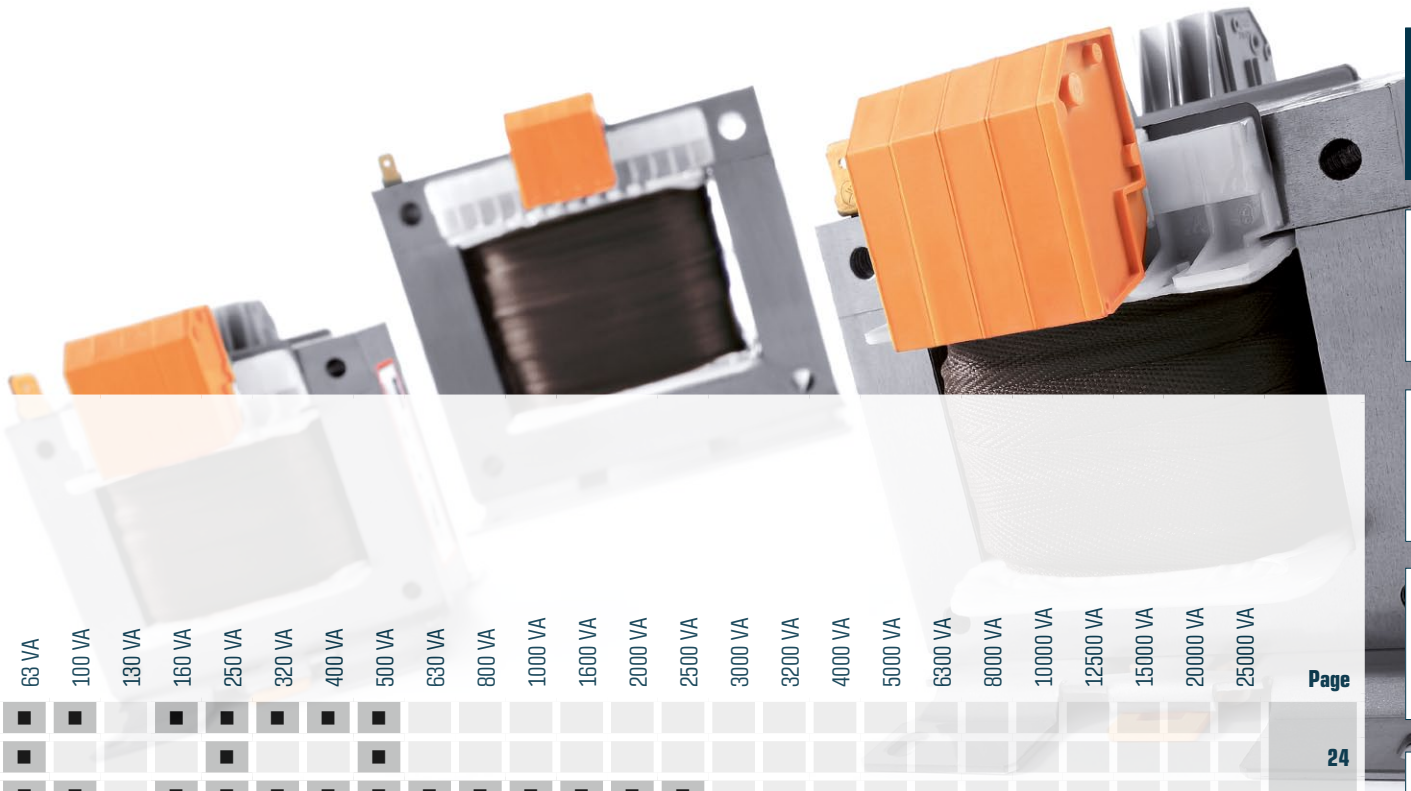
OVERVIEW
CONTROL TRANSFORMERS

Type	Features	Rated input voltage	Rated output voltage
STE	Cage-clamp terminals, DIN-Rail clamp included up to 250 VA	230 V, tappings for ± 5 %	24 V
		400 V, tappings for ± 5 %	24 V
		400 V, tappings for ± 5 %	230 V
STEU	Dual input voltage, cage-clamp terminals, DIN-Rail clamp included up to 250 VA	230 and 400 V, tappings for ± 5 %	2 x 12 V
			2 x 24 V
			2 x 115 V
USTE	Universal input voltages, cage-clamp terminals, DIN-Rail clamp included up to 250 VA	208, 230, 380, 400, 415, 440, 460, 480, 500, 525, 550, 575, 600 V	2 x 12 V
			2 x 115 V
ST	Screw-type terminals	230 V, tappings for ± 5 %	12 V
		230 V, tappings for ± 5 %	24 V
		230 V, tappings for ± 5 %	42 V
		230 V, tappings for ± 5 %	110 V
		230 V, tappings for ± 5 %	230 V
		400 V, tappings for ± 5 %	24 V
		400 V, tappings for ± 5 %	42 V
		400 V, tappings for ± 5 %	230 V
		440 V, tappings for ± 5 %	230 V
		500 V, tappings for ± 5 %	230 V
		690 V, tappings for ± 5 %	230 V
STU	Universal input voltages, screw-type terminals	210, 230, 250, 380, 400, 420, 440, 460, 480, 500, 520, 540 V	24 V
			2 x 115 V
STSU	Dual input voltage, low-inrush current	230 and 400 V	2 x 12 V, 2 x 24 V, 2 x 115 V
TT1	Horizontal design	219/230/241 V	24 V
		380/400/420 V	42 V
			2 x 115 V
BUST	Low height, screw-type terminals	230 V, tappings for ± 5 %	24 V
		230 V, tappings for ± 5 %	2 x 115 V
		400 V, tappings for ± 5 %	42 V
		400 V, tappings for ± 5 %	2 x 115 V
		440 V, tappings for ± 5 %	2 x 115 V
		500 V, tappings for ± 5 %	2 x 115 V



20 VA	40 VA	63 VA	100 VA	130 VA	160 VA	250 VA	320 VA	400 VA	500 VA	630 VA	800 VA	1000 VA	1600 VA	2000 VA	2500 VA	3000 VA	3200 VA	4000 VA	5000 VA	6300 VA	8000 VA	10000 VA	12500 VA	15000 VA	20000 VA	25000 VA	Page
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Control- and safety isolating- resp. isolating transformer
STE

General Data

Rated input voltage 230 - 400 Vac
Rated output voltage 24 - 230 Vac
Rated power 63 - 2500 VA
Insulation class B
Maximum ambient temperature 40 °C
Efficiency up to 95 %
Degree of protection IP 00

Advantages

Very good switch-on behaviour thanks to reduced starting currents
High performance for the volume thanks to compact design
Primary side ±5 % tappings for voltage adjustment
Very good corrosion protection and low noise thanks to vacuum impregnation
Quick to cable up thanks to the use of spring-clamp terminals
Contact protected screw connection terminals complying with UVV BGV A3
Simple mounting thanks to robust metal footplate with oval slots
Up to 250 VA with combination footplate for bolted and rail mounting

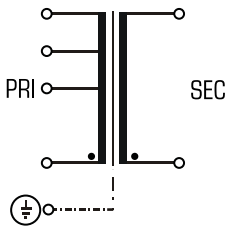
Applications

As a control transformer for the electrical isolation of the input and output sides.The construction of the transformer to supply control systems according to VDE 0113 is designed.

As an isolating transformer for the safe electrical isolation of the input and output sides. The transformer may be used to set up protective separation as a protective measure in accordance with VDE 0100.

As a safety isolating transformer for the safe electrical isolation of the input and output sides. The transformer is suitable for creating SELV and PELV circuits because of the limit on the output voltage.

Sample application



Standards

Control transformer
to: VDE 0570 Teil 2-2, DIN EN 61558-2-2, EN 61558-2-2, IEC 61558-2-2, UL 5085-1/-2, CSA 22.2 No.66

Safety isolating transformer
to: VDE 0570 Teil 2-6, DIN EN 61558-2-6, EN 61558-2-6, IEC 61558-2-6, UL 5085-1/-2, CSA 22.2 No.66

Isolating transformer
to: VDE 0570 Part2-4, DIN EN 61558-2-4, EN 61558-2-4, IEC 61558-2-4, UL 5085-1/-2, CSA 22.2 No.66

Approvals

UL 5085-1/-2, CSA 22.2 No.66

Control- and safety isolating- resp. isolating transformer
STE

Electrical data

Typ	STE 63/23/24	STE 63/4/24	STE 63/4/23	STE 100/23/24	STE 100/4/23	STE 160/23/24
Input						
Rated input voltage	230 Vac	400 Vac	400 Vac	230 Vac	400 Vac	230 Vac
Tappings Input	±5 %	±5 %	±5 %	±5 %	±5 %	±5 %
Rated frequency	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
Output						
Rated output voltage	24 Vac	24 Vac	230 Vac	24 Vac	230 Vac	24 Vac
Rated power VDE (DB cos phi=1)	63 VA	63 VA	63 VA	100 VA	100 VA	160 VA
Rated power VDE (KB cos phi=0.5)	175 VA	175 VA	175 VA	310 VA	310 VA	490 VA
No-load voltage (app. x factor)	1.10	1.10	1.10	1.07	1.07	1.06
Efficiency	87.0 %	87.0 %	87.0 %	87.0 %	87.0 %	90.0 %
Standards						
Classification	Control- and safety isolating transformer	Control- and safety isolating transformer	Control- and isolating transformer	Control- and safety isolating transformer	Control- and isolating transformer	Control- and safety isolating transformer
Approvals						
Approvals	cURus	cURus	cURus	cURus	cURus	cURus
Environment						
Ambient temperature max.	40 °C	40 °C	40 °C	40 °C	40 °C	40 °C
Type of cooling	self-cooling	self-cooling	self-cooling	self-cooling	self-cooling	self-cooling
Safety and protection						
Type	Open type	Open type	Open type	Open type	Open type	Open type
Insulation class	VDE=B, UL=class 130	VDE=B, UL=class 130	VDE=B, UL=class 130	VDE=B, UL=class 130	VDE=B, UL=class 130	VDE=B, UL=class 130
Protection index	IP 00	IP 00	IP 00	IP 00	IP 00	IP 00
Safety class (prepared)	I	I	I	I	I	I
Short circuit strength	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof
PRI Fusing recommendation by circuit breaker with tripping characteristic type 20 x Irated related to set)						
Setting range	0.25 - 0.40 A	0.16 - 0.25 A	0.16 - 0.25 A	0.40 - 0.63 A	0.25 - 0.40 A	0.63 - 1.00 A
Setting value	0.35 A	0.20 A	0.20 A	0.50 A	0.29 A	0.78 A
Order numbers						
Order Number	**STE 63/23/24**	**STE 63/4/24**	**STE 63/4/23**	**STE 100/23/24**	**STE 100/4/23**	**STE 160/23/24**

Control- and safety isolating- resp. isolating transformer
STE

Electrical data

Typ	STE 160/4/23	STE 250/23/24	STE 250/4/24	STE 250/4/23	STE 320/23/24	STE 320/4/23
Input						
Rated input voltage	400 Vac	230 Vac	400 Vac	400 Vac	230 Vac	400 Vac
Tappings Input	±5 %	±5 %	±5 %	±5 %	±5 %	±5 %
Rated frequency	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
Output						
Rated output voltage	230 Vac	24 Vac	24 Vac	230 Vac	24 Vac	230 Vac
Rated power VDE (DB cos phi=1)	160 VA	250 VA	250 VA	250 VA	320 VA	320 VA
Rated power VDE (KB cos phi=0.5)	490 VA	850 VA	850 VA	850 VA	1.120 VA	1.120 VA
No-load voltage (app. x factor)	1.06	1.07	1.07	1.07	1.05	1.05
Efficiency	90.0 %	90.0 %	90.0 %	90.0 %	91.0 %	91.0 %
Standards						
Classification	Control- and isolating transformer	Control- and safety isolating transformer	Control- and safety isolating transformer	Control- and isolating transformer	Control- and safety isolating transformer	Control- and isolating transformer
Approvals						
Approvals	cURus	cURus	cURus	cURus	cURus	cURus
Environment						
Ambient temperature max.	40 °C	40 °C	40 °C	40 °C	40 °C	40 °C
Type of cooling	self-cooling	self-cooling	self-cooling	self-cooling	self-cooling	self-cooling
Safety and protection						
Type	Open type	Open type	Open type	Open type	Open type	Open type
Insulation class	VDE=B, UL=class 130	VDE=B, UL=class 130	VDE=B, UL=class 130	VDE=B, UL=class 130	VDE=B, UL=class 130	VDE=B, UL=class 130
Protection index	IP 00	IP 00	IP 00	IP 00	IP 00	IP 00
Safety class (prepared)	I	I	I	I	I	I
Short circuit strength	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof
PRI Fusing recommendation by circuit breaker with tripping characteristic type 20 x Irated related to set)						
Setting range	0.40 - 0.63 A	1.00 - 1.60 A	0.63 - 1.00 A	0.63 - 1.00 A	1.00 - 1.60 A	0.63 - 1.00 A
Setting value	0.45 A	1.20 A	0.70 A	0.70 A	1.50 A	0.88 A
Order numbers						
Order Number	**STE 160/4/23**	**STE 250/23/24**	**STE 250/4/24**	**STE 250/4/23**	**STE 320/23/24**	**STE 320/4/23**

Control- and safety isolating- resp. isolating transformer
STE

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Electrical data

Typ	STE 400/23/24	STE 400/4/23	STE 500/23/24	STE 500/4/24	STE 500/4/23	STE 630/4/23
Input						
Rated input voltage	230 Vac	400 Vac	230 Vac	400 Vac	400 Vac	400 Vac
Tappings Input	±5 %	±5 %	±5 %	±5 %	±5 %	±5 %
Rated frequency	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
Output						
Rated output voltage	24 Vac	230 Vac	24 Vac	24 Vac	230 Vac	230 Vac
Rated power VDE (DB cos phi=1)	400 VA	400 VA	500 VA	500 VA	500 VA	630 VA
Rated power VDE (KB cos phi=0.5)	1.440 VA	1.440 VA	2.000 VA	2.000 VA	2.000 VA	2.350 VA
No-load voltage (app. x factor)	1.05	1.05	1.05	1.05	1.05	1.03
Efficiency	92.0 %	92.0 %	93.0 %	93.0 %	93.0 %	93.0 %
Standards						
Classification	Control- and safety isolating transformer	Control- and isolating transformer	Control- and safety isolating transformer	Control- and safety isolating transformer	Control- and isolating transformer	Control- and isolating transformer
Approvals						
Approvals	cURus	cURus	cURus	cURus	cURus	cURus
Environment						
Ambient temperature max.	40 °C	40 °C	40 °C	40 °C	40 °C	40 °C
Type of cooling	self-cooling	self-cooling	self-cooling	self-cooling	self-cooling	self-cooling
Safety and protection						
Type	Open type	Open type	Open type	Open type	Open type	Open type
Insulation class	VDE=B, UL=class 130	VDE=B, UL=class 130	VDE=B, UL=class 130	VDE=B, UL=class 130	VDE=B, UL=class 130	VDE=B, UL=class 130
Protection index	IP 00	IP 00	IP 00	IP 00	IP 00	IP 00
Safety class (prepared)	I	I	I	I	I	I
Short circuit strength	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof
PRI Fusing recommendation by circuit breaker with tripping characteristic type 20 x Irated related to set)						
Setting range	1.60 - 2.50 A	1.00 - 1.60 A	1.60 - 2.50 A	1.00 - 1.60 A	1.00 - 1.60 A	1.60 - 2.50 A
Setting value	1.90 A	1.10 A	2.40 A	1.40 A	1.40 A	1.70 A
Order numbers						
Order Number	**STE 400/23/24**	**STE 400/4/23**	**STE 500/23/24**	**STE 500/4/24**	**STE 500/4/23**	**STE 630/4/23**

Control- and safety isolating- resp. isolating transformer
STE

Electrical data

Typ	STE 800/4/23	STE 1000/4/23	STE 1600/4/23	STE 2000/4/23	STE 2500/4/23
Input					
Rated input voltage	400 Vac	400 Vac	400 Vac	400 Vac	400 Vac
Tappings Input	±5 %	±5 %	±5 %	±5 %	±5 %
Rated frequency	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
Output					
Rated output voltage	230 Vac	230 Vac	230 Vac	230 Vac	230 Vac
Rated power VDE (DB cos phi=1)	800 VA	1.000 VA	1.600 VA	2.000 VA	2.500 VA
Rated power VDE (KB cos phi=0.5)	3.400 VA	5.000 VA	7.800 VA	10.900 VA	12.500 VA
No-load voltage (app. x factor)	1.03	1.02	1.02	1.02	1.01
Efficiency	93.0 %	94.0 %	94.0 %	95.0 %	95.0 %
Standards					
Classification	Control- and isolating transformer	Control- and isolating transformer	Control- and isolating transformer	Control- and isolating transformer	Control- and isolating transformer
Approvals					
Approvals	cURus	cURus	cURus	cURus	cURus
Environment					
Ambient temperature max.	40 °C	40 °C	40 °C	40 °C	40 °C
Type of cooling	self-cooling	self-cooling	self-cooling	self-cooling	self-cooling
Safety and protection					
Type	Open type	Open type	Open type	Open type	Open type
Insulation class	VDE=B, UL=class 130	VDE=B, UL=class 130	VDE=B, UL=class 130	VDE=B, UL=class 130	VDE=B, UL=class 130
Protection index	IP 00	IP 00	IP 00	IP 00	IP 00
Safety class (prepared)	I	I	I	I	I
Short circuit strength	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof
PRI Fusing recommendation by circuit breaker with tripping characteristic type 20 x Irated related to set)					
Setting range	1.60 - 2.50 A	2.50 - 4.00 A	4.00 - 6.30 A	4.00 - 6.30 A	6.30 - 10.00 A
Setting value	2.10 A	2.60 A	4.20 A	5.20 A	6.40 A
Order numbers					
Order Number	**STE 800/4/23**	**STE 1000/4/23**	**STE 1600/4/23**	**STE 2000/4/23**	**STE 2500/4/23**

Control- and safety isolating- resp. isolating transformer
STE

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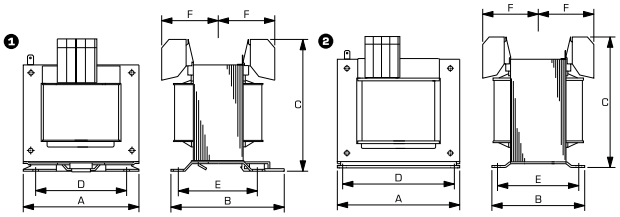
Mechanical data 30

Typ	Terminals	Fixing method	Fixing screws	Weight	Dimension picture (in mm)	A	B	C	D	E	F
STE 63/23/24	Spring clamp terminal, PE 6.3 x 0.8	Dual purpose base plate also for installation on mounting rails	M4	1.20 kg	1	78	85	88	64	64	46
STE 63/4/24	Spring clamp terminal, PE 6.3 x 0.8	Dual purpose base plate also for installation on mounting rails	M4	1.20 kg	1	78	85	88	64	64	46
STE 63/4/23	Spring clamp terminal, PE 6.3 x 0.8	Dual purpose base plate also for installation on mounting rails	M4	1.20 kg	1	78	85	88	64	64	46
STE 100/23/24	Spring clamp terminal, PE 6.3 x 0.8	Dual purpose base plate also for installation on mounting rails	M4	2.00 kg	1	84	85	96	64	64	54.5
STE 100/4/23	Spring clamp terminal, PE 6.3 x 0.8	Dual purpose base plate also for installation on mounting rails	M4	2.00 kg	1	84	85	96	64	64	54.5
STE 160/23/24	Spring clamp terminal, PE 6.3 x 0.8	Dual purpose foot plate also for installation on mounting rails	M5	2.90 kg	1	96	102	104	84	87	56
STE 160/4/23	Spring clamp terminal, PE 6.3 x 0.8	Dual purpose base plate also for installation on mounting rails	M5	2.90 kg	1	96	102	104	84	87	56
STE 250/23/24	Spring clamp terminal, PE 6.3 x 0.8	Dual purpose base plate also for installation on mounting rails	M5	3.50 kg	1	96	102	104	84	87	62.5
STE 250/4/24	Spring clamp terminal, PE 6.3 x 0.8	Dual purpose base plate also for installation on mounting rails	M5	3.50 kg	1	96	102	104	84	87	62.5
STE 250/4/23	Spring clamp terminal, PE 6.3 x 0.8	Dual purpose base plate also for installation on mounting rails	M5	3.50 kg	1	96	102	104	84	87	62.5
STE 320/23/24	Spring clamp terminal, PE 6.3 x 0.8	Base plate	M5	4.30 kg	2	105	103	110	81	86	63
STE 320/4/23	Spring clamp terminal, PE 6.3 x 0.8	Base plate	M5	4.30 kg	2	105	103	110	81	86	63
STE 400/23/24	Spring clamp terminal, PE 6.3 x 0.8	Base plate	M5	5.00 kg	2	120	104	121	90	86	60
STE 400/4/23	Spring clamp terminal, PE 6.3 x 0.8	Base plate	M5	5.00 kg	2	120	104	121	90	86	60
STE 500/23/24	Spring clamp terminal, PE 6.3 x 0.8	Base plate	M5	6.50 kg	2	120	124	121	90	106	71
STE 500/4/24	Spring clamp terminal, PE 6.3 x 0.8	Base plate	M5	6.50 kg	2	120	124	121	90	106	71
STE 500/4/23	Spring clamp terminal, PE 6.3 x 0.8	Base plate	M5	6.50 kg	2	120	124	121	90	106	71
STE 630/4/23	Spring clamp terminal, PE 6.3 x 0.8	Base plate	M6	7.80 kg	2	150	113	143	122	91	59
STE 800/4/23	Spring clamp terminal, PE 6.3 x 0.8	Base plate	M6	9.90 kg	2	150	130	143	122	107.5	65
STE 1000/4/23	Spring clamp terminal, PE 6.3 x 0.8	Base plate	M6	13.10 kg	2	150	156	143	122	134	82
STE 1600/4/23	Spring clamp terminal, PE 6.3 x 0.8	Base plate	M8	18.00 kg	2	192	145	180.5	156	117	72
STE 2000/4/23	Spring clamp terminal, PE 6.3 x 0.8	Base plate	M8	21.80 kg	2	192	161	180.5	156	136	80
STE 2500/4/23	Spring clamp terminal, PE 6.3 x 0.8	Base plate	M8	25.50 kg	2	192	179	180.5	156	151	91

Dimension pictures



Control- and safety isolating- resp. isolating transformer
STEU

General Data

Rated input voltage 230 and 400 Vac
Rated output voltage 24 - 230 Vac
Rated power 63 - 2500 VA
Insulation class B
Maximum ambient temperature 40 °C
Efficiency up to 94 %
Degree of protection IP 00

Advantages

Dual input voltage 230 and 400 Vac
Very good switch-on behaviour thanks to reduced starting currents
High performance for the volume thanks to compact design
Primary side ±15 V tappings for voltage adjustment
Very good corrosion protection and low noise thanks to vacuum impregnation
Quick to cable up thanks to the use of spring-clamp terminals
Contact protected screw connection terminals complying with UVV BGV A3
Simple mounting thanks to robust metal footplate with oval slots
Up to 250 VA with combination footplate for bolted and rail mounting

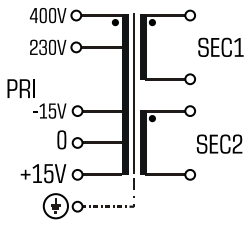
Applications

As a control transformer for the electrical isolation of the input and output sides. The construction of the transformer to supply control systems according to VDE 0113 is designed.

As an isolating transformer for the safe electrical isolation of the input and output sides. The transformer may be used to set up protective separation as a protective measure in accordance with VDE 0100.

As a safety transformer for the safe electrical isolation of the input and output sides. The transformer is suitable for creating SELV and PELV circuits because of the limit on the output voltage.

Sample application



Standards

Control transformer
to: VDE 0570 Teil 2-2, DIN EN 61558-2-2, EN 61558-2-2, IEC 61558-2-2, UL 5085-1/-2, CSA 22.2 No.66

Safety isolating transformer
to: VDE 0570 Teil 2-6, DIN EN 61558-2-6, EN 61558-2-6, IEC 61558-2-6, UL 5085-1/-2, CSA 22.2 No.66

Isolating transformer
to: VDE 0570 Part2-4, DIN EN 61558-2-4, EN 61558-2-4, IEC 61558-2-4, UL 5085-1/-2, CSA 22.2 No.66

Approvals

UL 5085-1/-2, CSA 22.2 No.66

Control- and safety isolating- resp. isolating transformer
STEU

Electrical data

Typ	STEU 63/48	STEU 63/24	STEU 63/23	STEU 100/48	STEU 100/24	STEU 100/23
Input						
Rated input voltage	230/400 Vac	230/400 Vac	230/400 Vac	230/400 Vac	230/400 Vac	230/400 Vac
Tappings Input	±15 V	±15 V	±15 V	±15 V	±15 V	±15 V
Frequency range	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
Output						
Rated output voltage	2x24 Vac	2 x 12 Vac	2 x 115 Vac	2x24 Vac	2 x 12 Vac	2 x 115 Vac
Rated power VDE (DB cos phi=1)	63 VA	63 VA	63 VA	100 VA	100 VA	100 VA
Rated power VDE (KB cos phi=0.5)	175 VA	175 VA	175 VA	310 VA	310 VA	175 VA
No-load voltage (app. x factor)	1.10	1.10	1.10	1.07	1.07	1.07
Efficiency	86.0 %	86.0 %	86.0 %	86.0 %	86.0 %	86.0 %
Standards						
Classification	Control- and safety isolating transformer	Control- and safety isolating transformer	Control- and isolating transformer	Control- and isolating transformer	Control- and safety isolating transformer	Control- and isolating transformer
Approvals						
Approvals	cURus	cURus	cURus	cURus	cURus	cURus
Environment						
Ambient temperature max.	40 °C	40 °C	40 °C	40 °C	40 °C	40 °C
Type of cooling	self-cooling	self-cooling	self-cooling	self-cooling	self-cooling	self-cooling
Safety and protection						
Type	Open type	Open type	Open type	Open type	Open type	Open type
Insulation class	VDE=B, UL=class 130	VDE=B, UL=class 130	VDE=B, UL=class 130	VDE=B, UL=class 130	VDE=B, UL=class 130	VDE=B, UL=class 130
Protection index	IP 00	IP 00	IP 00	IP 00	IP 00	IP 00
Safety class (prepared)	I	I	I	I	I	I
Short circuit strength	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof
PRI Fusing recommendation by circuit breaker with tripping characteristic type 20 x Irated related to set)						
Setting range 230 ±15 Vac	0.25 - 0.40 A	0.25 - 0.40 A	0,25 - 0,40 A	0.40 - 0.63 A	0.40 - 0.63 A	0.40 - 0.63 A
Setting value 230 ±15 Vac	0.35 A	0.35 A	0.35 A	0.50 A	0.50 A	0.50 A
Setting range 400 ±15 Vac	0.16 - 0.25 A	0.16 - 0.25 A	0,16 - 0,25 A	0.25 - 0.40 A	0.25 - 0.40 A	0.25 - 0.40 A
Setting value 400 ±15 Vac	0.20 A	0.20 A	0.20 A	0.29 A	0.29 A	0.29 A
Order numbers						
Order Number	**STEU 63/48**	**STEU 63/24**	**STEU 63/23**	**STEU 100/48**	**STEU 100/24**	**STEU 100/23**

Control- and safety isolating- resp. isolating transformer
STEU

Electrical data

Typ	STEU 160/48	STEU 160/24	STEU 160/23	STEU 250/48	STEU 250/24	STEU 250/23
Input						
Rated input voltage	230/400 Vac	230/400 Vac	230/400 Vac	230/400 Vac	230/400 Vac	230/400 Vac
Tappings Input	±15 V	±15 V	±15 V	±15 V	±15 V	±15 V
Frequency range	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
Output						
Rated output voltage	2x24 Vac	2 x 12 Vac	2 x 115 Vac	2x24 Vac	2 x 12 Vac	2 x 115 Vac
Rated power VDE (DB cos phi=1)	160 VA	160 VA	160 VA	250 VA	250 VA	250 VA
Rated power VDE (KB cos phi=0.5)	490 VA	490 VA	490 VA	850 VA	850 VA	850 VA
No-load voltage (app. x factor)	1.10	1.10	1.10	1.07	1.07	1.07
Efficiency	86.0 %	86.0 %	86.0 %	88.0 %	88.0 %	88.0 %
Standards						
Classification	Control- and isolating transformer	Control- and safety isolating transformer	Control- and isolating transformer	Control- and isolating transformer	Control- and safety isolating transformer	Control- and isolating transformer
Approvals						
Approvals	cURus	cURus	cURus	cURus	cURus	cURus
Environment						
Ambient temperature max.	40 °C	40 °C	40 °C	40 °C	40 °C	40 °C
Type of cooling	self-cooling	self-cooling	self-cooling	self-cooling	self-cooling	self-cooling
Safety and protection						
Type	Open type	Open type	Open type	Open type	Open type	Open type
Insulation class	VDE=B, UL=class 130	VDE=B, UL=class 130	VDE=B, UL=class 130	VDE=B, UL=class 130	VDE=B, UL=class 130	VDE=B, UL=class 130
Protection index	IP 00	IP 00	IP 00	IP 00	IP 00	IP 00
Safety class (prepared)	I	I	I	I	I	I
Short circuit strength	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof
PRI Fusing recommendation by circuit breaker with tripping characteristic type 20 x Irated related to set)						
Setting range 230 ±15 Vac	0.63 - 1.00 A	0.63 - 1.00 A	0.63 - 1.00 A	1.00 - 1.60 A	1.00 - 1.60 A	1.00 - 1.60 A
Setting value 230 ±15 Vac	0.80 A	0.80 A	0.80 A	1.20 A	1.20 A	1.20 A
Setting range 400 ±15 Vac	0.40 - 0.63 A	0.40 - 0.63 A	0.40 - 0.63 A	0.63 - 1.00 A	0.63 - 1.00 A	0.63 - 1.00 A
Setting value 400 ±15 Vac	0.46 A	0.46 A	0.46 A	0.70 A	0.70 A	0.70 A
Order numbers						
Order Number	**STEU 160/48**	**STEU 160/24**	**STEU 160/23**	**STEU 250/48**	**STEU 250/24**	**STEU 250/23**

Control- and safety isolating- resp. isolating transformer
STEU

Electrical data

Typ	STEU 320/48	STEU 320/24	STEU 320/23	STEU 400/24	STEU 400/23	STEU 500/48
Input						
Rated input voltage	230/400 Vac	230/400 Vac	230/400 Vac	230/400 Vac	230/400 Vac	230/400 Vac
Tappings Input	±15 V	±15 V	±15 V	±15 V	±15 V	±15 V
Frequency range	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
Output						
Rated output voltage	2x24 Vac	2 x 12 Vac	2 x 115 Vac	2 x 12 Vac	2 x 115 Vac	2x24 Vac
Rated power VDE (DB cos phi=1)	320 VA	320 VA	320 VA	400 VA	400 VA	500 VA
Rated power VDE (KB cos phi=0.5)	1.120 VA	1.120 VA	1.120 VA	1.440 VA	1.440 VA	2.000 VA
No-load voltage (app. x factor)	1.07	1.07	1.07	1.04	1.04	1.04
Efficiency	90.0 %	90.0 %	90.0 %	90.0 %	90.0 %	92.0 %
Standards						
Classification	Control- and isolating transformer	Control- and safety isolating transformer	Control- and isolating transformer	Control- and safety isolating transformer	Control- and isolating transformer	Control- and isolating transformer
Approvals						
Approvals	cURus	cURus	cURus	cURus	cURus	cURus
Environment						
Ambient temperature max.	40 °C	40 °C	40 °C	40 °C	40 °C	40 °C
Type of cooling	self-cooling	self-cooling	self-cooling	self-cooling	self-cooling	self-cooling
Safety and protection						
Type	Open type	Open type	Open type	Open type	Open type	Open type
Insulation class	VDE=B, UL=class 130	VDE=B, UL=class 130	VDE=B, UL=class 130	VDE=B, UL=class 130	VDE=B, UL=class 130	VDE=B, UL=class 130
Protection index	IP 00	IP 00	IP 00	IP 00	IP 00	IP 00
Safety class (prepared)	I	I	I	I	I	I
Short circuit strength	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof
PRI Fusing recommendation by circuit breaker with tripping characteristic type 20 x Irated related to set)						
Setting range 230 ±15 Vac	1.00 - 1.60 A	1.00 - 1.60 A	1.00 - 1.60 A	1.60 - 2.50 A	1.60 - 2.50 A	1.60 - 2.50 A
Setting value 230 ±15 Vac	1.50 A	1.50 A	1.50 A	1.90 A	1.90 A	2.40 A
Setting range 400 ±15 Vac	0.63 - 1.00 A	0.63 - 1.00 A	0.63 - 1.00 A	1.00 - 1.60 A	1.00 - 1.60 A	1.00 - 1.60 A
Setting value 400 ±15 Vac	0.88 A	0.88 A	0.88 A	1.10 A	1.10 A	1.40 A
Order numbers						
Order Number	**STEU 320/48**	**STEU 320/24**	**STEU 320/23**	**STEU 400/24**	**STEU 400/23**	**STEU 500/48**

Control- and safety isolating- resp. isolating transformer
STEU

Electrical data

Typ	STEU 500/24	STEU 500/23	STEU 630/24	STEU 630/23	STEU 800/48	STEU 800/24
Input						
Rated input voltage	230/400 Vac	230/400 Vac	230/400 Vac	230/400 Vac	230/400 Vac	230/400 Vac
Tappings Input	±15 V	±15 V	±15 V	±15 V	±15 V	±15 V
Frequency range	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
Output						
Rated output voltage	2 x 12 Vac	2 x 115 Vac	2 x 12 Vac	2 x 115 Vac	2x24 Vac	2 x 12 Vac
Rated power VDE (DB cos phi=1)	500 VA	500 VA	630 VA	630 VA	800 VA	800 VA
Rated power VDE (KB cos phi=0.5)	2.000 VA	2.000 VA	2.350 VA	2.350 VA	3.400 VA	3.400 VA
No-load voltage (app. x factor)	1.04	1.04	1.04	1.04	1.03	1.03
Efficiency	92.0 %	92.0 %	92.0 %	92.0 %	94.0 %	94.0 %
Standards						
Classification	Control- and safety isolating transformer	Control- and isolating transformer	Control- and safety isolating transformer	Control- and isolating transformer	Control- and isolating transformer	Control- and safety isolating transformer
Approvals						
Approvals	cURus	cURus	cURus	cURus	cURus	cURus
Environment						
Ambient temperature max.	40 °C	40 °C	40 °C	40 °C	40 °C	40 °C
Type of cooling	self-cooling	self-cooling	self-cooling	self-cooling	self-cooling	self-cooling
Safety and protection						
Type	Open type	Open type	Open type	Open type	Open type	Open type
Insulation class	VDE=B, UL=class 130	VDE=B, UL=class 130	VDE=B, UL=class 130	VDE=B, UL=class 130	VDE=B, UL=class 130	VDE=B, UL=class 130
Protection index	IP 00	IP 00	IP 00	IP 00	IP 00	IP 00
Safety class (prepared)	I	I	I	I	I	I
Short circuit strength	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof
PRI Fusing recommendation by circuit breaker with tripping characteristic type 20 x Irated related to set)						
Setting range 230 ±15 Vac	1.60 - 2.50 A	1.60 - 2.50 A	2.50 - 4.00 A	2.50 - 4.00 A	2.50 - 4.00 A	2.50 - 4.00 A
Setting value 230 ±15 Vac	2.40 A	2.40 A	3.00 A	3.00 A	3.70 A	3.70 A
Setting range 400 ±15 Vac	1.00 - 1.60 A	1.00 - 1.60 A	1.60 - 2.50 A	1.60 - 2.50 A	1.60 - 2.50 A	1.60 - 2.50 A
Setting value 400 ±15 Vac	1.40 A	1.40 A	1.70 A	1.70 A	2.20 A	2.20 A
Order numbers						
Order Number	**STEU 500/24**	**STEU 500/23**	**STEU 630/24**	**STEU 630/23**	**STEU 800/48**	**STEU 800/24**

Control- and safety isolating- resp. isolating transformer
STEU

Electrical data

Typ	STEU 800/23	STEU 1000/48	STEU 1000/24	STEU 1000/23	STEU 1600/23	STEU 2000/23
Input						
Rated input voltage	230/400 Vac	230/400 Vac	230/400 Vac	230/400 Vac	230/400 Vac	230/400 Vac
Tappings Input	±15 V	±15 V	±15 V	±15 V	±15 V	±15 V
Frequency range	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
Output						
Rated output voltage	2 x 115 Vac	2x24 Vac	2 x 12 Vac	2 x 115 Vac	2 x 115 Vac	2 x 115 Vac
Rated power VDE (DB cos phi=1)	800 VA	1.000 VA	1.000 VA	1.000 VA	1.600 VA	2.000 VA
Rated power VDE (KB cos phi=0.5)	3.400 VA	5.000 VA	5.000 VA	5.000 VA	7.800 VA	10.900 VA
No-load voltage (app. x factor)	1.03	1.03	1.03	1.03	1.01	1.02
Efficiency	94.0 %	94.0 %	94.0 %	94.0 %	94.0 %	94.0 %
Standards						
Classification	Control- and isolating transformer	Control- and isolating transformer	Control- and safety isolating transformer	Control- and isolating transformer	Control- and isolating transformer	Control- and isolating transformer
Approvals						
Approvals	cURus	cURus	cURus	cURus	cURus	cURus
Environment						
Ambient temperature max.	40 °C	40 °C	40 °C	40 °C	40 °C	40 °C
Type of cooling	self-cooling	self-cooling	self-cooling	self-cooling	self-cooling	self-cooling
Safety and protection						
Type	Open type	Open type	Open type	Open type	Open type	Open type
Insulation class	VDE=B, UL=class 130	VDE=B, UL=class 130	VDE=B, UL=class 130	VDE=B, UL=class 130	VDE=B, UL=class 130	VDE=B, UL=class 130
Protection index	IP 00	IP 00	IP 00	IP 00	IP 00	IP 00
Safety class (prepared)	I	I	I	I	I	I
Short circuit strength	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof
PRI Fusing recommendation by circuit breaker with tripping characteristic type 20 x Irated related to set)						
Setting range 230 ±15 Vac	2.50 - 4.00 A	4.00 - 6.30 A	4.00 - 6.30 A	4.00 - 6.30 A	6.30 - 10.00 A	8.00 - 10.00 A
Setting value 230 ±15 Vac	3.70 A	4.60 A	4.60 A	4.60 A	7.30 A	9.10 A
Setting range 400 ±15 Vac	1.60 - 2.50 A	2.50 - 4.00 A	2.50 - 4.00 A	2.50 - 4.00 A	4.00 - 6.30 A	4.00 - 6.30 A
Setting value 400 ±15 Vac	2.20 A	2.70 A	2.70 A	2.70 A	4.20 A	5.20 A
Order numbers						
Order Number	**STEU 800/23**	**STEU 1000/48**	**STEU 1000/24**	**STEU 1000/23**	**STEU 1600/23**	**STEU 2000/23**

Control- and safety isolating- resp. isolating transformer
STEU

Electrical data

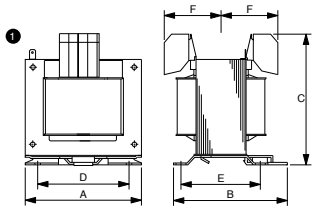
Typ	STEU 2500/23
Input	
Rated input voltage	230/400 Vac
Tappings Input	±15 V
Frequency range	50 - 60 Hz
Output	
Rated output voltage	2 x 115 Vac
Rated power VDE (DB cos phi=1)	2.500 VA
Rated power VDE (KB cos phi=0.5)	12.400 VA
No-load voltage (app. x factor)	1.02
Efficiency	94.0 %
Standards	
Classification	Control- and isolating transformer
Approvals	
Approvals	cURus
Environment	
Ambient temperature max.	40 °C
Type of cooling	self-cooling
Safety and protection	
Type	Open type
Insulation class	VDE=B, UL=class 130
Protection index	IP 00
Safety class (prepared)	I
Short circuit strength	non-short-circuit proof
PRI Fusing recommendation by circuit breaker with tripping characteristic type 20 x Irated related to set)	
Setting range 230 ±15 Vac	10.00 - 16.00 A
Setting value 230 ±15 Vac	11.20 A
Setting range 400 ±15 Vac	6.30 - 10.00 A
Setting value 400 ±15 Vac	6.50 A
Order numbers	
Order Number	**STEU 2500/23**

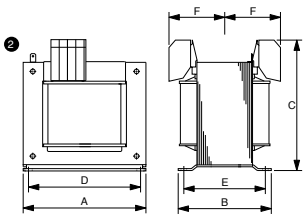
Control- and safety isolating- resp. isolating transformer
STEU

Mechanical data 30

Typ	Terminals	Fixing method	Fixing screws	Weight	Dimension picture (in mm)	A	B	C	D	E	F
STEU 63/48	Spring terminal, PE 6.3 x 0.8	Dual purpose base plate also for installation on mounting rails	M4	1.3 kg	1	84	85	88	64	64	46
STEU 63/24	Spring terminal, PE 6.3 x 0.8	Dual purpose base plate also for installation on mounting rails	M4	1.3 kg	1	84	85	88	64	64	46
STEU 63/23	Spring terminal, PE 6.3 x 0.8	Dual purpose base plate also for installation on mounting rails	M4	1.3 kg	1	84	85	88	64	64	46
STEU 100/48	Spring terminal, PE 6.3 x 0.8	Dual purpose base plate also for installation on mounting rails	M4	2.1 kg	1	84	85	96	64	64	54.5
STEU 100/24	Spring terminal, PE 6.3 x 0.8	Dual purpose base plate also for installation on mounting rails	M4	2.1 kg	1	84	85	96	64	64	54.5
STEU 100/23	Spring terminal, PE 6.3 x 0.8	Dual purpose base plate also for installation on mounting rails	M4	2.1 kg	1	84	85	96	64	64	54.5
STEU 160/48	Spring terminal, PE 6.3 x 0.8	Dual purpose base plate also for installation on mounting rails	M5	2.9 kg	1	96	102	104	84	87	56
STEU 160/24	Spring terminal, PE 6.3 x 0.8	Dual purpose base plate also for installation on mounting rails	M5	2.9 kg	1	96	102	104	84	87	56
STEU 160/23	Spring terminal, PE 6.3 x 0.8	Dual purpose base plate also for installation on mounting rails	M5	2.9 kg	1	96	102	104	84	87	56
STEU 250/48	Spring terminal, PE 6.3 x 0.8	Dual purpose base plate also for installation on mounting rails	M5	3.6 kg	1	96	125	105	84	87	62.5
STEU 250/24	Spring terminal, PE 6.3 x 0.8	Dual purpose base plate also for installation on mounting rails	M5	3.6 kg	1	96	102	104	84	87	62.5
STEU 250/23	Spring terminal, PE 6.3 x 0.8	Dual purpose base plate also for installation on mounting rails	M5	3.6 kg	1	96	125	105	84	87	62.5
STEU 320/48	Spring terminal, PE 6.3 x 0.8	Base plate	M5	4.3 kg	2	120	107	121	90	74	55
STEU 320/24	Spring terminal, PE 6.3 x 0.8	Base plate	M5	4.3 kg	2	120	107	121	90	74	55
STEU 320/23	Spring terminal, PE 6.3 x 0.8	Base plate	M5	4.3 kg	2	120	107	121	90	74	55
STEU 400/24	Spring terminal, PE 6.3 x 0.8	Base plate	M5	5.3 kg	2	120	104	121	90	86	60
STEU 400/23	Spring terminal, PE 6.3 x 0.8	Base plate	M5	5.3 kg	2	120	104	121	90	86	60
STEU 500/48	Spring terminal, PE 6.3 x 0.8	Base plate	M5	7.7 kg	2	120	124	121	90	106	71
STEU 500/24	Spring terminal, PE 6.3 x 0.8	Base plate	M5	7.7 kg	2	120	124	121	90	106	71
STEU 500/23	Spring terminal, PE 6.3 x 0.8	Base plate	M5	7.7 kg	2	120	124	121	90	106	71
STEU 630/24	Spring terminal, PE 6.3 x 0.8	Base plate	M6	7.9 kg	2	150	113	143	122	91	59

Dimension pictures



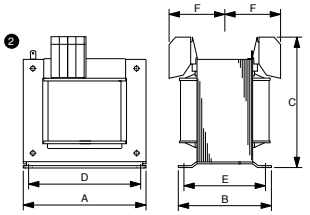


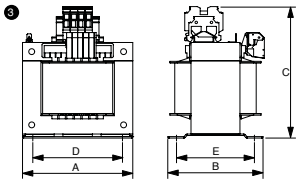
Control- and safety isolating- resp. isolating transformer
STEU

Mechanical data 30

Typ	Terminals	Fixing method	Fixing screws	Weight	Dimension picture (in mm)	A	B	C	D	E	F
STEU 630/23	Spring terminal, PE 6.3 x 0.8	Base plate	M6	7.9 kg	2	150	117	148	122	91	59
STEU 800/48	Spring terminal, PE 6.3 x 0.8	Base plate	M6	10.3 kg	2	150	130	143	122	107.5	65
STEU 800/24	Spring terminal, PE 6.3 x 0.8	Base plate	M6	10.3 kg	3	150	130	180	122	106	-
STEU 800/23	Spring terminal, PE 6.3 x 0.8	Base plate	M6	10.3 kg	2	150	130	143	122	107.5	65
STEU 1000/48	Spring terminal, PE 6.3 x 0.8	Base plate	M6	13.3 kg	2	150	156	143	122	134	82
STEU 1000/24	Spring terminal, PE 6.3 x 0.8	Base plate	M6	13.3 kg	2	150	180	185	122	134	82
STEU 1000/23	Spring terminal, PE 6.3 x 0.8	Base plate	M6	13.3 kg	2	150	156	143	122	134	82
STEU 1600/23	Spring terminal, PE 6.3 x 0.8	Base plate	M8	21.0 kg	2	192	161	185	155	133	80
STEU 2000/23	Spring terminal, PE 6.3 x 0.8	Base plate	M8	25.5 kg	2	192	183	185	156	155	91
STEU 2500/23	Spring terminal, PE 6.3 x 0.8	Base plate	M8	27.0 kg	2	192	190	185	156	161	94

Dimension pictures





Universal control- and safety isolating- resp. isolating transformer
USTE

General Data

Rated input voltage 208 - 600 Vac
Rated output voltage 24 - 230 Vac
Rated power 100 - 3200 VA
Insulation class B
Maximum ambient temperature 40 °C
Efficiency up to 96 %
Degree of protection IP 00

Advantages

Universal input voltages 208 to 600 Vac
Very good switch-on behaviour thanks to reduced starting currents
High performance for the volume thanks to compact design
Very good corrosion protection and low noise thanks to vacuum impregnation
Quick to cable up thanks to the use of spring-clamp terminals
Contact protected screw connection terminals complying with UVV BGV A3
Simple mounting thanks to robust metal footplate with oval slots
Up to 250 VA with combination footplate for bolted and rail mounting

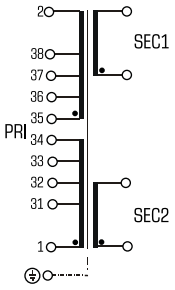
Applications

As a control transformer for the electrical isolation of the input and output sides. The construction of the transformer to supply control systems according to VDE 0113 is designed.

As an isolating transformer for the safe electrical isolation of the input and output sides. The transformer may be used to set up protective separation as a protective measure in accordance with VDE 0100.

As a safety isolating transformer for the safe electrical isolation of the input and output sides. The transformer is suitable for creating SELV and PELV circuits because of the limit on the output voltage.

Sample application



Standards

Control transformer
to: VDE 0570 Teil 2-2, DIN EN 61558-2-2, EN 61558-2-2, IEC 61558-2-2, UL 5085-1/-2, CSA 22.2 No.66

Safety isolating transformer
to: VDE 0570 Teil 2-6, DIN EN 61558-2-6, EN 61558-2-6, IEC 61558-2-6, UL 5085-1/-2, CSA 22.2 No.66

Isolating transformer
to: VDE 0570 Part2-4, DIN EN 61558-2-4, EN 61558-2-4, IEC 61558-2-4, UL 5085-1/-2, CSA 22.2 No.66

Approvals

UL 5085-1/-2, CSA 22.2 No.66

Universal control- and safety isolating-resp. isolating transformer
USTE

Electrical data

Typ	USTE 100/2x12	USTE 100/2x115	USTE 250/2x12	USTE 250/2x115	USTE 400/2x12	USTE 400/2x115
Input						
Rated input voltage	208 Vac/230 Vac/380 Vac 400 Vac/415 Vac/440 Vac 460 Vac/480 Vac/500 Vac 525 Vac/550 Vac/575 Vac 600 Vac	208 Vac/230 Vac/380 Vac 400 Vac/415 Vac/440 Vac 460 Vac/480 Vac/500 Vac 525 Vac/550 Vac/575 Vac 600 Vac	208 Vac/230 Vac/380 Vac 400 Vac/415 Vac/440 Vac 460 Vac/480 Vac/500 Vac 525 Vac/550 Vac/575 Vac 600 Vac	208 Vac/230 Vac/380 Vac 400 Vac/415 Vac/440 Vac 460 Vac/480 Vac/500 Vac 525 Vac/550 Vac/575 Vac 600 Vac	208 Vac/230 Vac/380 Vac 400 Vac/415 Vac/440 Vac 460 Vac/480 Vac/500 Vac 525 Vac/550 Vac/575 Vac 600 Vac	208 Vac/230 Vac/380 Vac 400 Vac/415 Vac/440 Vac 460 Vac/480 Vac/500 Vac 525 Vac/550 Vac/575 Vac 600 Vac
Frequency range	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
Output						
Rated output voltage	2x12 Vac	2x115 Vac	2x12 Vac	2x115 Vac	2x12 Vac	2x115 Vac
Rated power VDE (DB cos phi=1)	100 VA	100 VA	250 VA	250 VA	400 VA	400 VA
Rated power VDE (KB cos phi=0.5)	310 VA	310 VA	850 VA	850 VA	1.440 VA	1.440 VA
No-load voltage (app. x factor)	1.07	1.07	1.07	1.07	1.05	1.05
Efficiency	87.0 %	87.0 %	90.0 %	90.0 %	92.0 %	92.0 %
Standards						
Classification	Control- and safety isolating transformer	Control- and isolating transformer	Control- and safety isolating transformer	Control- and isolating transformer	Control- and safety isolating transformer	Control- and isolating transformer
Approvals						
Approvals	cURus	cURus	cURus	cURus	cURus	cURus
Environment						
Ambient temperature max.	40 °C	40 °C	40 °C	40 °C	40 °C	40 °C
Type of cooling	self-cooling	self-cooling	self-cooling	self-cooling	self-cooling	self-cooling
Safety and protection						
Type	Open type	Open type	Open type	Open type	Open type	Open type
Insulation class	VDE=B, UL=class 130	VDE=B, UL=class 130	VDE=B, UL=class 130	VDE=B, UL=class 130	VDE=B, UL=class 130	VDE=B, UL=class 130
Protection index	IP 00	IP 00	IP 00	IP 00	IP 00	IP 00
Safety class (prepared)	I	I	I	I	I	I
Short circuit strength	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof
PRI Fusing recommendation by circuit breaker with tripping characteristic type 20 x Irated related to set)						
Setting range 208 - 230 Vac	0.63 - 1.00 A	0.63 - 1.00 A	1.00 - 1.60 A	1.00 - 1.60 A	1.60 - 2.50 A	1.60 - 2.50 A
Setting value 208 - 230 Vac	0.63 A	0.63 A	1.30 A	1.30 A	2.10 A	2.10 A
Setting range 380 - 415 Vac	0.25 - 0.40 A	0.25 - 0.40 A	0.63 - 1.00 A	0.63 - 1.00 A	1.00 - 1.60 A	1.00 - 1.60 A
Setting value 380 - 415 Vac	0.34 A	0.34 A	0.71 A	0.71 A	1.10 A	1.10 A
Setting range 440 +20 Vac	0.25 - 0.40 A	0.25 - 0.40 A	0.63 - 1.00 A	0.63 - 1.00 A	1.00 - 1.60 A	1.00 - 1.60 A
Setting value 440 +20 Vac	0.31 A	0.31 A	0.64 A	0.64 A	1.00 A	1.00 A
Setting range 500 -20/+25 Vac	0.25 - 0.40 A	0.25 - 0.40 A	0.40 - 0.63 A	0.40 - 0.63 A	0.63 - 1.00 A	0.63 - 1.00 A
Setting value 500 -20/+25 Vac	0.27 A	0.27 A	0.57 A	0.57 A	0.90 A	0.90 A
Setting range 575 ±25 Vac	0.16 - 0.25 A	0.16 - 0.25 A	0.40 - 0.63 A	0.40 - 0.63 A	0.63 - 1.00 A	0.63 - 1.00 A
Setting value 575 ±25 Vac	0.24 A	0.24 A	0.50 A	0.81 A	0.81 A	0.81 A
Order numbers						
Order Number	**USTE 100/2x12**	**USTE 100/2x115**	**USTE 250/2x12**	**USTE 250/2x115**	**USTE 400/2x12**	**USTE 400/2x115**

Universal control- and safety isolating-resp. isolating transformer
USTE

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Electrical data

Typ	USTE 630/2x12	USTE 630/2x115	USTE 800/2x115	USTE 1000/2x115	USTE 1200/2x115	USTE 1600/2x115
Input						
Rated input voltage	208 Vac/230 Vac/380 Vac 400 Vac/415 Vac/440 Vac 460 Vac/480 Vac/500 Vac 525 Vac/550 Vac/575 Vac 600 Vac	208 Vac/230 Vac/380 Vac 400 Vac/415 Vac/440 Vac 460 Vac/480 Vac/500 Vac 525 Vac/550 Vac/575 Vac 600 Vac	208 Vac/230 Vac/380 Vac 400 Vac/415 Vac/440 Vac 460 Vac/480 Vac/500 Vac 525 Vac/550 Vac/575 Vac 600 Vac	208 Vac/230 Vac/380 Vac 400 Vac/415 Vac/440 Vac 460 Vac/480 Vac/500 Vac 525 Vac/550 Vac/575 Vac 600 Vac	208 Vac/230 Vac/380 Vac 400 Vac/415 Vac/440 Vac 460 Vac/480 Vac/500 Vac 525 Vac/550 Vac/575 Vac 600 Vac	208 Vac/230 Vac/380 Vac 400 Vac/415 Vac/440 Vac 460 Vac/480 Vac/500 Vac 525 Vac/550 Vac/575 Vac 600 Vac
Frequency range	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
Output						
Rated output voltage	2x12 Vac	2x115 Vac	2x115 Vac	2x115 Vac	2x115 Vac	2x115 Vac
Rated power VDE (DB cos phi=1)	630 VA	630 VA	800 VA	1.000 VA	1.200 VA	1.600 VA
Rated power VDE (KB cos phi=0.5)	2.350 VA	2.350 VA	3.400 VA	5.000 VA	5.000 VA	7.800 VA
No-load voltage (app. x factor)	1.03	1.03	1.03	1.02	1.02	1.02
Efficiency	93.0 %	93.0 %	93.0 %	94.0 %	94.0 %	94.0 %
Standards						
Classification	Control- and safety isolating transformer	Control- and isolating transformer	Control- and isolating transformer	Control- and isolating transformer	Control- and isolating transformer	Control- and isolating transformer
Approvals						
Approvals	cURus	cURus	cURus	cURus	cURus	cURus
Environment						
Ambient temperature max.	40 °C	40 °C	40 °C	40 °C	40 °C	40 °C
Type of cooling	self-cooling	self-cooling	self-cooling	self-cooling	self-cooling	self-cooling
Safety and protection						
Type	Open type	Open type	Open type	Open type	Open type	Open type
Insulation class	VDE=B, UL=class 130	VDE=B, UL=class 130	VDE=B, UL=class 130	VDE=B, UL=class 130	VDE=B, UL=class 130	VDE=B, UL=class 130
Protection index	IP 00	IP 00	IP 00	IP 00	IP 00	IP 00
Safety class (prepared)	I	I	I	I	I	I
Short circuit strength	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof
PRI Fusing recommendation by circuit breaker with tripping characteristic type 20 x Irated related to set)						
Setting range 208 - 230 Vac	2.50 - 4.00 A	2.50 - 4.00 A	2.50 - 4.00 A	4.00 - 6.30 A	4.00 - 6.30 A	6.30 - 10.00 A
Setting value 208 - 230 Vac	3.20 A	3.20 A	3.90 A	5.00 A	5.00 A	7.50 A
Setting range 380 - 415 Vac	1.60 - 2.50 A	1.60 - 2.50 A	1.60 - 2.50 A	2.50 - 4.00 A	2.50 - 4.00 A	4.00 - 6.30 A
Setting value 380 - 415 Vac	1.70 A	1.70 A	2.20 A	2.70 A	2.70 A	4.10 A
Setting range 440 +20 Vac	1.00 - 1.60 A	1.00 - 1.60 A	1.60 - 2.50 A	1.60 - 2.50 A	1.60 - 2.50 A	2.50 - 4.00 A
Setting value 440 +20 Vac	1.50 A	1.50 A	1.90 A	2.40 A	2.40 A	3.70 A
Setting range 500 -20/+25 Vac	1.00 - 1.60 A	1.00 - 1.60 A	1.60 - 2.50 A	1.60 - 2.50 A	1.60 - 2.50 A	2.50 - 4.00 A
Setting value 500 -20/+25 Vac	1.30 A	1.30 A	1.70 A	2.20 A	2.20 A	3.30 A
Setting range 575 ±25 Vac	1.00 - 1.60 A	1.00 - 1.60 A	1.00 - 1.60 A	1.60 - 2.50 A	1.60 - 2.50 A	2.50 - 4.00 A
Setting value 575 ±25 Vac	1.20 A	1.20 A	1.50 A	1.90 A	1.90 A	2.90 A
Order numbers						
Order Number	**USTE 630/2x12**	**USTE 630/2x115**	**USTE 800/2x115**	**USTE 1000/2x115**	**USTE 1200/2x115**	**USTE 1600/2x115**

1.1
1.2
1.3
2.1
2.2
3.1
3.2
3.3
4.0
5.1
5.2

Universal control- and safety isolating- resp. isolating transformer
USTE

Electrical data

Typ	USTE 2500/2x115	USTE 3200/2x115
Input		
Rated input voltage	208 Vac/230 Vac/380 Vac 400 Vac/415 Vac/440 Vac 460 Vac/480 Vac/500 Vac 525 Vac/550 Vac/575 Vac 600 Vac	208 Vac/230 Vac/380 Vac 400 Vac/415 Vac/440 Vac 460 Vac/480 Vac/500 Vac 525 Vac/550 Vac/575 Vac 600 Vac
Frequency range	50 - 60 Hz	50 - 60 Hz
Output		
Rated output voltage	2x115 Vac	2x115 Vac
Rated power VDE (DB cos phi=1)	2.500 VA	3.200 VA
Rated power VDE (KB cos phi=0.5)	12.500 VA	14.400 VA
No-load voltage (app. x factor)	1.01	1.02
Efficiency	95.0 %	96.0 %
Standards		
Classification	Control- and isolating transformer	Control- and isolating transformer
Approvals		
Approvals	cURus	cURus
Environment		
Ambient temperature max.	40 °C	40 °C
Type of cooling	self-cooling	self-cooling
Safety and protection		
Type	Open type	Open type
Insulation class	VDE=B, UL=class 130	VDE=B, UL=class 130
Protection index	IP 00	IP 00
Safety class (prepared)	I	I
Short circuit strength	non-short-circuit proof	non-short-circuit proof
PRI Fusing recommendation by circuit breaker with tripping characteristic type 20 x Irated related to set)		
Setting range 208 - 230 Vac	10.00 - 16.00 A	10.00 - 16.00 A
Setting value 208 - 230 Vac	12.50 A	15.20 A
Setting range 380 - 415 Vac	6.30 - 10.00 A	6.30-10.00 A
Setting value 380 - 415 Vac	6.90 A	8.40 A
Setting range 440 +20 Vac	4.00 - 6.30 A	6.30-10.00 A
Setting value 440 +20 Vac	6.10 A	7.50 A
Setting range 500 -20/+25 Vac	4.00 - 6.30 A	6.30-10.00 A
Setting value 500 -20/+25 Vac	5.20 A	6.50 A
Setting range 575 ±25 Vac	4.00 - 6.30 A	4.00 - 6.30 A
Setting value 575 ±25 Vac	4.70 A	5.80 A
Order numbers		
Order Number	**USTE 2500/2x115**	**USTE 3200/2x115**

Universal control- and safety isolating- resp. isolating transformer
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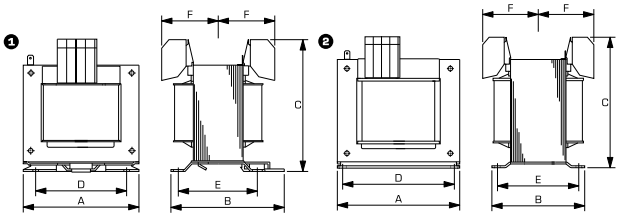
Mechanical data 30

Typ	Terminals	Fixing method	Fixing screws	Weight	Dimension picture (in mm)	A	B	C	D	E	F
USTE 100/2x12	Spring terminals, PE 6.3 x 0.8	Dual purpose base plate also for installation on mounting rails	M4	2.1 kg	1	84	85	96	64	64	54.5
USTE 100/2x115	Spring terminals, PE 6.3 x 0.8	Dual purpose base plate also for installation on mounting rails	M4	2.1 kg	1	84	85	96	64	64	54.5
USTE 250/2x12	Spring terminals, PE 6.3 x 0.8	Dual purpose base plate also for installation on mounting rails	M5	3.6 kg	1	96	102	104	84	87	62.5
USTE 250/2x115	Spring terminals, PE 6.3 x 0.8	Dual purpose base plate also for installation on mounting rails	M5	3.6 kg	1	96	102	104	84	87	62.5
USTE 400/2x12	Spring terminals, PE 6.3 x 0.8	Base plate	M5	5.3 kg	2	120	104	121	90	86	60
USTE 400/2x115	Spring terminals, PE 6.3 x 0.8	Base plate	M5	5.3 kg	2	120	104	121	90	86	60
USTE 630/2x12	Spring terminals, PE 6.3 x 0.8	Base plate	M6	7.9 kg	2	150	113	143	122	91	59
USTE 630/2x115	Spring terminals, PE 6.3 x 0.8	Base plate	M6	7.9 kg	2	150	113	143	122	91	59
USTE 800/2x115	Spring terminals, PE 6.3 x 0.8	Base plate	M6	10.9 kg	2	150	130	143	122	108	68
USTE 1000/2x115	Spring terminals, PE 6.3 x 0.8	Base plate	M6	13.8 kg	2	150	156	143	122	134	82
USTE 1200/2x115	Spring terminals, PE 6.3 x 0.8	Base plate	M6	13.8 kg		-	-	-	-	-	-
USTE 1600/2x115	Spring terminals, PE 6.3 x 0.8	Base plate	M8	20.8 kg	2	192	145	180.5	156	117	72
USTE 2500/2x115	Spring terminals, PE 6.3 x 0.8	Base plate	M8	26.3 kg	2	192	190	180.5	156	161	94
USTE 3200/2x115	Spring terminals, PE 6.3 x 0.8	Base plate	M10	39.0 kg	2	231	220	250	180	148	92

Dimension pictures



Control- and safety isolating- resp. isolating transformer
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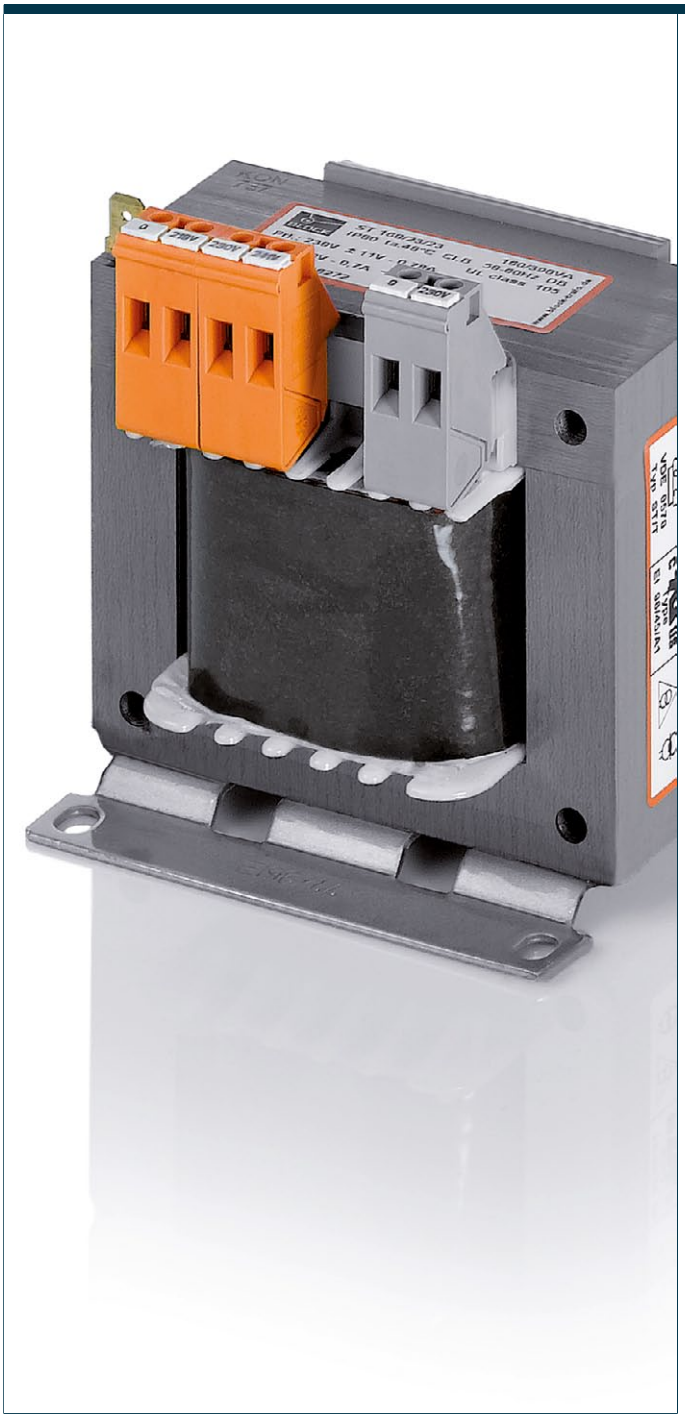


General Data

Rated input voltage 230 - 690 Vac
Rated output voltage 12 - 230 Vac
Rated power 20 - 2500 VA
Insulation class B
Maximum ambient temperature 40 °C
Efficiency up to 96 %
Degree of protection IP 00

Advantages

Very good switch-on behaviour thanks to reduced starting currents
High performance for the volume thanks to compact design
Primary side ±5 % tappings for voltage adjustment
Very good corrosion protection and low noise thanks to vacuum impregnation
Contact protected screw connection terminals complying with UVV BGV A3
Simple mounting thanks to robust metal footplate with oval slots

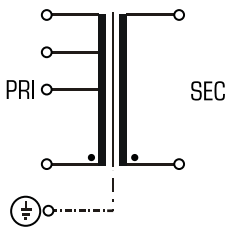
Applications

As a control transformer for the electrical isolation of the input and output sides.The construction of the transformer to supply control systems according to VDE 0113 is designed.

As an isolating transformer for the safe electrical isolation of the input and output sides. The transformer may be used to set up protective separation as a protective measure in accordance with VDE 0100.

As a safety isolating transformer for the safe electrical isolation of the input and output sides. The transformer is suitable for creating SELV and PELV circuits because of the limit on the output voltage.

Sample application



Standards

Control transformer
to: VDE 0570 Teil 2-2, DIN EN 61558-2-2, EN 61558-2-2, IEC 61558-2-2, UL 5085-1/-2, CSA 22.2 No.66

Safety isolating transformer
to: VDE 0570 Teil 2-6, DIN EN 61558-2-6, EN 61558-2-6, IEC 61558-2-6, UL 5085-1/-2, CSA 22.2 No.66

Isolating transformer
to: VDE 0570 Part2-4, DIN EN 61558-2-4, EN 61558-2-4, IEC 61558-2-4, UL 5085-1/-2, CSA 22.2 No.66

Approvals

ENEC 10 (VDE), UL 5085-1/-2, CSA 22.2 No.66

Control- and safety isolating- resp. isolating transformer
ST

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Electrical data

Typ	ST 20/23/12	ST 20/23/24	ST 20/23/23	ST 20/4/23	ST 63/23/12	ST 63/23/24
Input						
Rated input voltage	230 Vac	230 Vac	230 Vac	400 Vac	230 Vac	230 Vac
Tappings Input	±5 %	±5 %	±5 %	±5 %	±5 %	±5 %
Frequency range	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
Output						
Rated output voltage	12 Vac	24 Vac	230 Vac	230 Vac	12 Vac	24 Vac
Rated power VDE (DB cos phi=1)	20 VA	20 VA	20 VA	20 VA	63 VA	63 VA
Rated power VDE (KB cos phi=0.5)	42 VA	42 VA	42 VA	42 VA	110 VA	110 VA
No-load voltage (app. x factor)	1.10	1.10	1.10	1.10	1.10	1.10
Efficiency	81.0 %	81.0 %	81.0 %	81.0 %	84.0 %	84.0 %
Standards						
Classification	Safety isolating transformer	Safety isolating transformer	Isolating transformer	Isolating transformer	Control- and safety isolating transformer	Control- and safety isolating transformer
Approvals						
Approvals	cURus, ENEC 10 (VDE)	cURus, ENEC 10 (VDE)	cURus, ENEC 10 (VDE)	cURus, ENEC 10 (VDE)	cURus, ENEC 10 (VDE)	cURus, ENEC 10 (VDE)
Environment						
Ambient temperature max.	40 °C	40 °C	40 °C	40 °C	40 °C	40 °C
Type of cooling	self-cooling	self-cooling	self-cooling	self-cooling	self-cooling	self-cooling
Safety and protection						
Type	Open type	Open type	Open type	Open type	Open type	Open type
Insulation class	VDE=B, UL=class 105	VDE=B, UL=class 105	VDE=B, UL=class 105	VDE=B, UL=class 105	VDE=B, UL=class 105	VDE=B, UL=class 105
Protection index	IP 00	IP 00	IP 00	IP 00	IP 00	IP 00
Safety class (prepared)	I	I	I	I	I	I
Short circuit strength	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof
PRI Fusing recommendation by circuit breaker with tripping characteristic type 20 x Irated related to set)						
Setting range	0.10 - 0.16 A	0.10 - 0.16 A	0.10 - 0.16 A	0.10 - 0.16 A	0.25 - 0.40 A	0.25 - 0.40 A
Setting value	0.11 A	0.11 A	0.11 A	0.10 A	0.33 A	0.33 A
Order numbers						
Order Number	**ST 20/23/12**	**ST 20/23/24**	**ST 20/23/23**	**ST 20/4/23**	**ST 63/23/12**	**ST 63/23/24**

Control- and safety isolating- resp. isolating transformer
ST

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Electrical data

Typ	ST 63/23/23	ST 63/4/24	ST 63/4/42	ST 63/4/23	ST 63/44/23	ST 63/69/23
Input						
Rated input voltage	230 Vac	400 Vac	400 Vac	400 Vac	440 Vac	690 Vac
Tappings Input	±5 %	±5 %	±5 %	±5 %	±5 %	±5 %
Frequency range	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
Output						
Rated output voltage	230 Vac	24 Vac	42 Vac	230 Vac	230 Vac	230 Vac
Rated power VDE (DB cos phi=1)	63 VA	63 VA	63 VA	63 VA	63 VA	63 VA
Rated power VDE (KB cos phi=0.5)	110 VA	110 VA	110 VA	110 VA	110 VA	110 VA
No-load voltage (app. x factor)	1.10	1.10	1.10	1.10	1.10	1.10
Efficiency	84.0 %	84.0 %	84.0 %	84.0 %	84.0 %	84.0 %
Standards						
Classification	Control- and isolating transformer	Control- and safety isolating transformer	Control- and safety isolating transformer	Control- and isolating transformer	Control- and isolating transformer	Control- and isolating transformer
Approvals						
Approvals	cURus, ENEC 10 (VDE)	cURus, ENEC 10 (VDE)	cURus, ENEC 10 (VDE)	cURus, ENEC 10 (VDE)	cURus, ENEC 10 (VDE)	-
Environment						
Ambient temperature max.	40 °C	40 °C	40 °C	40 °C	40 °C	40 °C
Type of cooling	self-cooling	self-cooling	self-cooling	self-cooling	self-cooling	self-cooling
Safety and protection						
Type	Open type	Open type	Open type	Open type	Open type	Open type
Insulation class	VDE=B, UL=class 105	VDE=B, UL=class 105	VDE=B, UL=class 105	VDE=B, UL=class 105	VDE=B, UL=class 105	B
Protection index	IP 00	IP 00	IP 00	IP 00	IP 00	IP 00
Safety class (prepared)	I	I	I	I	I	I
Short circuit strength	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof
PRI Fusing recommendation by circuit breaker with tripping characteristic type 20 x Irated related to set)						
Setting range	0.25 - 0.40 A	0.16 - 0.25 A	0.16 - 0.25 A	0.16 - 0.25 A	0.16 - 0.25 A	0.10 - 0.16 A
Setting value	0.33 A	0.19 A	0.19 A	0.19 A	0.17 A	0.10 A
Order numbers						
Order Number	**ST 63/23/23**	**ST 63/4/24**	**ST 63/4/42**	**ST 63/4/23**	**ST 63/44/23**	**ST 63/69/23**

Control- and safety isolating- resp. isolating transformer
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Electrical data

Typ	ST 100/23/12	ST 100/23/24	ST 100/23/23	ST 100/4/24	ST 100/4/23	ST 100/69/23
Input						
Rated input voltage	230 Vac	230 Vac	230 Vac	400 Vac	400 Vac	690 Vac
Tappings Input	±5 %	±5 %	±5 %	±5 %	±5 %	±5 %
Frequency range	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
Output						
Rated output voltage	12 Vac	24 Vac	230 Vac	24 Vac	230 Vac	230 Vac
Rated power VDE (DB cos phi=1)	100 VA	100 VA	100 VA	100 VA	100 VA	100 VA
Rated power VDE (KB cos phi=0.5)	225 VA	225 VA	225 VA	225 VA	225 VA	225 VA
No-load voltage (app. x factor)	1.10	1.10	1.10	1.10	1.10	1.10
Efficiency	86.0 %	86.0 %	86.0 %	86.0 %	86.0 %	86.0 %
Standards						
Classification	Control- and safety isolating transformer	Control- and safety isolating transformer	Control- and isolating transformer	Control- and safety isolating transformer	Control- and isolating transformer	Control- and isolating transformer
Approvals						
Approvals	cURus, ENEC 10 (VDE)	cURus, ENEC 10 (VDE)	cURus, ENEC 10 (VDE)	cURus, ENEC 10 (VDE)	cURus, ENEC 10 (VDE)	-
Environment						
Ambient temperature max.	40 °C	40 °C	40 °C	40 °C	40 °C	40 °C
Type of cooling	self-cooling	self-cooling	self-cooling	self-cooling	self-cooling	self-cooling
Safety and protection						
Type	Open type	Open type	Open type	Open type	Open type	Open type
Insulation class	VDE=B, UL=class 105	VDE=B, UL=class 105	VDE=B, UL=class 105	VDE=B, UL=class 105	VDE=B, UL=class 105	B
Protection index	IP 00	IP 00	IP 00	IP 00	IP 00	IP 00
Safety class (prepared)	I	I	I	I	I	I
Short circuit strength	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof
PRI Fusing recommendation by circuit breaker with tripping characteristic type 20 x Irated related to set)						
Setting range	0.40 - 0.63 A	0.40 - 0.63 A	0.40 - 0.63 A	0.25 - 0.40 A	0.25 - 0.40 A	0.15 - 0.25 A
Setting value	0.50 A	0.50 A	0.50 A	0.29 A	0.29 A	0.18 A
Order numbers						
Order Number	**ST 100/23/12**	**ST 100/23/24**	**ST 100/23/23**	**ST 100/4/24**	**ST 100/4/23**	**ST 100/69/23**

Control- and safety isolating- resp. isolating transformer
ST

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Electrical data

Typ	ST 130/23/24	ST 130/23/11	ST 130/4/23	ST 130/69/23	ST 160/23/24	ST 160/23/23
Input						
Rated input voltage	230 Vac	230 Vac	400 Vac	690 Vac	230 Vac	230 Vac
Tappings Input	±5 %	±5 %	±5 %	±5 %	±5 %	±5 %
Frequency range	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
Output						
Rated output voltage	24 Vac	110 Vac	230 Vac	230 Vac	24 Vac	230 Vac
Rated power VDE (DB cos phi=1)	130 VA	130 VA	130 VA	130 VA	160 VA	160 VA
Rated power VDE (KB cos phi=0.5)	300 VA	300 VA	300 VA	300 VA	390 VA	390 VA
No-load voltage (app. x factor)	1.10	1.10	1.10	1.10	1.10	1.09
Efficiency	86.0 %	86.0 %	86.0 %	86.0 %	86.0 %	87.0 %
Standards						
Classification	Control- and safety isolating transformer	Control- and isolating transformer	Control- and isolating transformer	Control- and isolating transformer	Control- and safety isolating transformer	Control- and isolating transformer
Approvals						
Approvals	cURus, ENEC 10 (VDE)	cURus, ENEC 10 (VDE)	cURus, ENEC 10 (VDE)	-	cURus, ENEC 10 (VDE)	cURus, ENEC 10 (VDE)
Environment						
Ambient temperature max.	40 °C	40 °C	40 °C	40 °C	40 °C	40 °C
Type of cooling	self-cooling	self-cooling	self-cooling	self-cooling	self-cooling	self-cooling
Safety and protection						
Type	Open type	Open type	Open type	Open type	Open type	Open type
Insulation class	VDE=B, UL=class 105	VDE=B, UL=class 105	VDE=B, UL=class 105	B	VDE=B, UL=class 105	VDE=B, UL=class 105
Protection index	IP 00	IP 00	IP 00	IP 00	IP 00	IP 00
Safety class (prepared)	I	I	I	I	I	I
Short circuit strength	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof
PRI Fusing recommendation by circuit breaker with tripping characteristic type 20 x Irated related to set)						
Setting range	0.63 - 1.00 A	0.63 - 1.00 A	0.25 - 0.40 A	0.16 - 0.25 A	0.63 - 1.00 A	0.63 - 1.00 A
Setting value	0.64 A	0.64 A	0.37 A	0.23 A	0.78 A	0.78 A
Order numbers						
Order Number	**ST 130/23/24**	**ST 130/23/11**	**ST 130/4/23**	**ST 130/69/23**	**ST 160/23/24**	**ST 160/23/23**

Control- and safety isolating- resp. isolating transformer
ST

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Electrical data

Typ	ST 160/4/24	ST 160/4/23	ST 160/69/23	ST 250/23/12	ST 250/23/24	ST 250/23/42
Input						
Rated input voltage	400 Vac	400 Vac	690 Vac	230 Vac	230 Vac	230 Vac
Tappings Input	±5 %	±5 %	±5 %	±5 %	±5 %	±5 %
Frequency range	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
Output						
Rated output voltage	24 Vac	230 Vac	230 Vac	12 Vac	24 Vac	42 Vac
Rated power VDE (DB cos phi=1)	160 VA	160 VA	160 VA	250 VA	250 VA	250 VA
Rated power VDE (KB cos phi=0.5)	390 VA	390 VA	390 VA	555 VA	555 VA	555 VA
No-load voltage (app. x factor)	1.09	1.09	1.09	1.08	1.08	1.08
Efficiency	87.0 %	87.0 %	87.0 %	90.0 %	90.0 %	90.0 %
Standards						
Classification	Control- and safety isolating transformer	Control- and isolating transformer	Control- and isolating transformer	Control- and safety isolating transformer	Control- and safety isolating transformer	Control- and safety isolating transformer
Approvals						
Approvals	cURus, ENEC 10 (VDE)	cURus, ENEC 10 (VDE)	-	cURus, ENEC 10 (VDE)	cURus, ENEC 10 (VDE)	cURus, ENEC 10 (VDE)
Environment						
Ambient temperature max.	40 °C	40 °C	40 °C	40 °C	40 °C	40 °C
Type of cooling	self-cooling	self-cooling	self-cooling	self-cooling	self-cooling	self-cooling
Safety and protection						
Type	Open type	Open type	Open type	Open type	Open type	Open type
Insulation class	VDE=B, UL=class 105	VDE=B, UL=class 105	B	VDE=B, UL=class 105	VDE=B, UL=class 105	VDE=B, UL=class 105
Protection index	IP 00	IP 00	IP 00	IP 00	IP 00	IP 00
Safety class (prepared)	I	I	I	I	I	I
Short circuit strength	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof
PRI Fusing recommendation by circuit breaker with tripping characteristic type 20 x Irated related to set)						
Setting range	0.40 - 0.63 A	0.40 - 0.63 A	0.25 - 0.40 A	1.00 - 1.60 A	1.00 - 1.60 A	1.00 - 1.60 A
Setting value	0.45 A	0.45 A	0.28 A	1.20 A	1.20 A	1.20 A
Order numbers						
Order Number	**ST 160/4/24**	**ST 160/4/23**	**ST 160/69/23**	**ST 250/23/12**	**ST 250/23/24**	**ST 250/23/42**

Control- and safety isolating- resp. isolating transformer
ST

BLOCK Website

Electrical data

Typ	ST 250/23/23	ST 250/4/23	ST 250/44/23	ST 250/69/23	ST 320/23/24	ST 320/23/23
Input						
Rated input voltage	230 Vac	400 Vac	440 Vac	690 Vac	230 Vac	230 Vac
Tappings Input	±5 %	±5 %	±5 %	±5 %	±5 %	±5 %
Frequency range	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
Output						
Rated output voltage	230 Vac	230 Vac	230 Vac	230 Vac	24 Vac	230 Vac
Rated power VDE (DB cos phi=1)	250 VA	250 VA	250 VA	250 VA	320 VA	320 VA
Rated power VDE (KB cos phi=0.5)	555 VA	555 VA	555 VA	555 VA	810 VA	810 VA
No-load voltage (app. x factor)	1.08	1.08	1.08	1.08	1.06	1.06
Efficiency	90.0 %	90.0 %	90.0 %	90.0 %	91.0 %	91.0 %
Standards						
Classification	Control- and isolating transformer	Control- and isolating transformer	Control- and isolating transformer	Control- and isolating transformer	Control- and safety isolating transformer	Control- and isolating transformer
Approvals						
Approvals	cURus, ENEC 10 (VDE)	cURus, ENEC 10 (VDE)	cURus, ENEC 10 (VDE)	-	cURus, ENEC 10 (VDE)	cURus, ENEC 10 (VDE)
Environment						
Ambient temperature max.	40 °C	40 °C	40 °C	40 °C	40 °C	40 °C
Type of cooling	self-cooling	self-cooling	self-cooling	self-cooling	self-cooling	self-cooling
Safety and protection						
Type	Open type	Open type	Open type	Open type	Open type	Open type
Insulation class	VDE=B, UL=class 105	VDE=B, UL=class 105	VDE=B, UL=class 105	B	VDE=B, UL=class 105	VDE=B, UL=class 105
Protection index	IP 00	IP 00	IP 00	IP 00	IP 00	IP 00
Safety class (prepared)	I	I	I	I	I	I
Short circuit strength	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof
PRI Fusing recommendation by circuit breaker with tripping characteristic type 20 x Irated related to set)						
Setting range	1.00 - 1.60 A	0.63 - 1.00 A	0.63 - 1.00 A	0.40 - 0.63 A	1.00 - 1.60 A	1.00 - 1.60 A
Setting value	1.20 A	0.69 A	0.63 A	0.43 A	1.50 A	1.50 A
Order numbers						
Order Number	**ST 250/23/23**	**ST 250/4/23**	**ST 250/44/23**	**ST 250/69/23**	**ST 320/23/24**	**ST 320/23/23**

Control- and safety isolating- resp. isolating transformer
ST

BLOCK Website

Electrical data

Typ	ST 320/4/23	ST 320/69/23	ST 400/23/24	ST 400/23/23	ST 400/4/24	ST 400/4/23
Input						
Rated input voltage	400 Vac	690 Vac	230 Vac	230 Vac	400 Vac	400 Vac
Tappings Input	±5 %	±5 %	±5 %	±5 %	±5 %	±5 %
Frequency range	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
Output						
Rated output voltage	230 Vac	230 Vac	24 Vac	230 Vac	24 Vac	230 Vac
Rated power VDE (DB cos phi=1)	320 VA	320 VA	400 VA	400 VA	400 VA	400 VA
Rated power VDE (KB cos phi=0.5)	810 VA	810 VA	1.020 VA	1.020 VA	1.020 VA	1.020 VA
No-load voltage (app. x factor)	1.06	1.06	1.06	1.06	1.06	1.06
Efficiency	91.0 %	91.0 %	91.0 %	91.0 %	91.0 %	91.0 %
Standards						
Classification	Control- and isolating transformer	Control- and isolating transformer	Control- and safety isolating transformer	Control- and isolating transformer	Control- and safety isolating transformer	Control- and isolating transformer
Approvals						
Approvals	cURus, ENEC 10 (VDE)	-	cURus, ENEC 10 (VDE)	cURus, ENEC 10 (VDE)	cURus, ENEC 10 (VDE)	cURus, ENEC 10 (VDE)
Environment						
Ambient temperature max.	40 °C	40 °C	40 °C	40 °C	40 °C	40 °C
Type of cooling	self-cooling	self-cooling	self-cooling	self-cooling	self-cooling	self-cooling
Safety and protection						
Type	Open type	Open type	Open type	Open type	Open type	Open type
Insulation class	VDE=B, UL=class 105	B	VDE=B, UL=class 105	VDE=B, UL=class 105	VDE=B, UL=class 105	VDE=B, UL=class 105
Protection index	IP 00	IP 00	IP 00	IP 00	IP 00	IP 00
Safety class (prepared)	I	I	I	I	I	I
Short circuit strength	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof
PRI Fusing recommendation by circuit breaker with tripping characteristic type 20 x Irated related to set)						
Setting range	0.63 - 1.00 A	0.40 - 0.63 A	1.60 - 2.50 A	1.60 - 2.50 A	1.00 - 1.60 A	1.00 - 1.60 A
Setting value	0.88 A	0.55 A	1.90 A	1.90 A	1.10 A	1.10 A
Order numbers						
Order Number	**ST 320/4/23**	**ST 320/69/23**	**ST 400/23/24**	**ST 400/23/23**	**ST 400/4/24**	**ST 400/4/23**

Control- and safety isolating- resp. isolating transformer
ST

BLOCK Website

Electrical data

Typ	ST 400/69/23	ST 500/23/23	ST 500/4/23	ST 500/44/23	ST 500/69/23	ST 630/4/23
Input						
Rated input voltage	690 Vac	230 Vac	400 Vac	440 Vac	690 Vac	400 Vac
Tappings Input	±5 %	±5 %	±5 %	±5 %	±5 %	±5 %
Frequency range	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
Output						
Rated output voltage	230 Vac	230 Vac	230 Vac	230 Vac	230 Vac	230 Vac
Rated power VDE (DB cos phi=1)	400 VA	500 VA	500 VA	500 VA	500 VA	630 VA
Rated power VDE (KB cos phi=0.5)	1.020 VA	1.370 VA	1.370 VA	1.370 VA	1.370 VA	1.540 VA
No-load voltage (app. x factor)	1.06	1.05	1.05	1.05	1.05	1.05
Efficiency	91.0 %	91.0 %	91.0 %	91.0 %	91.0 %	92.0 %
Standards						
Classification	Control- and isolating transformer	Control- and isolating transformer	Control- and isolating transformer	Control- and isolating transformer	Control- and isolating transformer	Control- and isolating transformer
Approvals						
Approvals	-	cURus, ENEC 10 (VDE)	cURus, ENEC 10 (VDE)	cURus, ENEC 10 (VDE)	-	cURus, ENEC 10 (VDE)
Environment						
Ambient temperature max.	40 °C	40 °C	40 °C	40 °C	40 °C	40 °C
Type of cooling	self-cooling	self-cooling	self-cooling	self-cooling	self-cooling	self-cooling
Safety and protection						
Type	Open type	Open type	Open type	Open type	Open type	Open type
Insulation class	B	VDE=B, UL=class 105	VDE=B, UL=class 105	VDE=B, UL=class 105	B	VDE=B, UL=class 105
Protection index	IP 00	IP 00	IP 00	IP 00	IP 00	IP 00
Safety class (prepared)	I	I	I	I	I	I
Short circuit strength	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof
PRI Fusing recommendation by circuit breaker with tripping characteristic type 20 x Irated related to set)						
Setting range	0.63 - 1.00 A	1.60 - 2.50 A	1.00 - 1.60 A	1.00 - 1.60 A	0.63 - 1.00 A	1.60 - 2.50 A
Setting value	0.65 A	2.40 A	1.40 A	1.20 A	0.80 A	1.70 A
Order numbers						
Order Number	**ST 400/69/23**	**ST 500/23/23**	**ST 500/4/23**	**ST 500/44/23**	**ST 500/69/23**	**ST 630/4/23**

Control- and safety isolating- resp. isolating transformer
ST

BLOCK Website

Electrical data

Typ	ST 630/69/23	ST 800/23/23	ST 800/4/23	ST 800/44/23	ST 800/69/23	ST 1000/23/23
Input						
Rated input voltage	690 Vac	230 Vac	400 Vac	440 Vac	690 Vac	230 Vac
Tappings Input	±5 %	±5 %	±5 %	±5 %	±5 %	±5 %
Frequency range	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
Output						
Rated output voltage	230 Vac	230 Vac	230 Vac	230 Vac	230 Vac	230 Vac
Rated power VDE (DB cos phi=1)	630 VA	800 VA	800 VA	800 VA	800 VA	1.000 VA
Rated power VDE (KB cos phi=0.5)	1.540 VA	2.000 VA	2.000 VA	2.000 VA	2.000 VA	3.120 VA
No-load voltage (app. x factor)	1.05	1.04	1.04	1.04	1.04	1.03
Efficiency	92.0 %	92.0 %	92.0 %	92.0 %	92.0 %	94.0 %
Standards						
Classification	Control- and isolating transformer	Control- and isolating transformer	Control- and isolating transformer	Control- and isolating transformer	Control- and isolating transformer	Control- and isolating transformer
Approvals						
Approvals	-	cURus, ENEC 10 (VDE)	cURus, ENEC 10 (VDE)	cURus, ENEC 10 (VDE)	-	cURus, ENEC 10 (VDE)
Environment						
Ambient temperature max.	40 °C	40 °C	40 °C	40 °C	40 °C	40 °C
Type of cooling	self-cooling	self-cooling	self-cooling	self-cooling	self-cooling	self-cooling
Safety and protection						
Type	Open type	Open type	Open type	Open type	Open type	Open type
Insulation class	B	VDE=B, UL=class 105	VDE=B, UL=class 105	VDE=B, UL=class 105	B	VDE=B, UL=class 105
Protection index	IP 00	IP 00	IP 00	IP 00	IP 00	IP 00
Safety class (prepared)	I	I	I	I	I	I
Short circuit strength	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof
PRI Fusing recommendation by circuit breaker with tripping characteristic type 20 x Irated related to set)						
Setting range	1.00 - 1.60 A	2.50 - 4.00 A	1.60 - 2.50 A	1.60 - 2.50 A	1.00 - 1.60 A	4.00 - 6.30 A
Setting value	1.00 A	3.70 A	2.10 A	2.00 A	1.24 A	4.60 A
Order numbers						
Order Number	**ST 630/69/23**	**ST 800/23/23**	**ST 800/4/23**	**ST 800/44/23**	**ST 800/69/23**	**ST 1000/23/23**

Control- and safety isolating- resp. isolating transformer
ST

BLOCK Website

Electrical data

Typ	ST 1000/4/23	ST 1000/44/23	ST 1000/5/23	ST 1000/69/23	ST 1600/4/23	ST 1600/69/23
Input						
Rated input voltage	400 Vac	440 Vac	500 Vac	690 Vac	400 Vac	690 Vac
Tappings Input	±5 %	±5 %	±5 %	±5 %	±5 %	±5 %
Frequency range	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
Output						
Rated output voltage	230 Vac	230 Vac	230 Vac	230 Vac	230 Vac	230 Vac
Rated power VDE (DB cos phi=1)	1.000 VA	1.000 VA	1.000 VA	1.000 VA	1.600 VA	1.600 VA
Rated power VDE (KB cos phi=0.5)	3.120 VA	3.120 VA	3.120 VA	3.120 VA	7.800 VA	7.800 VA
No-load voltage (app. x factor)	1.03	1.03	1.03	1.03	1.03	1.03
Efficiency	94.0 %	94.0 %	94.0 %	94.0 %	94.0 %	94.0 %
Standards						
Classification	Control- and isolating transformer	Control- and isolating transformer	Control- and isolating transformer	Control- and isolating transformer	Control- and isolating transformer	Control- and isolating transformer
Approvals						
Approvals	cURus, ENEC 10 (VDE)	cURus, ENEC 10 (VDE)	cURus, ENEC 10 (VDE)	-	cURus, ENEC 10 (VDE)	-
Environment						
Ambient temperature max.	40 °C	40 °C	40 °C	40 °C	40 °C	40 °C
Type of cooling	self-cooling	self-cooling	self-cooling	self-cooling	self-cooling	self-cooling
Safety and protection						
Type	Open type	Open type	Open type	Open type	Open type	Open type
Insulation class	VDE=B, UL=class 105	VDE=B, UL=class 105	VDE=B, UL=class 105	B	VDE=B, UL=class 130	B
Protection index	IP 00	IP 00	IP 00	IP 00	IP 00	IP 00
Safety class (prepared)	I	I	I	I	I	I
Short circuit strength	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof
PRI Fusing recommendation by circuit breaker with tripping characteristic type 20 x Irated related to set)						
Setting range	2.50 - 4.00 A	1.60 - 2.50 A	1.60 - 2.50 A	1.60 - 2.50 A	4.00 - 6.30 A	1.60 - 2.50 A
Setting value	2.70 A	2.40 A	2.20 A	1.60 A	4.30 A	2.50 A
Order numbers						
Order Number	**ST 1000/4/23**	**ST 1000/44/23**	**ST 1000/5/23**	**ST 1000/69/23**	**ST 1600/4/23**	**ST 1600/69/23**

Control- and safety isolating- resp. isolating transformer
ST

BLOCK Website

Electrical data

Typ	ST 2000/4/23	ST 2000/69/23	ST 2500/4/23	ST 2500/69/23
Input				
Rated input voltage	400 Vac	690 Vac	400 Vac	690 Vac
Tappings Input	±5 %	±5 %	±5 %	±5 %
Frequency range	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
Output				
Rated output voltage	230 Vac	230 Vac	230 Vac	230 Vac
Rated power VDE (DB cos phi=1)	2.000 VA	2.000 VA	2.500 VA	2.500 VA
Rated power VDE (KB cos phi=0.5)	10.900 VA	10.900 VA	12.400 VA	12.400 VA
No-load voltage (app. x factor)	1.03	1.03	1.03	1.03
Efficiency	96.0 %	96.0 %	96.0 %	96.0 %
Standards				
Classification	Control- and isolating transformer	Control- and isolating transformer	Control- and isolating transformer	Control- and isolating transformer
Approvals				
Approvals	cURus, ENEC 10 (VDE)	-	cURus, ENEC 10 (VDE)	-
Environment				
Ambient temperature max.	40 °C	40 °C	40 °C	40 °C
Type of cooling	self-cooling	self-cooling	self-cooling	self-cooling
Safety and protection				
Type	Open type	Open type	Open type	Open type
Insulation class	VDE=B, UL=class 130	B	VDE=B, UL=class 130	B
Protection index	IP 00	IP 00	IP 00	IP 00
Safety class (prepared)	I	I	I	I
Short circuit strength	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof
PRI Fusing recommendation by circuit breaker with tripping characteristic type 20 x Irated related to set)				
Setting range	4.00 - 6.30 A	2.50 - 4.00 A	6.30 - 10.00 A	4,00 - 6,30 A
Setting value	5.30 A	3.00 A	6.50 A	4.00 A
Order numbers				
Order Number	**ST 2000/4/23**	**ST 2000/69/23**	**ST 2500/4/23**	**ST 2500/69/23**

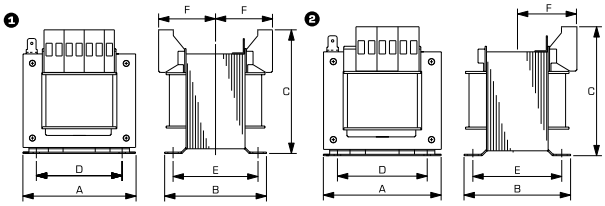
Control- and safety isolating- resp. isolating transformer
ST

BLOCK Website

Mechanical data 30

Typ	Terminals	Fixing method	Fixing screws	Weight	Dimension picture (in mm)	A	B	C	D	E	F
ST 20/23/12	Screw-type terminals, PE 6.3 x 0.8	Base plate	M4	0.70 kg	1	66	56	81	50	44.5	42
ST 20/23/24	Screw-type terminals, PE 6.3 x 0.8	Base plate	M4	0.70 kg	1	66	56	81	50	44.5	42
ST 20/23/23	Screw-type terminals, PE 6.3 x 0.8	Base plate	M4	0.70 kg	1	66	56	81	50	44.5	42
ST 20/4/23	Screw-type terminals, PE 6.3 x 0.8	Base plate	M4	0.70 kg	1	66	56	81	50	44.5	42
ST 63/23/12	Screw-type terminals, PE 6.3 x 0.8	Base plate	M4	1.10 kg	1	78	60	89	56	48.5	44
ST 63/23/24	Screw-type terminals, PE 6.3 x 0.8	Base plate	M4	1.10 kg	1	78	60	89	56	48.5	44
ST 63/23/23	Screw-type terminals, PE 6.3 x 0.8	Base plate	M4	1.10 kg	1	78	60	89	56	48.5	44
ST 63/4/24	Screw-type terminals, PE 6.3 x 0.8	Base plate	M4	1.10 kg	1	78	60	89	56	48.5	44
ST 63/4/42	Screw-type terminals, PE 6.3 x 0.8	Base plate	M4	1.10 kg	1	78	60	89	56	48.5	44
ST 63/4/23	Screw-type terminals, PE 6.3 x 0.8	Base plate	M4	1.10 kg	1	78	60	89	56	48.5	44
ST 63/44/23	Screw-type terminals, PE 6.3 x 0.8	Base plate	M4	1.10 kg	1	78	60	89	56	48.5	44
ST 63/69/23	Screw-type terminals, PE 6.3 x 0.8	Base plate	M4	1.10 kg	1	78	60	89	56	48.5	44
ST 100/23/12	Screw-type terminals, PE 6.3 x 0.8	Base plate	M4	2.00 kg	2	84	76	95	64	63.5	53
ST 100/23/24	Screw-type terminals, PE 6.3 x 0.8	Base plate	M4	2.00 kg	2	84	76	95	64	63.5	53
ST 100/23/23	Screw-type terminals, PE 6.3 x 0.8	Base plate	M4	2.00 kg	2	84	76	95	64	63.5	53
ST 100/4/24	Screw-type terminals, PE 6.3 x 0.8	Base plate	M4	2.00 kg	2	84	76	95	64	63.5	53
ST 100/4/23	Screw-type terminals, PE 6.3 x 0.8	Base plate	M4	2.00 kg	2	84	76	95	64	63.5	53
ST 100/69/23	Screw-type terminals, PE 6.3 x 0.8	Base plate	M4	2.00 kg	1	84	87	91	64	63.5	53
ST 130/23/24	Screw-type terminals, PE 6.3 x 0.8	Base plate	M5	2.30 kg	2	96	78	105	84	63.5	48
ST 130/23/11	Screw-type terminals, PE 6.3 x 0.8	Base plate	M5	2.30 kg	2	96	78	105	84	63.5	48
ST 130/4/23	Screw-type terminals, PE 6.3 x 0.8	Base plate	M5	2.30 kg	2	96	78	105	84	63.5	48
ST 130/69/23	Screw-type terminals, PE 6.3 x 0.8	Base plate	M5	2.30 kg	2	96	78	105	84	63.5	48
ST 160/23/24	Screw-type terminals, PE 6.3 x 0.8	Base plate	M5	2.80 kg	2	96	88	103	84	73	53
ST 160/23/23	Screw-type terminals, PE 6.3 x 0.8	Base plate	M5	2.80 kg	2	96	88	103	84	73	53
ST 160/4/24	Screw-type terminals, PE 6.3 x 0.8	Base plate	M5	2.80 kg	2	96	88	103	84	73	53
ST 160/4/23	Screw-type terminals, PE 6.3 x 0.8	Base plate	M5	2.80 kg	2	96	88	103	84	73	53
ST 160/69/23	Screw-type terminals, PE 6.3 x 0.8	Base plate	M5	2.80 kg	2	96	88	103	84	73	53
ST 250/23/12	Screw-type terminals, PE 6.3 x 0.8	Base plate	M5	3.50 kg	2	96	103	105	84	86.5	61
ST 250/23/24	Screw-type terminals, PE 6.3 x 0.8	Base plate	M5	3.50 kg	2	96	103	105	84	86.5	61
ST 250/23/42	Screw-type terminals, PE 6.3 x 0.8	Base plate	M5	3.50 kg	2	96	103	105	84	86.5	61
ST 250/23/23	Screw-type terminals, PE 6.3 x 0.8	Base plate	M5	3.50 kg	2	96	103	105	84	86.5	61
ST 250/4/23	Screw-type terminals, PE 6.3 x 0.8	Base plate	M5	3.50 kg	2	96	103	105	84	86.5	61
ST 250/44/23	Screw-type terminals, PE 6.3 x 0.8	Base plate	M5	3.50 kg	2	96	103	105	84	86.5	61
ST 250/69/23	Screw-type terminals, PE 6.3 x 0.8	Base plate	M5	3.50 kg	2	96	103	105	84	86.5	61
ST 320/23/24	Screw-type terminals, PE 6.3 x 0.8	Base plate	M5	4.30 kg	2	105	103	114	80	83	61
ST 320/23/23	Screw-type terminals, PE 6.3 x 0.8	Base plate	M5	4.30 kg	2	105	103	114	80	83	61
ST 320/4/23	Screw-type terminals, PE 6.3 x 0.8	Base plate	M5	4.30 kg	2	105	103	114	80	83	61
ST 320/69/23	Screw-type terminals, PE 6.3 x 0.8	Base plate	M5	4.30 kg	2	105	103	114	80	83	61
ST 400/23/24	Screw-type terminals, PE 6.3 x 0.8	Base plate	M5	5.00 kg	2	120	110	123	90	85	57
ST 400/23/23	Screw-type terminals, PE 6.3 x 0.8	Base plate	M5	5.00 kg	2	120	110	123	90	85	57
ST 400/4/24	Screw-type terminals, PE 6.3 x 0.8	Base plate	M5	5.00 kg	2	120	110	123	90	85	57
ST 400/4/23	Screw-type terminals, PE 6.3 x 0.8	Base plate	M5	5.00 kg	2	120	110	123	90	85	57
ST 400/69/23	Screw-type terminals, PE 6.3 x 0.8	Base plate	M5	5.00 kg	2	120	102	123	90	85	57
ST 500/23/23	Screw-type terminals, PE 6.3 x 0.8	Base plate	M5	6.60 kg	2	120	122	123	90	104	68
ST 500/4/23	Screw-type terminals, PE 6.3 x 0.8	Base plate	M5	6.60 kg	2	120	122	123	90	104	68
ST 500/44/23	Screw-type terminals, PE 6.3 x 0.8	Base plate	M5	6.60 kg	2	120	122	123	90	104	68
ST 500/69/23	Screw-type terminals, PE 6.3 x 0.8	Base plate	M5	6.60 kg	2	120	122	123	90	104	68

Dimension pictures



Control- and safety isolating- resp. isolating transformer
ST

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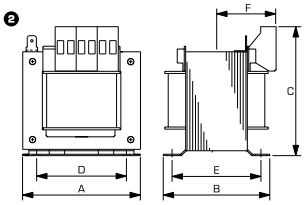
Mechanical data

Typ	Terminals	Fixing method	Fixing screws	Weight	Dimension picture (in mm)	A	B	C	D	E	F
ST 630/4/23	Screw-type terminals, PE 6.3 x 0.8	Base plate	M6	7.70 kg	2	150	111	148	122	90	56
ST 630/69/23	Screw-type terminals, PE 6.3 x 0.8	Base plate	M6	7.70 kg	2	150	111	148	122	90	56
ST 800/23/23	Screw-type terminals, PE 6.3 x 0.8	Base plate	M6	9.80 kg	2	150	128	148	122	106	63
ST 800/4/23	Screw-type terminals, PE 6.3 x 0.8	Base plate	M6	9.80 kg	2	150	128	148	122	106	63
ST 800/44/23	Screw-type terminals, PE 6.3 x 0.8	Base plate	M6	9.80 kg	2	150	128	148	122	106	63
ST 800/69/23	Screw-type terminals, PE 6.3 x 0.8	Base plate	M6	9.80 kg	2	150	128	148	122	106	63
ST 1000/23/23	Screw-type terminals, PE 6.3 x 0.8	Base plate	M6	13.10 kg	2	150	154	148	122	130	77
ST 1000/4/23	Screw-type terminals, PE 6.3 x 0.8	Base plate	M6	13.10 kg	2	150	154	148	122	130	77
ST 1000/44/23	Screw-type terminals, PE 6.3 x 0.8	Base plate	M6	13.10 kg	2	150	154	148	122	130	77
ST 1000/5/23	Screw-type terminals, PE 6.3 x 0.8	Base plate	M6	13.10 kg	2	150	154	148	122	130	77
ST 1000/69/23	Screw-type terminals, PE 6.3 x 0.8	Base plate	M6	13.10 kg	2	150	154	148	122	130	77
ST 1600/4/23	Screw-type terminals, PE 6.3 x 0.8	Base plate	M8	16.80 kg	2	192	146	182	156	119	65
ST 1600/69/23	Screw-type terminals, PE 6.3 x 0.8	Base plate	M8	16.80 kg	2	192	146	182	156	119	65
ST 2000/4/23	Screw-type terminals, PE 6.3 x 0.8	Base plate	M8	21.00 kg	2	192	162	182	156	135	73
ST 2000/69/23	Screw-type terminals, PE 6.3 x 0.8	Base plate	M8	21.00 kg	2	192	162	182	156	135	73
ST 2500/4/23	Screw-type terminals, PE 6.3 x 0.8	Base plate	M8	25.50 kg	2	192	185	185	156	157	84
ST 2500/69/23	Screw-type terminals, PE 6.3 x 0.8	Base plate	M4	25.50 kg	2	192	185	185	156	157	84

Dimension pictures

2



Universal control- and safety isolating- resp. isolating transformer
STU

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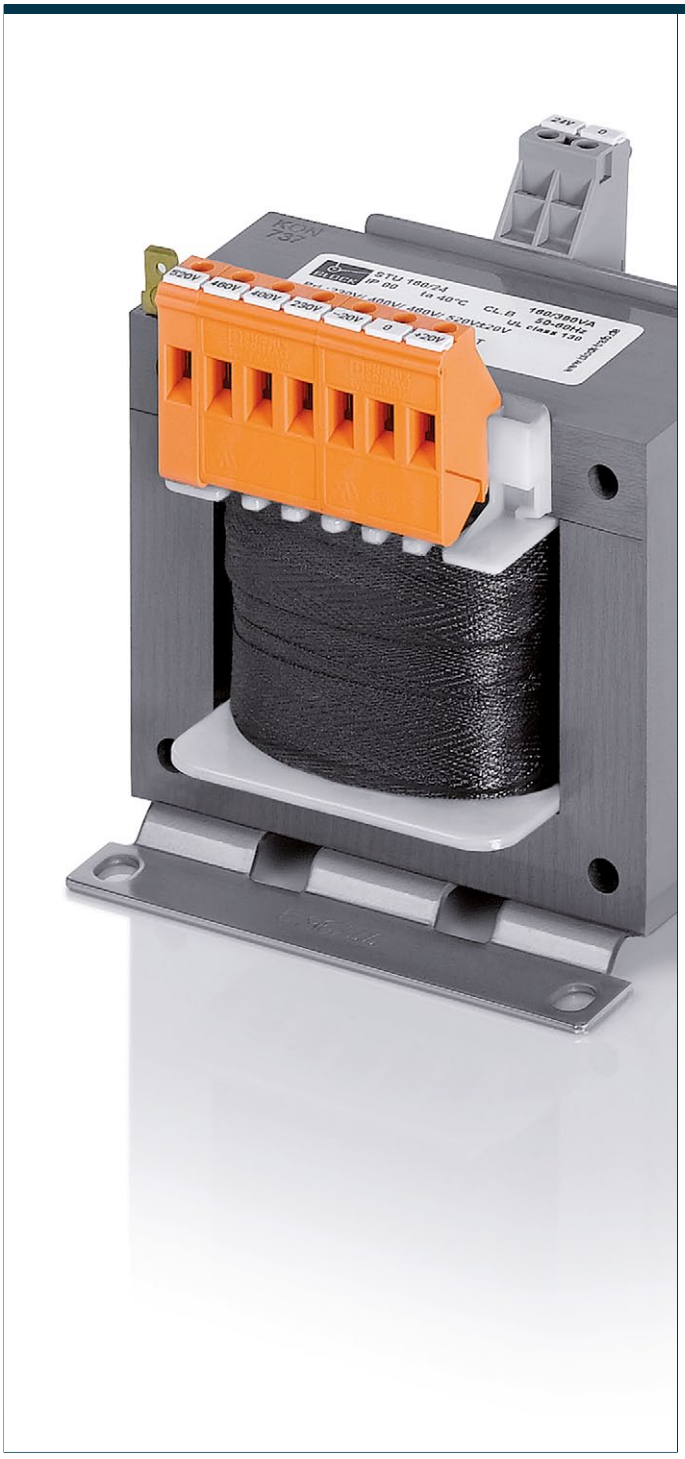


General Data

Rated input voltage 210 - 540 Vac
Rated output voltage 24 - 230 Vac
Rated power 63 - 2500 VA
Insulation class B
Maximum ambient temperature 40 °C
Efficiency up to 95 %
Degree of protection IP 00

Advantages

Universal input voltages 210 to 540 Vac
Very good switch-on behaviour thanks to reduced starting currents
High performance for the volume thanks to compact design
Very good corrosion protection and low noise thanks to vacuum impregnation
Contact protected screw connection terminals complying with UVV BGV A3
Simple mounting thanks to robust metal footplate with oval slots

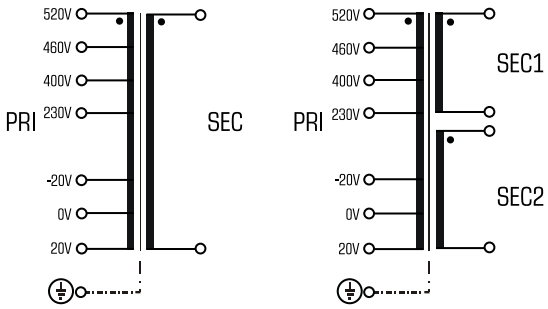
Applications

As a control transformer for the electrical isolation of the input and output sides.The construction of the transformer to supply control systems according to VDE 0113 is designed.

As an isolating transformer for the safe electrical isolation of the input and output sides. The transformer may be used to set up protective separation as a protective measure in accordance with VDE 0100.

As a safety isolating transformer for the safe electrical isolation of the input and output sides. The transformer is suitable for creating SELV and PELV circuits because of the limit on the output voltage.

Sample application



Standards

Control transformer
to: VDE 0570 Teil 2-2, DIN EN 61558-2-2, EN 61558-2-2, IEC 61558-2-2, UL 5085-1/-2, CSA 22.2 No.66

Safety isolating transformer
to: VDE 0570 Teil 2-6, DIN EN 61558-2-6, EN 61558-2-6, IEC 61558-2-6, UL 5085-1/-2, CSA 22.2 No.66

Isolating transformer
to: VDE 0570 Part2-4, DIN EN 61558-2-4, EN 61558-2-4, IEC 61558-2-4, UL 5085-1/-2, CSA 22.2 No.66

Approvals

ENEC 10 (VDE), UL 5085-1/-2, CSA 22.2 No.66

Universal control- and safety isolating-resp. isolating transformer
STU

BLOCK Website

Electrical data

Typ	STU 63/24	STU 63/2x115	STU 100/24	STU 100/2x115	STU 130/24	STU 130/2x115
Input						
Rated input voltage	210 Vac/230 Vac/250 Vac 380 Vac/400 Vac/420 Vac 440 Vac/460 Vac/480 Vac 500 Vac/520 Vac/540 Vac	210 Vac/230 Vac/250 Vac 380 Vac/400 Vac/420 Vac 440 Vac/460 Vac/480 Vac 500 Vac/520 Vac/540 Vac	210 Vac/230 Vac/250 Vac 380 Vac/400 Vac/420 Vac 440 Vac/460 Vac/480 Vac 500 Vac/520 Vac/540 Vac	210 Vac/230 Vac/250 Vac 380 Vac/400 Vac/420 Vac 440 Vac/460 Vac/480 Vac 500 Vac/520 Vac/540 Vac	210 Vac/230 Vac/250 Vac 380 Vac/400 Vac/420 Vac 440 Vac/460 Vac/480 Vac 500 Vac/520 Vac/540 Vac	210 Vac/230 Vac/250 Vac 380 Vac/400 Vac/420 Vac 440 Vac/460 Vac/480 Vac 500 Vac/520 Vac/540 Vac
Frequency range	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
Output						
Rated output voltage	24 Vac	2x115 Vac	24 Vac	2x115 Vac	24 Vac	2x115 Vac
Rated power VDE (DB cos phi=1)	63 VA	63 VA	100 VA	100 VA	130 VA	130 VA
Rated power VDE (KB cos phi=0.5)	110 VA	110 VA	225 VA	225 VA	300 VA	300 VA
No-load voltage (app. x factor)	1.10	1.10	1.10	1.10	1.10	1.10
Efficiency	84.0 %	84.0 %	86.0 %	86.0 %	86.0 %	86.0 %
Standards						
Classification	Control- and safety isolating transformer	Control- and isolating transformer	Control- and safety isolating transformer	Control- and isolating transformer	Control- and safety isolating transformer	Control- and isolating transformer
Approvals						
Approvals	cURus, ENEC 10 (VDE)	cURus, ENEC 10 (VDE)	cURus, ENEC 10 (VDE)	cURus, ENEC 10 (VDE)	cURus, ENEC 10 (VDE)	cURus, ENEC 10 (VDE)
Environment						
Ambient temperature max.	40 °C	40 °C	40 °C	40 °C	40 °C	40 °C
Type of cooling	self-cooling	self-cooling	self-cooling	self-cooling	self-cooling	self-cooling
Safety and protection						
Type	Open type	Open type	Open type	Open type	Open type	Open type
Insulation class	VDE=B, UL=class 105	VDE=B, UL=class 105	VDE=B, UL=class 105	VDE=B, UL=class 105	VDE=B, UL=class 105	VDE=B, UL=class 105
Protection index	IP 00	IP 00	IP 00	IP 00	IP 00	IP 00
Safety class (prepared)	I	I	I	I	I	I
Short circuit strength	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof
PRI Fusing recommendation by circuit breaker with tripping characteristic type 20 x Irated related to set)						
Setting range 230 ±20 Vac	0.25 - 0.40 A	0.25 - 0.40 A	0.40 - 0.63 A	0.40 - 0.63 A	0.63 - 1.00 A	0.63 - 1.00 A
Setting value 230 ±20 Vac	0.30 A	0.30 A	0.53 A	0.53 A	0.66 A	0.66 A
Setting range 400 ±20 Vac	0.16 - 0.25 A	0.16 - 0.25 A	0.25 - 0.40 A	0.25 - 0.40 A	0.40 - 0.63 A	0.25 - 0.40 A
Setting value 400 ±20 Vac	0.20 A	0.20 A	0.31 A	0.31 A	0.38 A	0.38 A
Setting range 460 ±20 Vac	0.16 - 0.25 A	0.16 - 0.25 A	0.25 - 0.40 A	0.25 - 0.40 A	0.25 - 0.40 A	0.25 - 0.40 A
Setting value 460 ±20 Vac	0.17 A	0.17 A	0.27 A	0.27 A	0.33 A	0.33 A
Setting range 520 ±20 Vac	0.10 - 0.16 A	0.10 - 0.16 A	0.16 - 0.25 A	0.16 - 0.25 A	0.25 - 0.40 A	0.25 - 0.40 A
Setting value 520 ±20 Vac	0.15 A	0.15 A	0.24 A	0.24 A	0.30 A	0.30 A
Order numbers						
Order Number	**STU 63/24**	**STU 63/2x115**	**STU 100/24**	**STU 100/2x115**	**STU 130/24**	**STU 130/2x115**

1.1
1.2
1.3
2.1
2.2
3.1
3.2
3.3
4.0
5.1
5.2

Universal control- and safety isolating-resp. isolating transformer
STU

Electrical data

Typ	STU 160/24	STU 160/2x115	STU 250/24	STU 250/2x115	STU 400/24	STU 400/2x115
Input						
Rated input voltage	210 Vac/230 Vac/250 Vac 380 Vac/400 Vac/420 Vac 440 Vac/460 Vac/480 Vac 500 Vac/520 Vac/540 Vac	210 Vac/230 Vac/250 Vac 380 Vac/400 Vac/420 Vac 440 Vac/460 Vac/480 Vac 500 Vac/520 Vac/540 Vac	210 Vac/230 Vac/250 Vac 380 Vac/400 Vac/420 Vac 440 Vac/460 Vac/480 Vac 500 Vac/520 Vac/540 Vac	210 Vac/230 Vac/250 Vac 380 Vac/400 Vac/420 Vac 440 Vac/460 Vac/480 Vac 500 Vac/520 Vac/540 Vac	210 Vac/230 Vac/250 Vac 380 Vac/400 Vac/420 Vac 440 Vac/460 Vac/480 Vac 500 Vac/520 Vac/540 Vac	210 Vac/230 Vac/250 Vac 380 Vac/400 Vac/420 Vac 440 Vac/460 Vac/480 Vac 500 Vac/520 Vac/540 Vac
Frequency range	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
Output						
Rated output voltage	24 Vac	2x115 Vac	24 Vac	2x115 Vac	24 Vac	2x115 Vac
Rated power VDE (DB cos phi=1)	160 VA	160 VA	250 VA	250 VA	400 VA	400 VA
Rated power VDE (KB cos phi=0.5)	390 VA	390 VA	555 VA	555 VA	1.020 VA	1.020 VA
No-load voltage (app. x factor)	1.09	1.09	1.08	1.08	1.06	1.06
Efficiency	87.0 %	87.0 %	90.0 %	90.0 %	91.0 %	91.0 %
Standards						
Classification	Control- and safety isolating transformer	Control- and isolating transformer	Control- and safety isolating transformer	Control- and isolating transformer	Control- and safety isolating transformer	Control- and isolating transformer
Approvals						
Approvals	cURus, ENEC 10 (VDE)	cURus, ENEC 10 (VDE)	cURus, ENEC 10 (VDE)	cURus, ENEC 10 (VDE)	cURus, ENEC 10 (VDE)	cURus, ENEC 10 (VDE)
Environment						
Ambient temperature max.	40 °C	40 °C	40 °C	40 °C	40 °C	40 °C
Type of cooling	self-cooling	self-cooling	self-cooling	self-cooling	self-cooling	self-cooling
Safety and protection						
Type	Open type	Open type	Open type	Open type	Open type	Open type
Insulation class	VDE=B, UL=class 105	VDE=B, UL=class 105	VDE=B, UL=class 105	VDE=B, UL=class 105	VDE=B, UL=class 105	VDE=B, UL=class 105
Protection index	IP 00	IP 00	IP 00	IP 00	IP 00	IP 00
Safety class (prepared)	I	I	I	I	I	I
Short circuit strength	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof
PRI Fusing recommendation by circuit breaker with tripping characteristic type 20 x Irated related to set)						
Setting range 230 ±20 Vac	0.63 - 1.00 A	0.63 - 1.00 A	1.00 - 1.60 A	1.00 - 1.60 A	1.60 - 2.50 A	1.60 - 2.50 A
Setting value 230 ±20 Vac	0.80 A	0.80 A	1.20 A	1.20 A	1.90 A	1.90 A
Setting range 400 ±20 Vac	0.40 - 0.63 A	0.40 - 0.63 A	0.63 - 1.00 A	0.63 - 1.00 A	1.00 - 1.60 A	1.00 - 1.60 A
Setting value 400 ±20 Vac	0.50 A	0.50 A	0.70 A	0.70 A	1.10 A	1.10 A
Setting range 460 ±20 Vac	0.40 - 0.63 A	0.40 - 0.63 A	0.40 - 0.63 A	0.40 - 0.63 A	1.00 - 1.60 A	1.00 - 1.60 A
Setting value 460 ±20 Vac	0.40 A	0.40 A	0.60 A	0.60 A	1.00 A	1.00 A
Setting range 520 ±20 Vac	0.25 - 0.40 A	0.25 - 0.40 A	0.40 - 0.63 A	0.40 - 0.63 A	0.63 - 1.00 A	0.63 - 1.00 A
Setting value 520 ±20 Vac	0.30 A	0.30 A	0.50 A	0.50 A	0.90 A	0.90 A
Order numbers						
Order Number	**STU 160/24**	**STU 160/2x115**	**STU 250/24**	**STU 250/2x115**	**STU 400/24**	**STU 400/2x115**

Universal control- and safety isolating-resp. isolating transformer
STU

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Electrical data

Typ	STU 500/24	STU 500/2x115	STU 630/24	STU 630/2x115	STU 800/24	STU 800/2x115
Input						
Rated input voltage	210 Vac/230 Vac/250 Vac 380 Vac/400 Vac/420 Vac 440 Vac/460 Vac/480 Vac 500 Vac/520 Vac/540 Vac	210 Vac/230 Vac/250 Vac 380 Vac/400 Vac/420 Vac 440 Vac/460 Vac/480 Vac 500 Vac/520 Vac/540 Vac	210 Vac/230 Vac/250 Vac 380 Vac/400 Vac/420 Vac 440 Vac/460 Vac/480 Vac 500 Vac/520 Vac/540 Vac	210 Vac/230 Vac/250 Vac 380 Vac/400 Vac/420 Vac 440 Vac/460 Vac/480 Vac 500 Vac/520 Vac/540 Vac	210 Vac/230 Vac/250 Vac 380 Vac/400 Vac/420 Vac 440 Vac/460 Vac/480 Vac 500 Vac/520 Vac/540 Vac	210 Vac/230 Vac/250 Vac 380 Vac/400 Vac/420 Vac 440 Vac/460 Vac/480 Vac 500 Vac/520 Vac/540 Vac
Frequency range	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
Output						
Rated output voltage	24 Vac	2x115 Vac	24 Vac	2x115 Vac	24 Vac	2x115 Vac
Rated power VDE (DB cos phi=1)	500 VA	500 VA	630 VA	630 VA	800 VA	800 VA
Rated power VDE (KB cos phi=0.5)	1.370 VA	1.370 VA	1.540 VA	1.540 VA	2.000 VA	2.000 VA
No-load voltage (app. x factor)	1.05	1.05	1.05	1.05	1.04	1.04
Efficiency	91.0 %	91.0 %	92.0 %	92.0 %	92.0 %	92.0 %
Standards						
Classification	Control- and safety isolating transformer	Control- and isolating transformer	Control- and safety isolating transformer	Control- and isolating transformer	Control- and safety isolating transformer	Control- and isolating transformer
Approvals						
Approvals	cURus, ENEC 10 (VDE)	cURus, ENEC 10 (VDE)	cURus, ENEC 10 (VDE)	cURus, ENEC 10 (VDE)	cURus, ENEC 10 (VDE)	cURus, ENEC 10 (VDE)
Environment						
Ambient temperature max.	40 °C	40 °C	40 °C	40 °C	40 °C	40 °C
Type of cooling	self-cooling	self-cooling	self-cooling	self-cooling	self-cooling	self-cooling
Safety and protection						
Type	Open type	Open type	Open type	Open type	Open type	Open type
Insulation class	VDE=B, UL=class 105	VDE=B, UL=class 105	VDE=B, UL=class 105	VDE=B, UL=class 105	VDE=B, UL=class 105	VDE=B, UL=class 105
Protection index	IP 00	IP 00	IP 00	IP 00	IP 00	IP 00
Safety class (prepared)	I	I	I	I	I	I
Short circuit strength	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof
PRI Fusing recommendation by circuit breaker with tripping characteristic type 20 x Irated related to set)						
Setting range 230 ±20 Vac	1.60 - 2.50 A	1.60 - 2.50 A	2.50 - 4.00 A	2.50 - 4.00 A	2.50 - 4.00 A	2.50 - 4.00 A
Setting value 230 ±20 Vac	2.30 A	2.30 A	3.00 A	3.00 A	3.70 A	3.70 A
Setting range 400 ±20 Vac	1.00 - 1.60 A	1.00 - 1.60 A	1.60 - 2.50 A	1.60 - 2.50 A	1.60 - 2.50 A	1.60 - 2.50 A
Setting value 400 ±20 Vac	1.40 A	1.40 A	1.70 A	1.70 A	2.10 A	2.10 A
Setting range 460 ±20 Vac	1.00 - 1.60 A	1.00 - 1.60 A	1.00 - 1.60 A	1.00 - 1.60 A	1.60 - 2.50 A	1.60 - 2.50 A
Setting value 460 ±20 Vac	1.20 A	1.20 A	1.50 A	1.50 A	1.70 A	1.70 A
Setting range 520 ±20 Vac	1.00 - 1.60 A	1.00 - 1.60 A	1.00 - 1.60 A	1.00 - 1.60 A	1.60 - 2.50 A	1.60 - 2.50 A
Setting value 520 ±20 Vac	1.00 A	1.00 A	1.30 A	1.30 A	1.60 A	1.60 A
Order numbers						
Order Number	**STU 500/24**	**STU 500/2x115**	**STU 630/24**	**STU 630/2x115**	**STU 800/24**	**STU 800/2x115**

Universal control- and safety isolating-resp. isolating transformer
STU

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Electrical data

Typ	STU 1000/2x115	STU 1600/2x115	STU 2000/2x115	STU 2500/2x115
Input				
Rated input voltage	210 Vac/230 Vac/250 Vac 380 Vac/400 Vac/420 Vac 440 Vac/460 Vac/480 Vac 500 Vac/520 Vac/540 Vac	210 Vac/230 Vac/250 Vac 380 Vac/400 Vac/420 Vac 440 Vac/460 Vac/480 Vac 500 Vac/520 Vac/540 Vac	210 Vac/230 Vac/250 Vac 380 Vac/400 Vac/420 Vac 440 Vac/460 Vac/480 Vac 500 Vac/520 Vac/540 Vac	210 Vac/230 Vac/250 Vac 380 Vac/400 Vac/420 Vac 440 Vac/460 Vac/480 Vac 500 Vac/520 Vac/540 Vac
Frequency range	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
Output				
Rated output voltage	2x115 Vac	2x115 Vac	2x115 Vac	2x115 Vac
Rated power VDE (DB cos phi=1)	1.000 VA	1.600 VA	2.000 VA	2.500 VA
Rated power VDE (KB cos phi=0.5)	3.120 VA	3.800 VA	5.770 VA	6.200 VA
No-load voltage (app. x factor)	1.03	1.03	1.02	1.02
Efficiency	94.0 %	94.0 %	95.0 %	95.0 %
Standards				
Classification	Control- and isolating transformer	Control- and isolating transformer	Control- and isolating transformer	Control- and isolating transformer
Approvals				
Approvals	cURus, ENEC 10 (VDE)	cURus, ENEC 10 (VDE)	cURus, ENEC 10 (VDE)	cURus, ENEC 10 (VDE)
Environment				
Ambient temperature max.	40 °C	40 °C	40 °C	40 °C
Type of cooling	self-cooling	self-cooling	self-cooling	self-cooling
Safety and protection				
Type	Open type	Open type	Open type	Open type
Insulation class	VDE=B, UL=class 105	VDE=B, UL=class 105	VDE=B, UL=class 105	VDE=B, UL=class 105
Protection index	IP 00	IP 00	IP 00	IP 00
Safety class (prepared)	I	I	I	I
Short circuit strength	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof
PRI Fusing recommendation by circuit breaker with tripping characteristic type 20 x Irated related to set)				
Setting range 230 ±20 Vac	4.00 - 6.30 A	6.30 - 10.00 A	8.00 - 12.00 A	10.00 - 16.00 A
Setting value 230 ±20 Vac	4.60 A	7.30 A	9.10 A	11.20 A
Setting range 400 ±20 Vac	2.50 - 4.00 A	4.00 - 6.30 A	4.00 - 6.30 A	6.30 - 10.00 A
Setting value 400 ±20 Vac	2.60 A	4.20 A	5.20 A	6.50 A
Setting range 460 ±20 Vac	1.60 - 2.50 A	2.50 - 4.00 A	4.00 - 6.30 A	4.00 - 6.30 A
Setting value 460 ±20 Vac	2.30 A	3.70 A	4.50 A	5.60 A
Setting range 520 ±20 Vac	1.60 - 2.50 A	2.50 - 4.00 A	4.00 - 6.30 A	4.00 - 6.30 A
Setting value 520 ±20 Vac	2.00 A	3.20 A	4.00 A	5.00 A
Order numbers				
Order Number	**STU 1000/2x115**	**STU 1600/2x115**	**STU 2000/2x115**	**STU 2500/2x115**

Universal control- and safety isolating- resp. isolating transformer **STU**

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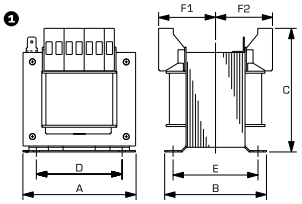
Mechanical data

Typ	Terminals	Fixing method	Fixing screws	Weight	Dimension picture (in mm)	A	B	C	D	E	F1	F2
STU 63/24	Screw-type terminals, PE 6.3 x 0.8	Base plate	M4	1.5 kg	1	84	70	95	64	50	38	38
STU 63/2x115	Screw-type terminals, PE 6.3 x 0.8	Base plate	M4	1.5 kg	1	84	64	94	64	50	38	38
STU 100/24	Screw-type terminals, PE 6.3 x 0.8	Base plate	M4	2.0 kg	1	84	76	94	64	63.5	45	45
STU 100/2x115	Screw-type terminals, PE 6.3 x 0.8	Base plate	M4	2.0 kg	1	84	76	94	64	63.5	45	45
STU 130/24	Screw-type terminals, PE 6.3 x 0.8	Base plate	M5	2.3 kg	1	96	78	105	84	63.5	39	39
STU 130/2x115	Screw-type terminals, PE 6.3 x 0.8	Base plate	M5	2.3 kg	1	96	78	105	84	63.5	39	39
STU 160/24	Screw-type terminals, PE 6.3 x 0.8	Base plate	M5	2.8 kg	1	96	88	105	84	73	46	46
STU 160/2x115	Screw-type terminals, PE 6.3 x 0.8	Base plate	M5	2.8 kg	1	96	88	105	84	73	46	46
STU 250/24	Screw-type terminals, PE 6.3 x 0.8	Base plate	M5	4.1 kg	1	120	92	123	90	74	46	46
STU 250/2x115	Screw-type terminals, PE 6.3 x 0.8	Base plate	M5	4.1 kg	1	120	92	123	90	74	46	46
STU 400/24	Screw-type terminals, PE 6.3 x 0.8	Base plate	M5	5.4 kg	1	120	102	123	90	85	50	67
STU 400/2x115	Screw-type terminals, PE 6.3 x 0.8	Base plate	M5	5.4 kg	1	120	102	123	90	85	50	58
STU 500/24	Screw-type terminals, PE 6.3 x 0.8	Base plate	M5	7.0 kg	1	150	122	126	90	104	60	77
STU 500/2x115	Screw-type terminals, PE 6.3 x 0.8	Base plate	M5	7.0 kg	1	120	122	123	90	104	60	68
STU 630/24	Screw-type terminals, PE 6.3 x 0.8	Base plate	M6	7.9 kg	1	150	111	149	122	90	47	65
STU 630/2x115	Screw-type terminals, PE 6.3 x 0.8	Base plate	M6	7.9 kg	1	150	111	149	122	90	47	56
STU 800/24	Screw-type terminals, PE 6.3 x 0.8	Base plate	M6	10.3 kg	1	150	139	150	122	106	54	74
STU 800/2x115	Screw-type terminals, PE 6.3 x 0.8	Base plate	M6	10.3 kg	1	150	128	149	122	106	54	65
STU 1000/2x115	Screw-type terminals, PE 6.3 x 0.8	Base plate	M6	13.5 kg	1	150	154	149	122	130	68	77
STU 1600/2x115	Screw-type terminals, PE 6.3 x 0.8	Base plate	M8	17.8 kg	1	192	145	182	156	120	86	66
STU 2000/2x115	Screw-type terminals, PE 6.3 x 0.8	Base plate	M8	22.4 kg	1	192	180	182	156	150	82	83
STU 2500/2x115	Screw-type terminals, PE 6.3 x 0.8	Base plate	M8	25.3 kg	1	192	185	182	156	160	87	88

Dimension pictures

1



Control- and safety isolating- resp. isolating transformer with shielding winding
STSU

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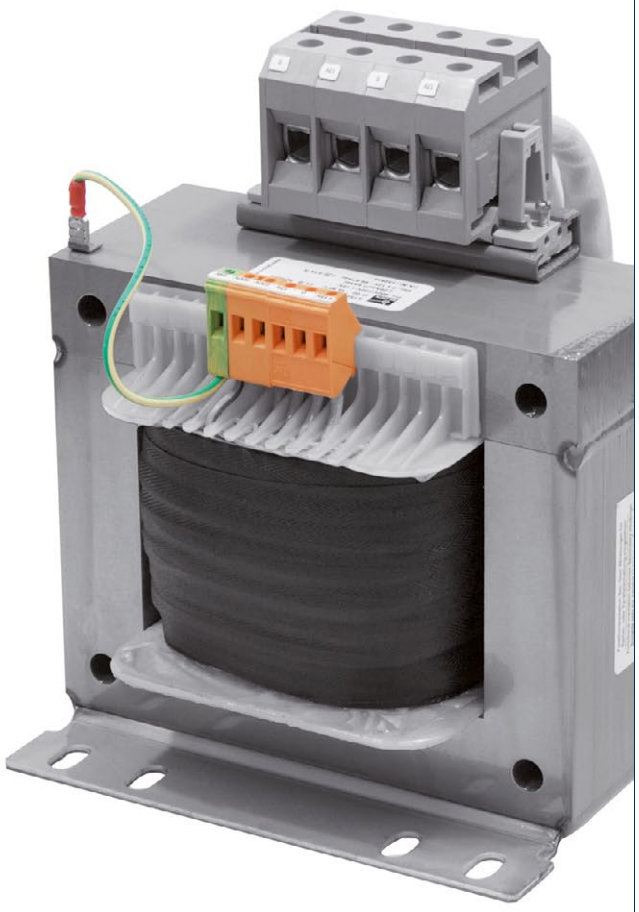


General Data

Rated input voltage 230 and 400 Vac
Rated output voltage 24 - 230 Vac
Rated power 40 - 2500 VA
Insulation class B
Maximum ambient temperature 40 °C
Efficiency up to 94 %
Degree of protection IP 00

Advantages

Dual input voltage 230 and 400 Vac
Shielding winding between input and output
Very good switch-on behaviour thanks to reduced starting currents
High performance for the volume thanks to compact design
Primary side ±15 V tappings for voltage adjustment
Very good corrosion protection and low noise thanks to vacuum impregnation
Contact protected screw connection terminals complying with UVV BGV A3
Simple mounting thanks to robust metal footplate with oval slots
63 - 250 VA with combination footplate for bolted and rail mounting

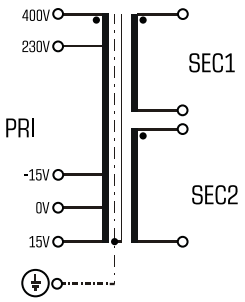
Applications

As a control transformer for the electrical isolation of the input and output sides.The construction of the transformer to supply control systems according to VDE 0113 is designed.

As an isolating transformer for the safe electrical isolation of the input and output sides. The transformer may be used to set up protective separation as a protective measure in accordance with VDE 0100.

As a safety transformer for the safe electrical isolation of the input and output sides. The transformer is suitable for creating SELV and PELV circuits because of the limit on the output voltage.

Sample application



Standards

Control transformer
to: VDE 0570 Teil 2-2, DIN EN 61558-2-2, EN 61558-2-2, IEC 61558-2-2, UL 5085-1/-2, CSA 22.2 No.66

Safety isolating transformer
to: VDE 0570 Teil 2-6, DIN EN 61558-2-6, EN 61558-2-6, IEC 61558-2-6, UL 5085-1/-2, CSA 22.2 No.66

Isolating transformer
to: VDE 0570 Part2-4, DIN EN 61558-2-4, EN 61558-2-4, IEC 61558-2-4, UL 5085-1/-2, CSA 22.2 No.66

Approvals

UL 5085-1/-2, CSA 22.2 No.66

Control- and safety isolating- resp. isolating transformer with shielding winding
STSU

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Electrical data

Typ	STSU 40/23	STSU 40/24	STSU 40/48	STSU 63/23
Input				
Frequency range	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
Tappings Input	±15 V	±15 V	±15 V	±15 V
Rated input voltage	230/400 Vac	230/400 Vac	230/400 Vac	230/400 Vac
Output				
Rated output voltage	2x115 Vac	2x12 Vac	2x24 Vac	2x115 Vac
Rated power VDE (DB cos phi=1)	40 VA	40 VA	40 VA	63 VA
Rated power VDE (KB cos phi=0.5)				175 VA
No-load voltage (app. x factor)	1.10	1.10	1.10	1.10
Secondary circuit	2	2	2	2
Efficiency	81.6 %	81.5 %	81.6 %	85.5 %
Standards				
Classification	Isolating transformer	Safety isolating transformer	Control- and isolating transformer	Control- and isolating transformer
Approvals				
Approvals	cURus	cURus	cURus	cURus
Environment				
Type of cooling	self-cooling	self-cooling	self-cooling	self-cooling
Ambient temperature max.	40 °C	40 °C	40 °C	40 °C
Safety and protection				
Type	Open type	Open type	Open type	Open type
Insulation class	VDE=B, UL=class 130	VDE=B, UL=class 130	VDE=B, UL=class 130	VDE=B, UL=class 130
Protection index	IP 00	IP 00	IP 00	IP 00
Safety class (prepared)	I	I	I	I
Short circuit strength	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof
Order numbers				
Order Number	**STSU 40/23**	**STSU 40/24**	**STSU 40/48**	**STSU 63/23**

Control- and safety isolating- resp. isolating transformer with shielding winding
STSU

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Electrical data

Typ	STSU 63/24	STSU 63/48	STSU 100/23	STSU 100/24
Input				
Frequency range	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
Tappings Input	±15 V	±15 V	±15 V	±15 V
Rated input voltage	230/400 Vac	230/400 Vac	230/400 Vac	230/400 Vac
Output				
Rated output voltage	2x12 Vac	2x24 Vac	2x115 Vac	2x12 Vac
Rated power VDE (DB cos phi=1)	63 VA	63 VA	100 VA	100 VA
Rated power VDE (KB cos phi=0.5)	175 VA	175 VA	310 VA	310 VA
No-load voltage (app. x factor)	1.10	1.10	1.09	1.08
Secondary circuit	2	2	2	2
Efficiency	82.4 %	85.2 %	85.0 %	87.0 %
Standards				
Classification	Control- and safety isolating transformer	Control- and isolating transformer	Control- and isolating transformer	Control- and safety isolating transformer
Approvals				
Approvals	cURus	cURus	cURus	cURus
Environment				
Type of cooling	self-cooling	self-cooling	self-cooling	self-cooling
Ambient temperature max.	40 °C	40 °C	40 °C	40 °C
Safety and protection				
Type	Open type	Open type	Open type	Open type
Insulation class	VDE=B, UL=class 130	VDE=B, UL=class 130	VDE=B, UL=class 130	VDE=B, UL=class 130
Protection index	IP 00	IP 00	IP 00	IP 00
Safety class (prepared)	I	I	I	I
Short circuit strength	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof
Order numbers				
Order Number	**STSU 63/24**	**STSU 63/48**	**STSU 100/23**	**STSU 100/24**

Control- and safety isolating- resp. isolating transformer with shielding winding
STSU

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Electrical data

Typ	STSU 100/48	STSU 160/23	STSU 160/24	STSU 160/48
Input				
Frequency range	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
Tappings Input	±15 V	±15 V	±15 V	±15 V
Rated input voltage	230/400 Vac	230/400 Vac	230/400 Vac	230/400 Vac
Output				
Rated output voltage	2x24 Vac	2x115 Vac	2x12 Vac	2x24 Vac
Rated power VDE (DB cos phi=1)	100 VA	160 VA	160 VA	160 VA
Rated power VDE (KB cos phi=0.5)	310 VA			
No-load voltage (app. x factor)	1.10	1.08	1.10	1.10
Secondary circuit	2	2	2	2
Efficiency	84.5 %	87.4 %	88.2 %	88.0 %
Standards				
Classification	Control- and isolating transformer	Control- and isolating transformer	Control- and safety isolating transformer	Control- and isolating transformer
Approvals				
Approvals	cURus	cURus	cURus	cURus
Environment				
Type of cooling	self-cooling	self-cooling	self-cooling	self-cooling
Ambient temperature max.	40 °C	40 °C	40 °C	40 °C
Safety and protection				
Type	Open type	Open type	Open type	Open type
Insulation class	VDE=B, UL=class 130	VDE=B, UL=class 130	VDE=B, UL=class 130	VDE=B, UL=class 130
Protection index	IP 00	IP 00	IP 00	IP 00
Safety class (prepared)	I	I	I	I
Short circuit strength	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof
Order numbers				
Order Number	**STSU 100/48**	**STSU 160/23**	**STSU 160/24**	**STSU 160/48**

Control- and safety isolating- resp. isolating transformer with shielding winding
STSU

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Electrical data

Typ	STSU 250/23	STSU 250/24	STSU 250/48	STSU 400/23
Input				
Frequency range	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
Tappings Input	±15 V	±15 V	±15 V	±15 V
Rated input voltage	230/400 Vac	230/400 Vac	230/400 Vac	230/400 Vac
Output				
Rated output voltage	2x115 Vac	2x12 Vac	2x24 Vac	2x115 Vac
Rated power VDE (DB cos phi=1)	250 VA	250 VA	250 VA	400 VA
Rated power VDE (KB cos phi=0.5)	850 VA	850 VA	850 VA	1.440 VA
No-load voltage (app. x factor)	1.07	1.07	1.07	1.04
Secondary circuit	2	2	2	2
Efficiency	89.4 %	88.4 %	88.7 %	91.2 %
Standards				
Classification	Control- and isolating transformer	Control- and safety isolating transformer	Control- and isolating transformer	Control- and isolating transformer
Approvals				
Approvals	cURus	cURus	cURus	cURus
Environment				
Type of cooling	self-cooling	self-cooling	self-cooling	self-cooling
Ambient temperature max.	40 °C	40 °C	40 °C	40 °C
Safety and protection				
Type	Open type	Open type	Open type	Open type
Insulation class	VDE=B, UL=class 130	VDE=B, UL=class 130	VDE=B, UL=class 130	VDE=B, UL=class 130
Protection index	IP 00	IP 00	IP 00	IP 00
Safety class (prepared)	I	I	I	I
Short circuit strength	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof
Order numbers				
Order Number	**STSU 250/23**	**STSU 250/24**	**STSU 250/48**	**STSU 400/23**

Control- and safety isolating- resp. isolating transformer with shielding winding
STSU

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Electrical data

Typ	STSU 400/24	STSU 400/48	STSU 630/23	STSU 630/24
Input				
Frequency range	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
Tappings Input	±15 V	±15 V	±15 V	±15 V
Rated input voltage	230/400 Vac	230/400 Vac	230/400 Vac	230/400 Vac
Output				
Rated output voltage	2x12 Vac	2x24 Vac	2x115 Vac	2x12 Vac
Rated power VDE (DB cos phi=1)	400 VA	400 VA	630 VA	630 VA
Rated power VDE (KB cos phi=0.5)	1.440 VA	1.440 VA	2.350 VA	2.350 VA
No-load voltage (app. x factor)	1.04	1.04	1.04	1.04
Secondary circuit	2	2	2	2
Efficiency	91.0 %	91.4 %	92.4 %	92.4 %
Standards				
Classification	Control- and safety isolating transformer	Control- and isolating transformer	Control- and isolating transformer	Control- and safety isolating transformer
Approvals				
Approvals	cURus	cURus	cURus	cURus
Environment				
Type of cooling	self-cooling	self-cooling	self-cooling	self-cooling
Ambient temperature max.	40 °C	40 °C	40 °C	40 °C
Safety and protection				
Type	Open type	Open type	Open type	Open type
Insulation class	VDE=B, UL=class 130	VDE=B, UL=class 130	VDE=B, UL=class 130	VDE=B, UL=class 130
Protection index	IP 00	IP 00	IP 00	IP 00
Safety class (prepared)	I	I	I	I
Short circuit strength	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof
Order numbers				
Order Number	**STSU 400/24**	**STSU 400/48**	**STSU 630/23**	**STSU 630/24**

Control- and safety isolating- resp. isolating transformer with shielding winding
STSU

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Electrical data

Typ	STSU 630/48	STSU 1000/23	STSU 1000/24	STSU 1000/48
Input				
Frequency range	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
Tappings Input	±15 V	±15 V	±15 V	±15 V
Rated input voltage	230/400 Vac	230/400 Vac	230/400 Vac	230/400 Vac
Output				
Rated output voltage	2x24 Vac	2x115 Vac	2x12 Vac	2x24 Vac
Rated power VDE (DB cos phi=1)	630 VA	1.000 VA	1.000 VA	1.000 VA
Rated power VDE (KB cos phi=0.5)	2.350 VA	5.000 VA	5.000 VA	5.000 VA
No-load voltage (app. x factor)	1.04	1.03	1.03	1.02
Secondary circuit	2	2	2	2
Efficiency	92.4 %	93.6 %	93.5 %	93.5 %
Standards				
Classification	Control- and isolating transformer	Control- and isolating transformer	Control- and safety isolating transformer	Control- and isolating transformer
Approvals				
Approvals	cURus	cURus	cURus	cURus
Environment				
Type of cooling	self-cooling	self-cooling	self-cooling	self-cooling
Ambient temperature max.	40 °C	40 °C	40 °C	40 °C
Safety and protection				
Type	Open type	Open type	Open type	Open type
Insulation class	VDE=B, UL=class 130	VDE=B, UL=class 130	VDE=B, UL=class 130	VDE=B, UL=class 130
Protection index	IP 00	IP 00	IP 00	IP 00
Safety class (prepared)	I	I	I	I
Short circuit strength	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof
Order numbers				
Order Number	**STSU 630/48**	**STSU 1000/23**	**STSU 1000/24**	**STSU 1000/48**

Control- and safety isolating- resp. isolating transformer with shielding winding
STSU

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Electrical data

Typ	STSU 1600/23	STSU 2000/23	STSU 2500/23
Input			
Frequency range	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
Tappings Input	±15 V	±15 V	±15 V
Rated input voltage	230/400 Vac	230/400 Vac	230/400 Vac
Output			
Rated output voltage	2x115 Vac	2x115 Vac	2x115 Vac
Rated power VDE (DB cos phi=1)	1.600 VA	2.000 VA	2.500 VA
Rated power VDE (KB cos phi=0.5)	7.800 VA	10.900 VA	12.400 VA
No-load voltage (app. x factor)	1.02	1.02	1.02
Secondary circuit	2	2	2
Efficiency	94.5 %	95.0 %	96.4 %
Standards			
Classification	Control- and isolating transformer	Control- and isolating transformer	Control- and isolating transformer
Approvals			
Approvals	cURus	cURus	cURus
Environment			
Type of cooling	self-cooling	self-cooling	self-cooling
Ambient temperature max.	40 °C	40 °C	40 °C
Safety and protection			
Type	Open type	Open type	Open type
Insulation class	VDE=B, UL=class 130	VDE=B, UL=class 130	VDE=B, UL=class 130
Protection index	IP 00	IP 00	IP 00
Safety class (prepared)	I	I	I
Short circuit strength	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof
Order numbers			
Order Number	**STSU 1600/23**	**STSU 2000/23**	**STSU 2500/23**

Control- and safety isolating- resp. isolating transformer with shielding winding
STSU

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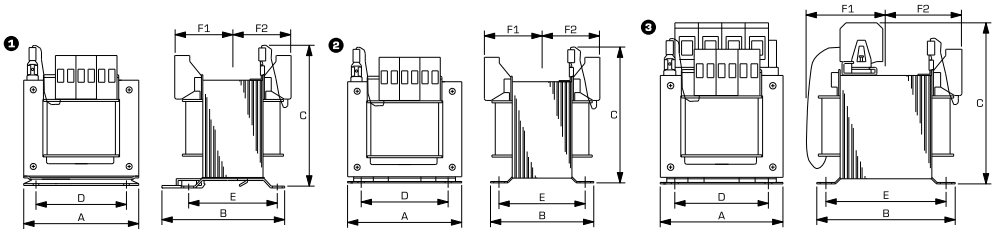
30 Mechanical data

Typ	Terminals	Fixing method	Fixing screws	Weight	Dimension picture (in mm)	A	B	C	D	E	F1	F2	F	G
STSU 40/23	Screw-type terminals	Base plate	M4	1.00 kg	2	66	82	78	50	55	41	41	41	41
STSU 40/24	Screw-type terminals	Base plate	M4	1.00 kg	2	66	82	78	50	55	41	41	41	41
STSU 40/48	Screw-type terminals	Base plate	M4	1.00 kg	2	66	82	78	50	55	41	41	41	41
STSU 63/23	Screw-type terminals	Dual purpose foot plate also for installation on mounting rails	M4	1.30 kg	1	84	89	88	64	64	37	52	37	37
STSU 63/24	Screw-type terminals	Dual purpose foot plate also for installation on mounting rails	M4	1.30 kg	1	84	89	88	64	64	37	52	37	37
STSU 63/48	Screw-type terminals	Dual purpose foot plate also for installation on mounting rails	M4	1.30 kg	1	84	89	88	64	64	37	52	37	37
STSU 100/23	Screw-type terminals	Dual purpose foot plate also for installation on mounting rails	M4	2.10 kg	1	84	97	96	64	64	46	51	46	46
STSU 100/24	Screw-type terminals	Dual purpose foot plate also for installation on mounting rails	M4	2.10 kg	1	84	97	96	64	64	46	51	46	46
STSU 100/48	Screw-type terminals	Dual purpose foot plate also for installation on mounting rails	M4	2.10 kg	1	84	97	96	64	64	46	51	46	46
STSU 160/23	Screw-type terminals	Dual purpose foot plate also for installation on mounting rails	M5	2.80 kg	1	96	102	104	84	87	51	51	51	51
STSU 160/24	Screw-type terminals	Dual purpose foot plate also for installation on mounting rails	M5	2.90 kg	1	96	102	104	84	87	51	51	51	51
STSU 160/48	Screw-type terminals	Dual purpose foot plate also for installation on mounting rails	M5	2.90 kg	1	96	102	104	84	87	51	51	51	51
STSU 250/23	Screw-type terminals	Dual purpose foot plate also for installation on mounting rails	M5	3.60 kg	1	96	102	104	84	87	53	53	53	53
STSU 250/24	Screw-type terminals	Dual purpose foot plate also for installation on mounting rails	M5	3.60 kg	1	96	102	104	84	87	53	53	53	53
STSU 250/48	Screw-type terminals	Dual purpose foot plate also for installation on mounting rails	M5	3.60 kg	1	96	102	104	84	87	53	53	53	53
STSU 400/23	Screw-type terminals	Base plate	M5	5.30 kg	2	120	110	123	90	85	50	57	50	57
STSU 400/24	Screw-type terminals	Base plate	M5	5.30 kg	2	120	110	123	90	85	50	57	50	57
STSU 400/48	Screw-type terminals	Base plate	M5	5.30 kg	2	120	110	123	90	85	50	57	50	57
STSU 630/23	Screw-type terminals	Base plate	M6	8.00 kg	2	150	112	150	122	90	49	56	49	56
STSU 630/24	Screw-type terminals	Base plate	M6	8.00 kg	3	150	122	153	122	90	49	66	49	66
STSU 630/48	Screw-type terminals	Base plate	M6	8.00 kg	2	150	112	150	122	90	49	56	49	56
STSU 1000/23	Screw-type terminals	Base plate	M6	13.60 kg	2	150	156	150	122	134	71	71	71	71
STSU 1000/24	Screw-type terminals	Base plate	M6	13.60 kg	3	150	174	190	122	134	71	70	71	70
STSU 1000/48	Screw-type terminals	Base plate	M6	13.60 kg	2	150	156	150	122	134	71	78	71	78
STSU 1600/23	Screw-type terminals	Base plate	M8	21.00 kg	2	192	161	185	156	133	65	65	65	65
STSU 2000/23	Screw-type terminals	Base plate	M8	26.00 kg	2	192	183	185	156	155	76	76	76	76
STSU 2500/23	Screw-type terminals	Base plate	M8	26.30 kg	2	192	189	185	156	161	79	79	79	79

Dimension pictures



Control transformer
BUST

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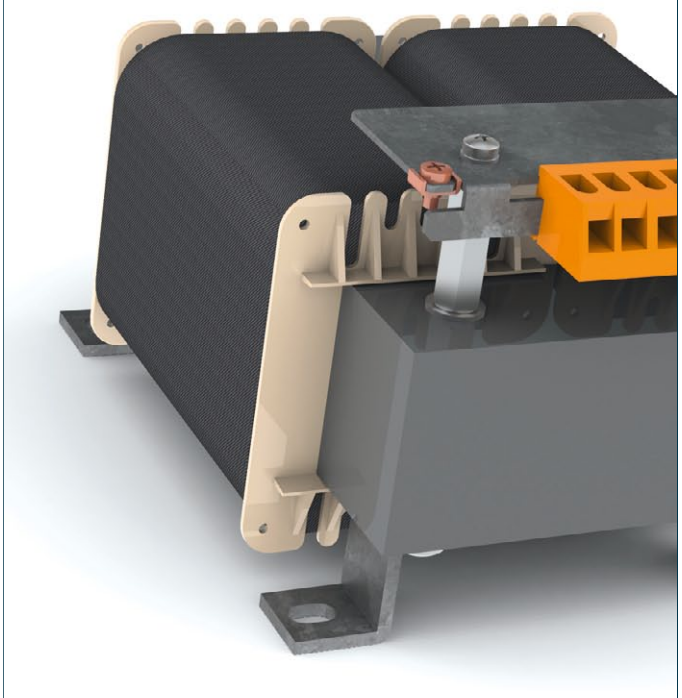


General Data

Rated input voltage 230 - 500 Vac
Rated output voltage 24 - 230 Vac
Rated power 1000 - 10000 VA
Insulation class B
Maximum ambient temperature 40 °C
Efficiency up to 96.8 %
Degree of protection IP 00

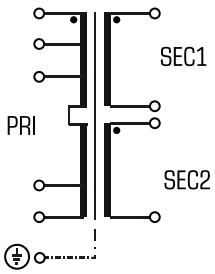
Advantages

High performance for the volume thanks to compact design
Primary side ±5 % tappings for voltage adjustment
Very good corrosion protection and low noise thanks to vacuum impregnation
Contact protected screw connection terminals complying with UVV BGV A3
Low height

Applications

Control transformer for the electrical isolation of the input and output sides. The design of the transformer makes it suitable for the supply of control systems complying with VDE 0113.

Sample application



Standards

Control transformer
to: VDE 0570 Teil 2-2, DIN EN 61558-2-2, EN 61558-2-2, IEC 61558-2-2, UL 5085-1/-2, CSA 22.2 No.66

Approvals

UL 5085-1/-2, CSA 22.2 No.66

Control transformer
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Electrical data

Typ	BUST 1000/23/24	BUST 1000/4/23	BUST 1600/23/24	BUST 1600/4/42	BUST 1600/4/23	BUST 2000/23/23
Input						
Rated input voltage	230 Vac	400 Vac	230 Vac	400 Vac	400 Vac	230 Vac
Tappings Input	±5 %	±5 %	±5 %	±5 %	±5 %	±5 %
Low-inrush current	typ. rated current up to 12 times	typ. rated current up to 12 times	typ. rated current up to 12 times	typ. rated current up to 12 times	typ. rated current up to 12 times	typ. rated current up to 12 times
Frequency range	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
Output						
Rated output voltage	24 Vac	2x115 Vac	24 Vac	42 Vac	2x115 Vac	2x115 Vac
Rated power VDE (DB cos phi=1)	1.000 VA	1.000 VA	1.600 VA	1.600 VA	1.600 VA	2.000 VA
Rated power VDE (KB cos phi=0.5)	2.500 VA	2.500 VA	4.300 VA	4.300 VA	4.300 VA	5.300 VA
Efficiency	92.6 %	92.5 %	93.5 %	93.3 %	93.2 %	93.7 %
Approvals						
Approvals	cURus	cURus	cURus	cURus	cURus	cURus
Environment						
Ambient temperature max.	40 °C	40 °C	40 °C	40 °C	40 °C	40 °C
Type of cooling	self-cooling	self-cooling	self-cooling	self-cooling	self-cooling	self-cooling
Safety and protection						
Type	Open type	Open type	Open type	Open type	Open type	Open type
Insulation class	VDE=B, UL=class 130	VDE=B, UL=class 130	VDE=B, UL=class 130	VDE=B, UL=class 130	VDE=B, UL=class 130	VDE=B, UL=class 130
Protection index	IP 00	IP 00	IP 00	IP 00	IP 00	IP 00
Safety class (prepared)	I	I	I	I	I	I
Short circuit strength	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof
PRI Fusing recommendation by circuit breaker with tripping characteristic type 20 x Irated related to set)						
Setting range	4.00 - 6.30 A	2.50 - 4.00 A	6.30 - 10.00 A	4.00 - 6.30 A	4.00 - 6.30 A	8.00 - 12.00 A
Setting value	4.70 A	2.70 A	7.40 A	4.30 A	4.30 A	9.30 A
Order numbers						
Order Number	**BUST 1000/23/24**	**BUST 1000/4/23**	**BUST 1600/23/24**	**BUST 1600/4/42**	**BUST 1600/4/23**	**BUST 2000/23/23**

Control transformer
BUST

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Electrical data

Typ	BUST 2000/4/23	BUST 2500/4/23	BUST 3000/4/23	BUST 3000/44/23	BUST 3000/5/23	BUST 4000/23/23
Input						
Rated input voltage	400 Vac	400 Vac	400 Vac	440 Vac	500 Vac	230 Vac
Tappings Input	±5 %	±5 %	±5 %	±5 %	±5 %	±5 %
Low-inrush current	typ. rated current up to 12 times	typ. rated current up to 12 times	typ. rated current up to 12 times	typ. rated current up to 12 times	typ. rated current up to 12 times	typ. rated current up to 12 times
Frequency range	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
Output						
Rated output voltage	2x115 Vac	2x115 Vac	2x115 Vac	2x115 Vac	2x115 Vac	2x115 Vac
Rated power VDE (DB cos phi=1)	2.000 VA	2.500 VA	3.000 VA	3.000 VA	3.000 VA	4.000 VA
Rated power VDE (KB cos phi=0.5)	5.300 VA	6.900 VA	8.900 VA	8.900 VA	8.900 VA	11.000 VA
Efficiency	93.9 %	94.8 %	95.3 %	95.4 %	95.3 %	95.4 %
Approvals						
Approvals	cURus	cURus	cURus	cURus	cURus	cURus
Environment						
Ambient temperature max.	40 °C	40 °C	40 °C	40 °C	40 °C	40 °C
Type of cooling	self-cooling	self-cooling	self-cooling	self-cooling	self-cooling	self-cooling
Safety and protection						
Type	Open type	Open type	Open type	Open type	Open type	Open type
Insulation class	VDE=B, UL=class 130	VDE=B, UL=class 130	VDE=B, UL=class 130	VDE=B, UL=class 130	VDE=B, UL=class 130	VDE=B, UL=class 130
Protection index	IP 00	IP 00	IP 00	IP 00	IP 00	IP 00
Safety class (prepared)	I	I	I	I	I	I
Short circuit strength	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof
PRI Fusing recommendation by circuit breaker with tripping characteristic type 20 x Irated related to set)						
Setting range	4.00 - 6.30 A	6.30 - 10.00 A	6.30 - 10.00 A	6.30 - 10.00 A	6.30 - 10.00 A	16.00 - 20.00 A
Setting value	5.30 A	6.50 A	7.80 A	7.10 A	6.30 A	18.10 A
Order numbers						
Order Number	**BUST 2000/4/23**	**BUST 2500/4/23**	**BUST 3000/4/23**	**BUST 3000/44/23**	**BUST 3000/5/23**	**BUST 4000/23/23**

Control transformer
BUST

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Electrical data

Typ	BUST 4000/4/23	BUST 4000/44/23	BUST 5000/23/23	BUST 5000/4/23	BUST 6300/4/23	BUST 6300/44/23
Input						
Rated input voltage	400 Vac	440 Vac	230 Vac	400 Vac	400 Vac	440 Vac
Tappings Input	±5 %	±5 %	±5 %	±5 %	±5 %	±5 %
Low-inrush current	typ. rated current up to 12 times	typ. rated current up to 12 times	typ. rated current up to 12 times	typ. rated current up to 12 times	typ. rated current up to 12 times	typ. rated current up to 12 times
Frequency range	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
Output						
Rated output voltage	2x115 Vac	2x115 Vac	2x115 Vac	2x115 Vac	2x115 Vac	2x115 Vac
Rated power VDE (DB cos phi=1)	4.000 VA	4.000 VA	5.000 VA	5.000 VA	6.300 VA	6.300 VA
Rated power VDE (KB cos phi=0.5)	11.000 VA	11.000 VA	15.700 VA	15.700 VA	16.000 VA	16.000 VA
Efficiency	95.4 %	95.4 %	95.8 %	95.7 %	96.2 %	96.4 %
Approvals						
Approvals	cURus	cURus	cURus	cURus	cURus	cURus
Environment						
Ambient temperature max.	40 °C	40 °C	40 °C	40 °C	40 °C	40 °C
Type of cooling	self-cooling	self-cooling	self-cooling	self-cooling	self-cooling	self-cooling
Safety and protection						
Type	Open type	Open type	Open type	Open type	Open type	Open type
Insulation class	VDE=B, UL=class 130	VDE=B, UL=class 130	VDE=B, UL=class 130	VDE=B, UL=class 130	VDE=B, UL=class 130	VDE=B, UL=class 130
Protection index	IP 00	IP 00	IP 00	IP 00	IP 00	IP 00
Safety class (prepared)	I	I	I	I	I	I
Short circuit strength	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof
PRI Fusing recommendation by circuit breaker with tripping characteristic type 20 x Irated related to set)						
Setting range	8.00 - 12.00 A	6.30 - 10.00 A	20.00 - 25.00 A	10.00 - 16.00 A	16.00 - 20.00 A	10.00 - 16.00 A
Setting value	10.40 A	9.00 A	22.00 A	12.90 A	16.20 A	14.80 A
Order numbers						
Order Number	**BUST 4000/4/23**	**BUST 4000/44/23**	**BUST 5000/23/23**	**BUST 5000/4/23**	**BUST 6300/4/23**	**BUST 6300/44/23**

Control transformer
BUST

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Electrical data

Typ	BUST 6300/5/23	BUST 8000/4/23	BUST 10000/4/23
Input			
Rated input voltage	500 Vac	400 Vac	400 Vac
Tappings Input	±5 %	±5 %	±5 %
Low-inrush current	typ. rated current up to 12 times	typ. rated current up to 12 times	typ. rated current up to 12 times
Frequency range	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
Output			
Rated output voltage	2x115 Vac	2x115 Vac	2x115 Vac
Rated power VDE (DB cos phi=1)	6.300 VA	8.000 VA	10.000 VA
Rated power VDE (KB cos phi=0.5)	16.000 VA	26.500 VA	27.000 VA
Efficiency	96.3%	96.5 %	96.8 %
Approvals			
Approvals	cURus	cURus	cURus
Environment			
Ambient temperature max.	40 °C	40 °C	40 °C
Type of cooling	self-cooling	self-cooling	self-cooling
Safety and protection			
Type	Open type	Open type	Open type
Insulation class	VDE=B, UL=class 130	VDE=B, UL=class 130	VDE=B, UL=class 130
Protection index	IP 00	IP 00	IP 00
Safety class (prepared)	I	I	I
Short circuit strength	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof
PRI Fusing recommendation by circuit breaker with tripping characteristic type 20 x Irated related to set)			
Setting range	10.00 - 16.00 A	20.00 - 25.00 A	20.00 - 25.00 A
Setting value	13.00 A	21.00 A	25.00 A
Order numbers			
Order Number	**BUST 6300/5/23**	**BUST 8000/4/23**	**BUST 10000/4/23**

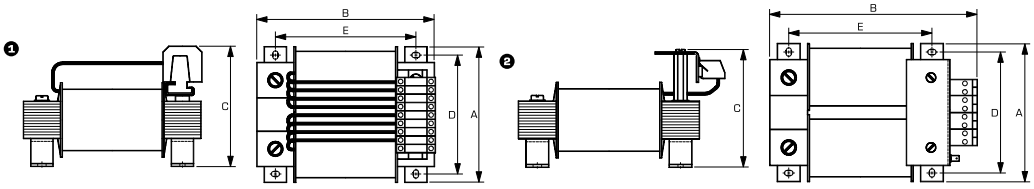
Control transformer
BUST

BLOCK Website

Mechanical data 30

Typ	Terminals	Fixing method	Fixing screws	Weight	Dimension picture (in mm)	A	B	C	D	E
BUST 1000/23/24	Screw-type terminals	Foot brackets	M5	10.00 kg	1	150	220	130	126	152
BUST 1000/4/23	Screw-type terminals	Foot brackets	M5	10.00 kg	2	150	220	130	126	152
BUST 1600/23/24	Screw-type terminals	Foot brackets	M6	16.00 kg	1	180	245	156	146	176
BUST 1600/4/42	Screw-type terminals	Foot brackets	M6	16.00 kg	1	180	245	156	146	176
BUST 1600/4/23	Screw-type terminals	Foot brackets	M6	16.00 kg	2	180	245	156	146	176
BUST 2000/23/23	Screw-type terminals	Foot brackets	M6	19.00 kg	2	200	275	175	174	200
BUST 2000/4/23	Screw-type terminals	Foot brackets	M6	19.00 kg	2	200	275	175	174	200
BUST 2500/4/23	Screw-type terminals	Foot brackets	M6	25.00 kg	2	200	275	175	174	200
BUST 3000/4/23	Screw-type terminals	Foot brackets	M6	28.00 kg	2	200	255	215	174	200
BUST 3000/44/23	Screw-type terminals	Foot brackets	M6	28.00 kg	2	200	255	215	174	200
BUST 3000/5/23	Screw-type terminals	Foot brackets	M6	28.00 kg	2	200	255	215	174	200
BUST 4000/23/23	Screw-type terminals	Foot brackets	M8	37.00 kg	2	240	325	175	204	240
BUST 4000/4/23	Screw-type terminals	Foot brackets	M8	37.00 kg	2	240	325	175	204	240
BUST 4000/44/23	Screw-type terminals	Foot brackets	M8	37.00 kg	2	240	325	175	204	240
BUST 5000/23/23	Screw-type terminals	Foot brackets	M8	41.00 kg	2	240	325	190	204	240
BUST 5000/4/23	Screw-type terminals	Foot brackets	M8	41.00 kg	2	240	325	190	204	240
BUST 6300/4/23	Screw-type terminals	Foot brackets	M8	58.00 kg	2	280	350	220	234	280
BUST 6300/44/23	Screw-type terminals	Foot brackets	M8	58.00 kg	2	280	350	220	234	280
BUST 6300/5/23	Screw-type terminals	Foot brackets	M8	58.00 kg	2	280	350	220	234	280
BUST 8000/4/23	Screw-type terminals	Foot brackets	M8	72.00 kg	2	280	350	250	234	280
BUST 10000/4/23	Screw-type terminals	Foot brackets	M10	86.00 kg	2	320	400	245	264	320

Dimension pictures



Control- and safety isolating- resp. isolating transformer
TT1

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General Data

Rated input voltage 219 Vac - 525 Vac
Rated output voltage 24, 42, 2 x 115 Vac
Rated power 1000 - 25000 VA
Insulation class F
Maximum ambient temperature 40 °C
Efficiency up to 98 %
Degree of protection IP 00, IPXXB on request
Optionally adapted package for higher degrees of protection

Advantages

Safe galvanic isolation
Patented assembly technology
Very good corrosion protection and low noise thanks to vacuum impregnation
Primary side ±5 % tappings for voltage adjustment
Fixed, contact protected screw connection terminals complying with UVV BGV A3
Multifunctional fixing rail with 8 oval slots
Space saving, thanks to horizontal design
Integrated crane eyes
Non-slip terminals

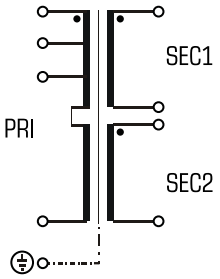
Applications

Isolating transformer for the safe electrical isolation of the input and output sides. The transformer may be used to set up protective separation as a protective measure in accordance with VDE 0100.

As a control transformer for the electrical isolation of the input and output sides.The construction of the transformer to supply control systems according to VDE 0113 is designed.

As a safety isolating transformer for the safe electrical isolation of the input and output sides. The transformer is suitable for creating SELV and PELV circuits because of the limit on the output voltage.

Sample application



Standards

Control transformer
to: VDE 0570 Teil 2-2, DIN EN 61558-2-2, EN 61558-2-2, IEC 61558-2-2, UL 5085-1/-2, CSA 22.2 No.66
Isolating transformer
to: VDE 0570 Part 2-4, DIN EN 61558-2-4, EN 61558-2-4, IEC 61558-2-4, UL 5085-1/-2, CSA 22.2 No.66
Safety isolating transformer
to: VDE 0570 Part 2-6, DIN EN 61558-2-6, EN 61558-2-6, IEC 61558-2-6, UL 5085-1/-2, CSA 22.2 No.66

Approvals

UL 5085, UL 1561, CSA 22.2 (E 103521)

Control- and safety isolating- resp. isolating transformer
TT1

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Electrical data

Typ	TT1 1-4-23	TT1 1-23-24	TT1 1,6-4-23	TT1 1,6-4-42	TT1 1,6-23-24	TT1 2-4-23
Input						
Rated input current	2,9 A /2,7 A /2,6 Aac	4,9 A /4,7A /4,5 Aac	4,5 A /4,3 A /4,1 Aac	4,5 A /4,3 A /4,1 Aac	7,8 A /7,4 A /7,1 A	5,6 A /5,3 A /5,1 Aac
Rated input voltage	380/400/420 Vac	219/230/241 Vac	380/400/420 Vac	380/400/420 Vac	219/230/241 Vac	380/400/420 Vac
Frequency range	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
Output						
Rated output current	4,3 Aac	41,7 Aac	7 Aac	38,1 Aac	67 Aac	8,7 Aac
Rated output voltage	2 x 115 Vac	24 Vac	2 x 115 Vac	42 Vac	24 Vac	2 x 115 Vac
Rated power VDE (DB cos phi=1)	1.000 VA	1.000 VA	1.600 VA	1.600 VA	1.600 VA	2.000 VA
Rated power VDE (KB cos phi=0.5)	2.270 VA	2.300 VA	4.080 VA	4.000 VA	4.260 VA	5.480 VA
Short circuit voltage uK	ca. 7,2%	ca. 7,3%	ca. 5,6%	ca. 5,6%	ca. 5,4%	ca. 5,0%
Vector group	Iii0	Iii0	Iii0	Iii0	Iii0	Iii0
Efficiency	92%	92%	93 %	93 %	93 %	94%
Standards						
Classification	Control- and isolating transformer	Control- and safety isolating transformer	Control- and isolating transformer	Control- and safety isolating transformer	Control- and safety isolating transformer	Control- and isolating transformer
Approvals						
Approvals	cURus	cURus	cURus	cURus	cURus	cURus
Environment						
Ambient temperature max.	40 °C	40 °C	40 °C	40 °C	40 °C	40 °C
Type of cooling	AN	AN	AN	AN	AN	AN
Safety and protection						
Type	Open type	Open type	Open type	Open type	Open type	Open type
Insulation class	VDE=F, UL=class 155	VDE=F, UL=class 155	VDE=F, UL=class 155	VDE=F, UL=class 155	VDE=F, UL=class 155	VDE=F, UL=class 155
Protection index	IP 00 IPXXB on request	IP 00 IPXXB on request	IP 00 IPXXB on request	IP 00 IPXXB on request	IP 00 IPXXB on request	IP 00 IPXXB on request
Safety class (prepared)	I	I	I	I	I	I
Short circuit strength	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof
Order numbers						
Order Number	**TT1 1-4-23**	**TT1 1-23-24**	**TT1 1,6-4-23**	**TT1 1,6-4-42**	**TT1 1,6-23-24**	**TT1 2-4-23**

Control- and safety isolating- resp. isolating transformer
TT1

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Electrical data

Typ	TT1 2-23-24	TT1 2,5-4-23	TT1 2,5-4-42	TT1 2,5-23-24	TT1 3-4-23	TT1 3-5-23
Input						
Rated input current	9,6 A /9,2 A /8,8 Aac	7,0 A /6,6A /6,3 Aac	6,9 A /6,6A /6,3 Aac	12,0 A /11,5 A /10,9 Aac	8,3 A /7,9 A /7,5 Aac	6,7 A /6,3 A /6,0 Aac
Rated input voltage	219/230/241 Vac	380/400/420 Vac	380/400/420 Vac	219/230/241 Vac	380/400/420 Vac	475/500/525 Vac
Frequency range	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
Output						
Rated output current	83 Aac	10,9 Aac	59,5 Aac	104 Aac	13,1 Aac	13,1 Aac
Rated output voltage	24 Vac	2 x 115 Vac	42 Vac	24 Vac	2 x 115 Vac	2 x 115 Vac
Rated power VDE (DB cos phi=1)	2.000 VA	2.500 VA	2.500 VA	2.500 VA	3.000 VA	3.000 VA
Rated power VDE (KB cos phi=0.5)	5.430 VA	6.560 VA	6.470 VA	6.470 VA	8.500 VA	8.500 VA
Short circuit voltage uK	ca. 5,0%	ca. 4,8 %	ca. 4,8 %	ca. 4,8 %	ca. 4,2 %	ca. 4,0%
Vector group	Iii0	Iii0	Iii0	Iii0	Iii0	Iii0
Efficiency	94 %	94 %	94 %	94 %	95 %	95 %
Standards						
Classification	Control- and safety isolating transformer	Control- and isolating transformer	Control- and safety isolating transformer	Control- and safety isolating transformer	Control- and isolating transformer	Control- and isolating transformer
Approvals						
Approvals	cURus	cURus	cURus	cURus	cURus	cURus
Environment						
Ambient temperature max.	40 °C	40 °C	40 °C	40 °C	40 °C	40 °C
Type of cooling	AN	AN	AN	AN	AN	AN
Safety and protection						
Type	Open type	Open type	Open type	Open type	Open type	Open type
Insulation class	VDE=F, UL=class 155	VDE=F, UL=class 155	VDE=F, UL=class 155	VDE=F, UL=class 155	VDE=F, UL=class 155	VDE=F, UL=class 155
Protection index	IP 00 IPXXB on request	IP 00 IPXXB on request	IP 00 IPXXB on request	IP 00 IPXXB on request	IP 00 IPXXB on request	IP 00 IPXXB on request
Safety class (prepared)	I	I	I	I	I	I
Short circuit strength	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof
Order numbers						
Order Number	**TT1 2-23-24**	**TT1 2,5-4-23**	**TT1 2,5-4-42**	**TT1 2,5-23-24**	**TT1 3-4-23**	**TT1 3-5-23**

Control- and safety isolating- resp. isolating transformer
TT1

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Electrical data

Typ	TT1 3-44-23	TT1 4-4-23	TT1 4-5-23	TT1 4-44-23	TT1 5-4-23	TT1 5-5-23
Input						
Rated input current	7,6 A /7,2 A /6,9 Aac	11,1 A /10,6 A /10,0 Aac	8,9 A /8,4 A /8,0 Aac	10,1 A /9,6 A /9,1 Aac	13,7 A /13,0 A /12,4 Aac	11,0 A /10,5 A /10,0 Aac
Rated input voltage	418/440/462 Vac	380/400/420 Vac	475/500/525 Vac	418/440/462 Vac	380/400/420 Vac	475/500/525 Vac
Frequency range	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
Output						
Rated output current	13,1 Aac	17,4 Aac	17,4 Aac	17,4 Aac	21,7 Aac	21,7 Aac
Rated output voltage	2 x 115 Vac	2 x 115 Vac	2 x 115 Vac	2 x 115 Vac	2 x 115 Vac	2 x 115 Vac
Rated power VDE (DB cos phi=1)	3.000 VA	4.000 VA	4.000 VA	4.000 VA	5.000 VA	5.000 VA
Rated power VDE (KB cos phi=0.5)	8.500 VA	12.450 VA	12.450 VA	12.450 VA	16.400 VA	16.400 VA
Short circuit voltage uK	ca. 4,2%	ca. 4,0%	ca. 4,1%	ca. 4,0 %	ca. 3,3%	ca. 3,2%
Vector group	Iii0	Iii0	Iii0	Iii0	Iii0	Iii0
Efficiency	95 %	95 %	95 %	95 %	95 %	95 %
Standards						
Classification	Control- and isolating transformer	Control- and isolating transformer	Control- and isolating transformer	Control- and isolating transformer	Control- and isolating transformer	Control- and isolating transformer
Approvals						
Approvals	cURus	cURus	cURus	cURus	cURus	cURus
Environment						
Ambient temperature max.	40 °C	40 °C	40 °C	40 °C	40 °C	40 °C
Type of cooling	AN	AN	AN	AN	AN	AN
Safety and protection						
Type	Open type	Open type	Open type	Open type	Open type	Open type
Insulation class	VDE=F, UL=class 155	VDE=F, UL=class 155	VDE=F, UL=class 155	VDE=F, UL=class 155	VDE=F, UL=class 155	VDE=F, UL=class 155
Protection index	IP 00 IPXXB on request	IP 00 IPXXB on request	IP 00 IPXXB on request	IP 00 IPXXB on request	IP 00 IPXXB on request	IP 00 IPXXB on request
Safety class (prepared)	I	I	I	I	I	I
Short circuit strength	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof
Order numbers						
Order Number	**TT1 3-44-23**	**TT1 4-4-23**	**TT1 4-5-23**	**TT1 4-44-23**	**TT1 5-4-23**	**TT1 5-5-23**

Control- and safety isolating- resp. isolating transformer
TT1

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Electrical data

Typ	TT1 5-44-23	TT1 6,3-4-23	TT1 6,3-5-23	TT1 6,3-44-23	TT1 8-4-23	TT1 8-5-23
Input						
Rated input current	12,5 A /11,9 A / 11,3 Aac	17,1 A /16,3 A/ 15,5 Aac	13,8 A /13,1 A /12,5 Aac	15,7 A /14,9 A /14,2 Aac	21,8 A / 20,7 A /19,7 Aac	17,5 A /16,6 A /15,9 Aac
Rated input voltage	418/440/462 Vac	380/400/420 Vac	475/500/525 Vac	418/440/462 Vac	380/400/420 Vac	475/500/525 Vac
Frequency range	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
Output						
Rated output current	21,7 Aac	27,4 Aac	27,4 Aac	27,4 Aac	34,8 Aac	34,8 Aac
Rated output voltage	2 x 115 Vac	2 x 115 Vac	2 x 115 Vac	2 x 115 Vac	2 x 115 Vac	2 x 115 Vac
Rated power VDE (DB cos phi=1)	5.000 VA	6.300 VA	6.300 VA	6.300 VA	8.000 VA	8.000 VA
Rated power VDE (KB cos phi=0.5)	16.400 VA	21.500 VA	21.500 VA	21.500 VA	28.000 VA	28.000 VA
Short circuit voltage uK	ca. 3,3%	ca. 2,8%	ca. 2,8%	ca. 2,8%	ca. 2,7%	ca. 2,7%
Vector group	Iii0	Iii0	Iii0	Iii0	Iii0	Iii0
Efficiency	95 %	96 %	96 %	96 %	96 %	96 %
Standards						
Classification	Control- and isolating transformer	Control- and isolating transformer	Control- and isolating transformer	Control- and isolating transformer	Control- and isolating transformer	Control- and isolating transformer
Approvals						
Approvals	cURus	cURus	cURus	cURus	cURus	cURus
Environment						
Ambient temperature max.	40 °C	40 °C	40 °C	40 °C	40 °C	40 °C
Type of cooling	AN	AN	AN	AN	AN	AN
Safety and protection						
Type	Open type	Open type	Open type	Open type	Open type	Open type
Insulation class	VDE=F, UL=class 155	VDE=F, UL=class 155	VDE=F, UL=class 155	VDE=F, UL=class 155	VDE=F, UL=class 155	VDE=F, UL=class 155
Protection index	IP 00 IPXXB on request	IP 00 IPXXB on request	IP 00 IPXXB on request	IP 00 IPXXB on request	IP 00 IPXXB on request	IP 00 IPXXB on request
Safety class (prepared)	I	I	I	I	I	I
Short circuit strength	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof
Order numbers						
Order Number	**TT1 5-44-23**	**TT1 6,3-4-23**	**TT1 6,3-5-23**	**TT1 6,3-44-23**	**TT1 8-4-23**	**TT1 8-5-23**

Control- and safety isolating- resp. isolating transformer
TT1

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Electrical data

Typ	TT1 8-44-23	TT1 10-4-23	TT1 10-5-23	TT1 10-44-23	TT1 12,5-4-23	TT1 15-4-23
Input						
Rated input current	19,9 A /18,9 A /18,0 Aac	27,2 A /25,7 A /24,4 Aac	21,6 A /20,5 A /19,6 Aac	24,2 A /23,2 A /22,2 Aac	33,4 A /31,9 A /30,6 Aac	40,2 A /37,7 A /35,5 Aac
Rated input voltage	418/440/462 Vac	380/400/420 Vac	475/500/525 Vac	418/440/462 Vac	380/400/420 Vac	380/400/420 Vac
Frequency range	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
Output						
Rated output current	34,8 Aac	43,5 Aac	43,5 Aac	43,5 Aac	54,4 Aac	65,2 Aac
Rated output voltage	2 x 115 Vac	2 x 115 Vac	2 x 115 Vac	2 x 115 Vac	2 x 115 Vac	2 x 115 Vac
Rated power VDE (DB cos phi=1)	8.000 VA	10.000 VA	10.000 VA	10.000 VA	12.500 VA	15.000 VA
Rated power VDE (KB cos phi=0.5)	28.000 VA	34.300 VA	34.300 VA	34.300 VA	41.800 VA	59.000 VA
Short circuit voltage uK	ca. 2,7%	ca. 1,5%	ca. 1,5%	ca. 1,5%	ca. 1,3%	ca. 1,1%
Vector group	Iii0	Iii0	Iii0	Iii0	Iii0	Iii0
Efficiency	96%	97 %	97 %	97 %	95.5 %	ca. 98 %
Standards						
Classification	Control- and isolating transformer	Control- and isolating transformer	Control- and isolating transformer	Control- and isolating transformer	Control- and isolating transformer	Control- and isolating transformer
Approvals						
Approvals	cURus	cURus	cURus	cURus	cURus	cURus
Environment						
Ambient temperature max.	40 °C	40 °C	40 °C	40 °C	40 °C	40 °C
Type of cooling	AN	AN	AN	AN	AN	AN
Safety and protection						
Type	Open type	Open type	Open type	Open type	Open type	Open type
Insulation class	VDE=F, UL=class 155	VDE=F, UL=class 155	VDE=F, UL=class 155	VDE=F, UL=class 155	VDE=F, UL=class 155	VDE=F, UL=class 155
Protection index	IP 00 IPXXB on request	IP 00 IPXXB on request	IP 00 IPXXB on request	IP 00 IPXXB on request	IP 00 IPXXB on request	IP 00 IPXXB on request
Safety class (prepared)	I	I	I	I	I	I
Short circuit strength	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof
Order numbers						
Order Number	**TT1 8-44-23**	**TT1 10-4-23**	**TT1 10-5-23**	**TT1 10-44-23**	**TT1 12,5-4-23**	**TT1 15-4-23**

Control- and safety isolating- resp. isolating transformer
TT1

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Electrical data

Typ	TT1 20-4-23	TT1 25-4-23
Input		
Rated input current	53,6 A /50,6 A /48 Aac	65,7 A /63,2 A /60,9 Aac
Rated input voltage	380/400/420 Vac	380/400/420 Vac
Frequency range	50 - 60 Hz	50 - 60 Hz
Output		
Rated output current	87 Aac	109 Aac
Rated output voltage	2 x 115 Vac	2 x 115 Vac
Rated power VDE (DB cos phi=1)	20.000 VA	25.000 VA
Rated power VDE (KB cos phi=0.5)	85.800 VA	133.000 VA
Short circuit voltage uK	ca. 1%	ca. 0,9%
Vector group	Iii0	Iii0
Efficiency	ca. 98 %	
Standards		
Classification	Control- and isolating transformer	Control- and isolating transformer
Approvals		
Approvals	cURus	cURus
Environment		
Ambient temperature max.	40 °C	40 °C
Type of cooling	AN	AN
Safety and protection		
Type	Open type	Open type
Insulation class	VDE=F, UL=class 155	VDE=F, UL=class 155
Protection index	IP 00 IPXXB on request	IP 00 IPXXB on request
Safety class (prepared)	I	I
Short circuit strength	non-short-circuit proof	non-short-circuit proof
Order numbers		
Order Number	**TT1 20-4-23**	**TT1 25-4-23**

Control- and safety isolating- resp. isolating transformer
TT1

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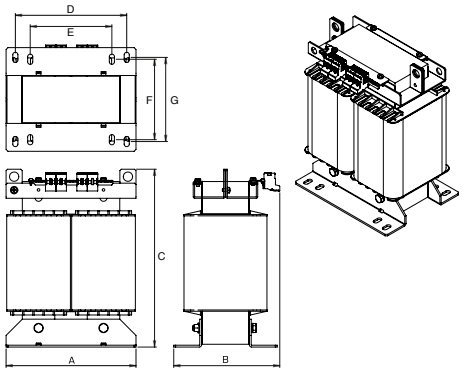
Mechanical data 30

Typ	Terminals	Fixing method	Fixing screws	Core type	Weight	Dimension picture (in mm)	A	B	C	D	E	F	G
TT1 1-4-23	Screw-type terminal	Fixing rail	M6	UI 114/40	9.1 kg	1	150	125	220	104	100	71	98
TT1 1-23-24	Screw-type terminal	Fixing rail	M6	UI 114/40	9.1 kg	1	150	140	220	104	100	71	98
TT1 1,6-4-23	Screw-type terminal	Fixing rail	M6	UI 120/61	13.8 kg	1	160	145	230	110	100	89	115
TT1 1,6-4-42	Screw-type terminal	Fixing rail	M6	3UI 132/72	13.8 kg	2	160	145	260	110	100	89	115
TT1 1,6-23-24	Screw-type terminal	Fixing rail	M6	UI 120/61	13.5 kg	2	160	145	265	110	100	89	115
TT1 2-4-23	Screw-type terminal	Fixing rail	M10	UI 132/60	17.0 kg	1	175	140	245	128	112	90	114
TT1 2-23-24	Screw-type terminal	Fixing rail	M10	UI 132/60	17.0 kg	2	175	140	285	128	112	90	114
TT1 2,5-4-23	Screw-type terminal	Fixing rail	M12	3UI 180/78	18.5 kg	1	200	155	275	140	112	94	120
TT1 2,5-4-42	Screw-type terminal	Fixing rail	M10	3UI 180/78	0.0 kg	2	200	155	310	140	112	94	120
TT1 2,5-23-24	Screw-type terminal	Fixing rail	M12	3UI 180/78	20.0 kg	2	200	155	315	140	112	94	120
TT1 3-4-23	Screw-type terminal	Fixing rail	M10	UI 150/65	24.0 kg	1	200	165	275	140	112	107	133
TT1 3-5-23	Screw-type terminal	Fixing rail	M10	UI 150/65	24.0 kg	1	200	165	275	140	112	107	133
TT1 3-44-23	Screw-type terminal	Fixing rail	M10	UI 150/65	24.0 kg	1	200	165	275	140	112	107	133
TT1 4-4-23	Screw-type terminal	Fixing rail	M10	UI 180/63	31.0 kg	1	240	165	335	200	144	125	125
TT1 4-5-23	Screw-type terminal	Fixing rail	M10	UI 180/63	31.0 kg	1	240	165	335	200	144	125	125
TT1 4-44-23	Screw-type terminal	Fixing rail	M10	UI 180/63	31.0 kg	1	240	165	335	200	144	125	-
TT1 5-4-23	Screw-type terminal	Fixing rail	M10	UI 180/63	39.0 kg	1	240	195	335	200	144	140	140
TT1 5-5-23	Screw-type terminal	Fixing rail	M10	UI 180/78	39.0 kg	1	240	195	335	200	144	140	140
TT1 5-44-23	Screw-type terminal	Fixing rail	M10	UI 180/78	39.0 kg	1	240	195	335	200	144	140	140
TT1 6,3-4-23	Screw-type terminal	Fixing rail	M10	3UI 240/140	48.0 kg	1	240	210	335	200	144	155	155
TT1 6,3-5-23	Screw-type terminal	Fixing rail	M10	UI 180/93	48.0 kg	1	240	210	335	200	144	155	155
TT1 6,3-44-23	Screw-type terminal	Fixing rail	M10	UI 180/93	48.0 kg	1	240	210	335	200	144	155	155
TT1 8-4-23	Screw-type terminal	Fixing rail	M10	UI 210/88	60.0 kg	1	280	215	385	240	176	158	166
TT1 8-5-23	Screw-type terminal	Fixing rail	M10	UI 210/88	60.0 kg	1	280	215	385	240	176	158	166
TT1 8-44-23	Screw-type terminal	Fixing rail	M10	UI 210/88	60.0 kg	1	280	215	385	240	176	158	166
TT1 10-4-23	Screw-type terminal	Fixing rail	M10	UI 210/103	75.0 kg	1	280	230	385	240	176	173	181
TT1 10-5-23	Screw-type terminal	Fixing rail	M10	UI 210 /103	75.0 kg	1	280	230	385	240	176	173	181
TT1 10-44-23	Screw-type terminal	Fixing rail	M10	UI 210/103	75.0 kg	1	280	230	385	240	176	173	181
TT1 12,5-4-23	Screw-type terminal	Fixing rail	M12	3UI 180/63	105.0 kg	2	320	250	460	270	196	184	210
TT1 15-4-23	Screw-type terminal	Fixing rail	M12	UI 240/110	98.0 kg	2	320	250	470	270	196	184	210
TT1 20-4-23	Screw-type terminal	Fixing rail	M12	UI 240/140	133.0 kg	2	320	280	470	270	196	214	240
TT1 25-4-23	Screw-type terminal	Fixing rail	M12	UI 240/170	153.0 kg	2	320	310	490	270	196	244	270

Dimension pictures

1



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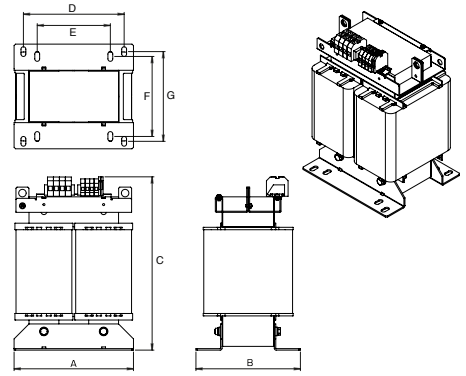
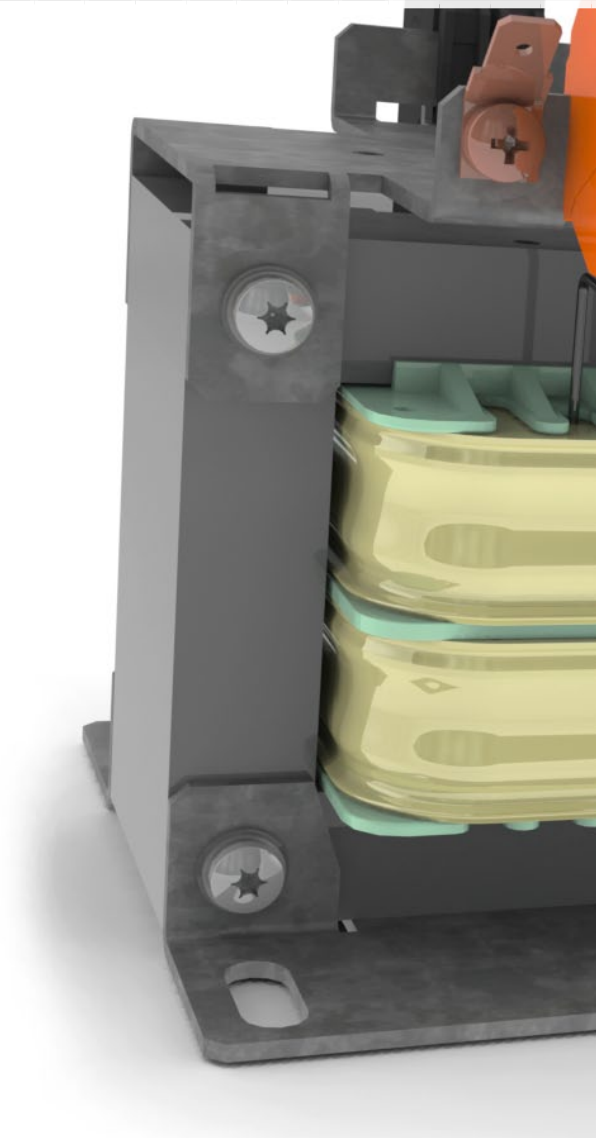


OVERVIEW
SEPARATING TRANSFORMERS

Type	Features	Rated input voltage	Rated output voltage	50 VA	75 VA	100 VA	150 VA	200 VA	250 VA	300 VA	350 VA	500 VA
CT	Versions with US-fuseholder or DIN rail for additional components are available	2 x 240 V	120 V	■	■	■	■	■	■	■	■	■
			24 V	■	■	■	■	■	■	■	■	
		600 V	120 V	■	■	■	■	■	■	■	■	■
			24 V	■	■	■	■	■	■	■	■	



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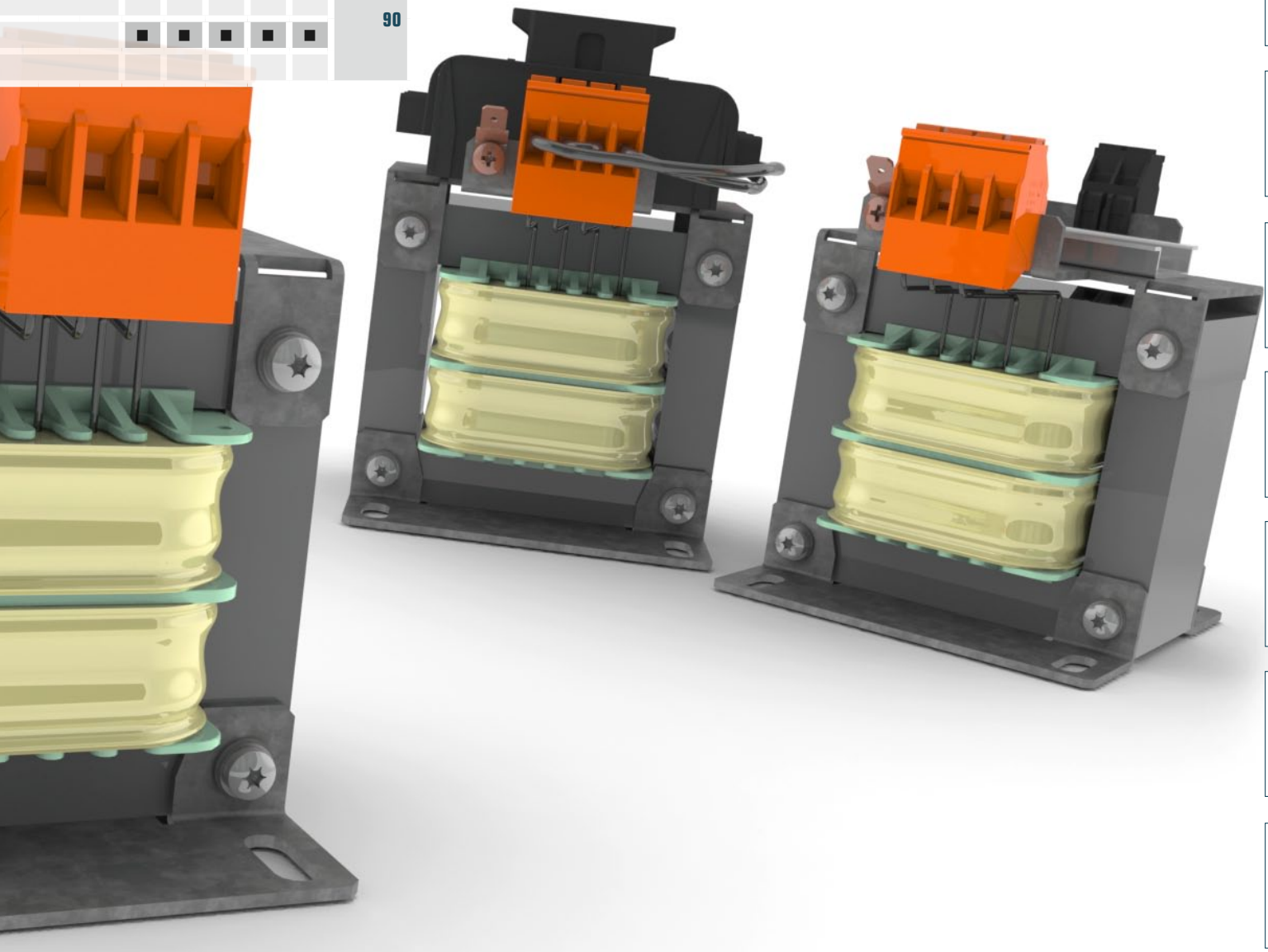
750 VA	1000 VA	1500 VA	2000 VA	2500 VA	Page
■	■	■	■	■	90
■	■	■	■	■	



Separating transformer
CT

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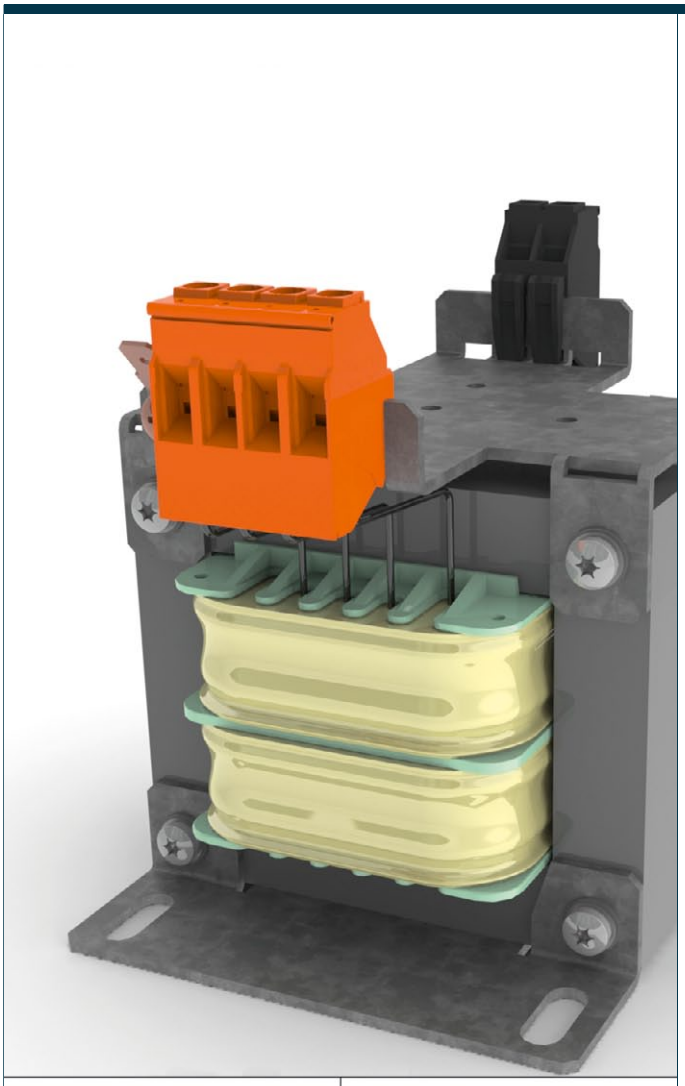
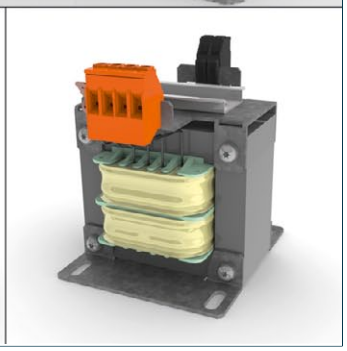




General Data

Rated input voltage 2 x 240 V or 600 V
Rated output voltage 24 V, 120 V
Rated power 50 - 2500 VA
Insulation class B
Maximum ambient temperature 40 °C
Efficiency up to 95 %
Degree of protection IP 00

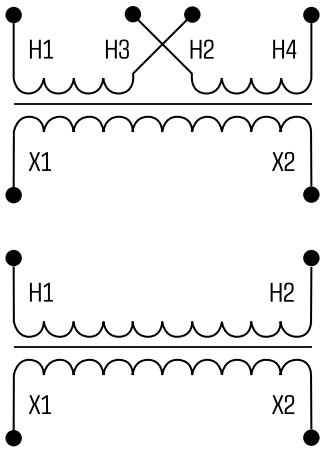
Advantages

Fused versions available
Versions with DIN rail for additional components available
Contact protected screw connection terminals
Jumpers included for primary voltage selection
Impregnated for max. protection
Up to 2500 VA

Applications

As a control transformer for the electrical isolation of the input and output sides.The construction of the transformer to supply control systems according to VDE 0113 is designed.

Sample application



Standards

Separating transformer
to: EN 61558 part 1 with part 2-1, UL 5085-1/-2;2:2, CSA 22.2 No. 66

Approvals

EN 61558, UL 5085-1/-2, CSA 22.2 No 66

Separating transformer
CT

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Electrical data

Typ	CT-005-048-12-0	CT-005-048-12-1	CT-005-048-12-2	CT-005-048-24-0	CT-005-048-24-1	CT-005-048-24-2
Special features						
Characteristics	-	Fused version	with DIN rail for additional components	-	Fused version	with DIN rail for additional components
Input						
Rated input voltage	2 x 240 Vac	2 x 240 Vac	2 x 240 Vac	2 x 240 Vac	2 x 240 Vac	2 x 240 Vac
Rated input current	2 x 0,13 Aac	2 x 0,13 Aac	2 x 0,13 Aac	2 x 0,13 Aac	2 x 0,13 Aac	2 x 0,13 Aac
Frequency Range	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
Output						
Rated output voltage	120 Vac	120 Vac	120 Vac	24 Vac	24 Vac	24 Vac
Rated Power	50 VA	50 VA	50 VA	50 VA	50 VA	50 VA
No-load voltage (app. x factor)	1.13	1.13	1.13	1.13	1.13	1.13
Efficiency	81.0 %	81.0 %	81.0 %	81.0 %	81.0 %	81.0 %
Standards						
Classification	Separating transformer	Separating transformer	Separating transformer	Separating transformer	Separating transformer	Separating transformer
Approvals						
Approvals	cURus	cURus	cURus	cURus	cURus	cURus
Environment						
Type of cooling	self-cooling	self-cooling	self-cooling	self-cooling	self-cooling	self-cooling
Ambient temperature	max. 40 °C	max. 40 °C	max. 40 °C	max. 40 °C	max. 40 °C	max. 40 °C
Safety and protection						
Type	Open type	Open type	Open type	Open type	Open type	Open type
Insulation class	B, class 130	B, class 130	B, class 130	B, class 130	B, class 130	B, class 130
Protection index	IP 00	IP 00	IP 00	IP 00	IP 00	IP 00
Safety class (prepared)	I	I	I	I	I	I
Short circuit strength	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof
Core	EI 66/34,7	EI 66/34,7	EI 66/34,7	EI 66/34,7	EI 66/34,7	EI 66/34,7

Separating transformer
CT

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Electrical data

Typ	CT-005-060-12-0	CT-005-060-12-1	CT-005-060-12-2	CT-005-060-24-0	CT-005-060-24-1	CT-005-060-24-2
Special features						
Characteristics	-	Fused version	with DIN rail for additional components	-	Fused version	with DIN rail for additional components
Input						
Rated input voltage	600 Vac	600 Vac	600 Vac	600 Vac	600 Vac	600 Vac
Rated input current	0,10 Aac	0,10 Aac	0,10 Aac	0,10 Aac	0,10 Aac	0,10 Aac
Frequency Range	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
Output						
Rated output voltage	120 Vac	120 Vac	120 Vac	24 Vac	24 Vac	24 Vac
Rated Power	50 VA	50 VA	50 VA	50 VA	50 VA	50 VA
No-load voltage (app. x factor)	1.13	1.13	1.13	1.13	1.13	1.13
Efficiency	81.0 %	81.0 %	81.0 %	81.0 %	81.0 %	81.0 %
Standards						
Classification	Separating transformer	Separating transformer	Separating transformer	Separating transformer	Separating transformer	Separating transformer
Approvals						
Approvals	cURus	cURus	cURus	cURus	cURus	cURus
Environment						
Type of cooling	self-cooling	self-cooling	self-cooling	self-cooling	self-cooling	self-cooling
Ambient temperature	max. 40 °C	max. 40 °C	max. 40 °C	max. 40 °C	max. 40 °C	max. 40 °C
Safety and protection						
Type	Open type	Open type	Open type	Open type	Open type	Open type
Insulation class	B, class 130	B, class 130	B, class 130	B, class 130	B, class 130	B, class 130
Protection index	IP 00	IP 00	IP 00	IP 00	IP 00	IP 00
Safety class (prepared)	I	I	I	I	I	I
Short circuit strength	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof
Core	EI 66/34,7	EI 66/34,7	EI 66/34,7	EI 66/34,7	EI 66/34,7	EI 66/34,7

Separating transformer
CT

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Electrical data

Typ	CT-007-048-12-0	CT-007-048-12-1	CT-007-048-12-2	CT-007-048-24-0	CT-007-048-24-1	CT-007-048-24-2
Special features						
Characteristics	-	Fused version	with DIN rail for additional components	-	Fused version	with DIN rail for additional components
Input						
Rated input voltage	2 x 240 Vac	2 x 240 Vac	2 x 240 Vac	2 x 240 Vac	2 x 240 Vac	2 x 240 Vac
Rated input current	2 x 0,19 Aac	2 x 0,19 Aac	2 x 0,19 Aac	2 x 0,19 Aac	2 x 0,19 Aac	2 x 0,19 Aac
Frequency Range	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
Output						
Rated output voltage	120 Vac	120 Vac	120 Vac	24 Vac	24 Vac	24 Vac
Rated Power	75 VA	75 VA	75 VA	75 VA	75 VA	75 VA
No-load voltage (app. x factor)	1.16	1.16	1.16	1.16	1.16	1.16
Efficiency	82.0 %	82.0 %	82.0 %	82.0 %	82.0 %	82.0 %
Standards						
Classification	Separating transformer	Separating transformer	Separating transformer	Separating transformer	Separating transformer	Separating transformer
Approvals						
Approvals	cURus	cURus	cURus	cURus	cURus	cURus
Environment						
Type of cooling	self-cooling	self-cooling	self-cooling	self-cooling	self-cooling	self-cooling
Ambient temperature	max. 40 °C	max. 40 °C	max. 40 °C	max. 40 °C	max. 40 °C	max. 40 °C
Safety and protection						
Type	Open type	Open type	Open type	Open type	Open type	Open type
Insulation class	B, class 130	B, class 130	B, class 130	B, class 130	B, class 130	B, class 130
Protection index	IP 00	IP 00	IP 00	IP 00	IP 00	IP 00
Safety class (prepared)	I	I	I	I	I	I
Short circuit strength	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof
Core	EI 78/27,5	EI 78/27,5	EI 78/27,5	EI 78/27,5	EI 78/27,5	EI 78/27,5

Separating transformer
CT

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Electrical data

Typ	CT-007-060-12-0	CT-007-060-12-1	CT-007-060-12-2	CT-007-060-24-0	CT-007-060-24-1	CT-007-060-24-2
Special features						
Characteristics	-	Fused version	with DIN rail for additional components	-	Fused version	with DIN rail for additional components
Input						
Rated input voltage	600 Vac	600 Vac	600 Vac	600 Vac	600 Vac	600 Vac
Rated input current	0,15 Aac	0,15 Aac	0,15 Aac	0,15 Aac	0,15 Aac	0,15 Aac
Frequency Range	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
Output						
Rated output voltage	120 Vac	120 Vac	120 Vac	24 Vac	24 Vac	24 Vac
Rated Power	75 VA	75 VA	75 VA	75 VA	75 VA	75 VA
No-load voltage (app. x factor)	1.16	1.16	1.16	1.16	1.16	1.16
Efficiency	82.0 %	82.0 %	82.0 %	82.0 %	82.0 %	82.0 %
Standards						
Classification	Separating transformer	Separating transformer	Separating transformer	Separating transformer	Separating transformer	Separating transformer
Approvals						
Approvals	cURus	cURus	cURus	cURus	cURus	cURus
Environment						
Type of cooling	self-cooling	self-cooling	self-cooling	self-cooling	self-cooling	self-cooling
Ambient temperature	max. 40 °C	max. 40 °C	max. 40 °C	max. 40 °C	max. 40 °C	max. 40 °C
Safety and protection						
Type	Open type	Open type	Open type	Open type	Open type	Open type
Insulation class	B, class 130	B, class 130	B, class 130	B, class 130	B, class 130	B, class 130
Protection index	IP 00	IP 00	IP 00	IP 00	IP 00	IP 00
Safety class (prepared)	I	I	I	I	I	I
Short circuit strength	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof
Core	EI 78/27,5	EI 78/27,5	EI 78/27,5	EI 78/27,5	EI 78/27,5	EI 78/27,5

Separating transformer
CT

BLOCK Website

Electrical data

Typ	CT-010-048-12-0	CT-010-048-12-1	CT-010-048-12-2	CT-010-048-24-0	CT-010-048-24-1	CT-010-048-24-2
Special features						
Characteristics	-	Fused version	with DIN rail for additional components	-	Fused version	with DIN rail for additional components
Input						
Rated input voltage	2 x 240 Vac	2 x 240 Vac	2 x 240 Vac	22 x 240 Vac	2 x 240 Vac	2 x 240 Vac
Rated input current	2 x 0,25 Aac	2 x 0,25 Aac	2 x 0,25 Aac	2 x 0,25 Aac	2 x 0,25 Aac	2 x 0,25 Aac
Frequency Range	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
Output						
Rated output voltage	120 Vac	120 Vac	120 Vac	24 Vac	24 Vac	24 Vac
Rated Power	100 VA	100 VA	100 VA	100 VA	100 VA	100 VA
No-load voltage (app. x factor)	1.13	1.13	1.13	1.13	1.13	1.13
Efficiency	84.0 %	84.0 %	84.0 %	84.0 %	84.0 %	84.0 %
Standards						
Classification	Separating transformer	Separating transformer	Separating transformer	Separating transformer	Separating transformer	Separating transformer
Approvals						
Approvals	cURus	cURus	cURus	cURus	cURus	cURus
Environment						
Type of cooling	self-cooling	self-cooling	self-cooling	self-cooling	self-cooling	self-cooling
Ambient temperature	max. 40 °C	max. 40 °C	max. 40 °C	max. 40 °C	max. 40 °C	max. 40 °C
Safety and protection						
Type	Open type	Open type	Open type	Open type	Open type	Open type
Insulation class	B, class 130	B, class 130	B, class 130	B, class 130	B, class 130	B, class 130
Protection index	IP 00	IP 00	IP 00	IP 00	IP 00	IP 00
Safety class (prepared)	I	I	I	I	I	I
Short circuit strength	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof
Core	EI 78/36,5	EI 78/36,5	EI 78/36,5	EI 78/36,5	EI 78/36,5	EI 78/36,5

Separating transformer
CT

BLOCK Website

Electrical data

Typ	CT-010-060-12-0	CT-010-060-12-1	CT-010-060-12-2	CT-010-060-24-0	CT-010-060-24-1	CT-010-060-24-2
Special features						
Characteristics	-	Fused version	with DIN rail for additional components	-	Fused version	with DIN rail for additional components
Input						
Rated input voltage	600 Vac	600 Vac	600 Vac	600 Vac	600 Vac	600 Vac
Rated input current	0,2 Aac	0,2 Aac	0,2 Aac	0,2 Aac	0,2 Aac	0,2 Aac
Frequency Range	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
Output						
Rated output voltage	120 Vac	120 Vac	120 Vac	24 Vac	24 Vac	24 Vac
Rated Power	100 VA	100 VA	100 VA	100 VA	100 VA	100 VA
No-load voltage (app. x factor)	1.13	1.13	1.13	1.13	1.13	1.13
Efficiency	84.0 %	84.0 %	84.0 %	84.0 %	84.0 %	84.0 %
Standards						
Classification	Separating transformer	Separating transformer	Separating transformer	Separating transformer	Separating transformer	Separating transformer
Approvals						
Approvals	cURus	cURus	cURus	cURus	cURus	cURus
Environment						
Type of cooling	self-cooling	self-cooling	self-cooling	self-cooling	self-cooling	self-cooling
Ambient temperature	max. 40 °C	max. 40 °C	max. 40 °C	max. 40 °C	max. 40 °C	max. 40 °C
Safety and protection						
Type	Open type	Open type	Open type	Open type	Open type	Open type
Insulation class	B, class 130	B, class 130	B, class 130	B, class 130	B, class 130	B, class 130
Protection index	IP 00	IP 00	IP 00	IP 00	IP 00	IP 00
Safety class (prepared)	I	I	I	I	I	I
Short circuit strength	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof
Core	EI 78/36,5	EI 78/36,5	EI 78/36,5	EI 78/36,5	EI 78/36,5	EI 78/36,5

Separating transformer
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Electrical data

Typ	CT-015-048-12-0	CT-015-048-12-1	CT-015-048-12-2	CT-015-048-24-0	CT-015-048-24-1	CT-015-048-24-2
Special features						
Characteristics	-	Fused version	with DIN rail for additional components	-	Fused version	with DIN rail for additional components
Input						
Rated input voltage	2 x 240 Vac	2 x 240 Vac	2 x 240 Vac	2 x 240 Vac	2 x 240 Vac	2 x 240 Vac
Rated input current	2 x 0,36 Aac	2 x 0,36 Aac	2 x 0,36 Aac	2 x 0,36 Aac	2 x 0,36 Aac	2 x 0,36 Aac
Frequency Range	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
Output						
Rated output voltage	120 Vac	120 Vac	120 Vac	24 Vac	24 Vac	24 Vac
Rated Power	150 VA	150 VA	150 VA	150 VA	150 VA	150 VA
No-load voltage (app. x factor)	1.10	1.10	1.10	1.10	1.10	1.10
Efficiency	86.0 %	86.0 %	86.0 %	86.0 %	86.0 %	86.0 %
Standards						
Classification	Separating transformer	Separating transformer	Separating transformer	Separating transformer	Separating transformer	Separating transformer
Approvals						
Approvals	cURus	cURus	cURus	cURus	cURus	cURus
Environment						
Type of cooling	self-cooling	self-cooling	self-cooling	self-cooling	self-cooling	self-cooling
Ambient temperature	max. 40 °C	max. 40 °C	max. 40 °C	max. 40 °C	max. 40 °C	max. 40 °C
Safety and protection						
Type	Open type	Open type	Open type	Open type	Open type	Open type
Insulation class	B, class 130	B, class 130	B, class 130	B, class 130	B, class 130	B, class 130
Protection index	IP 00	IP 00	IP 00	IP 00	IP 00	IP 00
Safety class (prepared)	I	I	I	I	I	I
Short circuit strength	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof
Core	EI 96/35,7	EI 96/35,7	EI 96/35,7	EI 96/35,7	EI 96/35,7	EI 96/35,7

Separating transformer
CT

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Electrical data

Typ	CT-015-060-12-0	CT-015-060-12-1	CT-015-060-12-2	CT-015-060-24-0	CT-015-060-24-1	CT-015-060-24-2
Special features						
Characteristics	-	Fused version	with DIN rail for additional components	-	Fused version	with DIN rail for additional components
Input						
Rated input voltage	600 Vac	600 Vac	600 Vac	600 Vac	600 Vac	600 Vac
Rated input current	0,29 Aac	0,29 Aac	0,29 Aac	0,29 Aac	0,29 Aac	0,29 Aac
Frequency Range	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
Output						
Rated output voltage	120 Vac	120 Vac	120 Vac	24 Vac	24 Vac	24 Vac
Rated Power	150 VA	150 VA	150 VA	150 VA	150 VA	150 VA
No-load voltage (app. x factor)	1.10	1.10	1.10	1.10	1.10	1.10
Efficiency	86.0 %	86.0 %	86.0 %	86.0 %	86.0 %	86.0 %
Standards						
Classification	Separating transformer	Separating transformer	Separating transformer	Separating transformer	Separating transformer	Separating transformer
Approvals						
Approvals	cURus	cURus	cURus	cURus	cURus	cURus
Environment						
Type of cooling	self-cooling	self-cooling	self-cooling	self-cooling	self-cooling	self-cooling
Ambient temperature	max. 40 °C	max. 40 °C	max. 40 °C	max. 40 °C	max. 40 °C	max. 40 °C
Safety and protection						
Type	Open type	Open type	Open type	Open type	Open type	Open type
Insulation class	B, class 130	B, class 130	B, class 130	B, class 130	B, class 130	B, class 130
Protection index	IP 00	IP 00	IP 00	IP 00	IP 00	IP 00
Safety class (prepared)	I	I	I	I	I	I
Short circuit strength	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof
Core	EI 96/35,7	EI 96/35,7	EI 96/35,7	EI 96/35,7	EI 96/35,7	EI 96/35,7

Separating transformer
CT

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Electrical data

Typ	CT-020-048-12-0	CT-020-048-12-1	CT-020-048-12-2	CT-020-048-24-0	CT-020-048-24-1	CT-020-048-24-2
Special features						
Characteristics	-	Fused version	with DIN rail for additional components	-	Fused version	with DIN rail for additional components
Input						
Rated input voltage	2 x 240 Vac	2 x 240 Vac	2 x 240 Vac	2 x 240 Vac	2 x 240 Vac	2 x 240 Vac
Rated input current	2 x 0,47 Aac	2 x 0,47 Aac	2 x 0,47 Aac	2 x 0,47 Aac	2 x 0,47 Aac	2 x 0,47 Aac
Frequency Range	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
Output						
Rated output voltage	120 Vac	120 Vac	120 Vac	24 Vac	24 Vac	24 Vac
Rated Power	200 VA	200 VA	200 VA	200 VA	200 VA	200 VA
No-load voltage (app. x factor)	1.09	1.09	1.09	1.09	1.09	1.09
Efficiency	88.0 %	88.0 %	88.0 %	88.0 %	88.0 %	88.0 %
Standards						
Classification	Separating transformer	Separating transformer	Separating transformer	Separating transformer	Separating transformer	Separating transformer
Approvals						
Approvals	cURus	cURus	cURus	cURus	cURus	cURus
Environment						
Type of cooling	self-cooling	self-cooling	self-cooling	self-cooling	self-cooling	self-cooling
Ambient temperature	max. 40 °C	max. 40 °C	max. 40 °C	max. 40 °C	max. 40 °C	max. 40 °C
Safety and protection						
Type	Open type	Open type	Open type	Open type	Open type	Open type
Insulation class	B, class 130	B, class 130	B, class 130	B, class 130	B, class 130	B, class 130
Protection index	IP 00	IP 00	IP 00	IP 00	IP 00	IP 00
Safety class (prepared)	I	I	I	I	I	I
Short circuit strength	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof
Core	EI 96/45,7	EI 96/45,7	EI 96/45,7	EI 96/45,7	EI 96/45,7	EI 96/45,7

Separating transformer
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Electrical data

Typ	CT-020-060-12-0	CT-020-060-12-1	CT-020-060-12-2	CT-020-060-24-0	CT-020-060-24-1	CT-020-060-24-2
Special features						
Characteristics	-	Fused version	with DIN rail for additional components	-	Fused version	with DIN rail for additional components
Input						
Rated input voltage	600 Vac	600 Vac	600 Vac	600 Vac	600 Vac	600 Vac
Rated input current	0,37 Aac	0,37 Aac	0,37 Aac	0,37 Aac	0,37 Aac	0,37 Aac
Frequency Range	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
Output						
Rated output voltage	120 Vac	120 Vac	120 Vac	24 Vac	24 Vac	24 Vac
Rated Power	200 VA	200 VA	200 VA	200 VA	200 VA	200 VA
No-load voltage (app. x factor)	1.09	1.09	1.09	1.09	1.09	1.09
Efficiency	88.0 %	88.0 %	88.0 %	88.0 %	88.0 %	88.0 %
Standards						
Classification	Separating transformer	Separating transformer	Separating transformer	Separating transformer	Separating transformer	Separating transformer
Approvals						
Approvals	cURus	cURus	cURus	cURus	cURus	cURus
Environment						
Type of cooling	self-cooling	self-cooling	self-cooling	self-cooling	self-cooling	self-cooling
Ambient temperature	max. 40 °C	max. 40 °C	max. 40 °C	max. 40 °C	max. 40 °C	max. 40 °C
Safety and protection						
Type	Open type	Open type	Open type	Open type	Open type	Open type
Insulation class	B, class 130	B, class 130	B, class 130	B, class 130	B, class 130	B, class 130
Protection index	IP 00	IP 00	IP 00	IP 00	IP 00	IP 00
Safety class (prepared)	I	I	I	I	I	I
Short circuit strength	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof
Core	EI 96/45,7	EI 96/45,7	EI 96/45,7	EI 96/45,7	EI 96/45,7	EI 96/45,7

Separating transformer
CT

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Electrical data

Typ	CT-025-048-12-0	CT-025-048-12-1	CT-025-048-12-2	CT-025-048-24-0	CT-025-048-24-1	CT-025-048-24-2
Special features						
Characteristics	-	Fused version	with DIN rail for additional components	-	Fused version	with DIN rail for additional components
Input						
Rated input voltage	2 x 240 Vac	2 x 240 Vac	2 x 240 Vac	2 x 240 Vac	2 x 240 Vac	2 x 240 Vac
Rated input current	2 x 0,58 Aac	2 x 0,58 Aac	2 x 0,58 Aac	2 x 0,58 Aac	2 x 0,58 Aac	2 x 0,58 Aac
Frequency Range	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
Output						
Rated output voltage	120 Vac	120 Vac	120 Vac	24 Vac	24 Vac	24 Vac
Rated Power	250 VA	250 VA	250 VA	250 VA	250 VA	250 VA
No-load voltage (app. x factor)	1.07	1.07	1.07	1.07	1.07	1.07
Efficiency	89.0 %	89.0 %	89.0 %	89.0 %	89.0 %	89.0 %
Standards						
Classification	Separating transformer	Separating transformer	Separating transformer	Separating transformer	Separating transformer	Separating transformer
Approvals						
Approvals	cURus	cURus	cURus	cURus	cURus	cURus
Environment						
Type of cooling	self-cooling	self-cooling	self-cooling	self-cooling	self-cooling	self-cooling
Ambient temperature	max. 40 °C	max. 40 °C	max. 40 °C	max. 40 °C	max. 40 °C	max. 40 °C
Safety and protection						
Type	Open type	Open type	Open type	Open type	Open type	Open type
Insulation class	B, class 130	B, class 130	B, class 130	B, class 130	B, class 130	B, class 130
Protection index	IP 00	IP 00	IP 00	IP 00	IP 00	IP 00
Safety class (prepared)	I	I	I	I	I	I
Short circuit strength	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof
Core	EI 96/59,7	EI 96/59,7	EI 96/59,7	EI 96/59,7	EI 96/59,7	EI 96/59,7

Separating transformer
CT

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Electrical data

Typ	CT-025-060-12-0	CT-025-060-12-1	CT-025-060-12-2	CT-025-060-24-0	CT-025-060-24-1	CT-025-060-24-2
Special features						
Characteristics	-	Fused version	with DIN rail for additional components	-	Fused version	with DIN rail for additional components
Input						
Rated input voltage	600 Vac	600 Vac	600 Vac	600 Vac	600 Vac	600 Vac
Rated input current	0,47 Aac	0,47 Aac	0,47 Aac	0,47 Aac	0,47 Aac	0,47 Aac
Frequency Range	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
Output						
Rated output voltage	120 Vac	120 Vac	120 Vac	24 Vac	24 Vac	24 Vac
Rated Power	250 VA	250 VA	250 VA	250 VA	250 VA	250 VA
No-load voltage (app. x factor)	1.07	1.07	1.07	1.07	1.07	1.07
Efficiency	89.0 %	89.0 %	89.0 %	89.0 %	89.0 %	89.0 %
Standards						
Classification	Separating transformer	Separating transformer	Separating transformer	Separating transformer	Separating transformer	Separating transformer
Approvals						
Approvals	cURus	cURus	cURus	cURus	cURus	cURus
Environment						
Type of cooling	self-cooling	self-cooling	self-cooling	self-cooling	self-cooling	self-cooling
Ambient temperature	max. 40 °C	max. 40 °C	max. 40 °C	max. 40 °C	max. 40 °C	max. 40 °C
Safety and protection						
Type	Open type	Open type	Open type	Open type	Open type	Open type
Insulation class	B, class 130	B, class 130	B, class 130	B, class 130	B, class 130	B, class 130
Protection index	IP 00	IP 00	IP 00	IP 00	IP 00	IP 00
Safety class (prepared)	I	I	I	I	I	I
Short circuit strength	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof
Core	EI 96/59,7	EI 96/59,7	EI 96/59,7	EI 96/59,7	EI 96/59,7	EI 96/59,7

Separating transformer
CT

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Electrical data

Typ	CT-030-048-12-0	CT-030-048-12-1	CT-030-048-12-2	CT-030-048-24-0	CT-030-048-24-1	CT-030-048-24-2
Special features						
Characteristics	-	Fused version	with DIN rail for additional components	-	Fused version	with DIN rail for additional components
Input						
Rated input voltage	2 x 240 Vac	2 x 240 Vac	2 x 240 Vac	2 x 240 Vac	2 x 240 Vac	2 x 240 Vac
Rated input current	2 x 0,70 Aac	2 x 0,70 Aac	2 x 0,70 Aac	2 x 0,70 Aac	2 x 0,70 Aac	2 x 0,70 Aac
Frequency Range	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
Output						
Rated output voltage	120 Vac	120 Vac	120 Vac	24 Vac	24 Vac	24 Vac
Rated Power	300 VA	300 VA	300 VA	300 VA	300 VA	300 VA
No-load voltage (app. x factor)	1.08	1.08	1.08	1.08	1.08	1.08
Efficiency	89.0 %	89.0 %	89.0 %	89.0 %	89.0 %	89.0 %
Standards						
Classification	Separating transformer	Separating transformer	Separating transformer	Separating transformer	Separating transformer	Separating transformer
Approvals						
Approvals	cURus	cURus	cURus	cURus	cURus	cURus
Environment						
Type of cooling	self-cooling	self-cooling	self-cooling	self-cooling	self-cooling	self-cooling
Ambient temperature	max. 40 °C	max. 40 °C	max. 40 °C	max. 40 °C	max. 40 °C	max. 40 °C
Safety and protection						
Type	Open type	Open type	Open type	Open type	Open type	Open type
Insulation class	B, class 130	B, class 130	B, class 130	B, class 130	B, class 130	B, class 130
Protection index	IP 00	IP 00	IP 00	IP 00	IP 00	IP 00
Safety class (prepared)	I	I	I	I	I	I
Short circuit strength	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof
Core	EI 120/41,7	EI 120/41,7	EI 120/41,7	EI 120/41,7	EI 120/41,7	EI 120/41,7

Separating transformer
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Electrical data

Typ	CT-030-060-12-0	CT-030-060-12-1	CT-030-060-12-2	CT-030-060-24-0	CT-030-060-24-1	CT-030-060-24-2
Special features						
Characteristics	-	Fused version	with DIN rail for additional components	-	Fused version	with DIN rail for additional components
Input						
Rated input voltage	600 Vac	600 Vac	600 Vac	600 Vac	600 Vac	600 Vac
Rated input current	0,55 Aac	0,55 Aac	0,55 Aac	0,55 Aac	0,55 Aac	0,55 Aac
Frequency Range	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
Output						
Rated output voltage	120 Vac	120 Vac	120 Vac	24 Vac	24 Vac	24 Vac
Rated Power	300 VA	300 VA	300 VA	300 VA	300 VA	300 VA
No-load voltage (app. x factor)	1.08	1.08	1.08	1.08	1.08	1.08
Efficiency	89.0 %	89.0 %	89.0 %	89.0 %	89.0 %	89.0 %
Standards						
Classification	Separating transformer	Separating transformer	Separating transformer	Separating transformer	Separating transformer	Separating transformer
Approvals						
Approvals	cURus	cURus	cURus	cURus	cURus	cURus
Environment						
Type of cooling	self-cooling	self-cooling	self-cooling	self-cooling	self-cooling	self-cooling
Ambient temperature	max. 40 °C	max. 40 °C	max. 40 °C	max. 40 °C	max. 40 °C	max. 40 °C
Safety and protection						
Type	Open type	Open type	Open type	Open type	Open type	Open type
Insulation class	B, class 130	B, class 130	B, class 130	B, class 130	B, class 130	B, class 130
Protection index	IP 00	IP 00	IP 00	IP 00	IP 00	IP 00
Safety class (prepared)	I	I	I	I	I	I
Short circuit strength	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof
Core	EI 120/41,7	EI 120/41,7	EI 120/41,7	EI 120/41,7	EI 120/41,7	EI 120/41,7

Separating transformer
CT

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Electrical data

Typ	CT-035-048-12-0	CT-035-048-12-1	CT-035-048-12-2	CT-035-048-24-0	CT-035-048-24-1	CT-035-048-24-2
Special features						
Characteristics	-	Fused version	with DIN rail for additional components	-	Fused version	with DIN rail for additional components
Input						
Rated input voltage	2 x 240 Vac	2 x 240 Vac	2 x 240 Vac	2 x 240 Vac	2 x 240 Vac	2 x 240 Vac
Rated input current	2 x 0,81 Aac	2 x 0,81 Aac	2 x 0,81 Aac	2 x 0,81 Aac	2 x 0,81 Aac	2 x 0,81 Aac
Frequency Range	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
Output						
Rated output voltage	120 Vac	120 Vac	120 Vac	24 Vac	24 Vac	24 Vac
Rated Power	350 VA	350 VA	350 VA	350 VA	350 VA	350 VA
No-load voltage (app. x factor)	1.07	1.07	1.07	1.07	1.07	1.07
Efficiency	91.0 %	91.0 %	91.0 %	91.0 %	91.0 %	91.0 %
Standards						
Classification	Separating transformer	Separating transformer	Separating transformer	Separating transformer	Separating transformer	Separating transformer
Approvals						
Approvals	cURus	cURus	cURus	cURus	cURus	cURus
Environment						
Type of cooling	self-cooling	self-cooling	self-cooling	self-cooling	self-cooling	self-cooling
Ambient temperature	max. 40 °C	max. 40 °C	max. 40 °C	max. 40 °C	max. 40 °C	max. 40 °C
Safety and protection						
Type	Open type	Open type	Open type	Open type	Open type	Open type
Insulation class	B, class 130	B, class 130	B, class 130	B, class 130	B, class 130	B, class 130
Protection index	IP 00	IP 00	IP 00	IP 00	IP 00	IP 00
Safety class (prepared)	I	I	I	I	I	I
Short circuit strength	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof
Core	EI 120/50,7	EI 120/50,7	EI 120/50,7	EI 120/50,7	EI 120/50,7	EI 120/50,7

Separating transformer
CT

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Electrical data

Typ	CT-035-060-12-0	CT-035-060-12-1	CT-035-060-12-2	CT-035-060-24-0	CT-035-060-24-1	CT-035-060-24-2
Special features						
Characteristics	-	Fused version	with DIN rail for additional components	-	Fused version	with DIN rail for additional components
Input						
Rated input voltage	600 Vac	600 Vac	600 Vac	600 Vac	600 Vac	600 Vac
Rated input current	0,65 Aac	0,65 Aac	0,65 Aac	0,65 Aac	0,65 Aac	0,65 Aac
Frequency Range	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
Output						
Rated output voltage	120 Vac	120 Vac	120 Vac	24 Vac	24 Vac	24 Vac
Rated Power	350 VA	350 VA	350 VA	350 VA	350 VA	350 VA
No-load voltage (app. x factor)	1.07	1.07	1.07	1.07	1.07	1.07
Efficiency	91.0 %	91.0 %	91.0 %	91.0 %	91.0 %	91.0 %
Standards						
Classification	Separating transformer	Separating transformer	Separating transformer	Separating transformer	Separating transformer	Separating transformer
Approvals						
Approvals	cURus	cURus	cURus	cURus	cURus	cURus
Environment						
Type of cooling	self-cooling	self-cooling	self-cooling	self-cooling	self-cooling	self-cooling
Ambient temperature	max. 40 °C	max. 40 °C	max. 40 °C	max. 40 °C	max. 40 °C	max. 40 °C
Safety and protection						
Type	Open type	Open type	Open type	Open type	Open type	Open type
Insulation class	B, class 130	B, class 130	B, class 130	B, class 130	B, class 130	B, class 130
Protection index	IP 00	IP 00	IP 00	IP 00	IP 00	IP 00
Safety class (prepared)	I	I	I	I	I	I
Short circuit strength	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof
Core	EI 120/50,7	EI 120/50,7	EI 120/50,7	EI 120/50,7	EI 120/50,7	EI 120/50,7

Separating transformer
CT

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Electrical data

Typ	CT-050-048-12-0	CT-050-048-12-1	CT-050-048-12-2	CT-050-060-12-0	CT-050-060-12-1	CT-050-060-12-2
Special features						
Characteristics	-	Fused version	with DIN rail for additional components	-	Fused version	with DIN rail for additional components
Input						
Rated input voltage	2 x 240 Vac	2 x 240 Vac	2 x 240 Vac	600 Vac	600 Vac	600 Vac
Rated input current	2 x 1,13 Aac	2 x 1,13 Aac	2 x 1,13 Aac	0,91 Aac	0,91 Aac	0,91 Aac
Frequency Range	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
Output						
Rated output voltage	120 Vac	120 Vac	120 Vac	120 Vac	120 Vac	120 Vac
Rated Power	500 VA	500 VA	500 VA	500 VA	500 VA	500 VA
No-load voltage (app. x factor)	1.06	1.06	1.06	1.06	1.06	1.06
Efficiency	91.0 %	91.0 %	91.0 %	91.0 %	91.0 %	91.0 %
Standards						
Classification	Separating transformer	Separating transformer	Separating transformer	Separating transformer	Separating transformer	Separating transformer
Approvals						
Approvals	cURus	cURus	cURus	cURus	cURus	cURus
Environment						
Type of cooling	self-cooling	self-cooling	self-cooling	self-cooling	self-cooling	self-cooling
Ambient temperature	max. 40 °C	max. 40 °C	max. 40 °C	max. 40 °C	max. 40 °C	max. 40 °C
Safety and protection						
Type	Open type	Open type	Open type	Open type	Open type	Open type
Insulation class	B, class 130	B, class 130	B, class 130	B, class 130	B, class 130	B, class 130
Protection index	IP 00	IP 00	IP 00	IP 00	IP 00	IP 00
Safety class (prepared)	I	I	I	I	I	I
Short circuit strength	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof
Core	EI 120/73,7	EI 120/73,7	EI 120/73,7	EI 120/73,7	EI 120/73,7	EI 120/73,7

Separating transformer
CT

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Electrical data

Typ	CT-075-048-12-0	CT-075-048-12-1	CT-075-048-12-2	CT-075-060-12-0	CT-075-060-12-1	CT-075-060-12-2
Special features						
Characteristics	-	Fused version	with DIN rail for additional components	-	Fused version	with DIN rail for additional components
Input						
Rated input voltage	2 x 240 Vac	2 x 240 Vac	2 x 240 Vac	600 Vac	600 Vac	600 Vac
Rated input current	2 x 1,69 Aac	2 x 1,69 Aac	2 x 1,69 Aac	2 x 1,35 Aac	2 x 1,35 Aac	2 x 1,35 Aac
Frequency Range	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
Output						
Rated output voltage	120 Vac	120 Vac	120 Vac	120 Vac	120 Vac	120 Vac
Rated Power	750 VA	750 VA	750 VA	750 VA	750 VA	750 VA
No-load voltage (app. x factor)	1.05	1.05	1.05	1.05	1.05	1.05
Efficiency	93.0 %	93.0 %	93.0 %	93.0 %	93.0 %	93.0 %
Standards						
Classification	Separating transformer	Separating transformer	Separating transformer	Separating transformer	Separating transformer	Separating transformer
Approvals						
Approvals	cURus	cURus	cURus	cURus	cURus	cURus
Environment						
Type of cooling	self-cooling	self-cooling	self-cooling	self-cooling	self-cooling	self-cooling
Ambient temperature	max. 40 °C	max. 40 °C	max. 40 °C	max. 40 °C	max. 40 °C	max. 40 °C
Safety and protection						
Type	Open type	Open type	Open type	Open type	Open type	Open type
Insulation class	B, class 130	B, class 130	B, class 130	B, class 130	B, class 130	B, class 130
Protection index	IP 00	IP 00	IP 00	IP 00	IP 00	IP 00
Safety class (prepared)	I	I	I	I	I	I
Short circuit strength	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof
Core	EI 150N/66,6	EI 150N/66,6	EI 150N/66,6	EI 150N/66,6	EI 150N/66,6	EI 150N/66,6

Separating transformer
CT

BLOCK Website

Electrical data

Typ	CT-100-048-12-0	CT-100-048-12-1	CT-100-048-12-2	CT-100-060-12-0	CT-100-060-12-1	CT-100-060-12-2
Special features						
Characteristics	-	Fused version	with DIN rail for additional components	-	Fused version	with DIN rail for additional components
Input						
Rated input voltage	2 x 240 Vac	2 x 240 Vac	2 x 240 Vac	600 Vac	600 Vac	600 Vac
Rated input current	2 x 2,3 Aac	2 x 2,3 Aac	2 x 2,3 Aac	1,8 Aac	1,8 Aac	1,8 Aac
Frequency Range	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
Output						
Rated output voltage	120 Vac	120 Vac	120 Vac	120 Vac	120 Vac	120 Vac
Rated Power	1000 VA	1000 VA	1000 VA	1000 VA	1000 VA	1000 VA
No-load voltage (app. x factor)	1.05	1.05	1.05	1.05	1.05	1.05
Efficiency	93.0 %	93.0 %	93.0 %	93.0 %	93.0 %	93.0 %
Standards						
Classification	Separating transformer	Separating transformer	Separating transformer	Separating transformer	Separating transformer	Separating transformer
Approvals						
Approvals	cURus	cURus	cURus	cURus	cURus	cURus
Environment						
Type of cooling	self-cooling	self-cooling	self-cooling	self-cooling	self-cooling	self-cooling
Ambient temperature	max. 40 °C	max. 40 °C	max. 40 °C	max. 40 °C	max. 40 °C	max. 40 °C
Safety and protection						
Type	Open type	Open type	Open type	Open type	Open type	Open type
Insulation class	B, class 130	B, class 130	B, class 130	B, class 130	B, class 130	B, class 130
Protection index	IP 00	IP 00	IP 00	IP 00	IP 00	IP 00
Safety class (prepared)	I	I	I	I	I	I
Short circuit strength	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof
Core	EI 174/52	EI 174/52	EI 174/52	EI 174/52	EI 174/52	EI 174/52

Separating transformer
CT

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Electrical data

Typ	CT-150-048-12-0	CT-150-048-12-1	CT-150-048-12-2	CT-150-060-12-0	CT-150-060-12-1	CT-150-060-12-2
Special features						
Characteristics	-	Fused version	with DIN rail for additional components	-	Fused version	with DIN rail for additional components
Input						
Rated input voltage	2 x 240 Vac	2 x 240 Vac	2 x 240 Vac	600 Vac	600 Vac	600 Vac
Rated input current	2 x 3,3 Aac	2 x 3,3 Aac	2 x 3,3 Aac	2,6 Aac	2,6 Aac	2,6 Aac
Frequency Range	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
Output						
Rated output voltage	120 Vac	120 Vac	120 Vac	120 Vac	120 Vac	120 Vac
Rated Power	1500 VA	1500 VA	1500 VA	1500 VA	1500 VA	1500 VA
No-load voltage (app. x factor)	1.04	1.04	1.04	1.04	1.04	1.04
Efficiency	94.0 %	94.0 %	94.0 %	94.0 %	94.0 %	94.0 %
Standards						
Classification	Separating transformer	Separating transformer	Separating transformer	Separating transformer	Separating transformer	Separating transformer
Approvals						
Approvals	cURus	cURus	cURus	cURus	cURus	cURus
Environment						
Type of cooling	self-cooling	self-cooling	self-cooling	self-cooling	self-cooling	self-cooling
Ambient temperature	max. 40 °C	max. 40 °C	max. 40 °C	max. 40 °C	max. 40 °C	max. 40 °C
Safety and protection						
Type	Open type	Open type	Open type	Open type	Open type	Open type
Insulation class	B, class 130	B, class 130	B, class 130	B, class 130	B, class 130	B, class 130
Protection index	IP 00	IP 00	IP 00	IP 00	IP 00	IP 00
Safety class (prepared)	I	I	I	I	I	I
Short circuit strength	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof
Core	EI 192/66	EI 192/66	EI 192/66	EI 192/66	EI 192/66	EI 192/66

Separating transformer
CT

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Electrical data

Typ	CT-200-048-12-0	CT-200-048-12-1	CT-200-048-12-2	CT-200-060-12-0	CT-200-060-12-1	CT-200-060-12-2
Special features						
Characteristics	-	Fused version	with DIN rail for additional components	-	Fused version	with DIN rail for additional components
Input						
Rated input voltage	2 x 240 Vac	2 x 240 Vac	2 x 240 Vac	600 Vac	600 Vac	600 Vac
Rated input current	2 x 4,3 Aac	2 x 4,3 Aac	2 x 4,3 Aac	3,4 Aac	3,4 Aac	3,4 Aac
Frequency Range	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
Output						
Rated output voltage	120 Vac	120 Vac	120 Vac	120 Vac	120 Vac	120 Vac
Rated Power	2000 VA	2000 VA	2000 VA	2000 VA	2000 VA	2000 VA
No-load voltage (app. x factor)	1.03	1.03	1.03	1.03	1.03	1.03
Efficiency	95.0 %	95.0 %	95.0 %	95.0 %	95.0 %	95.0 %
Standards						
Classification	Separating transformer	Separating transformer	Separating transformer	Separating transformer	Separating transformer	Separating transformer
Approvals						
Approvals	cURus	cURus	cURus	cURus	cURus	cURus
Environment						
Type of cooling	self-cooling	self-cooling	self-cooling	self-cooling	self-cooling	self-cooling
Ambient temperature	max. 40 °C	max. 40 °C	max. 40 °C	max. 40 °C	max. 40 °C	max. 40 °C
Safety and protection						
Type	Open type	Open type	Open type	Open type	Open type	Open type
Insulation class	B, class 130	B, class 130	B, class 130	B, class 130	B, class 130	B, class 130
Protection index	IP 00	IP 00	IP 00	IP 00	IP 00	IP 00
Safety class (prepared)	I	I	I	I	I	I
Short circuit strength	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof
Core	EI 192/82	EI 192/82	EI 192/82	EI 192/82	EI 192/82	EI 192/82

Separating transformer
CT

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Electrical data

Typ	CT-250-048-12-0	CT-250-048-12-1	CT-250-048-12-2	CT-250-060-12-0	CT-250-060-12-1	CT-250-060-12-2
Special features						
Characteristics	-	Fused version	with DIN rail for additional components	-	Fused version	with DIN rail for additional components
Input						
Rated input voltage	2 x 240 Vac	2 x 240 Vac	2 x 240 Vac	600 Vac	600 Vac	600 Vac
Rated input current	2 x 5,2 Aac	2 x 5,2 Aac	2 x 5,2 Aac	4,2 Aac	4,2 Aac	4,2 Aac
Frequency Range	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
Output						
Rated output voltage	120 Vac	120 Vac	120 Vac	120 Vac	120 Vac	120 Vac
Rated Power	2500 VA	2500 VA	2500 VA	2500 VA	2500 VA	2500 VA
No-load voltage (app. x factor)	1.03	1.03	1.03	1.03	1.03	1.03
Efficiency	95.0 %	95.0 %	95.0 %	95.0 %	95.0 %	95.0 %
Standards						
Classification	Separating transformer	Separating transformer	Separating transformer	Separating transformer	Separating transformer	Separating transformer
Approvals						
Approvals	cURus	cURus	cURus	cURus	cURus	cURus
Environment						
Type of cooling	self-cooling	self-cooling	self-cooling	self-cooling	self-cooling	self-cooling
Ambient temperature	max. 40 °C	max. 40 °C	max. 40 °C	max. 40 °C	max. 40 °C	max. 40 °C
Safety and protection						
Type	Open type	Open type	Open type	Open type	Open type	Open type
Insulation class	B, class 130	B, class 130	B, class 130	B, class 130	B, class 130	B, class 130
Protection index	IP 00	IP 00	IP 00	IP 00	IP 00	IP 00
Safety class (prepared)	I	I	I	I	I	I
Short circuit strength	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof
Core	EI 192/100	EI 192/100	EI 192/100	EI 192/100	EI 192/100	EI 192/100

Separating transformer
CT

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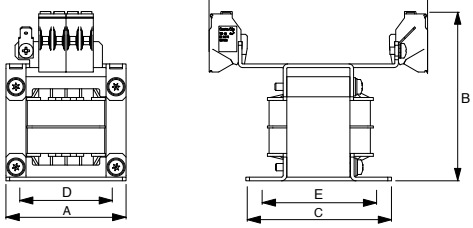
Mechanical data

Typ	Dimension picture (in mm)	A	A1	B	B1	C	D	E	F1	F2	F	Weight
CT-005-048-12-0	1	66	-	92.7	-	80	50.8	63.5	-	-	120	1.00 kg
CT-005-048-12-1	2	66	75.7	92.7	95.4	80	50.8	63.5	60	60	-	1.00 kg
CT-005-048-12-2	3	66	-	92.7	-	80	50.8	63.5	-	-	120	1.00 kg
CT-005-048-24-0	1	66	-	92.7	-	80	50.8	63.5	-	-	120	1.00 kg
CT-005-048-24-1	2	66	75.7	92.7	95.4	80	50.8	63.5	60	60	-	1.00 kg
CT-005-048-24-2	3	66	-	92.7	-	80	50.8	63.5	-	-	120	1.00 kg

Dimension pictures

1



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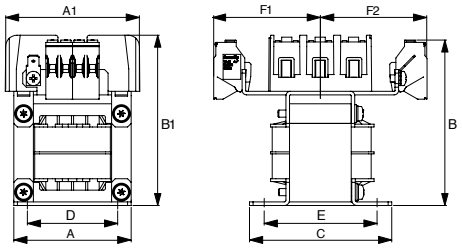

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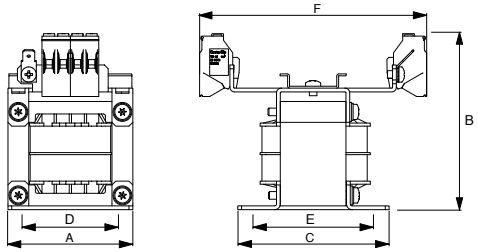

Separating transformer
CT

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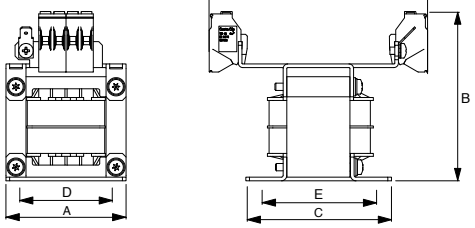
Mechanical data 30

Typ	Dimension picture (in mm)	A	A1	B	B1	C	D	E	F1	F2	F	Weight
CT-005-060-12-0	1	66	-	92.7	-	80	50.8	63.5	-	-	120	1.00 kg
CT-005-060-12-1	2	66	75.7	92.7	95.4	80	50.8	63.5	60	60	-	1.00 kg
CT-005-060-12-2	3	66	-	92.7	-	80	50.8	63.5	-	-	120	1.00 kg
CT-005-060-24-0	1	66	-	92.7	-	80	50.8	63.5	-	-	120	1.00 kg
CT-005-060-24-1	2	66	75.7	92.7	95.4	80	50.8	63.5	60	60	-	1.00 kg
CT-005-060-24-2	3	66	-	92.7	-	80	50.8	63.5	-	-	120	1.00 kg

Dimension pictures

1



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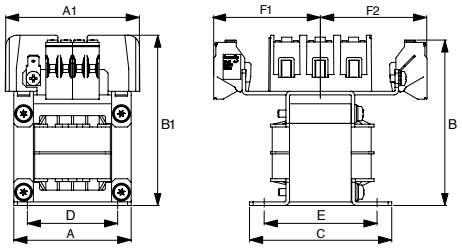

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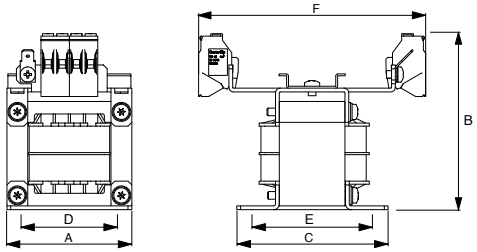

Separating transformer
CT

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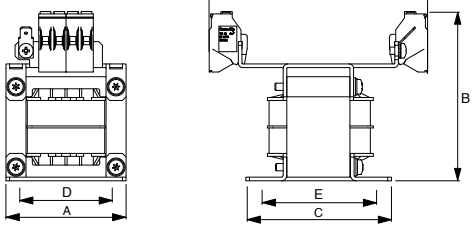
Mechanical data

Typ	Dimension picture (in mm)	A	A1	B	B1	C	D	E	F1	F2	F	Weight
CT-007-048-12-0	1	78	-	102.7	-	79	66	63.5	-	-	112.8	1.10 kg
CT-007-048-12-1	2	78	78	102.7	105.4	79	66	63.5	56.4	56.4	-	1.10 kg
CT-007-048-12-2	3	78	-	102.7	-	79	66	63.5	-	-	112.8	1.10 kg
CT-007-048-24-0	1	78	-	102.7	-	79	66	63.5	-	-	112.8	1.10 kg
CT-007-048-24-1	2	78	78	102.7	105.4	79	66	63.5	56.4	56.4	-	1.10 kg
CT-007-048-24-2	3	78	-	102.7	-	79	66	63.5	-	-	112.8	1.10 kg

Dimension pictures

1



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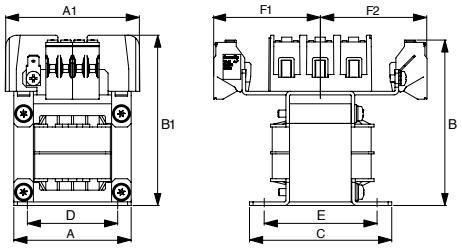

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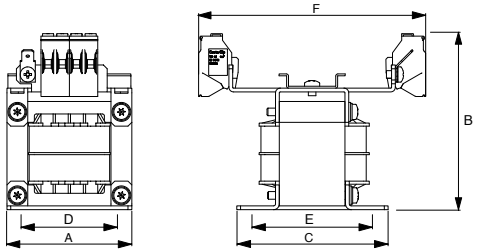

Separating transformer
CT

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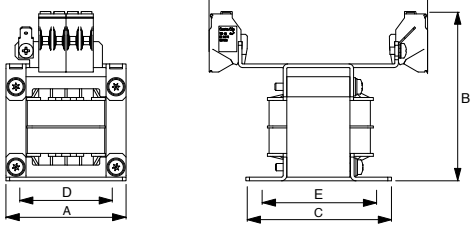
Mechanical data 30

Typ	Dimension picture (in mm)	A	A1	B	B1	C	D	E	F1	F2	F	Weight
CT-007-060-12-0	1	78	-	102.7	-	79	66	63.5	-	-	112.8	1.10 kg
CT-007-060-12-1	2	78	78	102.7	105.4	79	66	63.5	56.4	56.4	-	1.10 kg
CT-007-060-12-2	3	78	-	102.7	-	79	66	63.5	-	-	112.8	1.10 kg
CT-007-060-24-0	1	78	-	102.7	-	79	66	63.5	-	-	112.8	1.10 kg
CT-007-060-24-1	2	78	78	102.7	105.4	79	66	63.5	56.4	56.4	-	1.10 kg
CT-007-060-24-2	3	78	-	102.7	-	79	66	63.5	-	-	112.8	1.10 kg

Dimension pictures

1



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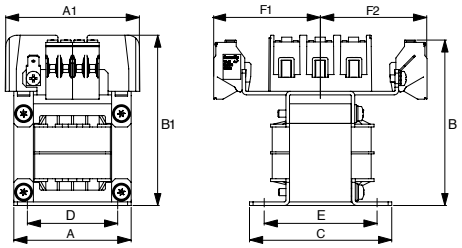

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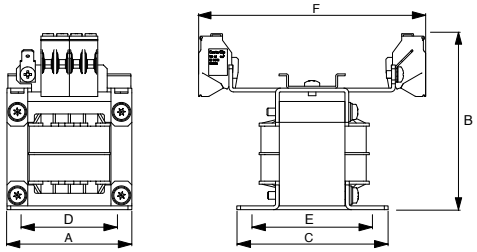

Separating transformer
CT

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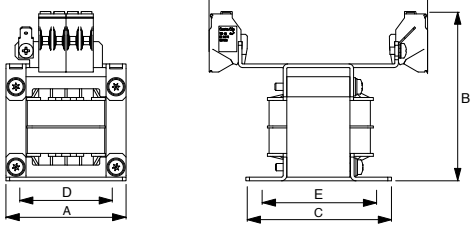
Mechanical data

Typ	Dimension picture (in mm)	A	A1	B	B1	C	D	E	F1	F2	F	Weight
CT-010-048-12-0	1	78	-	102.7	-	82	66	66	-	-	121.8	1.50 kg
CT-010-048-12-1	2	78	78	102.7	105.4	82	66	66	60.9	60.9	-	1.50 kg
CT-010-048-12-2	3	78	-	102.7	-	82	66	66	-	-	121.8	1.50 kg
CT-010-048-24-0	1	78	-	102.7	-	82	66	66	-	-	121.8	1.50 kg
CT-010-048-24-1	2	78	78	102.7	105.4	82	66	66	60.9	60.9	-	1.50 kg
CT-010-048-24-2	3	78	-	102.7	-	82	66	66	-	-	121.8	1.50 kg

Dimension pictures

1



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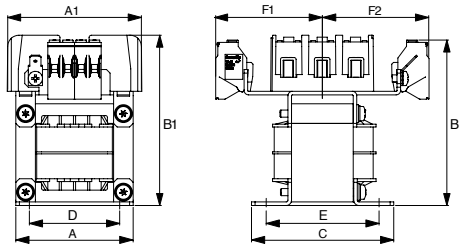

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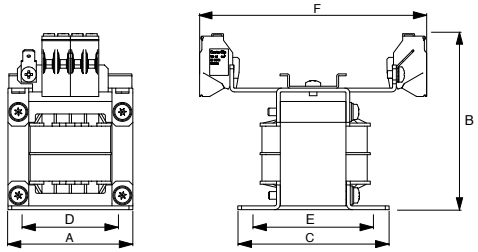

Separating transformer
CT

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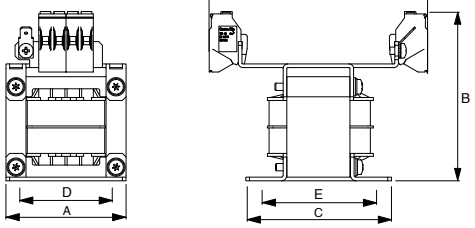
Mechanical data 30

Typ	Dimension picture (in mm)	A	A1	B	B1	C	D	E	F1	F2	F	Weight
CT-010-060-12-0	1	78	-	102.7	-	82	66	66	-	-	121.8	1.50 kg
CT-010-060-12-1	2	78	78	102.7	105.4	82	66	66	60.9	60.9	-	1.50 kg
CT-010-060-12-2	3	78	-	102.7	-	82	66	66	-	-	121.8	1.50 kg
CT-010-060-24-0	1	78	-	102.7	-	82	66	66	-	-	121.8	1.50 kg
CT-010-060-24-1	2	78	78	102.7	105.4	82	66	66	60.9	60.9	-	1.50 kg
CT-010-060-24-2	3	78	-	102.7	-	82	66	66	-	-	121.8	1.50 kg

Dimension pictures

1



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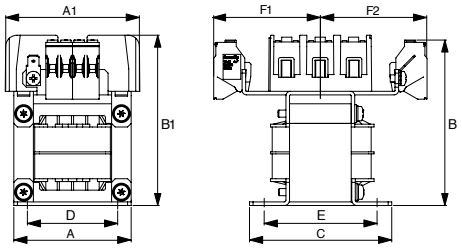

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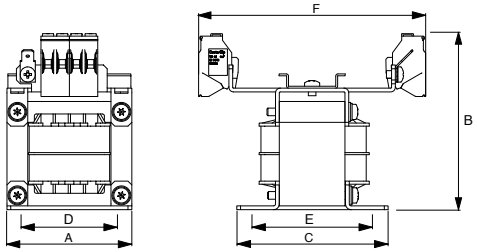

Separating transformer
CT

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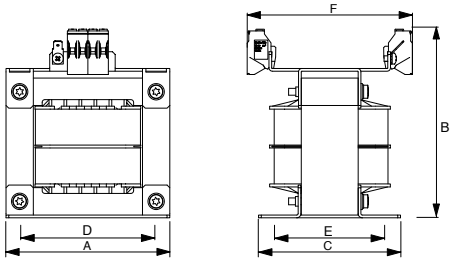
Mechanical data

Typ	Dimension picture (in mm)	A	A1	B	B1	C	D	E	F1	F2	F	Weight
CT-015-048-12-0	4	96	-	117.7	-	100	80	76.2	-	-	117	2.20 kg
CT-015-048-12-1	5	96	96	117.7	120.4	100	80	76.2	58.5	58.5	-	2.20 kg
CT-015-048-12-2	6	96	-	117.7	-	100	80	76.2	-	-	117	2.20 kg
CT-015-048-24-0	4	96	-	117.7	-	100	80	76.2	-	-	117	2.20 kg
CT-015-048-24-1	5	96	96	117.7	120.4	100	80	76.2	58.5	58.5	-	2.20 kg
CT-015-048-24-2	6	96	-	117.7	-	100	80	76.2	-	-	117	2.20 kg

Dimension pictures

4



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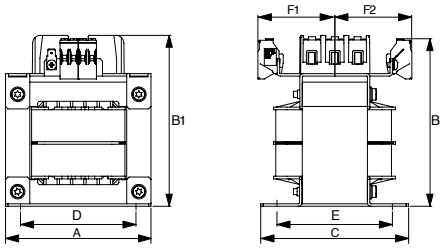

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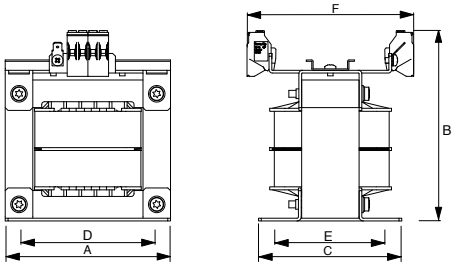


Separating transformer
CT

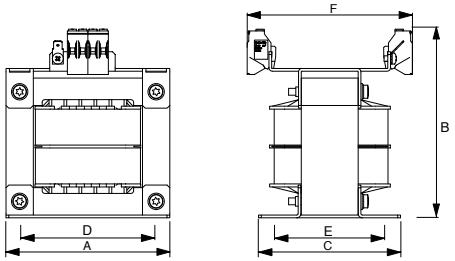
BLOCK Website

30 Mechanical data

Typ	Dimension picture (in mm)	A	A1	B	B1	C	D	E	F1	F2	F	Weight
CT-015-060-12-0	4	96	-	117.7	-	100	80	76.2	-	-	117	2.20 kg
CT-015-060-12-1	5	96	96	117.7	120.4	100	80	76.2	58.5	58.5	-	2.20 kg
CT-015-060-12-2	6	96	-	117.7	-	100	80	76.2	-	-	117	2.20 kg
CT-015-060-24-0	4	96	-	117.7	-	100	80	76.2	-	-	117	2.20 kg
CT-015-060-24-1	5	96	96	117.7	120.4	100	80	76.2	58.5	58.5	-	2.20 kg
CT-015-060-24-2	6	96	-	117.7	-	100	80	76.2	-	-	117	2.20 kg

Dimension pictures

4



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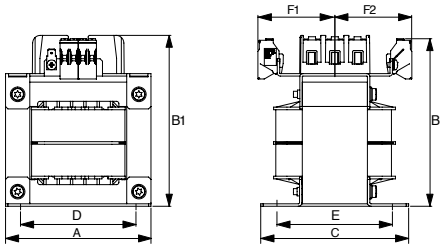

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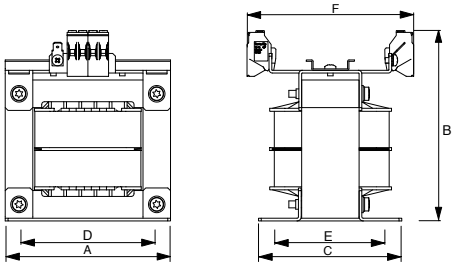


Separating transformer
CT

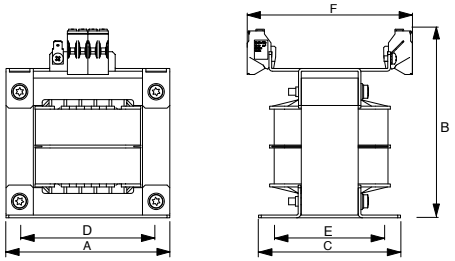
BLOCK Website

Mechanical data

Typ	Dimension picture (in mm)	A	A1	B	B1	C	D	E	F1	F2	F	Weight
CT-020-048-12-0	4	96	-	117.7	-	108	80	84	-	-	125	2.80 kg
CT-020-048-12-1	5	96	96	117.7	120.4	108	80	84	62.5	62.5	-	2.80 kg
CT-020-048-12-2	6	96	-	117.7	-	108	80	84	-	-	125	2.80 kg
CT-020-048-24-0	4	96	-	117.7	-	108	80	84	-	-	125	2.80 kg
CT-020-048-24-1	5	96	96	117.7	120.4	108	80	84	62.5	62.5	-	2.80 kg
CT-020-048-24-2	6	96	-	117.7	-	108	80	84	-	-	125	2.80 kg

Dimension pictures

4



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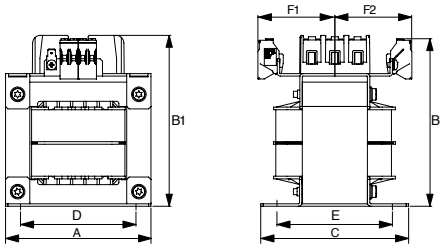

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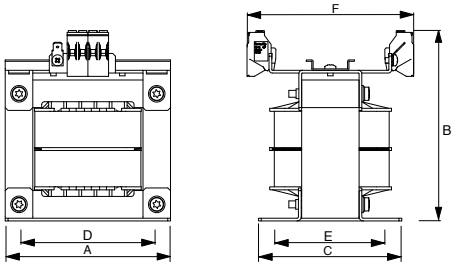


Separating transformer
CT

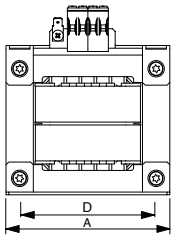
BLOCK Website

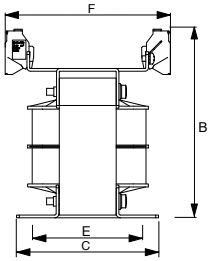
30 Mechanical data

Typ	Dimension picture (in mm)	A	A1	B	B1	C	D	E	F1	F2	F	Weight
CT-020-060-12-0	4	96	-	117.7	-	108	80	84	-	-	125	2.80 kg
CT-020-060-12-1	5	96	96	117.7	120.4	108	80	84	62.5	62.5	-	2.80 kg
CT-020-060-12-2	6	96	-	117.7	-	108	80	84	-	-	125	2.80 kg
CT-020-060-24-0	4	96	-	117.7	-	108	80	84	-	-	125	2.80 kg
CT-020-060-24-1	5	96	96	117.7	120.4	108	80	84	62.5	62.5	-	2.80 kg
CT-020-060-24-2	6	96	-	117.7	-	108	80	84	-	-	125	2.80 kg

Dimension pictures

4





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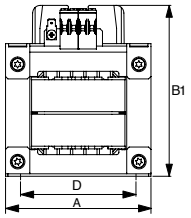

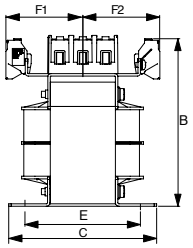

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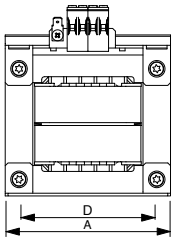
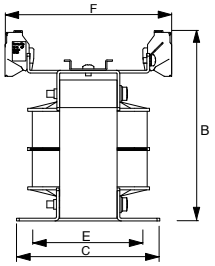




Separating transformer
CT

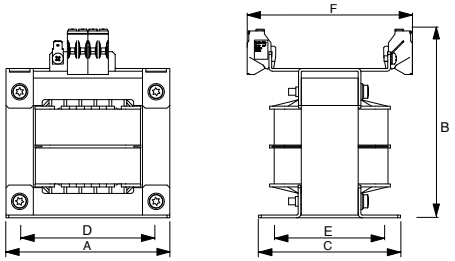
BLOCK Website

Mechanical data

Typ	Dimension picture (in mm)	A	A1	B	B1	C	D	E	F1	F2	F	Weight
CT-025-048-12-0	4	96	-	117.7	-	122	80	99	-	-	123	3.50 kg
CT-025-048-12-1	5	96	96	117.7	120.4	122	80	99	61.5	61.5	-	3.50 kg
CT-025-048-12-2	6	96	-	117.7	-	122	80	99	-	-	123	3.50 kg
CT-025-048-24-0	4	96	-	117.7	-	122	80	99	-	-	123	3.50 kg
CT-025-048-24-1	5	96	96	117.7	120.4	122	80	99	61.5	61.5	-	3.50 kg
CT-025-048-24-2	6	96	-	117.7	-	122	80	99	-	-	123	3.50 kg

Dimension pictures

4



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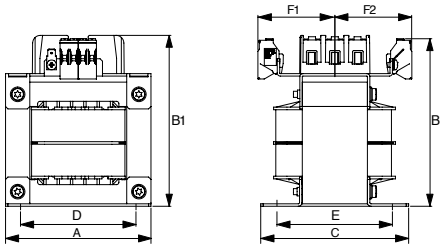

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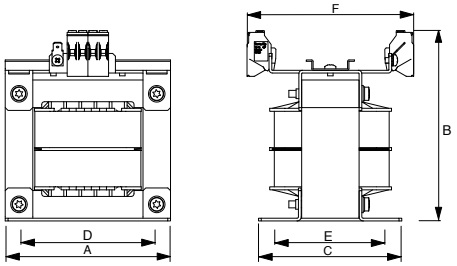


Separating transformer
CT

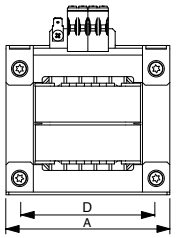
BLOCK Website

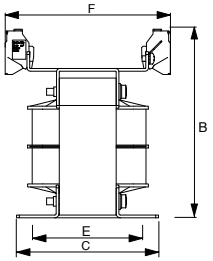
30 Mechanical data

Typ	Dimension picture (in mm)	A	A1	B	B1	C	D	E	F1	F2	F	Weight
CT-025-060-12-0	4	96	-	117.7	-	122	80	99	-	-	123	3.50 kg
CT-025-060-12-1	5	96	96	117.7	120.4	122	80	99	61.5	61.5	-	3.50 kg
CT-025-060-12-2	6	96	-	117.7	-	122	80	99	-	-	123	3.50 kg
CT-025-060-24-0	4	96	-	117.7	-	122	80	99	-	-	123	3.50 kg
CT-025-060-24-1	5	96	96	117.7	120.4	122	80	99	61.5	61.5	-	3.50 kg
CT-025-060-24-2	6	96	96	117.7	117.7	122	80	99	61.5	61.5	-	3.50 kg

Dimension pictures

4





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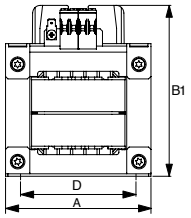

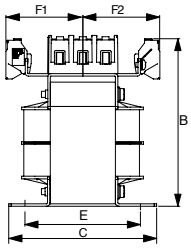

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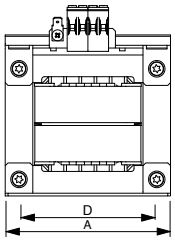
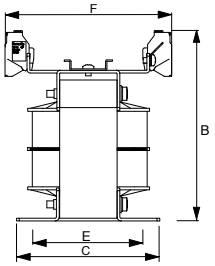




Separating transformer
CT

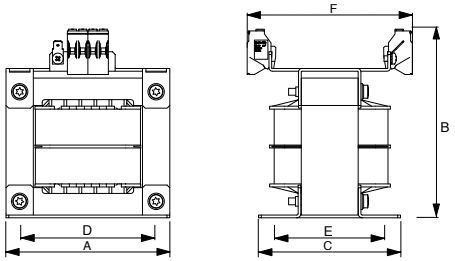
BLOCK Website

Mechanical data

Typ	Dimension picture (in mm)	A	A1	B	B1	C	D	E	F1	F2	F	Weight
CT-030-048-12-0	4	120	-	137.7	-	104	95	80	-	-	121	4.00 kg
CT-030-048-12-1	5	120	120	137.7	140.4	104	95	80	60.5	60.5	-	4.00 kg
CT-030-048-12-2	6	120	-	137.7	-	104	95	80	-	-	121	4.00 kg
CT-030-048-24-0	4	120	-	137.7	-	104	95	80	-	-	121	4.00 kg
CT-030-048-24-1	5	120	120	137.7	140.4	104	95	80	60.5	60.5	-	4.00 kg
CT-030-048-24-2	6	120	-	137.7	-	104	95	80	-	-	121	4.00 kg

Dimension pictures

4



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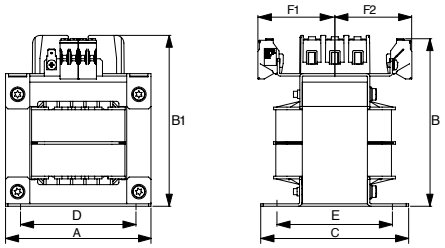

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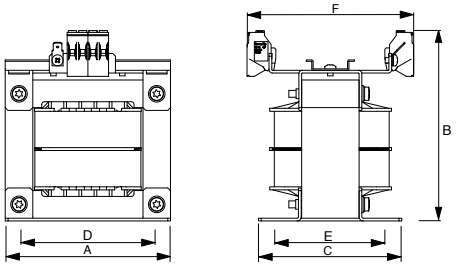


Separating transformer
CT

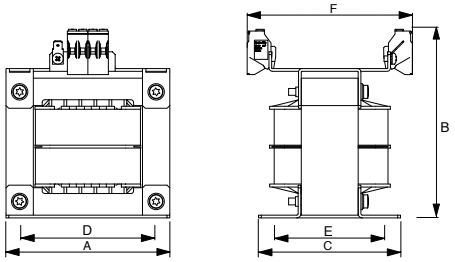
BLOCK Website

30 Mechanical data

Typ	Dimension picture (in mm)	A	A1	B	B1	C	D	E	F1	F2	F	Weight
CT-030-060-12-0	4	120	-	137.7	-	104	95	80	-	-	121	4.00 kg
CT-030-060-12-1	5	120	120	137.7	140.4	104	95	80	60.5	60.5	-	4.00 kg
CT-030-060-12-2	5	120	-	137.7	-	104	95	80	-	-	121	4.00 kg
CT-030-060-24-0	4	120	-	137.7	-	104	95	80	-	-	121	4.00 kg
CT-030-060-24-1	5	120	120	137.7	140.4	104	95	80	60.5	60.5	-	4.00 kg
CT-030-060-24-2	6	120	-	137.7	-	104	95	80	-	-	121	4.00 kg
CT-035-048-12-0	4	120	-	137.7	-	122	95	95	-	-	127	5.00 kg
CT-035-048-12-1	5	120	120	137.7	140.4	122	95	95	63.5	63.5	-	5.00 kg
CT-035-048-12-2	6	120	-	137.7	-	122	95	95	-	-	127	5.00 kg

Dimension pictures

4



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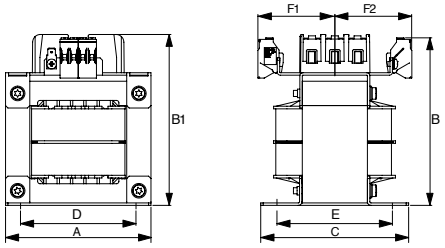

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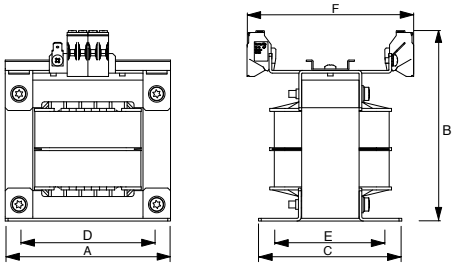


Separating transformer
CT

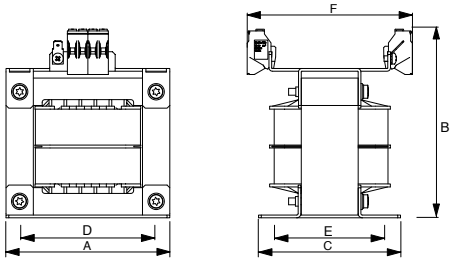
BLOCK Website

Mechanical data

Typ	Dimension picture (in mm)	A	A1	B	B1	C	D	E	F1	F2	F	Weight
CT-035-048-24-0	4	120	-	137.7	-	122	95	95	-	-	127	5.00 kg
CT-035-048-24-1	5	120	120	137.7	140.4	122	95	95	63.5	63.5	-	5.00 kg
CT-035-048-24-2	6	120	-	137.7	-	122	95	95	-	-	127	5.00 kg
CT-035-060-12-0	4	120	-	137.7	-	122	95	95	-	-	127	5.00 kg
CT-035-060-12-1	5	120	120	137.7	140.4	122	95	95	63.5	63.5	-	5.00 kg
CT-035-060-12-2	6	120	-	137.7	-	122	95	95	-	-	127	5.00 kg

Dimension pictures

4



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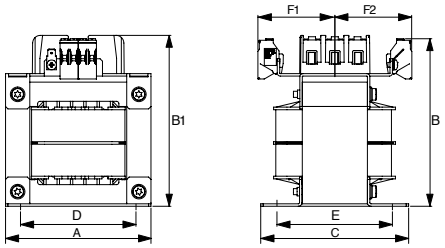

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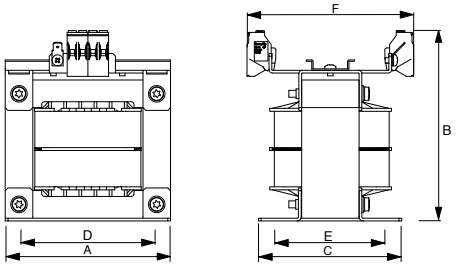


Separating transformer
CT

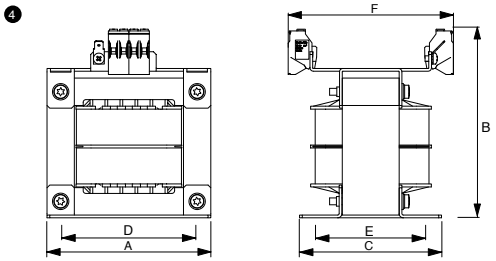
BLOCK Website

30 Mechanical data

Typ	Dimension picture (in mm)	A	A1	B	B1	C	D	E	F1	F2	F	Weight
CT-035-060-24-0	4	120	-	137.7	-	122	95	95	-	-	127	5.00 kg
CT-035-060-24-1	5	120	120	137.7	140.4	122	95	95	63.5	63.5	-	5.00 kg
CT-035-060-24-2	6	120	-	137.7	-	122	95	95	-	-	127	5.00 kg
CT-050-048-12-0	4	120	-	137.7	-	145	95	114	-	-	137	6.80 kg
CT-050-048-12-1	5	120	120	137.7	140.4	145	95	114	68.5	68.5	-	6.80 kg
CT-050-048-12-2	6	120	-	137.7	-	145	95	114	-	-	137	6.80 kg

Dimension pictures

4



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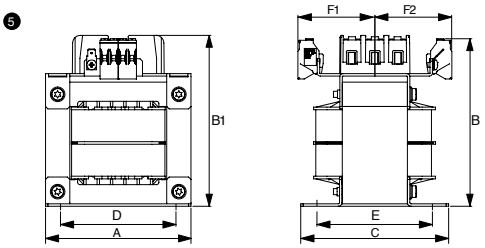

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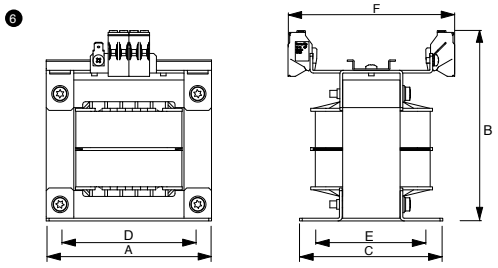


Separating transformer
CT

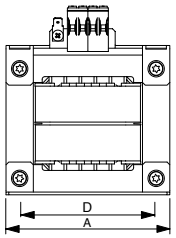
BLOCK Website

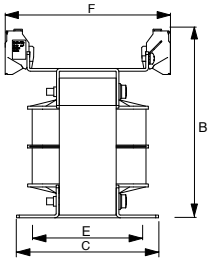
Mechanical data

Typ	Dimension picture (in mm)	A	A1	B	B1	C	D	E	F1	F2	F	Weight
CT-050-060-12-0	4	120	-	137.7	-	145	95	114	-	-	137	6.80 kg
CT-050-060-12-1	5	120	120	137.7	140.4	145	95	114	68.5	68.5	-	6.80 kg
CT-050-060-12-2	6	120	-	137.7	-	145	95	114	-	-	137	6.80 kg
CT-075-048-12-0	4	150	-	162.7	-	140	112	109	-	-	132	9.80 kg
CT-075-048-12-1	5	150	150	162.7	165.4	140	112	109	66	66	-	9.80 kg
CT-075-048-12-2	6	150	-	162.7	-	140	112	109	-	-	132	9.80 kg

Dimension pictures

4





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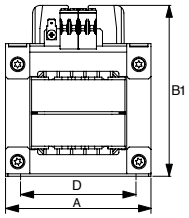

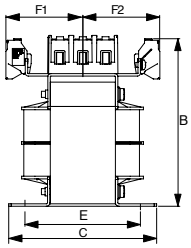

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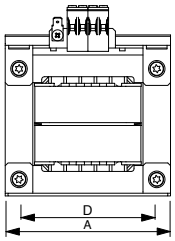
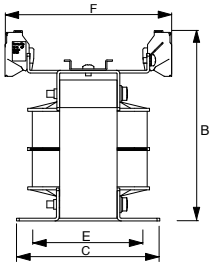




Separating transformer
CT

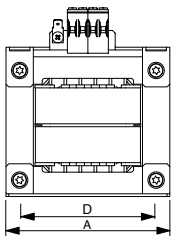
BLOCK Website

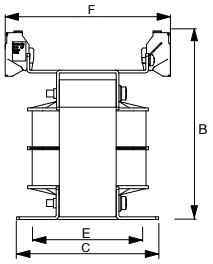
Mechanical data 30

Typ	Dimension picture (in mm)	A	A1	B	B1	C	D	E	F1	F2	F	Weight
CT-075-060-12-0	4	150	-	162.7	-	140	112	109	-	-	132	9.80 kg
CT-075-060-12-1	5	150	150	162.7	165.4	140	112	109	66	66	-	9.80 kg
CT-075-060-12-2	6	150	-	162.7	-	140	112	109	-	-	132	9.80 kg
CT-100-048-12-0	4	174	-	183.2	-	145	140	113	-	-	122	11.20 kg
CT-100-048-12-1	5	174	174	183.2	185.9	145	140	113	61	61	-	11.20 kg
CT-100-048-12-2	5	174	-	183.2	-	145	140	113	-	-	122	11.20 kg
CT-100-060-12-0	4	174	-	183.2	-	145	140	113	-	-	122	11.20 kg
CT-100-060-12-1	5	174	174	183.2	185.9	145	140	113	61	61	-	11.20 kg

Dimension pictures

4





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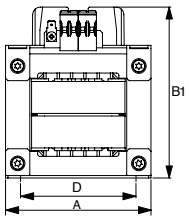

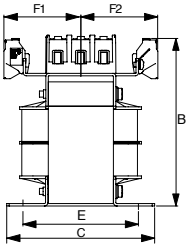

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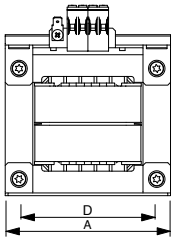
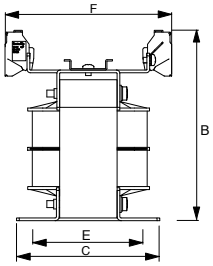




Separating transformer
CT

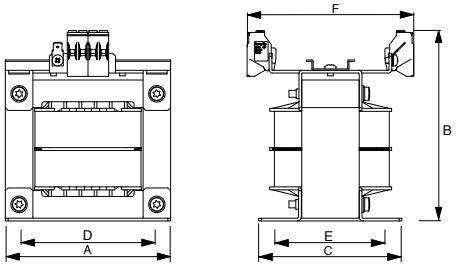
BLOCK Website

Mechanical data

Typ	Dimension picture (in mm)	A	A1	B	B1	C	D	E	F1	F2	F	Weight
CT-100-060-12-2	6	174	-	183.2	-	145	140	113	-	-	122	11.20 kg
CT-150-048-12-0	7	192	-	198.2	-	165	152.4	127	-	-	130	16.70 kg
CT-150-048-12-1	8	192	192	198.2	200.9	165	152.4	127	65	65	-	16.70 kg
CT-150-048-12-2	9	192	-	198.2	-	165	152.4	127	-	-	130	16.70 kg
CT-150-060-12-0	7	192	-	198.2	-	165	152	127	-	-	130	16.70 kg
CT-150-060-12-1	8	192	192	198.2	200.9	165	152.4	127	65	65	-	16.70 kg

Dimension pictures

6



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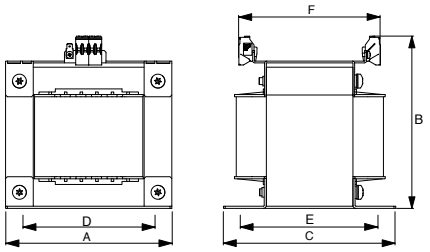

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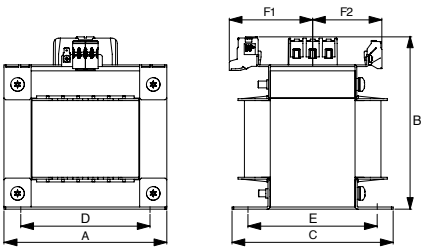

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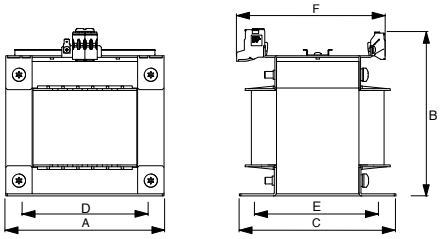


Separating transformer
CT

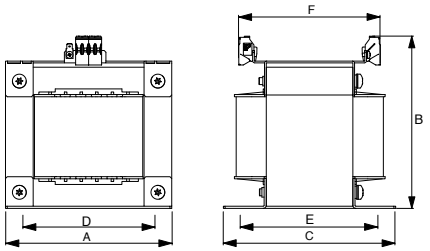
BLOCK Website

30 Mechanical data

Typ	Dimension picture (in mm)	A	A1	B	B1	C	D	E	F1	F2	F	Weight
CT-150-060-12-2	9	192	-	198.2	-	165	152.4	127	-	-	130	16.70 kg
CT-200-048-12-0	7	192	-	202.4	-	180	152.4	140	-	-	162.1	21.00 kg
CT-200-048-12-1	8	192	192	202.4	202.4	180	152.4	140	89.3	72.8	-	21.00 kg
CT-200-048-12-2	9	192	-	202.4	-	180	152.4	140	-	-	162.1	21.00 kg
CT-200-060-12-0	7	192	-	202.4	-	180	152.4	140	-	-	162.1	21.00 kg
CT-200-060-12-1	8	192	192	202.4	202.4	180	152.4	140	89.3	72.8	-	21.00 kg

Dimension pictures

7



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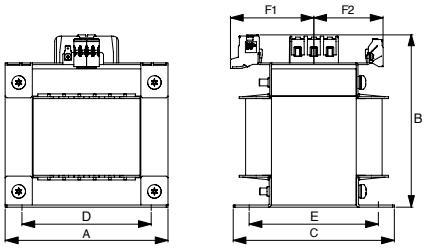

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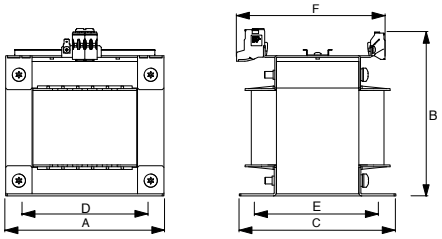


Separating transformer
CT

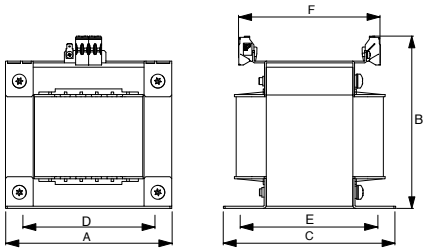
BLOCK Website

Mechanical data

Typ	Dimension picture (in mm)	A	A1	B	B1	C	D	E	F1	F2	F	Weight
CT-200-060-12-2	9	192	-	202.4	-	180	152.4	140	-	-	162.1	21.00 kg
CT-250-048-12-0	7	192	-	202.4	-	190	152.4	152.4	-	-	180.1	25.80 kg
CT-250-048-12-1	8	192	192	202.4	202.4	190	152.4	152.4	98.3	81.8	-	25.80 kg
CT-250-048-12-2	9	192	-	202.4	-	190	152.4	152.4	-	-	180.1	25.80 kg
CT-250-060-12-0	7	192	-	202.4	-	190	152.4	152.4	-	-	180.1	25.80 kg
CT-250-060-12-1	8	192	192	202.4	202.4	190	152.4	152.4	98.3	81.8	-	25.80 kg

Dimension pictures

7



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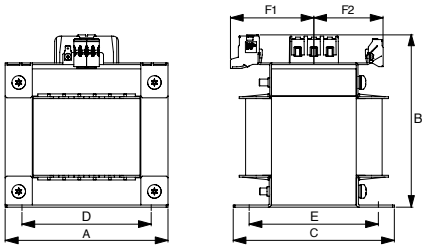

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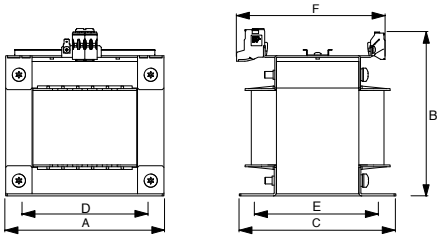


Separating transformer
CT

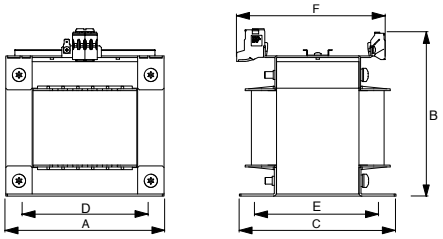
BLOCK Website

Mechanical data

Typ	Dimension picture (in mm)	A	A1	B	B1	C	D	E	F1	F2	F	Weight
CT-250-060-12-2	9	192	-	202.4	-	190	152.4	152.4	-	-	180.1	25.80 kg

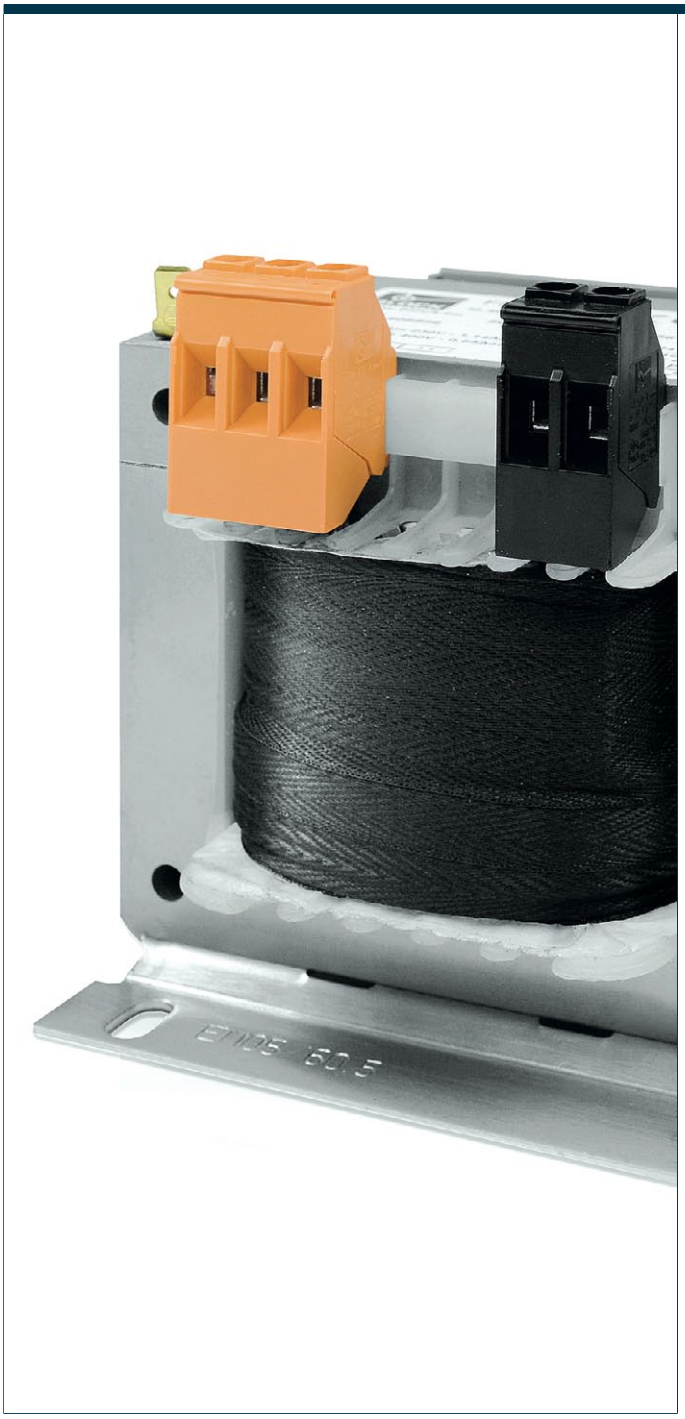
Dimension pictures

9



FAIL-SAFE transformer
FST

BLOCK Website



General Data

Rated input voltage 230 V / 400 V
Rated output voltage 24 V / 230 V
Rated power 100 VA / 160 VA / 250 VA
Insulation class B
Max. ambient temperature 40 °C
Protection index IP 00

Advantages

With integrated FAIL-SAFE protection
High performance per volume thanks to compact design
Very good switch-on behaviour thanks to reduced starting currents
May be operated at 50 - 60 Hz
Very good corrosion protection and low noise thanks to vacuum impregnation
Primary side for input voltage 230 V and 400 V
100 VA and 160 VA versions for mounting with integrated DIN rail mounting in compliance with DIN 50022

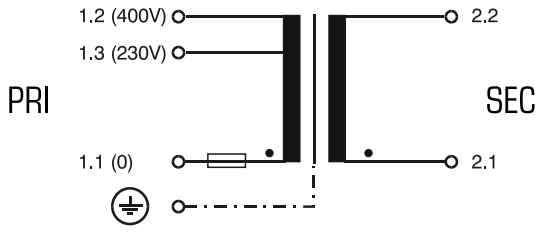
Applications

FAIL-SAFE transformer as a control transformer for electrical isolations of the input and output sides. The transformer is designed to provide control in compliance with EN 60204

FAIL-SAFE transformer as an isolating transformer for the safe electrical isolation of the input and output sides. The transformer may be used to set up protective separation as a protective measure in accordance with VDE 0100.

FAIL-SAFE transformer as a safety transformer to secure electrical isolation of the input and output sides. By limiting the output voltage, this transformer is suitable for the construction of both SELV and PELV electrical circuits.

Sample application



Standards

FAIL-SAFE control and safety transformer to: EN 61558 part 1 with part 2-2 and part 2-6

FAIL-SAFE voltage control and isolating transformer to: EN 61558 part 1 with part 2-2 and part 2-4

Approvals

ENEC 10 (VDE)

FAIL-SAFE transformer
FST

BLOCK Website

Electrical data

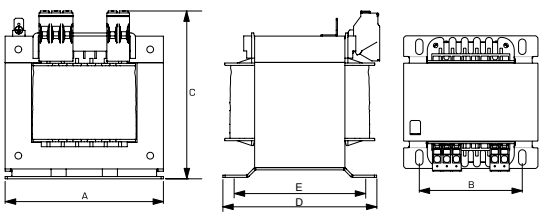
Typ	FST 100/23	FST 100/24	FST 160/23	FST 160/24	FST 250/23	FST 250/24
Input						
Rated input current	0,49 A / 0,28 Aac	0,49 A / 0,28 Aac	0,77 A / 0,45 Aac	0,77 A / 0,45 Aac	1,14 A / 0,65 Aac	1,14 A / 0,65 Aac
Rated input voltage	230 Vac / 400 Vac	230 Vac / 400 Vac	230 Vac / 400 Vac	230 Vac / 400 Vac	230 Vac / 400 Vac	230 Vac / 400 Vac
Switch-on time	100%	100%	100%	100%	100%	100%
Frequency Range	50-60 Hz	50-60 Hz	50-60 Hz	50-60 Hz	50-60 Hz	50-60 Hz
Output						
Rated output current	0,43 Aac	4,17 Aac	0,695 Aac	6,67 Aac	1,09 Aac	10,41 Aac
Rated output voltage	230 Vac	24 Vac	230 Vac	24 V	230 Vac	24 Vac
Rated power VDE (DB cos phi=1)	100 VA	100 VA	160 VA	160 VA	250 VA	250 VA
Rated power VDE (KB cos phi=0.5)	220 VA	220 VA	320 VA	320 VA	490 VA	490 VA
Vector group	Ii0	Ii0	Ii0	Ii0	Ii0	Ii0
Power loss	14.0 W	14.0 W	20.8 W	20.8 W	27.0 W	25.5 W
Standards						
Classification	Control- and safety isolating transformer	Control- and safety isolating transformer	Control- and safety isolating transformer	Control- and safety isolating transformer	Control- and safety isolating transformer	Control- and safety isolating transformer
Environment						
Ambient temperature max.	40 °C	40 °C	40 °C	40 °C	40 °C	40 °C
Type of cooling	AN	AN	AN	AN	AN	AN
Safety and protection						
Protection index	IP 00	IP 00	IP 00	IP 00	IP 00	IP 00
Safety class (prepared)	I	I	I	I	I	I
Insulation class	B	B	B	B	B	B
Order numbers						
Order Number	**FST 100/23**	**FST 100/24**	**FST 160/23**	**FST 160/24**	**FST 250/23**	**FST 250/24**

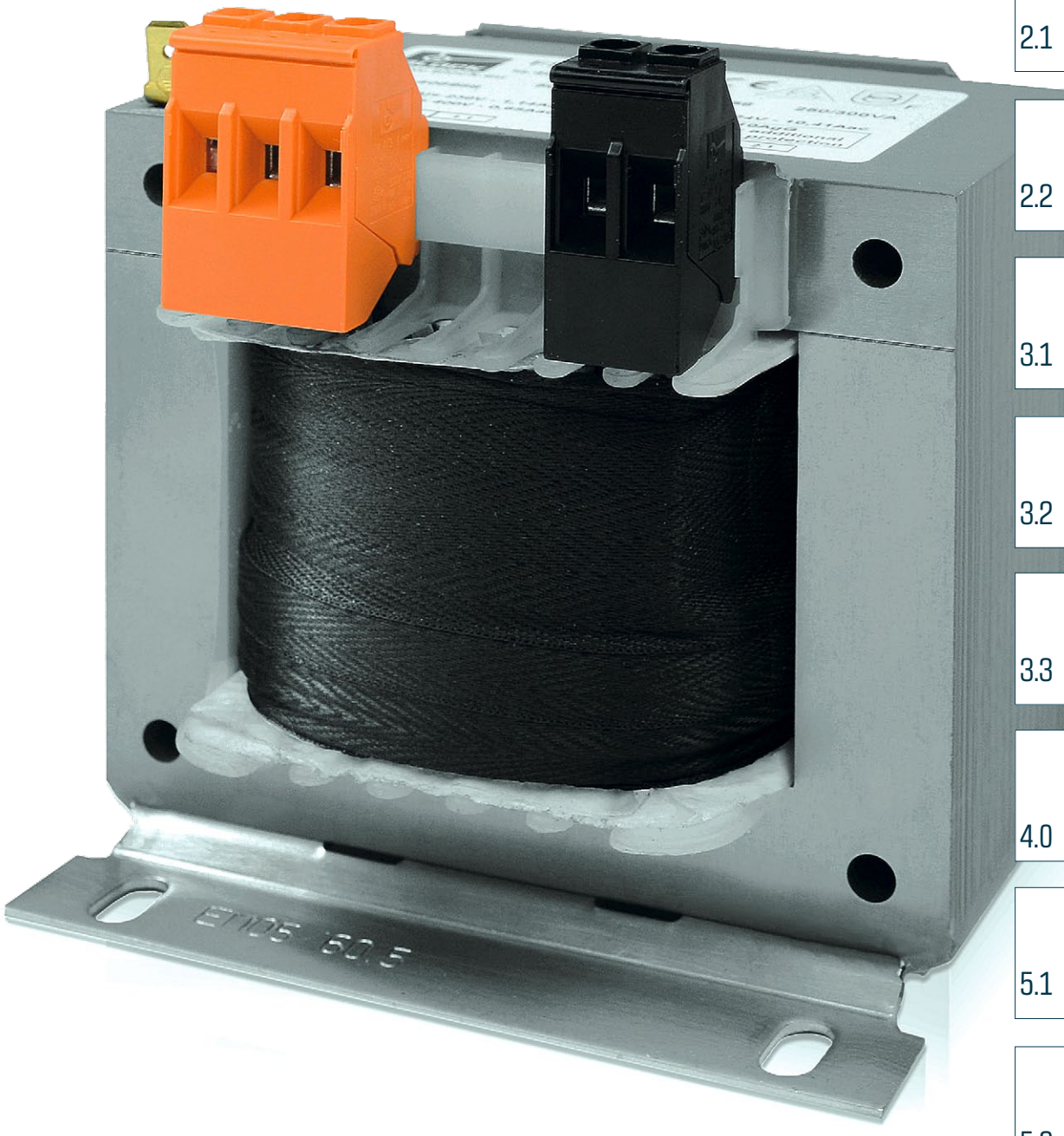
Mechanical data

Terminal and mounting						
DIN rail mounting	✔	✔	✔	✔	-	-
Terminals PE	Tab connector, 6.3 x 0.8 mm	Tab connector, 6.3 x 0.8 mm	Tab connector, 6.3 x 0.8 mm	Tab connector, 6.3 x 0.8 mm	Tab connector, 6.3 x 0.8 mm	Tab connector, 6.3 x 0.8 mm
Terminals Output	Screw terminal 4 mm²	Screw terminal 4 mm²	Screw terminal 4 mm²	Screw terminal 4 mm²	Screw terminal 4 mm²	Screw terminal 4 mm²
Terminals Input	Screw terminal 4 mm²	Screw terminal 4 mm²	Screw terminal 4 mm²	Screw terminal 4 mm²	Screw terminal 4 mm²	Screw terminal 4 mm²
Measures and weights						
Dimension (W x H x D)	84 x 94 x 83 mm	84 x 94 x 83 mm	96 x 102 x 102 mm	96 x 102 x 102 mm	105 x 112 x 106 mm	105 x 112 x 106 mm
Core type	EI 84/43,5	EI 84/43,5	EI 96/45,7	EI 96/45,7	EI 105/60,5	EI 105/60,5
Weight	2.00 kg	2.00 kg	2.90 kg	2.90 kg	4.30 kg	4.30 kg
Cu-Weight	0.40 kg	0.40 kg	0.60 kg	0.60 kg	0.80 kg	0.80 kg
Dimension picture (in mm)	❶	❶	❶	❶	❶	❶
A	84	84	96	96	105	105
B	64	64	84	84	80.5	80.5
C	94	94	102	102	112	112
D	83	83	102	102	106	106
E	64	64	87	87	86	86

Dimension pictures

❶




EI105 60.5

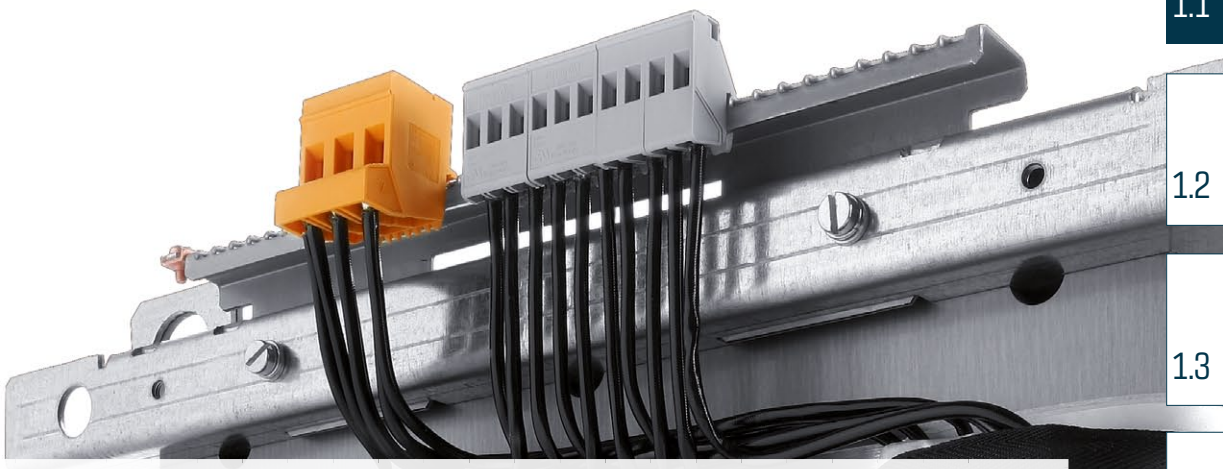
OVERVIEW ISOLATING TRANSFORMERS / INTERFERENCE SUPPRESSING TRANSFORMERS

Isolating transformers

	Type	Features	Rated input voltage	Rated output voltage	60 VA	100 VA	160 VA	200 VA	250 VA	300 VA	500 VA	630 VA	630 VA	800 VA	1000 VA	1600 VA
1-phase	TIM	In housing, IP 20	230 Vac	2 x 115 Vac	■	■		■		■	■			■	■	
	ETTK	Resin encapsulation, IP 67, for portable application	230 Vac	230 Vac			■		■			■	■		■	■
	TTML	For medical rooms, horizontal	230 Vac	115 Vac and 230 Vac												
	TTMS	For medical rooms, vertical	230 Vac	115 Vac and 230 Vac												
	TTIT	For creating a monitored IT main	230 Vac	230 Vac												
3-phase	TT3	IP 00 or up to IP 23 in housing	3 x 400 Vac	3 x 400 Vac ± 5 %											■	
	TT3 Neo	IP 00, in housing possible	3 x 400 Vac	3 x 400 Vac												

Interference suppressing transformers

	Type	Features	Rated input voltage	Rated output voltage	60 VA	100 VA	150 VA	200 VA	400 VA	Page
1-phase	STT	For portable application	230 Vac	230 Vac		■		■	■	163
	SMTT	Isolating transformer, for portable application	230 Vac	230 Vac			■			165



2500 VA	3150 VA	4000 VA	5000 VA	6300 VA	8000 VA	10000 VA	12500 VA	16000 VA	20000 VA	25000 VA	30000 VA	40000 VA	50000 VA	63000 VA	80000 VA	100000 VA	125000 VA	160000 VA	200000 VA	250000 VA	315000 VA	400000 VA	500000 VA	630000 VA	800000 VA	1000000 VA	Page
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	■	■	■	■	■																						157
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Isolating transformer
TIM

BLOCK Website

General Data

Rated input voltage 230 Vac
Rated output voltage 2 x 115 Vac
Rated power 60 - 1000 VA
Insulation class A or B
Maximum ambient temperature 40 °C
Efficiency up to 95 %
Degree of protection IP 20

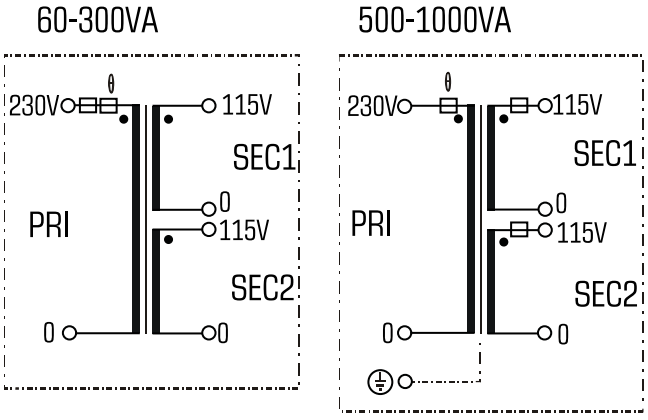
Advantages

Safe galvanic isolation
Integrated short-circuit and overload protection
Double output voltage for series or parallel connection
Very good moisture protection and low noise thanks to XtraDenseFill resin encapsulation (up to 300 VA)
Screw terminals under cover with strain relief

Applications

Isolating transformer for the safe electrical isolation of the input and output sides. The transformer may be used to set up protective separation as a protective measure in accordance with VDE 0100.

Sample applications



Standards

Isolating transformer
to: VDE 0570 Part 2-4, DIN EN 61558-2-4, EN 61558-2-4, IEC 61558-2-4

Approvals

VDE

Isolating transformer
TIM

BLOCK Website

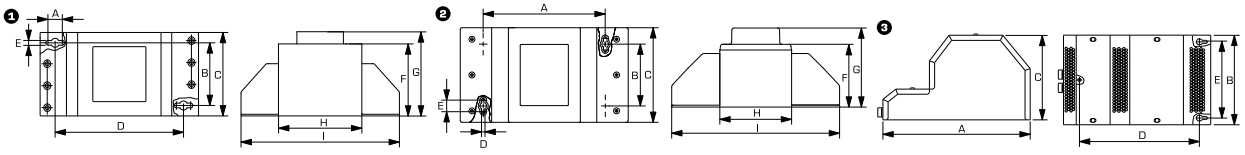
Electrical data

Typ	TIM 60	TIM 100	TIM 200	TIM 300	TIM 500	TIM 800
Input						
Rated input voltage	230 Vac	230 Vac	230 Vac	230 Vac	230 Vac	230 Vac
Frequency range	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
Output						
Rated output voltage	2 x 115 Vac	2 x 115 Vac	2 x 115 Vac	2 x 115 Vac	2 x 115 Vac	2 x 115 Vac
Rated Power	60 VA	100 VA	200 VA	300 VA	500 VA	800 VA
No-load voltage (app. x factor)	1.15	1.08	1.07	1.05	1.02	1.02
No-load loss (typ.)	3.30 W	4.90 W	7.40 W	14.00 W	18.00 W	31.00 W
Efficiency	83.5 %	87.5 %	89.5 %	91.0 %	92.0 %	94.0 %
Approvals						
Approvals	VDE	VDE	VDE	VDE	VDE, cURus	VDE, cURus
Environment						
Ambient temperature max.	40 °C	40 °C	40 °C	40 °C	40 °C	40 °C
Safety and protection						
Type	Resin encapsulated transformer	Resin encapsulated transformer	Resin encapsulated transformer	Resin encapsulated transformer	Encapsulated in metal housing	Encapsulated in metal housing
Insulation class	A	A	A	A	B	B
Protection index	IP 20	IP 20	IP 20	IP 20	IP 20	IP 20
Safety class	II	II	II	II	I	I
Short circuit strength	non-inherently short-circuit proof	non-inherently short-circuit proof	non-inherently short-circuit proof	non-inherently short-circuit proof	non-inherently short-circuit proof	non-inherently short-circuit proof
Test voltage	5000 Vac, 50 Hz	5000 Vac, 50 Hz	5000 Vac, 50 Hz	5000 Vac, 50 Hz	3750 Vac, 50 Hz	3750 Vac, 50 Hz
Order numbers						
Order Number	**TIM 60**	**TIM 100**	**TIM 200**	**TIM 300**	**TIM 500**	**TIM 800**

Mechanical data

Terminal and mounting						
Terminals	Screw-type terminals	Screw-type terminals	Screw-type terminals	Screw-type terminals	Screw-type terminals	Screw-type terminals
Fixing method	Fixing holes in the terminal connection compartment	Fixing holes in the terminal connection compartment	Fixing holes in the terminal connection compartment	Fixing holes in the terminal connection compartment	Fixing holes in the housing	Fixing holes in the housing
Measures and weights						
Weight	1.55 kg	2.00 kg	3.60 kg	4.90 kg	9.10 kg	15.60 kg
Dimension picture (in mm)	❶	❶	❷	❷	❸	❸
A	14.2	14.2	167	167	283	283
B	58	58	76	76	176	200
C	77	77	117	117	150	166
D	135	135	4.3	4.3	245	245
E	4.3	4.3	14	14	123	148
F	65	65	77	100	-	-
G	76	76	97	117	-	-
H	90	90	97	97	-	-
I	166	166	223	223	-	-

Dimension pictures



Isolating transformer
TIM

BLOCK Website

Electrical data

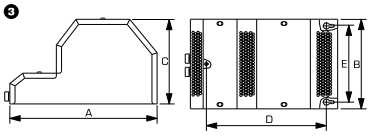
Typ	TIM 1000
Input	
Rated input voltage	230 Vac
Frequency range	50 - 60 Hz
Output	
Rated output voltage	2 x 115 Vac
Rated Power	1000 VA
No-load voltage (app. x factor)	1.02
No-load loss (typ.)	27.00 W
Efficiency	95.0 %
Approvals	
Approvals	VDE, cURus
Environment	
Ambient temperature max.	40 °C
Safety and protection	
Type	Encapsulated in metal housing
Insulation class	B
Protection index	IP 20
Safety class	I
Short circuit strength	non-inherently short-circuit proof
Test voltage	3750 Vac, 50 Hz
Order numbers	
Order Number	**TIM 1000**

Mechanical data

Terminal and mounting	
Terminals	Screw-type terminals
Fixing method	Fixing holes in the housing
Measures and weights	
Weight	17.10 kg
Dimension picture (in mm)	❸
A	283
B	200
C	166
D	245
E	148
F	-
G	-
H	-
I	-

Dimension pictures

❸



Isolating transformer
ETTK

BLOCK Website

General Data

Rated input voltage 230 Vac
Rated output voltage 230 Vac
Rated power 160 - 2500 VA
Insulation class A
Maximum ambient temperature 40 °C
Degree of protection IP 67

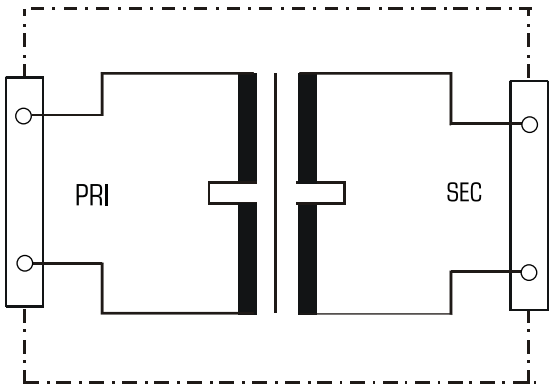
Advantages

Safe galvanic isolation
Integrated short-circuit and overload protection
Very good moisture protection and low noise thanks to resin encapsulation
High degree of protection
Carry handle, mains cable with safety plug, shockproof socket for portable application

Applications

Isolating transformer for the safe electrical isolation of the input and output sides. The transformer may be used to set up protective separation as a protective measure in accordance with VDE 0100.

Sample application



Standards

Isolating transformer
to: VDE 0570 Part 2-4, DIN EN 61558-2-4, EN 61558-2-4, IEC 61558-2-4

Approvals

EAC

Isolating transformer
ETTK

BLOCK Website

Electrical data

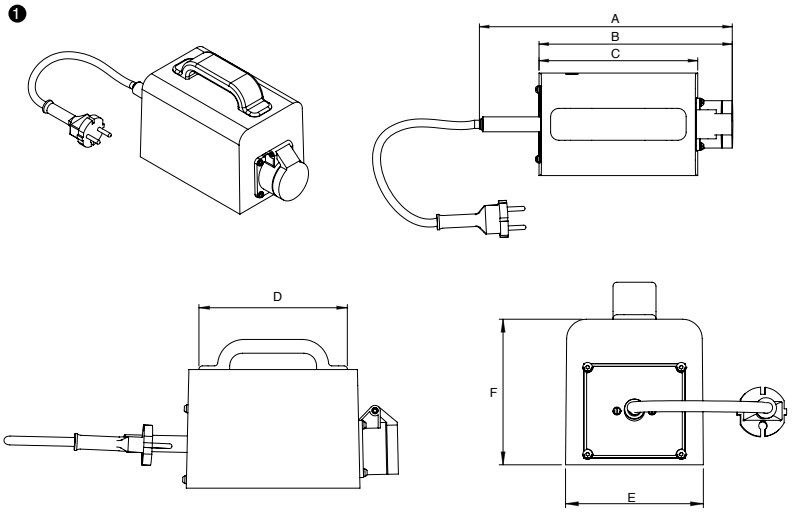
Typ	ETTK 160	ETTK 250	ETTK 630	ETTK 1000	ETTK 1600	ETTK 2500
Input						
Rated input voltage	230 Vac	230 Vac	230 Vac	230 Vac	230 Vac	230 Vac
Frequency range	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
Output						
Rated output voltage	230 Vac	230 Vac	230 Vac	230 Vac	230 Vac	230 Vac
Rated Power	160 VA	250 VA	630 VA	1000 VA	1600 VA	2500 VA
Environment						
Ambient temperature max.	40 °C	40 °C	40 °C	40 °C	40 °C	40 °C
Safety and protection						
Type	Resin encapsulated transformer	Resin encapsulated transformer	Resin encapsulated transformer	Resin encapsulated transformer	Resin encapsulated transformer	Resin encapsulated transformer
Insulation class	A	A	A	A	A	A
Protection index	IP 67	IP 67	IP 67	IP 67	IP 67	IP 67
Safety class	II	II	II	II	II	II
Short circuit strength	non-inherently short-circuit proof	non-inherently short-circuit proof	non-inherently short-circuit proof	non-inherently short-circuit proof	non-inherently short-circuit proof	non-inherently short-circuit proof
Test voltage	4000 Vac, 50 Hz	4000 Vac, 50 Hz	4000 Vac, 50 Hz	4000 Vac, 50 Hz	4000 Vac, 50 Hz	4000 Vac, 50 Hz
Order numbers						
Order Number	**ETTK 160**	**ETTK 250**	**ETTK 630**	**ETTK 1000**	**ETTK 1600**	**ETTK 2500**

Mechanical data

Typ	Terminals Input	Terminals Output	Weight	Dimension (W x H x D)	Dimension picture (in mm)	A	B	C	D	E	F	G
ETTK 160	Mains connecting cable with Schuko plug	Shockproof socket	5.80 kg	105 x 160 x 170 mm	❶	255	196	168	140	105	122	-
ETTK 250	Mains connecting cable with Schuko plug	Shockproof socket	9.40 kg	120 x 185 x 200 mm	❶	283	255	192	141	119	150	-
ETTK 630	Mains connecting cable with Schuko plug	Shockproof socket	16.40 kg	120 x 230 x 300 mm	❶	378	320	293	198	115	190	-
ETTK 1000	Mains connecting cable with Schuko plug	Shockproof socket	21.00 kg	140 x 230 x 300 mm	❶	385	330	298	198	138	190	-

Dimension pictures

❶



Isolating transformer
ETTK

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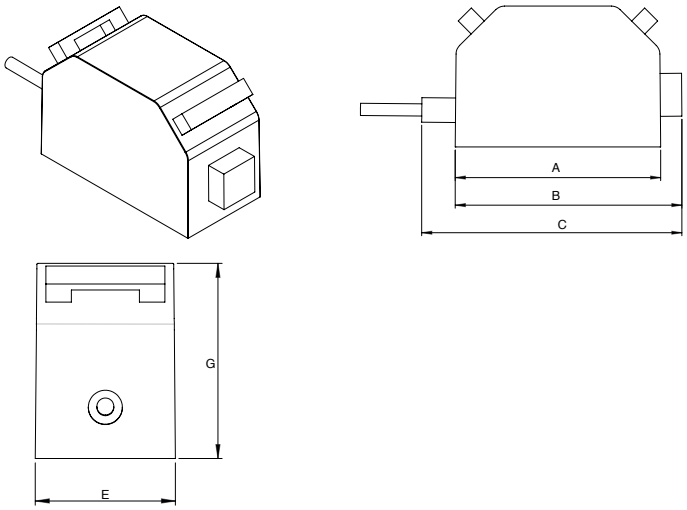
Mechanical data

Typ	Terminals Input	Terminals Output	Weight	Dimension (W x H x D)	Dimension picture (in mm)	A	B	C	D	E	F	G
ETTK 1600	Mains connecting cable with Schuko plug	Shockproof socket	35.80 kg	170 x 225 x 340 mm	❷	335	370	425	-	165	-	230
ETTK 2500	Mains connecting cable with Schuko plug	Shockproof socket	39.00 kg	170 x 225 x 340 mm	❷	335	370	425	-	165	-	230

Dimension pictures

❷



Isolating transformer
TT3

BLOCK Website

General Data

Rated input voltage 3 x 400 Vac
Rated output voltage 3 x 400 Vac
Rated power 1000 - 30000 VA
Insulation class F
Maximum ambient temperature 50 °C
Efficiency up to 97.5 %
Degree of protection IP 00 or IP 23
Optionally adapted package for higher degrees of protection

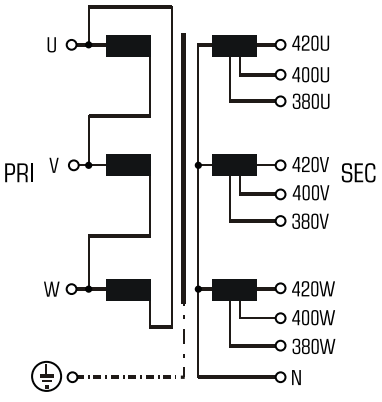
Advantages

Safe galvanic isolation
Patented assembly technology to lower heat losses
Very good corrosion protection and low noise thanks to vacuum impregnation
Secondary side ±5 % tappings for voltage adjustment
Fixed, contact protected screw connection terminals complying with UVV BGV A3
Multifunctional fixing rails with 12 oval slots
Enlarged fixing rail for easy installation from above
Integrated crane eyes

Applications

Isolating transformer for the safe electrical isolation of the input and output sides. The transformer may be used to set up protective separation as a protective measure in accordance with VDE 0100.

Sample application



Standards

Isolating transformer
to: VDE 0570 Part2-4, DIN EN 61558-2-4, EN 61558-2-4, IEC 61558-2-4, UL 5085-1/-2, CSA 22.2 No.66

Approvals

UL 5085, UL 1561, CSA 22.2 (E 103521)

Isolating transformer
TT3

BLOCK Website

Electrical data

Typ	TT3 1-4-4	TT3 2,5-4-4	TT3 2,5-69-4	TT3 5-4-4	TT3 6,3-4-4	TT3 8-4-4
Input						
Rated input voltage	3 x 400 Vac	3 x 400 Vac	3 x 690 Vac	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac
Frequency range	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
Output						
Rated output voltage	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac
Tappings Output (±)	±5 %	±5 %	±5 %	±5 %	±5 %	±5 %
Rated Power	1000 VA	2500 VA	2500 VA	5000 VA	6300 VA	8000 VA
Rated current	3 x 1.52 Aac (3 x 380 Vac) 3 x 1.44 Aac (3 x 400 Vac) 3 x 1.38 Aac (3 x 420 Vac)	3 x 3.8 Aac (3 x 380 Vac) 3 x 3.7 Aac (3 x 400 Vac) 3 x 3.5 Aac (3 x 420 Vac)	3 x 3.8 Aac (3 x 380 Vac) 3 x 3.7 Aac (3 x 400 Vac) 3 x 3.5 Aac (3 x 420 Vac)	3 x 7.6 Aac (3 x 380 Vac) 3 x 7.2 Aac (3 x 400 Vac) 3 x 6.9 Aac (3 x 420 Vac)	3 x 9.6 Aac (3 x 380 Vac) 3 x 9.1 Aac (3 x 400 Vac) 3 x 8.6 Aac (3 x 420 Vac)	3 x 12.2 Aac (3 x 380 Vac) 3 x 11.5 Aac (3 x 400 Vac) 3 x 11 Aac (3 x 420 Vac)
Short circuit voltage	6.4 %	3.7 %	3,8 %	3.6 %	2.8 %	2.2 %
Power loss	92.0 W	155.0 W	155.0 W	275.0 W	290.0 W	320.0 W
Vector group	Dyn 5	Dyn 5	Dyn 5	Dyn 5	Dyn 5	Dyn 5
Efficiency	91.5 %	94.3 %	94.3 %	94.7 %	95.5 %	96 %
Approvals						
Approvals	cURus	cURus	-	cURus	cURus	cURus
Environment						
Ambient temperature max.	50 °C	50 °C	50 °C	50 °C	50 °C	50 °C
Safety and protection						
Type	Open type	Open type	Open type	Open type	Open type	Open type
Insulation class	VDE=F, UL=class 155	VDE=F, UL=class 155	F (155°C)	VDE=F, UL=class 155	VDE=F, UL=class 155	VDE=F, UL=class 155
Protection index	IP 00	IP 00	IP 00	IP 00	IP 00	IP 00
Safety class (prepared)	I	I	I	I	I	I
Short circuit strength	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof
Order numbers						
Recommended enclosure	BGUK 20	BGE-050	BGE-050	BGE-065	BGE-065	BGE-065
Order Number	**TT3 1-4-4**	**TT3 2,5-4-4**	**TT3 2,5-69-4**	**TT3 5-4-4**	**TT3 6,3-4-4**	**TT3 8-4-4**

Isolating transformer
TT3

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Electrical data

Typ	TT3 10-4-4	TT3 10-69-4	TT3 12,5-4-4	TT3 16-4-4	TT3 20-4-4	TT3 20-69-4
Input						
Rated input voltage	3 x 400 Vac	3 x 690 Vac	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac	3 x 690 Vac
Frequency range	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
Output						
Rated output voltage	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac
Tappings Output (±)	±5 %	±5 %	±5 %	±5 %	±5 %	±5 %
Rated Power	10000 VA	10000 VA	12,500 VA	16000 VA	20000 VA	20000 VA
Rated current	3 x 15.1 Aac (3 x 380 Vac) 3 x 14.4 Aac (3 x 400 Vac) 3 x 13.8 Aac (3 x 420 Vac)	3 x 15,1 Aac (3 x 380 Vac) 3 x 14,4 Aac (3 x 400 Vac) 3 x 13,8 Aac (3 x 420 Vac)	3 x 19 Aac (3 x 380 Vac) 3 x 18 Aac (3 x 400 Vac) 3 x 17,2 Aac (3 x 420 Vac)	3 x 24.4 Aac (3 x 380 Vac) 3 x 23.1 Aac (3 x 400 Vac) 3 x 22 Aac (3 x 420 Vac)	3 x 30.4 Aac (3 x 380 Vac) 3 x 28.9 Aac (3 x 400 Vac) 3 x 27.5 Aac (3 x 420 Vac)	3 x 38.1 Aac (3 x 380 Vac) 3 x 36.1 Aac (3 x 400 Vac) 3 x 34.4 Aac (3 x 420 Vac)
Short circuit voltage	1.9 %	2.0 %	1.65 %	1.5 %	1.5 %	1.9 %
Power loss	350.0 W	350.0 W	380.0 W	500.0 W	525.0 W	632.0 W
Vector group	Dyn 5	Dyn 5	Dyn 5	Dyn 5	Dyn 5	Dyn 5
Efficiency	96.5 %	97.5 %	97 %	97 %	97.5 %	97.5 %
Approvals						
Approvals	cURus	-	cURus	cURus	cURus	-
Environment						
Ambient temperature max.	50 °C	50 °C	50 °C	50 °C	50 °C	50 °C
Safety and protection						
Type	Open type	Open type	Open type	Open type	Open type	Open type
Insulation class	VDE=F, UL=class 155	F (155°C)	VDE=F, UL=class 155	VDE=F, UL=class 155	VDE=F, UL=class 155	VDE=F, UL=class 155
Protection index	IP 00	IP 00	IP 00	IP 00	IP 00	IP 00
Safety class (prepared)	I	I	I	I	I	I
Short circuit strength	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof
Order numbers						
Recommended enclosure				BGE-080	BGE-080	BGE-080
Order Number	**TT3 10-4-4**	**TT3 10-69-4**	**TT3 12,5-4-4**	**TT3 16-4-4**	**TT3 20-4-4**	**TT3 20-69-4**

Isolating transformer
TT3

BLOCK Website

Electrical data

Typ	TT3 25-4-4	TT3 25-69-4	TT3 30-4-4
Input			
Rated input voltage	3 x 400 Vac	3 x 690 Vac	3 x 400 Vac
Frequency range	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
Output			
Rated output voltage	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac
Tappings Output (±)	±5 %	±5 %	±5 %
Rated Power	25000 VA	25000 VA	30000 VA
Rated current	3 x 38.1 Aac (3 x 380 Vac) 3 x 36.1 Aac (3 x 400 Vac) 3 x 34.4 Aac (3 x 420 Vac)	3 x 38.1 Aac (3 x 380 Vac) 3 x 36.1 Aac (3 x 400 Vac) 3 x 34.4 Aac (3 x 420 Vac)	3 x 45.7 Aac (3 x 380 Vac) 3 x 43.3 Aac (3 x 400 Vac) 3 x 41.3 Aac (3 x 420 Vac)
Short circuit voltage	1.2 %	1.2 %	1.7 %
Power loss	604.0 W	624.0 W	770.0 W
Vector group	Dyn 5	Dyn 5	Dyn 5
Efficiency	97.5 %	97.5 %	97.5 %
Approvals			
Approvals	cURus	-	cURus
Environment			
Ambient temperature max.	50 °C	50 °C	50 °C
Safety and protection			
Type	Open type	Open type	Open type
Insulation class	VDE=F, UL=class 155	F (155°C)	VDE=F, UL=class 155
Protection index	IP 00	IP 00	IP 00
Safety class (prepared)	I	I	I
Short circuit strength	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof
Order numbers			
Recommended enclosure	BGE-080	BGE-080	BGE-080
Order Number	**TT3 25-4-4**	**TT3 25-69-4**	**TT3 30-4-4**

Isolating transformer
TT3

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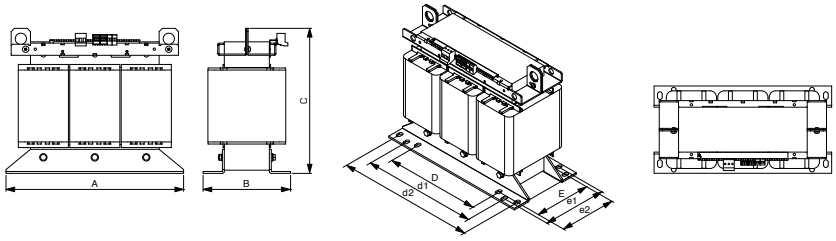
30 Mechanical data

Typ	Terminals	Fixing method	Fixing screws	Weight	Core type	Dimension picture (in mm)	A	B	C	D	d1	d2	E	e1	e2	F	G	H	I	J	K	L
TT3 1-4-4	Screw-type terminal	Fixing rail	M6	15.00 kg	3UI 114/40	1	267	125	215	176	180	249	71	79	98	-	-	-	-	-	-	-
TT3 2,5-4-4	Screw-type terminal	Fixing rail	M8	32.00 kg	3UI 132/72	1	315	165	250	200	215	292	102	124	126	-	-	-	-	-	-	-
TT3 2,5-69-4	Screw-type terminal	Fixing rail	M8	29.00 kg	3UI 132/72	1	315	165	250	200	215	292	102	124	126	-	-	-	-	-	-	-
TT3 5-4-4	Screw-type terminal	Fixing rail	M8	48.00 kg	3UI 180/63	1	410	155	355	264	310	388	125	125	115	-	-	-	-	-	-	-
TT3 6,3-4-4	Screw-type terminal	Fixing rail	M8	55.00 kg	3UI 180/63	1	410	175	360	264	310	388	125	125	115	-	-	-	-	-	-	-
TT3 8-4-4	Screw-type terminal	Fixing rail	M8	67.00 kg	3UI 180/78	1	410	180	360	264	310	388	140	140	130	-	-	-	-	-	-	-
TT3 10-4-4	Screw-type terminal	Fixing rail	M10	87.00 kg	3UI 210/73	1	480	192	400	316	370	450	143	151	133	-	-	-	-	-	-	-
TT3 10-69-4	Screw-type terminal	Fixing rail	M10	87.00 kg	3UI 240/140	1	480	192	400	316	370	450	143	151	133	-	-	-	-	-	-	-
TT3 12,5-4-4	Screw-type terminal	Fixing rail	M10	115.00 kg	3UI 210/103	1	480	222	400	316	370	450	173	181	163	-	-	-	-	-	-	-
TT3 16-4-4	Screw-type terminal	Fixing rail	M12	150.00 kg	3UI 240/110	1	550	267	510	356	430	516	184	210	182	-	-	-	-	-	-	-
TT3 20-4-4	Screw-type terminal	Fixing rail	M12	180.00 kg	3UI 240/140	1	550	297	510	356	430	516	214	240	212	-	-	-	-	-	-	-
TT3 20-69-4	Screw-type terminal	Fixing rail	M12	180.00 kg	3UI 240/140	1	550	297	510	356	430	516	214	240	212	-	-	-	-	-	-	-
TT3 25-4-4	Screw-type terminal	Fixing rail	M12	205.00 kg	3UI 240/140	1	550	297	510	356	430	516	214	240	212	-	-	-	-	-	-	-
TT3 25-69-4	Screw-type terminal	Fixing rail	M12	218.00 kg	3UI 240/140	1	550	300	510	356	430	516	214	240	212	-	-	-	-	-	-	-
TT3 30-4-4	Screw-type terminal	Fixing rail	M12	230.00 kg	3UI 240/170	2	550	320	480	356	430	516	244	270	242	-	-	-	-	-	-	-

Dimension pictures

1



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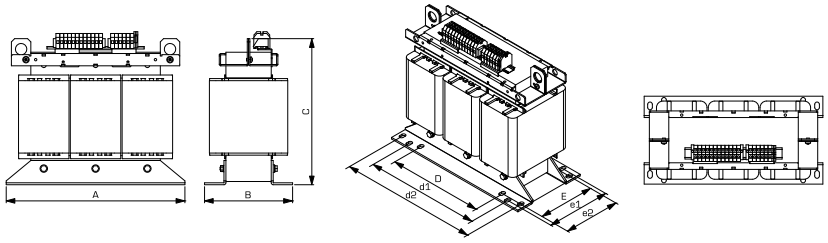

Isolating transformer
TT3 Neo

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General Data

Rated input voltage 3 x 400 Vac
Rated output voltage 3 x 400 Vac
Rated power 10 kVA - 1 MVA
Insulation class F
Maximum ambient temperature 40 °C
Degree of protection IP 00

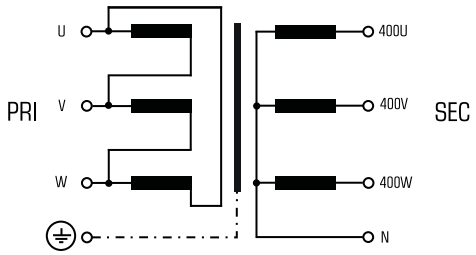
Advantages

Safe galvanic isolation
Very good corrosion protection and low noise thanks to vacuum impregnation
Very good discharging of thermal losses by means of optimally arranged cooling channels within the coils
Integrated crane eyes
If desired, the transformers can be realised in individual voltages

Applications

Isolating transformer for the safe electrical isolation of the input and output sides. The transformer may be used to set up protective separation as a protective measure in accordance with VDE 0100.

Sample application



Standards

Isolating transformer
to: VDE 0570 part 2-4, DIN EN 61558 part 1 with part 2-4

Approvals

Isolating transformer
TT3 Neo

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Electrical data

Typ	TT3-A010-4040-0	TT3-A016-4040-0	TT3-A020-4040-0	TT3-A025-4040-0	TT3-A030-4040-0	TT3-A040-4040-0
Input						
Rated input voltage	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac
Frequency range	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
Output						
Rated output voltage	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac
Rated Power	10.000 VA	16.000 VA	20.000 VA	25.000 VA	30.000 VA	40.000 VA
Output rated current	3 x 14,4 A	3 x 23,1 A	3 x 28.9 A	3 x 36.1 A	3 x 43,3 A	3 x 57.7 A
Short circuit voltage	5,2 %	4,4 %	4 %	3,3 %	3.7 %	4,3 %
Vector group	Dyn 5	Dyn 5	Dyn 5	Dyn 5	Dyn 5	Dyn 5
Environment						
Ambient temperature max.	40 °C	40 °C	40 °C	40 °C	40 °C	40 °C
Safety and protection						
Type	Open type	Open type	Open type	Open type	Open type	Open type
Insulation class	F	F	F	F	F	F
Protection index	IP 00	IP 00	IP 00	IP 00	IP 00	IP 00
Safety class (prepared)	I	I	I	I	I	I
Short circuit strength	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof
Order numbers						
Recommended enclosure	BGE-065	BGE-080	BGE-080	BGE-080	BGE-080	BGE-085
Order Number	**TT3-A010-4040-0**	**TT3-A016-4040-0**	**TT3-A020-4040-0**	**TT3-A025-4040-0**	**TT3-A030-4040-0**	**TT3-A040-4040-0**

Isolating transformer
TT3 Neo

BLOCK Website

Electrical data

Typ	TT3-A050-4040-0	TT3-A063-4040-0	TT3-A080-4040-0	TT3-A100-4040-0	TT3-A125-4040-0	TT3-A160-4040-0
Input						
Rated input voltage	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac
Frequency range	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
Output						
Rated output voltage	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac
Rated Power	50.000 VA	63.000 VA	80.000 VA	100.000 VA	125.000 VA	160.000 VA
Output rated current	3 x 72,1 A	3 x 90.9 A	3 x 115.4 A	3 x 144,3 A	3 x 180.4 A	3 x 230.9 A
Short circuit voltage	5,1 %	4,1 %	4,9 %	4,9 %	4,4 %	4,6 %
Vector group	Dyn 5	Dyn 5	Dyn 5	Dyn 5	Dyn 5	Dyn 5
Environment						
Ambient temperature max.	40 °C	40 °C	40 °C	40 °C	40 °C	40 °C
Safety and protection						
Type	Open type	Open type	Open type	Open type	Open type	Open type
Insulation class	F	F	F	F	F	F
Protection index	IP 00	IP 00	IP 00	IP 00	IP 00	IP 00
Safety class (prepared)	I	I	I	I	I	I
Short circuit strength	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof
Order numbers						
Recommended enclosure	BGE-085	BGE-085	BGE-115	BGE-115	BGE-115	BGE-130
Order Number	**TT3-A050-4040-0**	**TT3-A063-4040-0**	**TT3-A080-4040-0**	**TT3-A100-4040-0**	**TT3-A125-4040-0**	**TT3-A160-4040-0**

Isolating transformer
TT3 Neo

BLOCK Website

Electrical data

Typ	TT3-A200-4040-0	TT3-A250-4040-0	TT3-A315-4040-0	TT3-A400-4040-0	TT3-A500-4040-0	TT3-A630-4040-0
Input						
Rated input voltage	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac
Frequency range	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
Output						
Rated output voltage	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac
Rated Power	200.000 VA	250.000 VA	315.000 VA	400.000 VA	500.000 VA	630.000 VA
Output rated current	3 x 288.6 A	3 x 360.7 A	3 x 454.5 A	3 x 577.2 A	3 x 721.5 A	3 x 909.1 A
Short circuit voltage	4,1 %	3.6 %	3,2 %	3,2 %	3,3 %	3 %
Vector group	Dyn 5	Dyn 5	Dyn 5	Dyn 5	Dyn 5	Dyn 5
Environment						
Ambient temperature max.	40 °C	40 °C	40 °C	40 °C	40 °C	40 °C
Safety and protection						
Type	Open type	Open type	Open type	Open type	Open type	Open type
Insulation class	F	F	F	F	F	F
Protection index	IP 00	IP 00	IP 00	IP 00	IP 00	IP 00
Safety class (prepared)	I	I	I	I	I	I
Short circuit strength	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof
Order numbers						
Recommended enclosure	BGE-130	BGE-130	BGE-130	BGE-150	BGE-150	BGE-150
Order Number	**TT3-A200-4040-0**	**TT3-A250-4040-0**	**TT3-A315-4040-0**	**TT3-A400-4040-0**	**TT3-A500-4040-0**	**TT3-A630-4040-0**

Isolating transformer
TT3 Neo

BLOCK Website

Electrical data

Typ	TT3-A800-4040-0	TT3C1000-4040-0
Input		
Rated input voltage	3 x 400 Vac	3 x 400 Vac
Frequency range	50 - 60 Hz	50 - 60 Hz
Output		
Rated output voltage	3 x 400 Vac	3 x 400 Vac
Rated Power	800.000 VA	1 MVA
Output rated current	3 x 1154 A	3 x 1443 A
Short circuit voltage	2.4 %	3 %
Vector group	Dyn 5	Dyn 5
Environment		
Ambient temperature max.	40 °C	40 °C
Safety and protection		
Type	Open type	Open type
Insulation class	F	F
Protection index	IP 00	IP 00
Safety class (prepared)	I	I
Short circuit strength	non-short-circuit proof	non-short-circuit proof
Order numbers		
Recommended enclosure		
Order Number	**TT3-A800-4040-0**	**TT3C1000-4040-0**

Isolating transformer
TT3 Neo

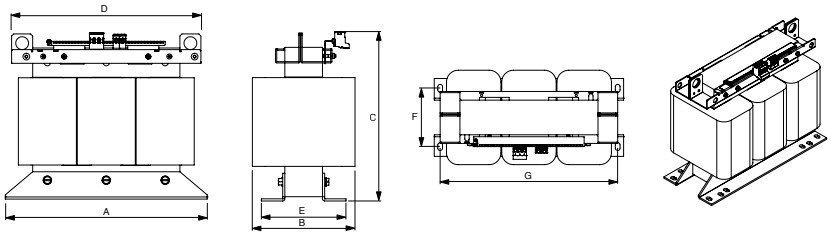
BLOCK Website

Mechanical data

Typ	Terminals	Fixing method	Weight	Core type	Dimension picture (in mm)	A	B	C	D	E	F	G
TT3-A010-4040-0	Screw-type terminal input 10 mm², output 4 mm²	Fixing rail	74.00 kg	3UI 210/88	1	480	240	400	450	198	148	450
TT3-A016-4040-0	Screw-type terminal 10 mm²	Fixing rail	119.00 kg	3UI 240/110	1	552	270	460	-	-	-	-
TT3-A020-4040-0	Screw-type terminal 10 mm²	Fixing rail	122.00 kg	3UI 240/110	1	552	300	460	525	245	182	516
TT3-A025-4040-0	Screw-type terminal 10 mm²	Fixing rail	154.00 kg	3UI 240/140	1	552	300	460	-	-	-	-
TT3-A030-4040-0	Screw-type terminal 10 mm²	Fixing rail	160.00 kg	3UI 240/140	1	552	300	460	-	-	-	-
TT3-A040-4040-0	Screw-type terminal 16 mm²	Fixing rail	161.00 kg	3UC 454/110	3	550	300	550	-	-	-	-
TT3-A050-4040-0	Screw-type terminal 35 mm²	Fixing rail	192.00 kg	3UC 504/125	3	620	350	570	-	-	-	-
TT3-A063-4040-0	Screw-type terminal 35 mm²	Fixing rail	267.00 kg	3UC 504/175	3	620	380	570	-	-	-	-
TT3-A080-4040-0	Screw-type terminal 35 mm²	Fixing rail	300.00 kg	3UC 594/125	3	740	340	790	-	-	-	-
TT3-A100-4040-0	Screw-type terminal 70 mm²	Fixing rail	359.00 kg	3UC 594/150	3	740	370	790	661	-	250	600
TT3-A125-4040-0	Screw-type terminal 70 mm²	Fixing rail	410.00 kg	3UC 594/175	3	740	400	805	-	-	-	-
TT3-A160-4040-0	Screw-type terminal 150 mm²	Fixing rail	455.00 kg	3UC 719/125	3	890	360	985	-	-	-	-
TT3-A200-4040-0	Screw-type terminal 240 mm²	Fixing rail	541.00 kg	3UC 719/150	3	890	470	920	-	-	-	-
TT3-A250-4040-0	Ø11 mm busbar hole	Fixing rail	710.00 kg	3UC 814/150	3	1000	530	1040	-	-	-	-
TT3-A315-4040-0	Ø11 mm busbar hole	Fixing rail	825.00 kg	3UC 814/175	3	1000	555	1040	-	-	-	-
TT3-A400-4040-0	Ø11 mm busbar hole	Fixing rail	1068.00 kg	3UC 864/200	3	1075	580	1100	-	-	-	-
TT3-A500-4040-0	Ø13 mm busbar hole	Fixing rail	1353.00 kg	3UC 864/250	3	1075	630	1100	-	-	-	-
TT3-A630-4040-0	2x Ø13 mm busbar hole	Fixing rail	1616.00 kg	3UC 864/300	3	1075	710	1100	-	-	-	-
TT3-A800-4040-0	4x Ø13 mm busbar hole	Fixing rail	2100.00 kg	3UC 864/300	5	1170	545	1150	-	-	460	1000
TT3C1000-4040-0	4x Ø13 mm busbar hole	Fixing rail	2700.00 kg	3UC 864/300	5	1170	545	1150	-	-	460	1000

Dimension pictures

1



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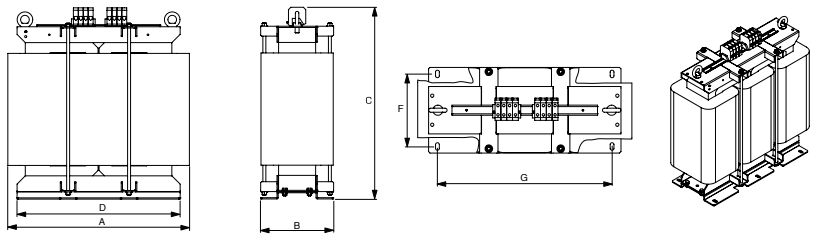

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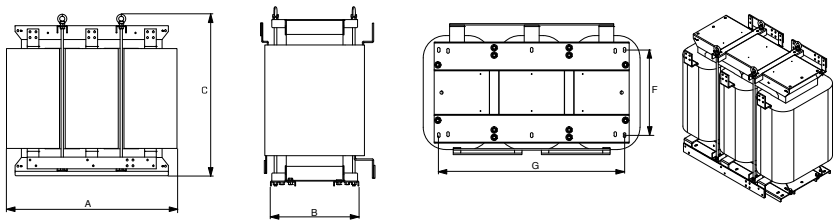
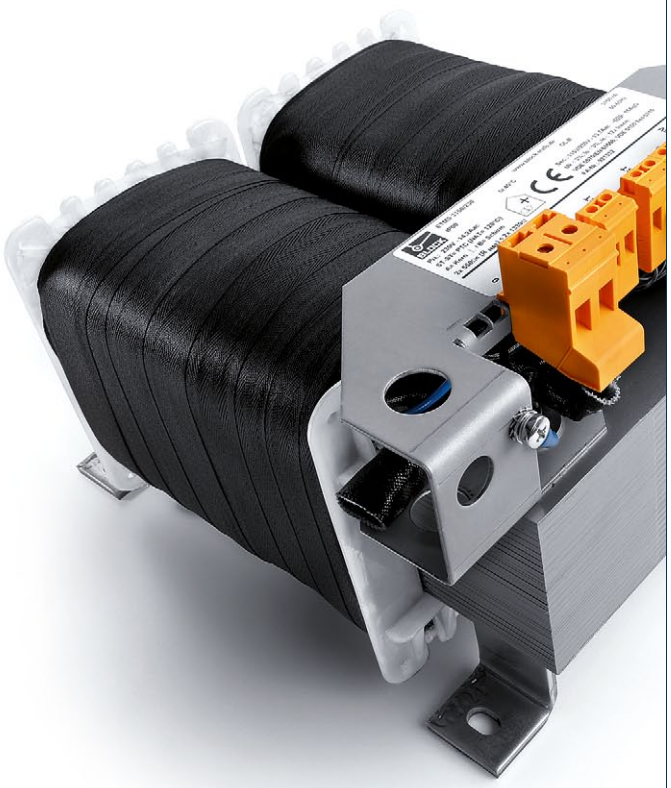


Isolating transformer for supply of medical rooms
TTML

BLOCK Website



General Data

Rated input voltage 230 Vac
Rated output voltage 115 and 230 Vac
Rated power 3150 - 8000 VA
Insulation class B
Maximum ambient temperature 40 °C
Efficiency up to 97 %
Degree of protection IP 00

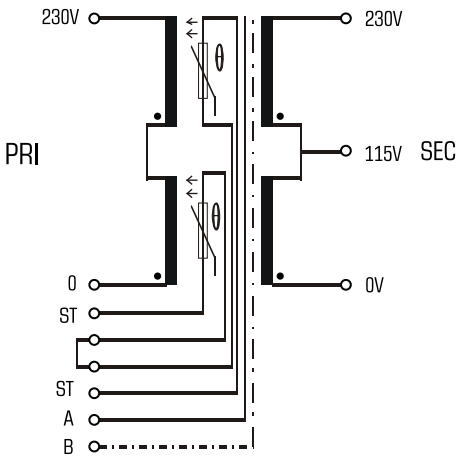
Advantages

Safe galvanic isolation
PTC resistor built into every coil to set up an external monitoring unit for protection against overload
Very good switch-on behaviour thanks to reduced starting currents
Very high efficiency
Very low short circuit voltage
Very low idle current
Very good corrosion protection and low noise thanks to BLOCKIMPEX vacuum impregnation
Contact protected screw connection terminals complying with UVV BGV A3
Low height

Applications

Isolating transformer for supply of medical rooms of the User group 2.

Sample application



Standards

Isolating transformer for supply of medical rooms
to: VDE 0570 Part 2-15, VDE 0100 Part 710, DIN EN 61558-2-15,
EN 61558-2-15

Approvals

EAC

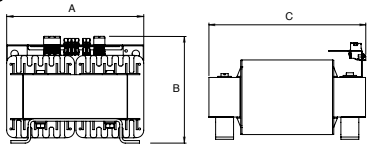
Isolating transformer for supply of medical rooms
TTML

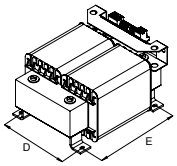
BLOCK Website

Typ	TTML 3150/230	TTML 4000/230	TTML 5000/230	TTML 6300/230	TTML 8000/230
Electrical data					
Input					
Rated input voltage	230 Vac	230 Vac	230 Vac	230 Vac	230 Vac
Low-inrush current	≤12 x INom	≤12 x INom	≤12 x INom	≤12 x INom	≤12 x INom
Frequency range	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
Output					
Rated output voltage	115 and 230 Vac	115 and 230 Vac	115 and 230 Vac	115 and 230 Vac	115 and 230 Vac
Rated Power	3150 VA	4000 VA	5000 VA	6300 VA	8000 VA
Short circuit voltage	≤3 %	≤3 %	≤3 %	≤3 %	≤3 %
No-load current	≤3 %	≤3 %	≤3 %	≤3 %	≤3 %
Efficiency	97.0 %	97.0 %	97.0 %	97.0 %	97.0 %
Environment					
Ambient temperature max.	40 °C	40 °C	40 °C	40 °C	40 °C
Safety and protection					
Type	Open type	Open type	Open type	Open type	Open type
Insulation class	B	B	B	B	B
Protection index	IP 00	IP 00	IP 00	IP 00	IP 00
Safety class (prepared)	II	II	II	II	II
Short circuit strength	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof
Test voltage	3.75 kVac	3.75 kVac	3.75 kVac	3.75 kVac	3.75 kVac
Order numbers					
Order Number	**TTML 3150/230**	**TTML 4000/230**	**TTML 5000/230**	**TTML 6300/230**	**TTML 8000/230**
Mechanical data					
Terminal and mounting					
Terminals	Screw-type terminal 10 mm², Screw-type terminal 4 mm²	Screw-type terminal 10 mm², Screw-type terminal 4 mm²	Screw-type terminal 10 mm², Screw-type terminal 4 mm²	Screw-type terminal 10 mm², Screw-type terminal 4 mm²	Screw-type terminal 10 mm², Screw-type terminal 4 mm²
Fixing method	Fixing rail	Fixing rail	Fixing rail	Fixing rail	Fixing rail
Fixing screws	M8	M8	M8	M8	M8
Measures and weights					
Weight	50.00 kg	55.00 kg	60.00 kg	67.00 kg	75.00 kg
Dimension picture (in mm)	❷	❷	❷	❷	❷
A	245	275	275	275	275
B	200	200	210	225	240
C	300	350	350	350	350
D	204	234	234	234	234
E	240	280	280	280	280

Dimension pictures

❶





Isolating transformer for supply of medical rooms
TTMS

BLOCK Website

General Data

Rated input voltage 230 Vac
Rated output voltage 115 and 230 Vac
Rated power 3150 - 8000 VA
Insulation class B
Maximum ambient temperature 40 °C
Efficiency up to 97 %
Degree of protection IP 00
Optionally adapted package for higher degrees of protection

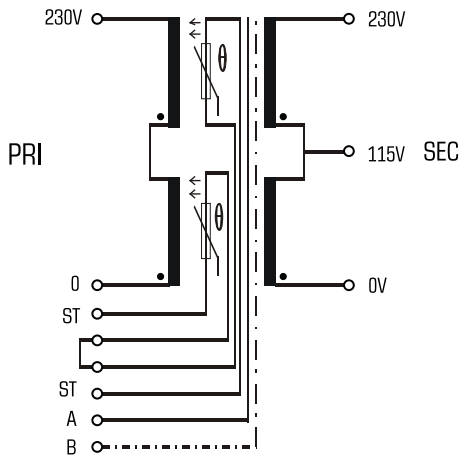
Advantages

Safe galvanic isolation
PTC resistor built into every coil to set up an external monitoring unit for protection against overload
Very good switch-on behaviour thanks to reduced starting currents
High efficiency
Low short-circuit voltage
Very low idle current
Very good corrosion protection and low noise thanks to vacuum impregnation
Contact protected screw connection terminals complying with UVV BGV A3
Simple mounting thanks to robust metal fixing rail with 8 oval slots

Applications

Isolating transformer for supply of medical rooms of the user group 2.

Sample application



Standards

Isolating transformer for supply of medical rooms
to: VDE 0570 Part 2-15, VDE 0100 Part 710, DIN EN 61558-2-15, EN 61558-2-15

Approvals

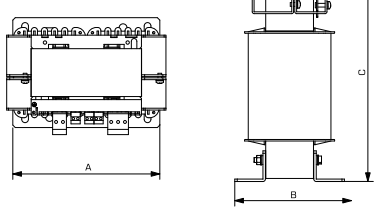
EAC

Isolating transformer for supply of medical rooms
TTMS

BLOCK Website

Typ	TTMS 3150/230	TTMS 4000/230	TTMS 5000/230	TTMS 6300/230	TTMS 8000/230
Electrical data					
Input					
Rated input voltage	230 Vac	230 Vac	230 Vac	230 Vac	230 Vac
Low-inrush current	≤12 x INom	≤12 x INom	≤12 x INom	≤12 x INom	≤12 x INom
Frequency range	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
Output					
Rated output voltage	115/230 Vac	115/230 Vac	115/230 Vac	115/230 Vac	115/230 Vac
Rated Power	3.150 VA	4.000 VA	5.000 VA	6.300 VA	8.000 VA
Short circuit voltage	≤3 %	≤3 %	≤3 %	≤3 %	≤3 %
No-load current	≤3 %	≤3 %	≤3 %	≤3 %	≤3 %
Efficiency	97.0 %	97.0 %	97.0 %	97.0 %	97.0 %
Environment					
Ambient temperature max.	40 °C	40 °C	40 °C	40 °C	40 °C
Safety and protection					
Type	Open type	Open type	Open type	Open type	Open type
Insulation class	B	B	B	B	B
Protection index	IP 00	IP 00	IP 00	IP 00	IP 00
Safety class (prepared)	II	II	II	II	II
Short circuit strength	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof
Test voltage	3.75 kVac	3.75 kVac	3.75 kVac	3.75 kVac	3.75 kVac
Order numbers					
Order Number	**TTMS 3150/230**	**TTMS 4000/230**	**TTMS 5000/230**	**TTMS 6300/230**	**TTMS 8000/230**
Mechanical data					
Terminal and mounting					
Terminals	Screw-type terminal 10 mm², Screw-type terminal 4 mm²	Screw-type terminal 10 mm², Screw-type terminal 4 mm²	Screw-type terminal 10 mm², Screw-type terminal 4 mm²	Screw-type terminal 10 mm², Screw-type terminal 4 mm²	Screw-type terminal 10 mm², Screw-type terminal 4 mm²
Fixing screws	M8	M8	M8	M8	M8
Fixing method	Fixing rail	Fixing rail	Fixing rail	Fixing rail	Fixing rail
Measures and weights					
Weight	50.00 kg	55.00 kg	60.00 kg	67.00 kg	75.00 kg
Dimension picture (in mm)	1	1	1	1	1
A	260	310	310	310	310
B	195	190	200	215	230
C	345	395	395	395	395

Dimension pictures



Isolating transformer with integrated insulation monitoring
TTIT

BLOCK Website

General Data

Rated input voltage 230 Vac
Rated output voltage 230 Vac
Rated power 2500 VA
Insulation class B
Maximum ambient temperature 40 °C
Efficiency up to 98 %
Degree of protection IP 54

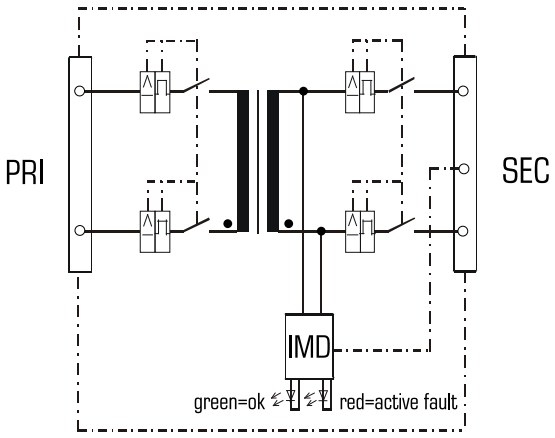
Advantages

Safe galvanic isolation
Visual status indicator
Integrated short circuit and overload protection
Very high efficiency
Very low idle current
High insulation strength, very good moisture protection and low noise thanks to XtraDenseFill resin encapsulation
High degree of protection
Carrying handles, mains connecting lead and socket for mobile use

Applications

Isolating transformer for mobile use for the safe electrical isolation of the input and output sides. The transformer can be used to build an IT network.

Sample application



Standards

Isolating transformer
to: VDE 0570 Part 2-4, DIN EN 61558-2-4, EN 61558-2-4

Approvals

EAC

Isolating transformer with integrated insulation monitoring
TTIT

BLOCK Website

Electrical data

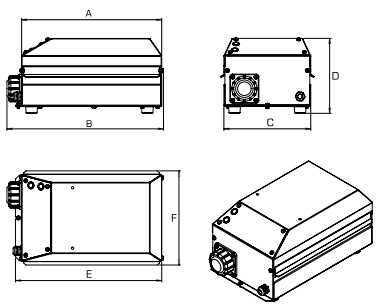
Typ	TTIT 2500
Input	
Rated input voltage	230 Vac
Low-inrush current	315 A
Frequency range	50 - 60 Hz
Output	
Rated output voltage	230 Vac
Rated Power	2.500 VA
Short circuit voltage	2.7 %
No-load current	0.6 Adc
Efficiency	98.0 %
Environment	
Ambient temperature max.	40 °C
Safety and protection	
Short circuit strength	short-circuit proof
Insulation class	B
Type	Encapsulated in metal housing
Protection index	IP 54
Safety class (prepared)	II
Test voltage	3.6 kVac
Order numbers	
Order Number	**TTIT 2500**

Mechanical data

Terminal and mounting	
Terminals Input	Mains connection cable with protected contact plug
Terminals Output	Protective contact socket
Measures and weights	
Weight	30.00 kg
Dimension (W x H x D)	250 x 180 x 410 mm
Cu-Weight	7.50 kg
Dimension picture (in mm)	❹
A	363
B	405
C	225
D	195
E	379
F	245

Dimension pictures

❶



Interference suppressing transformer
STT

BLOCK Website

General Data

Rated input voltage 230 Vac
Rated output voltage 230 Vac
Rated power 100 - 400 VA
Insulation class A
Maximum ambient temperature 40 °C
Efficiency up to 91 %
Degree of protection IP 44

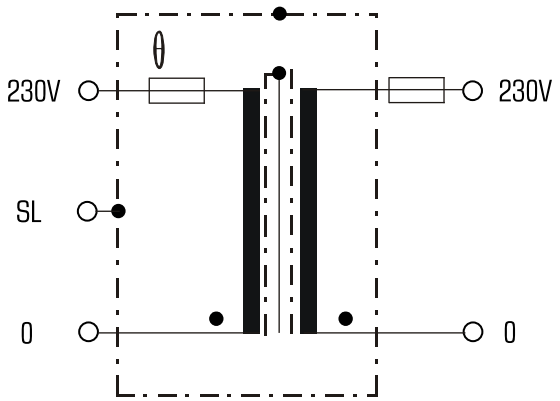
Advantages

Good attenuation against radio frequency interference and pulses
Low magnetic leakage field
Integrated short circuit and overload protection
Very good moisture protection and low noise thanks to resin encapsulation
High degree of protection
Carrying handle, mains connecting lead and socket for mobile use

Applications

Mains transformer complying with EN 61558-2-4 for portable application to minimize mains supply faults such as disturbing pulses and electrical noise.

Sample application



Standards

Mains transformer
to: VDE 0570 Teil 2-4, DIN EN 61558-2-4, EN 61558-2-4, IEC 61558-2-4

Approvals

EAC

Interference suppressing transformer
STT

BLOCK Website

Electrical data

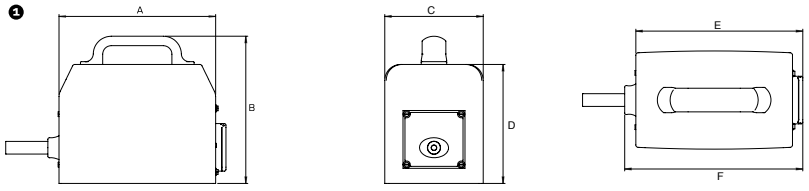
Typ	STT 100	STT 200	STT 400
Input			
Rated input voltage	230 Vac	230 Vac	230 Vac
Frequency range	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
Output			
Rated output voltage	230 Vac	230 Vac	230 Vac
Rated Power	100 VA	200 VA	400 VA
No-load voltage (app. x factor)	1.06	1.07	1.10
Leakage cur. (PRI-PE)	43 µA (typ.)	57 µA (typ.)	85 µA (typ.)
Leakage cur. (PRI-SEC)	16 µA (typ.)	26 µA (typ.)	41 µA (typ.)
Efficiency	89.0 %	90.0 %	92.0 %
Environment			
Ambient temperature max.	40 °C	40 °C	40 °C
Safety and protection			
Type	Enclosed	Enclosed	Enclosed
Insulation class	A	A	A
Protection index	IP 44	IP 44	IP 44
Safety class	I	I	I
Insulation res. (PRI-PE)	>10 GΩ (typ.)	>10 GΩ (typ.)	>10 GΩ (typ.)
Insulation res. (PRI-SEC)	>10 GΩ (typ.)	>10 GΩ (typ.)	>10 GΩ (typ.)
Coupling cap. (PRI-SEC)	172 pF (typ.)	262 pF (typ.)	390 pF (typ.)
Magn. 50 Hz stray f. (Encl.)	0.33 mT (typ.)	0.30 mT (typ.)	0.85 mT (typ.)
Short circuit strength	non-inherently short-circuit proof	non-inherently short-circuit proof	non-inherently short-circuit proof
Test voltage	4000 Vac, 50 Hz	4000 Vac, 50 Hz	4000 Vac, 50 Hz
Order numbers			
Order Number	**STT 100**	**STT 200**	**STT 400**

Mechanical data

Terminal and mounting			
Terminals Input	Mains connecting cable with safety plug	Mains connecting cable with safety plug	Mains connecting cable with safety plug
Terminals Output	Protective contact socket	Protective contact socket	Protective contact socket
Measures and weights			
Weight	5.10 kg	8.00 kg	12.70 kg
Dimension (W x H x D)	105 x 125 x 170 mm	120 x 150 x 200 mm	120 x 175 x 300 mm
Dimension picture (in mm)	❶	❶	❶
A	170	197	295
B	165	190	220
C	105	125	110
D	130	150	175
E	180	210	310
F	235	225	365

Dimension pictures

❶



Interference suppressing isolating transformer
SMTT

BLOCK Website

General Data

Rated input voltage 230 Vac
Rated output voltage 230 Vac
Rated power 150 VA
Insulation class A
Maximum ambient temperature 40 °C
Efficiency up to 90 %
Degree of protection IP 40

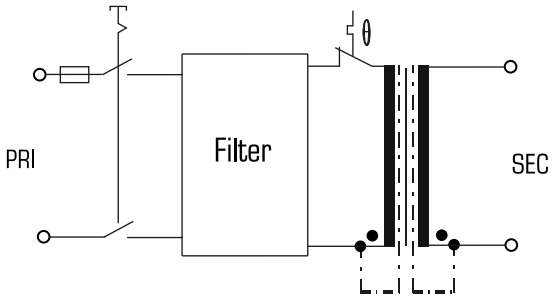
Advantages

Safe galvanic isolation
Low leakage current and high insulation resistance
Good attenuation against radio frequency interference and pulses
Low magnetic 50 Hz leakage field
Integrated short-circuit and overload protection
Very good moisture protection and low noise thanks to XtraDenseFill resin encapsulation
High degree of protection
Carry handle, mains cable with safety plug, shockproof socket for portable application

Applications

Isolating transformer for mobile use to minimize mains supply faults such as disturbing pulses and electrical noise.

Sample application



Standards

Isolating transformer
to: VDE 0570 Part 2-4, DIN EN 61558-2-4, EN 61558-2-4, IEC 61558-2-4

Approvals

EAC

Interference suppressing isolating transformer
SMTT

BLOCK Website

Electrical data

Typ	SMTT 150
Input	
Rated input voltage	230 Vac
Frequency range	50 - 60 Hz
Active-Power input	typ. 6.5 W (running at no load)
Output	
Rated output voltage	230 Vac
Rated Power	150 VA
Leakage cur. (PRI-PE)	9 µA (typ.)
Leakage cur. (PRI-SEC)	8 µA (typ.)
Efficiency	90.0 %
Environment	
Ambient temperature max.	40 °C
Safety and protection	
Type	Resin encapsulated transformer
Insulation class	A
Protection index	IP 40
Safety class	II
Coupling cap. (PRI-SEC)	90 pF (typ.)
Magn. 50 Hz stray f. (Encl.)	9.00 mT (typ.)
Short circuit strength	non-inherently short-circuit proof
Test voltage	5000 Vac, 50 Hz
Order numbers	
Order Number	**SMTT 150**

Interference suppressing isolating transformer
SMTT

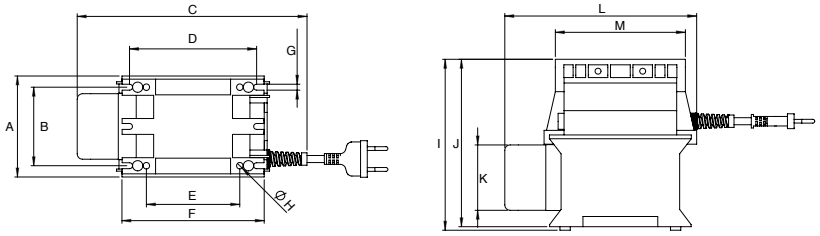
BLOCK Website

Mechanical data

Typ	Terminals Input	Terminals Output	Weight	Dimension picture (in mm)	A	B	C	D	E	F	G	H	I	J	K	L	M
SMTT 150	Mains connecting cable with safety plug	Protective contact socket	3.50 kg	1	93.5	72.5	215	117	86	131	5.5	6	160	155	60.5	180	120

Dimension pictures

1



OVERVIEW
SAFETY ISOLATING TRANSFORMERS

Safety isolating transformers

Type	Features	Rated input voltage	Rated output voltage	7,5 VA	10 VA	13 VA	18 VA	25 VA	28 VA	40 VA	50 VA	63 VA
EL	Free wiring	230 Vac	2 x 6 Vac	■		■	■		■		■	
			2 x 9 Vac	■		■	■		■		■	
			2 x 12 Vac	■		■	■		■		■	
			2 x 15 Vac	■		■	■		■		■	
			2 x 18 Vac	■		■	■		■		■	
			2 x 24 Vac									
ACT	In housing, DIN rail mounting	230 Vac	24 Vac		■			■				■
SIM	In housing, IP 20	230 Vac	2 x 12 Vac									■
EVKE	Resin encapsulation, IP 67/68	230 Vac	24 Vac					■		■		■
ETKEC	Resin encapsulation, for mobile use, CEE socket outlet, IP 44	230 Vac	24 Vac									

Safety isolating transformers for halogen lamps

Type	Features	Rated input voltage	Rated output voltage	60 W	105 W	150 W	200 W	250 W	300 W	Page
HIT	Screw-type terminals, resin encapsulation	230 Vac	11.3 - 11.5 Vac	■	■	■	■	■	■	182

100 VA	160 VA	200 VA	250 VA	300 VA	400 VA	500 VA	630 VA	800 VA	Page
■									170
■									
■									
■									
■									
■									172
■		■		■		■		■	174
■	■		■		■		■		176
■		■							179

Safety isolating transformer
EL

BLOCK Website

General Data

Rated input voltage 230 Vac
Rated output voltage 2 x 6 - 2 x 18 Vac
Rated power 7.5 - 100 VA
Insulation class E
Maximum ambient temperature 40 °C
Efficiency up to 88 %
Degree of protection IP 00

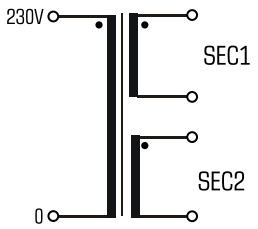
Advantages

- Solder tab for free wiring
- Very good corrosion protection and low noise thanks to vacuum impregnation
- Simple mounting thanks to robust metal footplate with oval slots

Applications

Safety isolating transformer for the safe electrical isolation of the input and output sides. The transformer is suitable for creating SELV and PELV circuits because of the limit on the output voltage.

Sample application



Standards

Safety isolating transformer
to: VDE 0570 Part 2-6, DIN EN 61558-2-6, EN 61558-2-6

Approvals

Safety isolating transformer
EL

BLOCK Website

Electrical data

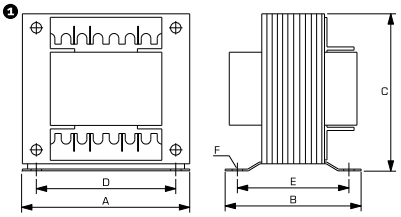
Typ	EL 7,5/..	EL 13/..	EL 18/..	EL 28/..	EL 50/..	EL 100/..
Input						
Rated input voltage	230 Vac	230 Vac	230 Vac	230 Vac	230 Vac	230 Vac
Frequency range	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
Output						
Rated output voltage: Order no.	2x6 Vac: EL 7,5/6 2x9 Vac: EL 7,5/9 2x12 Vac: EL 7,5/12 2x15 Vac: EL 7,5/15 2x18 Vac: EL 7,5/18	2x6 Vac: EL 13/6 2x9 Vac: EL 13/9 2x12 Vac: EL 13/12 2x15 Vac: EL 13/15 2x18 Vac: EL 13/18	2x6 Vac: EL 18/6 2x9 Vac: EL 18/9 2x12 Vac: EL 18/12 2x15 Vac: EL 18/15 2x18 Vac: EL 18/18	2x6 Vac: EL 28/6 2x9 Vac: EL 28/9 2x12 Vac: EL 28/12 2x15 Vac: EL 28/15 2x18 Vac: EL 28/18	2x6 Vac: EL 50/6 2x9 Vac: EL 50/9 2x12 Vac: EL 50/12 2x15 Vac: EL 50/15 2x18 Vac: EL 50/18	2x9 Vac: EL 100/9 2x12 Vac: EL 100/12 2x15 Vac: EL 100/15 2x18 Vac: EL 100/18 2x24 Vac: EL 100/24
Rated Power	7,5 VA	13 VA	18 VA	28 VA	50 VA	100 VA
No-load voltage (app. x factor)	1.38	1.28	1.18	1.16	1.15	1.11
No-load loss (typ.)	2.00 W	2.20 W	2.70 W	3.10 W	3.50 W	4.70 W
Efficiency	62.0 %	67.0 %	72.0 %	77.0 %	81.0 %	88.0 %
Environment						
Ambient temperature max.	40 °C	40 °C	40 °C	40 °C	40 °C	40 °C
Safety and protection						
Type	Open type	Open type	Open type	Open type	Open type	Open type
Insulation class	E	E	E	E	E	E
Protection index	IP 00	IP 00	IP 00	IP 00	IP 00	IP 00
Safety class (prepared)	II	II	II	II	II	II
Short circuit strength	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof
Overload protection	Typ PTC 880 (Accessory - available on request)	Typ PTC 872 (Accessory - available on request)	Typ PTC 860 (Accessory - available on request)	Typ PTC 850 (Accessory - available on request)	Typ PTC 840 (Accessory - available on request)	Typ PTC 810 (Accessory - available on request)
Test voltage	4000 Vac, 50 Hz	4000 Vac, 50 Hz	4000 Vac, 50 Hz	4000 Vac, 50 Hz	4000 Vac, 50 Hz	4000 Vac, 50 Hz
Order numbers						
Order Number	**see rated output voltage**	**see rated output voltage**	**see rated output voltage**	**see rated output voltage**	**see rated output voltage**	**see rated output voltage**

Mechanical data

Terminal and mounting						
Terminals	Solder tab for free wiring	Solder tab for free wiring	Solder tab for free wiring	Solder tab for free wiring	Solder tab for free wiring	Solder tab for free wiring
Fixing method	Base plate	Base plate	Base plate	Base plate	Base plate	Base plate
Fixing screws	M3	M3	M3	M3	M4	M4
Measures and weights						
Weight	0.26 kg	0.36 kg	0.50 kg	0.68 kg	0.97 kg	1.96 kg
Core type	EI 48/16,5	EI 54/18,8	EI 60/21	EI 60/30	EI 75/26,5	EI 84/43,5
Dimension picture (in mm)	❶	❶	❶	❶	❶	❶
A	48	54	60	60	75	84
B	39	40	47	56	59	80
C	45	50	55	55	67	76
D	40	45	50	50	62.5	64
E	32	30	32	42	45	63.5

Dimension pictures

❶



Safety isolating transformer
ACT

BLOCK Website

General Data

Rated input voltage 230 Vac
Rated output voltage 24 Vac
Rated power 10 - 100 VA
Insulation class B
Maximum ambient temperature 25 °C
Degree of protection IP 00

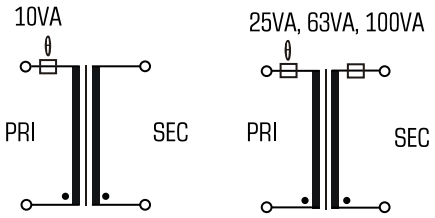
Advantages

- Integrated short-circuit and overload protection thanks to temperature fuse in the input and fuse in the output (ACT 10 only temperature fuse)
- Permanent corrosion protection, high insulation value and maximum electrical reliability thanks to XtraDenseFill resin encapsulation
- Robust plastic housing for rail mounting, e.g. in consumer units or meter mounting boards

Applications

Safety isolating transformer for the safe electrical isolation of the input and output sides. The transformer is suitable for creating SELV and PELV circuits because of the limit on the output voltage.

Sample application



Standards

Safety isolating transformer
to: VDE 0570 Part 2-6, DIN EN 61558-2-6, EN 61558-2-6, IEC 61558-2-6

Approvals

Safety isolating transformer
ACT

BLOCK Website

Electrical data

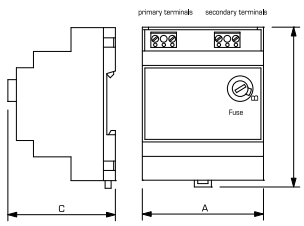
Typ	ACT 10	ACT 25	ACT 63	ACT 100
Input				
Rated input voltage	230 Vac	230 Vac	230 Vac	230 Vac
Frequency range	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
Output				
Rated output voltage	24 Vac	24 Vac	24 Vac	24 Vac
Rated Power	10 VA	25 VA	63 VA	100 VA
Environment				
Ambient temperature max.	25 °C	25 °C	25 °C	25 °C
Type of cooling	self-cooling	self-cooling	self-cooling	self-cooling
Safety and protection				
Type	Resin encapsulated transformer	Resin encapsulated transformer	Resin encapsulated transformer	Resin encapsulated transformer
Insulation class	B	B	B	B
Protection index	IP 00	IP 00	IP 00	IP 00
Safety class (prepared)	II	II	II	II
Short circuit strength	non-inherently short-circuit proof	non-inherently short-circuit proof	non-inherently short-circuit proof	non-inherently short-circuit proof
Test voltage	3750 Vac, 50 Hz	3750 Vac, 50 Hz	3750 Vac, 50 Hz	3750 Vac, 50 Hz
Order numbers				
Order Number	**ACT 10**	**ACT 25**	**ACT 63**	**ACT 100**

Mechanical data

Terminal and mounting				
Terminals	Screw-type terminal	Screw-type terminal	Screw-type terminal	Screw-type terminal
Fixing method	Panel installation on mounting rails	Panel installation on mounting rails	Panel installation on mounting rails	Panel installation on mounting rails
Measures and weights				
Weight	0.36 kg	0.95 kg	1.93 kg	1.93 kg
Dimension (W x H x D)	94 x 63 x 35 mm	94 x 63 x 106 mm	94 x 63 x 159 mm	94 x 63 x 159 mm
Dimension picture (in mm)	❶	❷	❸	❸
A	35	106	159	159
B	94	94	94	94
C	63	63	63	63

Dimension pictures

❶



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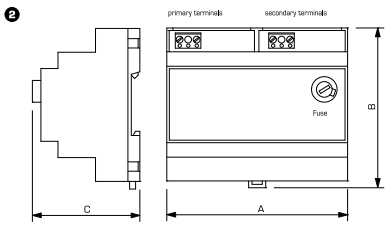

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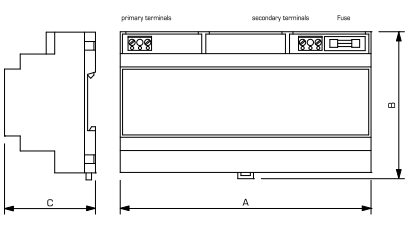


Safety isolating transformer
SIM

BLOCK Website

General Data

Rated input voltage 230 Vac
Rated output voltage 2 x 12 Vac
Rated power 60 - 800 VA
Insulation class A
Maximum ambient temperature 40 °C
Efficiency up to 95 %
Degree of protection IP 20

Advantages

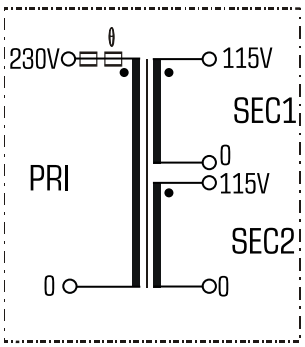
Integrated short-circuit and overload protection
Double output voltage for series or parallel connection
Very good moisture protection and low noise thanks to XtraDenseFill resin encapsulation (up to 300 VA)
Screw terminals under cover with strain relief

Applications

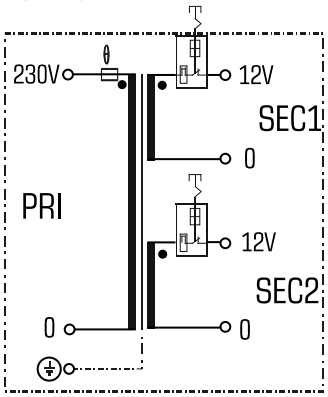
Safety isolating transformer for the safe electrical isolation of the input and output sides. The transformer is suitable for creating SELV and PELV circuits because of the limit on the output voltage.

Sample applications

60-300VA



500-800VA



Standards

Safety isolating transformer
to: VDE 0570 Part 2-6, DIN EN 61558-2-6, EN 61558-2-6, IEC 61558-2-6

Approvals

VDE

Safety isolating transformer
SIM

BLOCK Website

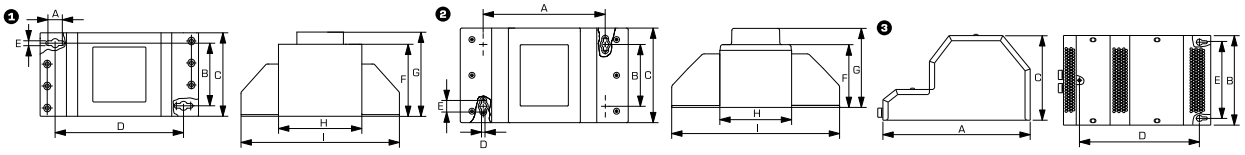
Electrical data

Typ	SIM 60	SIM 100	SIM 200	SIM 300	SIM 500	SIM 800
Input						
Rated input voltage	230 Vac	230 Vac	230 Vac	230 Vac	230 Vac	230 Vac
Frequency range	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
Output						
Rated output voltage	2 x 12 Vac	2 x 12 Vac	2 x 12 Vac	2 x 12 Vac	2 x 12 Vac	2 x 12 Vac
Rated Power	60 VA	100 VA	200 VA	300 VA	500 VA	800 VA
No-load voltage (app. x factor)	1.15	1.08	1.07	1.05	1.04	1.03
No-load loss (typ.)	3.30 W	4.90 W	7.40 W	14.00 W	18.00 W	27.00 W
Efficiency	83.5 %	87.5 %	89.5 %	91.0 %	92.0 %	95.0 %
Standards						
Classification	Safety isolating transformer	Safety isolating transformer	Safety isolating transformer	Safety isolating transformer	Safety isolating transformer	Safety isolating transformer
Approvals						
Approvals	VDE	VDE	VDE	VDE	VDE, cURus	VDE, cURus
Environment						
Ambient temperature max.	40 °C	40 °C	40 °C	40 °C	40 °C	40 °C
Safety and protection						
Type	Resin encapsulated transformer	Resin encapsulated transformer	Resin encapsulated transformer	Resin encapsulated transformer	Encapsulated in metal housing	Encapsulated in metal housing
Insulation class	A	A	A	A	B	B
Protection index	IP 20	IP 20	IP 20	IP 20	IP 20	IP 20
Safety class	II	II	II	II	I	I
Short circuit strength	non-inherently short-circuit proof	non-inherently short-circuit proof	non-inherently short-circuit proof	non-inherently short-circuit proof	non-inherently short-circuit proof	non-inherently short-circuit proof
Test voltage	5000 Vac, 50 Hz	5000 Vac, 50 Hz	5000 Vac, 50 Hz	5000 Vac, 50 Hz	3750 Vac, 50 Hz	3750 Vac, 50 Hz
Order numbers						
Order Number	**SIM 60**	**SIM 100**	**SIM 200**	**SIM 300**	**SIM 500**	**SIM 800**

Mechanical data

Terminal and mounting						
Terminals	Screw-type terminal	Screw-type terminal	Screw-type terminal	Screw-type terminal	Screw-type terminal	Screw-type terminal
Fixing method	Fixing holes in the terminal connection compartment	Fixing holes in the terminal connection compartment	Fixing holes in the terminal connection compartment	Fixing holes in the terminal connection compartment	Fixing holes in housing	Fixing holes in housing
Measures and weights						
Weight	1.55 kg	2.00 kg	3.60 kg	4.90 kg	9.10 kg	15.60 kg
Dimension picture (in mm)	❶	❶	❷	❷	❸	❸
A	14.2	14.2	167	167	283	283
B	58	58	76	76	200	200
C	77	77	117	117	166	166
D	135	135	4.3	4.3	245	245
E	4.3	4.3	14	14	148	148
F	65	65	77	100	-	-
G	76	76	97	117	-	-
H	90	90	97	97	-	-
I	166	166	223	223	-	-

Dimension pictures



Safety isolating transformer
EVKE

BLOCK Website

General Data

- Rated input voltage 230 Vac
- Rated output voltage 24 Vac
- Rated power 25 - 630 VA
- Insulation class E
- Maximum ambient temperature 40 °C
- Degree of protection IP 67/68

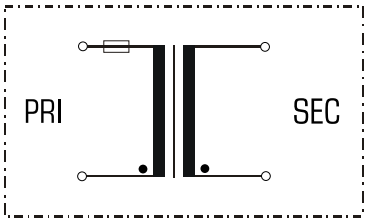
Advantages

- Integrated short-circuit and overload protection
- Very good moisture protection and low noise thanks to resin encapsulation
- High degree of protection
- Plastic fittings on terminals

Applications

Safety isolating transformer for the safe electrical isolation of the input and output sides. The transformer is suitable for creating SELV and PELV circuits because of the limit on the output voltage.

Sample application



Standards

Safety isolating transformer
to: VDE 0570 Part 2-6, DIN EN 61558-2-6, EN 61558-2-6, IEC 61558-2-6

Approvals

Safety isolating transformer
EVKE

BLOCK Website

Electrical data

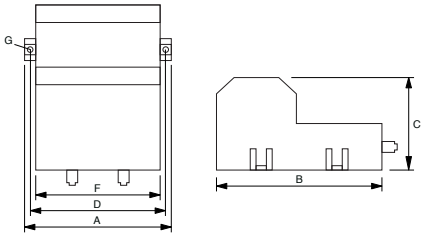
Typ	EVKE 25/24	EVKE 40/24	EVKE 100/24	EVKE 160/24	EVKE 250/24	EVKE 400/24
Input						
Rated input voltage	230 Vac	230 Vac	230 Vac	230 Vac	230 Vac	230 Vac
Frequency range	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
Output						
Rated output voltage	24 Vac	24 Vac	24 Vac	24 Vac	24 Vac	24 Vac
Rated Power	25 VA	40 VA	100 VA	160 VA	250 VA	400 VA
Environment						
Ambient temperature max.	40 °C	40 °C	40 °C	40 °C	40 °C	40 °C
Safety and protection						
Type	Resin encapsulated transformer	Resin encapsulated transformer	Resin encapsulated transformer	Resin encapsulated transformer	Resin encapsulated transformer	Resin encapsulated transformer
Insulation class	E	E	E	E	E	E
Test voltage	3750 Vac, 50 Hz	3750 Vac, 50 Hz	3750 Vac, 50 Hz	3750 Vac, 50 Hz	3750 Vac, 50 Hz	3750 Vac, 50 Hz
Protection index	IP 68	IP 68	IP 68	IP 68	IP 68	IP 68
Safety class	II	II	II	II	II	II
Short circuit strength	non-inherently short-circuit proof	non-inherently short-circuit proof	non-inherently short-circuit proof	non-inherently short-circuit proof	non-inherently short-circuit proof	non-inherently short-circuit proof
Order numbers						
Order Number	**EVKE 25/24**	**EVKE 40/24**	**EVKE 100/24**	**EVKE 160/24**	**EVKE 250/24**	**EVKE 400/24**

Mechanical data

Terminal and mounting						
Terminals	Plastic fittings on 2 x M16 terminals	Plastic fittings on 2 x M16 terminals	Plastic fittings on 2 x M16 terminals	Plastic fittings on 1 x M16, 1 x M20 terminals	Plastic fittings on 1 x M16, 1 x M20 terminals	Plastic fittings on 1 x M16, 1 x M20 terminals
Fixing method	Mounting lugs	Mounting lugs	Mounting lugs	Mounting lugs	Mounting lugs	Mounting lugs
Measures and weights						
Weight	0.98 kg	1.64 kg	2.80 kg	4.50 kg	6.50 kg	9.50 kg
Dimension picture (in mm)	❶	❶	❶	❶	❶	❷
A	106	120	145	150	150	195
B	140	150	180	190	190	255
C	68	78	90	105	105	130
D	88	102	123	125	125	172
E	-	-	-	-	-	120
F	75	89	105	108	108	155
G	6	6	6	6	6	6
H	-	-	-	-	-	30

Dimension pictures

❶



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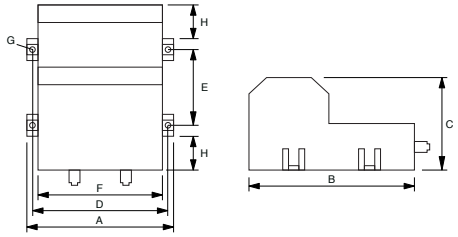


Safety isolating transformer
EVKE

BLOCK Website

Electrical data

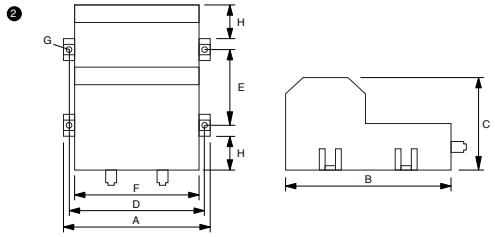
Typ	EVKE 630/24
Input	
Rated input voltage	230 Vac
Frequency range	50 - 60 Hz
Output	
Rated output voltage	24 Vac
Rated Power	630 VA
Environment	
Ambient temperature max.	40 °C
Safety and protection	
Type	Resin encapsulated transformer
Insulation class	E
Test voltage	3750 Vac, 50 Hz
Protection index	IP 68
Safety class	II
Short circuit strength	non-inherently short-circuit proof
Order numbers	
Order Number	**EVKE 630/24**

Mechanical data

Terminal and mounting	
Terminals	Plastic fittings on 1 x M20, 1 x M25 terminals
Fixing method	Mounting lugs
Measures and weights	
Weight	13.00 kg
Dimension picture (in mm)	❷
A	215
B	280
C	150
D	196
E	125
F	175
G	6
H	40

Dimension pictures

❷



Safety isolating transformer
ETKEC

BLOCK Website

General Data

Rated input voltage 230 Vac
Rated output voltage 24 Vac
Rated power 100 - 200 VA
Insulation class E
Maximum ambient temperature 40 °C
Degree of protection IP 44

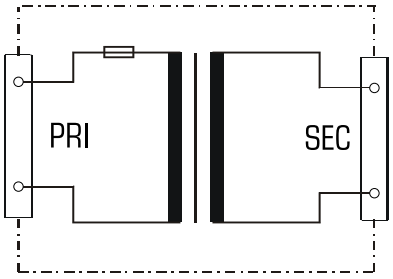
Advantages

- Integrated short circuit and overload protection
- Very good moisture protection and low noise thanks to resin encapsulation
- High degree of protection
- Carrying handle, mains connecting lead and CEE socket for mobile use

Applications

Safety isolating transformer for the safe electrical isolation of the input and output sides. The transformer is suitable for creating SELV and PELV circuits because of the limit on the output voltage.

Sample application



Standards

Safety isolating transformer
to: VDE 0570 Part 2-6, DIN EN 61558-2-6, EN 61558-2-6, IEC 61558-2-6

Approvals

EAC

Safety isolating transformer
ETKEC

BLOCK Website

Electrical data

Typ	ETKEC 100/24	ETKEC 200/24
Input		
Rated input voltage	230 Vac	230 Vac
Frequency range	50 - 60 Hz	50 - 60 Hz
Output		
Rated output voltage	24 Vac	24 Vac
Rated Power	100 VA	200 VA
Environment		
Ambient temperature max.	40 °C	40 °C
Safety and protection		
Type	Resin encapsulated transformer	Resin encapsulated transformer
Insulation class	E	E
Protection index	IP 44	IP 44
Safety class	II	II
Short circuit strength	non-inherently short-circuit proof	non-inherently short-circuit proof
Test voltage	3750 Vac, 50 Hz	3750 Vac, 50 Hz
Order numbers		
Order Number	**ETKEC 100/24**	**ETKEC 200/24**

Safety isolating transformer
ETKEC

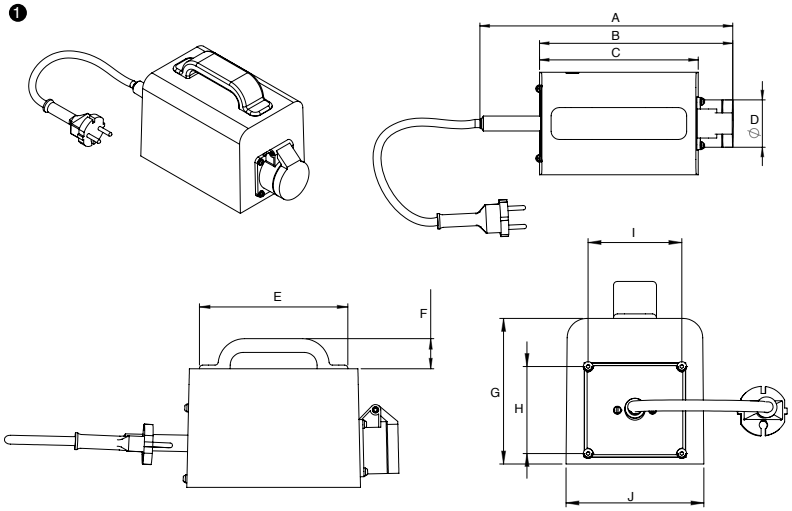
BLOCK Website

Mechanical data

Typ	Terminals Input	Terminals Output	Weight	Dimension (W x H x D)	Dimension picture (in mm)	A	B	C	D	E	F	G	H	I	J
ETKEC 100/24	Mains connecting cable with safety plug	CEE-socket	3.50 kg	110 x 120 x 265 mm	❶	261	200	164	49	140	29	112	67	72	106
ETKEC 200/24	Mains connecting cable with safety plug	2 CEE-sockets	6.70 kg	140 x 145 x 220 mm	❷	16.5	147.5	139	140	163	196	253	-	-	-

Dimension pictures

❶



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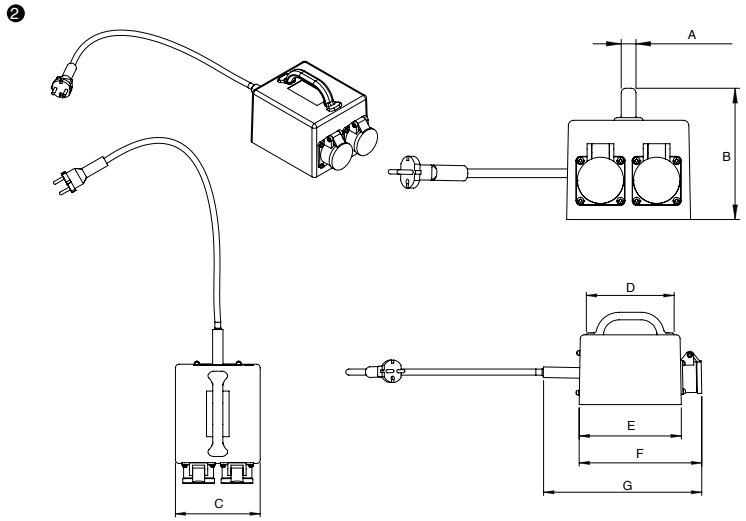


Safety isolating transformer for halogen lamps
HIT

BLOCK Website

General Data

Rated input voltage 230 Vac
Rated output voltage 11.3 - 11.5 Vac
Rated output 60 - 300 W
Insulation class A
Maximum ambient temperature 40 °C
Efficiency up to 92 %
Degree of protection IP 20

Advantages

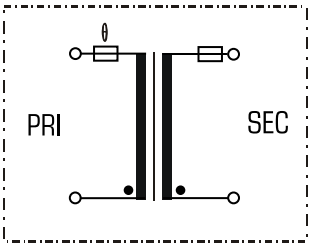
Integrated short circuit and overload protection
Very good moisture protection and low noise thanks to XtraDenseFill resin encapsulation
Screw terminals under cover with strain relief

Applications

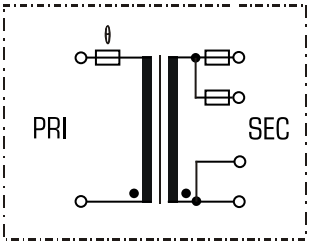
Safety isolating transformer for 12 V halogen lamps for the safe electrical isolation of the input and output sides. The transformer is suitable for creating SELV and PELV circuits because of the limit on the output voltage.

Sample application

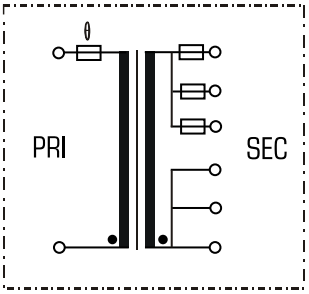
60VA, 105VA



200VA



150VA, 250VA, 300VA



Standards

Safety isolating transformer for halogen lamps
to: VDE 0570 Teil 2-6, DIN EN 61558-2-6, EN 61558-2-6, IEC 61558-2-6

Approvals

EAC

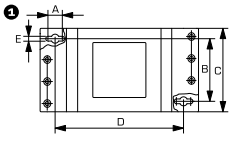
Safety isolating transformer for halogen lamps
HIT

BLOCK Website

Typ	HIT 60	HIT 105	HIT 150	HIT 200	HIT 250	HIT 300
Electrical data						
Input						
Rated input voltage	230 Vac	230 Vac	230 Vac	230 Vac	230 Vac	230 Vac
Frequency range	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
Output						
Rated output voltage	11.5 Vac	11.5 Vac	11.3 Vac	11.3 Vac	11.3 Vac	11.3 Vac
Number of SEC-Circuits	1	1	3	2	3	3
Rated current	4.80 A	8.40 A	3 x 4.00 A	2 x 8.00 A	2 x 8.00 A, 1 x 4.00 A	3 x 8.00 A
for Lamps power	60 W	105 W	150 W	200 W	250 W	300 W
Efficiency	85.5 %	87.0 %	89.0 %	90.0 %	90.0 %	92.0 %
Standards						
Classification	Safety isolating transformer	Safety isolating transformer	Safety isolating transformer	Safety isolating transformer	Safety isolating transformer	Safety isolating transformer
Environment						
Ambient temperature max.	40 °C	40 °C	40 °C	40 °C	40 °C	40 °C
Safety and protection						
Type	Resin encapsulated transformer	Resin encapsulated transformer	Resin encapsulated transformer	Resin encapsulated transformer	Resin encapsulated transformer	Resin encapsulated transformer
Insulation class	A	A	A	A	A	A
Protection index	IP 20	IP 20	IP 20	IP 20	IP 20	IP 20
Safety class	II	II	II	II	II	II
Short circuit strength	non-inherently short-circuit proof	non-inherently short-circuit proof	non-inherently short-circuit proof	non-inherently short-circuit proof	non-inherently short-circuit proof	non-inherently short-circuit proof
Test voltage	5000 Vac, 50 Hz	5000 Vac, 50 Hz	5000 Vac, 50 Hz	5000 Vac, 50 Hz	5000 Vac, 50 Hz	5000 Vac, 50 Hz
Order numbers						
Order Number	**HIT 60**	**HIT 105**	**HIT 150**	**HIT 200**	**HIT 250**	**HIT 300**
Mechanical data						
Terminal and mounting						
Terminals	Screw-type terminals	Screw-type terminals	Screw-type terminals	Screw-type terminals	Screw-type terminals	Screw-type terminals
Fixing method	Fixing holes in the terminal connection compartment	Fixing holes in the terminal connection compartment	Fixing holes in the terminal connection compartment	Fixing holes in the terminal connection compartment	Fixing holes in the terminal connection compartment	Fixing holes in the terminal connection compartment
Measures and weights						
Weight	1.42 kg	2.00 kg	3.00 kg	3.55 kg	4.20 kg	5.00 kg
Dimension picture (in mm)	❶	❶	❷	❷	❷	❷
A	14.2	14.2	167	167	167	167
B	58	58	76	76	76	76
C	77	77	117	117	117	117
D	135	135	4.3	4.3	4.3	4.3
E	4.3	4.3	14	14	14	14
F	65	65	77	77	100	100
G	76	76	97	97	117	117
H	90	90	97	97	97	97
I	166	166	223	223	223	223

Dimension pictures

❶



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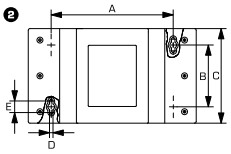


OVERVIEW AUTOTRANSFORMERS

	Type	Features	Rated input voltage	Rated output voltage	0.8 A	1.25 A
1-phase	AIM	In housing, IP 20	115 Vac	220, 230, 240 Vac	■	
			115 Vac	115 Vac		
			220, 230, 240 Vac	115, 220, 230, 240 Vac		
	ESP	For setting the speed of fan motors	230 Vac	80 Vac/115 Vac/130 Vac/150 Vac/170 Vac/190 Vac		
			400 Vac	140 Vac/170 Vac/200 Vac/235 Vac/270 Vac/310 Vac	■	
	ESS	Variable transformer	230 Vac	0 - 230 Vac	■	■
				0 - 230/250 Vac		
				0 - 230/260 Vac		
3-phase	DSP	For setting the speed of fan motors	3 x 400 Vac	3 x 240 Vac/3 x 230 Vac/3 x 190 Vac/3 x 170 Vac/3 x 130 Vac		

	Type	Features	Rated input voltage	Rated output voltage	150 VA	250 VA	350 VA	500 VA	1000 VA	2000 VA	3000 VA
1-phase	VT-EN	IP 00	110, 125, 230, 240 Vac	110, 125, 230, 240 Vac	■		■	■	■	■	■
	E-JET	For portable application	230 Vac	110 Vac		■		■	■		
	JET	For portable application	110 Vac	230 Vac		■		■	■		
3-phase	AT3	IP 00, optional IP 23 or IP 54 in housing	3 x 200/208 - 3 x 690	3 x 400 Vac						■	

1.5 A	1.6 A	1.8 A	2.0 A	2.5 A	2.8 A	3.0 A	3.15 A	3.20 A	3.60 A	4.00 A	5.00 A	5.40 A	5.80 A	6.00 A	6.30 A	8.00 A	9.00 A	10.00 A	15.00 A	16.00 A	18.00 A	20.00 A	Page
	■			■							■					■							
	■							■			■							■		■			186
	■							■			■							■		■			
■					■								■					■			■		190
	■								■			■						■					
				■			■			■					■	■		■			■	■	212
		■					■				■					■						■	
■						■								■			■		■				210

3500 VA	10000 VA	15000 VA	25000 VA	45000 VA	70000 VA	110000 VA	160000 VA	250000 VA	Page
									188
									193
									195
■	■	■	■	■	■	■	■	■	198

Autotransformer
AIM

BLOCK Website

General Data

Rated input voltage 115/220/230/240 Vac
Rated output voltage 115/220/230/240 Vac
Rated output current 0.8 - 16 A
Insulation class A or B
Maximum ambient temperature 40 °C
Degree of protection IP 20

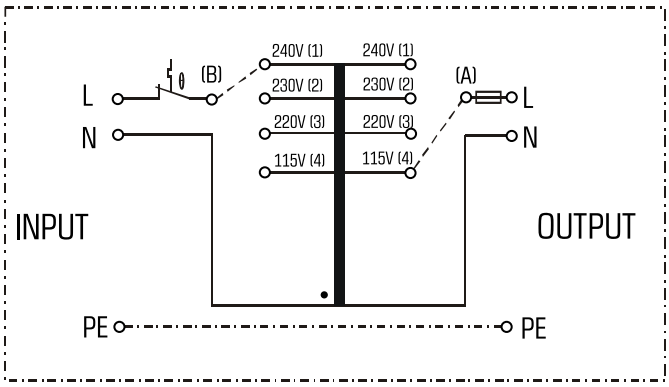
Advantages

- Low weight and small size (compared to isolating transformers)
- Integrated short-circuit and overload protection
- Very high efficiency
- Very good moisture protection and low noise thanks to XtraDenseFill resin encapsulation (AIM 1.8/8 - AIM 5.0/2.5)
- Screw terminals under cover with strain relief

Applications

Autotransformer for adjustment of the voltage on the input and output sides with no requirement for electrical isolation.

Sample application



Standards

Autotransformer
to: VDE 0570 Part 2-13, DIN EN 61558-2-13, EN 61558-2-13, IEC 61558-2-13

Approvals

EAC

Autotransformer
AIM

BLOCK Website

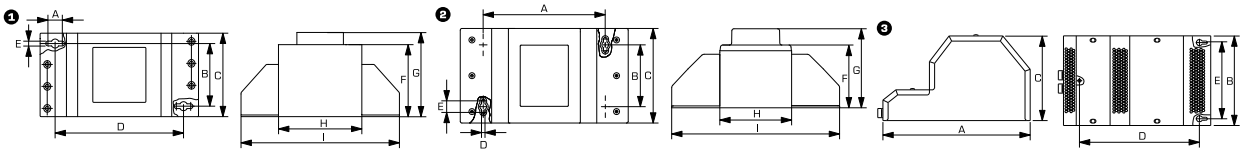
Electrical data

Typ	AIM 1,6/0,8	AIM 3,2/1,6	AIM 5,0/2,5	AIM 10/5	AIM 16/8
Input					
Rated input voltage	115 Vac/220 Vac 230 Vac/240 Vac	115 Vac/220 Vac 230 Vac/240 Vac	115 Vac/220 Vac 230 Vac/240 Vac	115 Vac/220 Vac 230 Vac/240 Vac	115 Vac/220 Vac 230 Vac/240 Vac
Frequency range	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
Output					
Rated output voltage	115 Vac/220 Vac 230 Vac/240 Vac	115 Vac/220 Vac 230 Vac/240 Vac	115 Vac/220 Vac 230 Vac/240 Vac	115 Vac/220 Vac 230 Vac/240 Vac	115 Vac/220 Vac 230 Vac/240 Vac
Rated output current	0.80 (PRI 115 / SEC 220, 230, 240); 1.60 (PRI 115 / SEC 115); 1.60 (PRI 220, 230, 240 / SEC 115, 220, 230, 240)	1.60 (PRI 115 / SEC 220, 230, 240); 3.20 (PRI 115 / SEC 115); 3.20 (PRI 220, 230, 240 / SEC 115, 220, 230, 240)	2.50 (PRI 115 / SEC 220, 230, 240); 5.00 (PRI 115 / SEC 115); 5.00 (PRI 220, 230, 240 / SEC 115, 220, 230, 240)	5.00 (PRI 115 / SEC 220, 230, 240); 10.00 (PRI 115 / SEC 115); 10.00 (PRI 220, 230, 240 / SEC 115, 220, 230, 240)	8.00 (PRI 115 / SEC 220, 230, 240); 16.00 (PRI 115 / SEC 115); 16.00 (PRI 220, 230, 240 / SEC 115, 220, 230, 240)
No-load loss (typ.)	4.70 W	6.70 W	11.80 W	18.00 W	21.00 W
Environment					
Ambient temperature max.	40 °C	40 °C	40 °C	40 °C	40 °C
Safety and protection					
Type	Resin encapsulated transformer	Resin encapsulated transformer	Resin encapsulated transformer	Enclosed	Enclosed
Insulation class	A	A	A	B	B
Protection index	IP 20	IP 20	IP 20	IP 20	IP 20
Safety class	May be used in protection category I and II. When protection category I devices are equipped the protective conductor in the output must be connected with the lead-in protective conductor.	May be used in protection category I and II. When protection category I devices are equipped the protective conductor in the output must be connected with the lead-in protective conductor.	May be used in protection category I and II. When protection category I devices are equipped the protective conductor in the output must be connected with the lead-in protective conductor.	I	I
Short circuit strength	non-inherently short-circuit proof	non-inherently short-circuit proof	non-inherently short-circuit proof	non-inherently short-circuit proof	non-inherently short-circuit proof
Order numbers					
Order Number	**AIM 1,6/0,8**	**AIM 3,2/1,6**	**AIM 5,0/2,5**	**AIM 10/5**	**AIM 16/8**

Mechanical data

Terminal and mounting					
Terminals	Screw-type terminal	Screw-type terminal	Screw-type terminal	Screw-type terminal	Screw-type terminal
Fixing method	Fixing holes in the terminal connection compartment	Fixing holes in the terminal connection compartment	Fixing holes in the terminal connection compartment	Fixing holes in the housing	Fixing holes in the housing
Measures and weights					
Weight	2.1 kg	3.6 kg	5.0 kg	12.1 kg	16.5 kg
Dimension picture (in mm)	❶	❷	❷	❸	❸
A	14.2	167	167	283	283
B	58	76	76	200	200
C	77	117	117	166	165
D	135	4.3	4.3	245	245
E	4.3	14	14	148	148
F	65	77	100	-	-
G	76	97	117	-	-
H	90	97	97	-	-
I	166	223	223	-	-

Dimension pictures



Autotransformer
VT-EN

BLOCK Website

General Data

Rated input voltage 110/125/230/240 Vac
Rated output voltage 110/125/230/240 Vac
Rated power 150 - 3000 VA
Insulation class B or E
Maximum ambient temperature 40 °C
Degree of protection IP 00

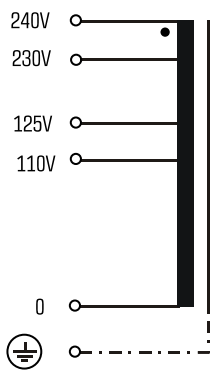
Advantages

Low weight and small size (compared to isolating transformers)
Very high efficiency
Very good moisture protection and low noise thanks to vacuum impregnation
Contact protected screw connection terminals complying with UVV BGV A3
Simple mounting thanks to robust metal fixing rail with oval slots

Applications

Autotransformer for adjustment of the voltage on the input and output sides with no requirement for electrical isolation.

Sample application



Standards

Autotransformer
to: VDE 0570 Teil 2-13, DIN EN 61558-2-13, EN 61558-2-13, IEC 61558-2-13, UL 5085-1/-2, CSA 22.2 No.66

Approvals

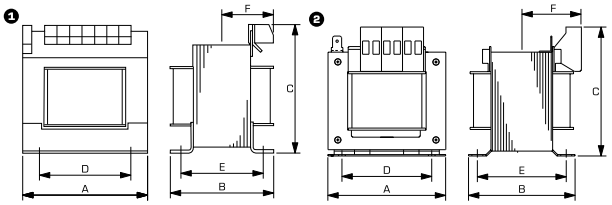
UL 5085-1/-2, CSA 22.2 No.66

Autotransformer
VT-EN

BLOCK Website

Typ	VT 15-EN	VT 35-EN	VT 50-EN	VT 100-EN	VT 200-EN	VT 300-EN
Input						
Rated input voltage	110 Vac/125 Vac 230 Vac/240 Vac	110 Vac/125 Vac 230 Vac/240 Vac	110 Vac/125 Vac 230 Vac/240 Vac	110 Vac/125 Vac 230 Vac/240 Vac	110 Vac/125 Vac 230 Vac/240 Vac	110 Vac/125 Vac 230 Vac/240 Vac
Frequency range	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
Output						
Rated output voltage	110 Vac/125 Vac 230 Vac/240 Vac	110 Vac/125 Vac 230 Vac/240 Vac	110 Vac/125 Vac 230 Vac/240 Vac	110 Vac/125 Vac 230 Vac/240 Vac	110 Vac/125 Vac 230 Vac/240 Vac	110 Vac/125 Vac 230 Vac/240 Vac
Rated Power	150 VA	350 VA	500 VA	1.000 VA	2.000 VA	3.000 VA
Approvals						
Approvals	cURus	cURus	cURus	cURus	cURus	cURus
Environment						
Ambient temperature max.	40 °C	40 °C	40 °C	40 °C	40 °C	40 °C
Safety and protection						
Type	Open type	Open type	Open type	Open type	Open type	Open type
Insulation class	E	B	E	E	B	B
Protection index	IP 00	IP 00	IP 00	IP 00	IP 00	IP 00
Safety class (prepared)	I	I	I	I	I	I
Short circuit strength	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof
Test voltage	2500 Vac, 50 Hz	2500 Vac, 50 Hz	2500 Vac, 50 Hz	2500 Vac, 50 Hz	2500 Vac, 50 Hz	2500 Vac, 50 Hz
Order numbers						
Order Number	**VT 15-EN**	**VT 35-EN**	**VT 50-EN**	**VT 100-EN**	**VT 200-EN**	**VT 300-EN**
Terminal and mounting						
Terminals	Screw-type terminal, PE 6.3 x 0.8	Screw-type terminal, PE 6.3 x 0.8	Screw-type terminal, PE 6.3 x 0.8	Screw-type terminal, PE 6.3 x 0.8	Screw-type terminal, PE 6.3 x 0.8	Screw-type terminal, PE 6.3 x 0.8
Fixing method	Base plate	Fixing rail	Base plate	Base plate	Fixing rail	Fixing rail
Measures and weights						
Weight	1.90 kg	3.30 kg	4.20 kg	7.80 kg	14.10 kg	19.40 kg
Dimension picture (in mm)	❷	❶	❷	❷	❶	❶
A	84	105	120	150	174	174
B	75	87	86	104	126	155
C	100	120	130	140	150	150
D	54	84	90	122	135	135
E	63	70	70	84	106	134
F	50	50	50	60	70	90

Dimension pictures



Autotransformer
ESP

BLOCK Website

General Data

Rated input voltage 230 or 400 Vac
Rated output voltage 80 - 310 Vac
Rated output current 0.8 - 18 A
Insulation class B
Maximum ambient temperature 40 °C
Degree of protection IP 00

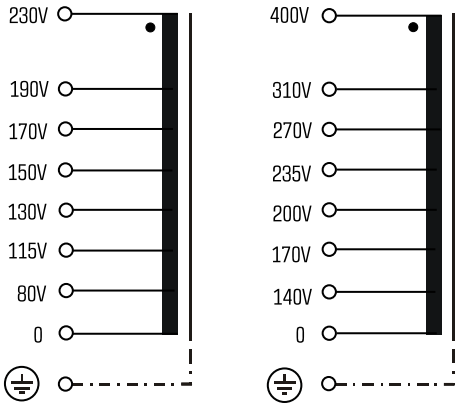
Advantages

Low weight and small size (compared to isolating transformers)
Very high efficiency
Very good moisture protection and low noise thanks to vacuum impregnation
Contact protected screw connection terminals complying with UVV BGV A3
Simple mounting thanks to robust metal footplate with oval slots

Applications

Autotransformer for example for setting the speed of single-phase fan motors.

Sample application



Standards

Autotransformer
to: VDE 0570 Teil 2-13, DIN EN 61558-2-13, EN 61558-2-13,
IEC 61558-2-13

Approvals

EAC

Autotransformer
ESP

BLOCK Website

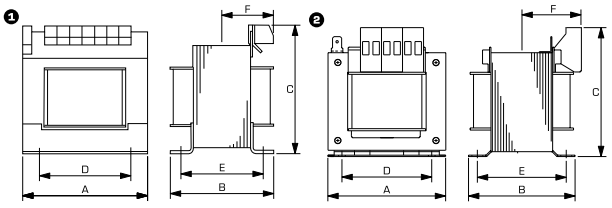
Electrical data

Typ	ESP 230/1,5	ESP 230/2,8	ESP 230/5,8	ESP 230/10	ESP 230/18	ESP 400/0,8
Input						
Rated input voltage	230 Vac	230 Vac	230 Vac	230 Vac	230 Vac	400 Vac
Frequency range	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
Output						
Rated output voltage	80 Vac/115 Vac/130 Vac 150 Vac/170 Vac/190 Vac	80 Vac/115 Vac/130 Vac 150 Vac/170 Vac/190 Vac	80 Vac/115 Vac/130 Vac 150 Vac/170 Vac/190 Vac	80 Vac/115 Vac/130 Vac 150 Vac/170 Vac/190 Vac	80 Vac/115 Vac/130 Vac/ 150 Vac/170 Vac/190 Vac	140 Vac/170 Vac/200 Vac 235 Vac/270 Vac/310 Vac
Rated output current	1.50 A	2.80 A	5.80 A	10.00 A	18.00 A	0.80 A
Environment						
Ambient temperature max.	40 °C	40 °C	40 °C	40 °C	40 °C	40 °C
Safety and protection						
Type	Open type	Open type	Open type	Open type	Open type	Open type
Insulation class	B	B	B	B	B	B
Protection index	IP 00	IP 00	IP 00	IP 00	IP 00	IP 00
Safety class (prepared)	I	I	I	I	I	I
Short circuit strength	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof
Order numbers						
Order Number	**ESP 230/1,5**	**ESP 230/2,8**	**ESP 230/5,8**	**ESP 230/10**	**ESP 230/18**	**ESP 400/0,8**

Mechanical data

Terminal and mounting						
Terminals	Screw-type terminals, PE 6.3 x 0.8	Screw-type terminals, PE 6.3 x 0.8	Screw-type terminals, PE 6.3 x 0.8	Screw-type terminals, PE 6.3 x 0.8	Screw-type terminals, PE 6.3 x 0.8	Screw-type terminals, PE 6.3 x 0.8
Fixing method	Fixing rail	Fixing rail	Base plate	Base plate	Fixing rail	Fixing rail
Fixing screws	M4	M5	M5	M6	M6	M4
Measures and weights						
Weight	1.5 kg	3.0 kg	4.3 kg	7.8 kg	11.5 kg	1.5 kg
Dimension picture (in mm)	❶	❶	❷	❷	❶	❶
A	84	105	120	150	174	84
B	75	85	91	112	120	75
C	100	118	130	135	150	100
D	64	84	90	122	135	64
E	50	62	70	84	85	50
F	42	45	48	58	60	42

Dimension pictures



Autotransformer
ESP

BLOCK Website

Electrical data

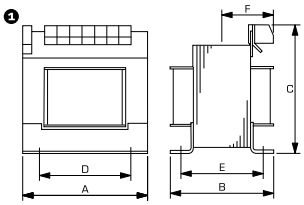
Typ	ESP 400/1,6	ESP 400/3,6	ESP 400/5,4	ESP 400/10
Input				
Rated input voltage	400 Vac	400 Vac	400 Vac	400 Vac
Frequency range	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
Output				
Rated output voltage	140 Vac/170 Vac/200 Vac 235 Vac/270 Vac/310 Vac	140 Vac/170 Vac/200 Vac 235 Vac/270 Vac/310 Vac	140 Vac/170 Vac/200 Vac 235 Vac/270 Vac/310 Vac	140 Vac/170 Vac/200 Vac 235 Vac/270 Vac/310 Vac
Rated output current	1.60 A	3.60 A	5.40 A	10.00 A
Environment				
Ambient temperature max.	40 °C	40 °C	40 °C	40 °C
Safety and protection				
Type	Open type	Open type	Open type	Open type
Insulation class	B	B	B	B
Protection index	IP 00	IP 00	IP 00	IP 00
Safety class (prepared)	I	I	I	I
Short circuit strength	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof
Order numbers				
Order Number	**ESP 400/1,6**	**ESP 400/3,6**	**ESP 400/5,4**	**ESP 400/10**

Mechanical data

Terminal and mounting				
Terminals	Screw-type terminals, PE 6.3 x 0.8	Screw-type terminals, PE 6.3 x 0.8	Screw-type terminals, PE 6.3 x 0.8	Screw-type terminals, PE 6.3 x 0.8
Fixing method	Fixing rail	Fixing rail	Fixing rail	Fixing rail
Fixing screws	M5	M5	M6	M6
Measures and weights				
Weight	3.0 kg	4.3 kg	7.8 kg	11.5 kg
Dimension picture (in mm)	❶	❶	❶	❶
A	105	120	150	174
B	85	91	112	120
C	118	130	135	150
D	84	90	122	135
E	62	70	84	85
F	45	48	58	60

Dimension pictures

❶



Autotransformer
E-JET

BLOCK Website

General Data

Rated input voltage 230 Vac
Rated output voltage 110 Vac
Rated power 250 - 1000 VA
Insulation class A
Maximum ambient temperature 40 °C
Efficiency up to 96 %
Degree of protection IP 22

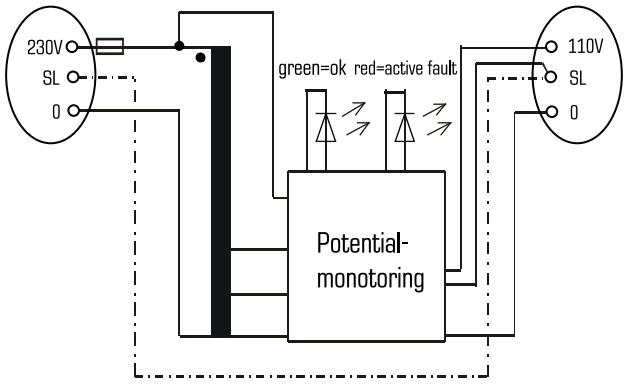
Advantages

Electronic potential monitoring by not connecting the output voltage until the protected contact plug is inserted correctly
Integrated short-circuit and overload protection
Very high efficiency
Very good moisture protection and low noise thanks to XtraDenseFill resin encapsulation
Carry handle, mains cable with safety plug, socket NEMA5-15 (USA) for portable application

Applications

Autotransformer for mobile use for the adjustment of the voltage in 230 Vac networks to 110 Vac equipment when no electrical isolation is required.

Sample application



Standards

Autotransformer
to: VDE 0570 Teil 2-13, DIN EN 61558-2-13, EN 61558-2-13,
IEC 61558-2-13

Approvals

EAC

Autotransformer
E-JET

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Electrical data

Typ	E-JET 250	E-JET 500	E-JET 1000
Input			
Rated input voltage	230 Vac	230 Vac	230 Vac
Frequency range	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
Output			
Rated output voltage	110 Vac	110 Vac	110 Vac
Rated Power	250 VA	500 VA	1.000 VA
No-load voltage (app. x factor)	1.04	1.04	1.03
Efficiency	94.0 %	94.0 %	96.0 %
Environment			
Ambient temperature max.	40 °C	40 °C	40 °C
Safety and protection			
Type	Resin encapsulated transformer	Resin encapsulated transformer	Resin encapsulated transformer
Insulation class	A	A	A
Protection index	IP 22	IP 22	IP 22
Safety class	I	I	I
Short circuit strength	non-inherently short-circuit proof	non-inherently short-circuit proof	non-inherently short-circuit proof
Order numbers			
Order Number	**E-JET 250**	**E-JET 500**	**E-JET 1000**

Mechanical data

Terminal and mounting			
Terminals Input	Connecting cable with safety plug	Connecting cable with safety plug	Connecting cable with safety plug
Terminals Output	NEMA5-15 socket (USA)	NEMA5-15 socket (USA)	NEMA5-15 socket (USA)
Measures and weights			
Weight	3.10 kg	6.80 kg	9.90 kg
Dimension (W x H x D)	95 x 155 x 160 mm	126 x 192 x 180 mm	143 x 197 x 244 mm

Autotransformer
JET

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General Data

Rated input voltage 110 Vac
Rated output voltage 230 Vac
Rated power 250 - 1000 VA
Insulation class A
Maximum ambient temperature 40 °C
Efficiency up to 96 %
Degree of protection IP 22

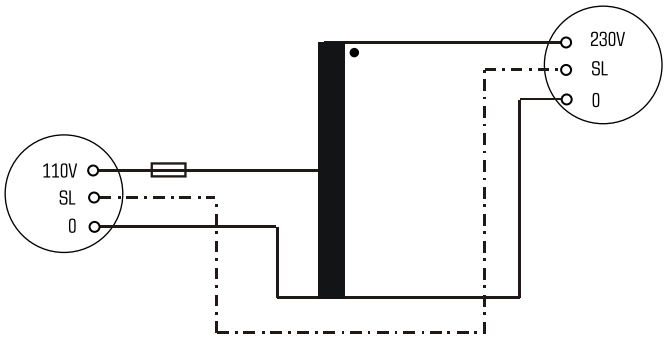
Advantages

Integrated short-circuit and overload protection
Very high efficiency
Very good moisture protection and low noise thanks to XtraDenseFill resin encapsulation
Carrying handle, mains connecting lead NEMA5-15 (USA) and socket for portable application

Applications

Autotransformer for portable application for the adjustment of the voltage in 110 Vac networks to 230 Vac equipment when no electrical isolation is required.

Sample application



Standards

Autotransformer
to: VDE 0570 Teil 2-13, DIN EN 61558-2-13, EN 61558-2-13, IEC 61558-2-13

Approvals

EAC

Autotransformer
JET

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Electrical data

Typ	JET 250	JET 500	JET 1000
Input			
Rated input voltage	110 Vac	110 Vac	110 Vac
Frequency range	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
Output			
Rated output voltage	230 Vac	230 Vac	230 Vac
Rated Power	250 VA	500 VA	1.000 VA
No-load voltage (app. x factor)	1.04	1.04	1.03
Efficiency	94.0 %	91.0 %	96.0 %
Environment			
Ambient temperature max.	40 °C	40 °C	40 °C
Safety and protection			
Type	Resin encapsulated transformer	Resin encapsulated transformer	Resin encapsulated transformer
Insulation class	A	A	A
Protection index	IP 22	IP 22	IP 22
Safety class	I	I	I
Short circuit strength	non-inherently short-circuit proof	non-inherently short-circuit proof	non-inherently short-circuit proof
Order numbers			
Order Number	**JET 250**	**JET 500**	**JET 1000**

Autotransformer
JET

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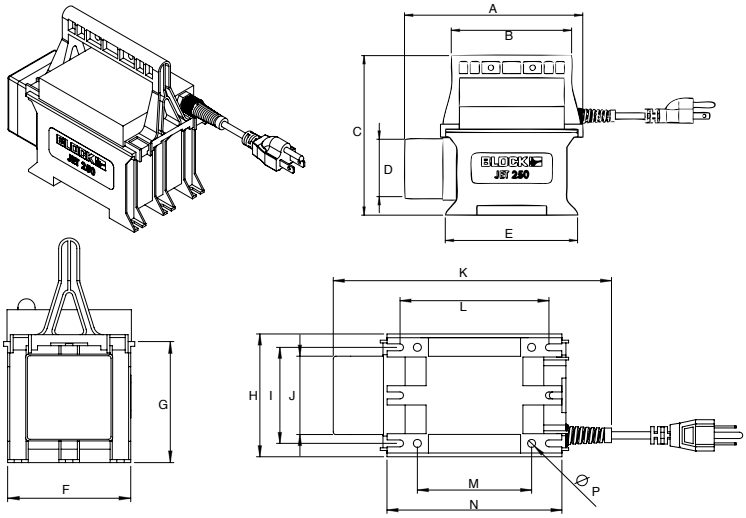
Mechanical data

Typ	Terminals Input	Terminals Output	Weight	Dimension picture (in mm)	A	B	C	D	E	F	G	H	I	J	K	L	M	N	P
JET 250	Connecting cable with NEMAS-15 plug (USA)	Protective contact socket	3.1 kg	❶	180	119	160	56.8	130.8	86.5	85.1	92	72	58.8	210	111.5	85.5	131	6
JET 500	Connecting cable with NEMAS-15 plug (USA)	Protective contact socket	6.7 kg	❷	230	175	150	195	123	90	180	126	-	-	-	-	-	-	-
JET 1000	Connecting cable with NEMAS-15 plug (USA)	Protective contact socket	9.7 kg	❷	295	240	155	195	142	255	245	143	-	-	-	-	-	-	-

Dimension pictures

❶



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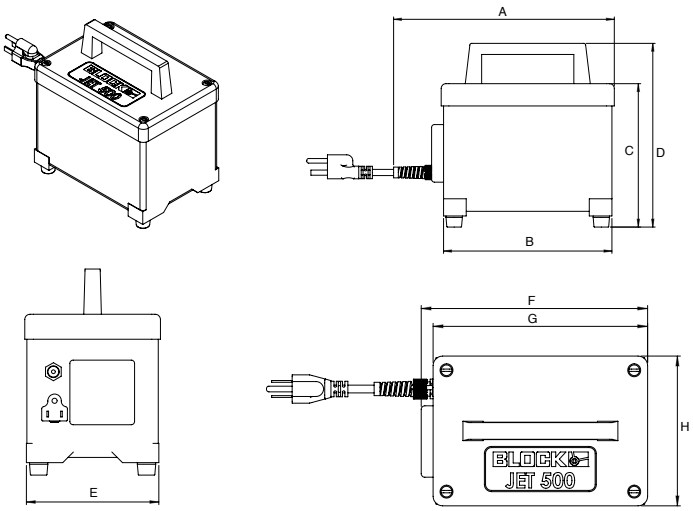
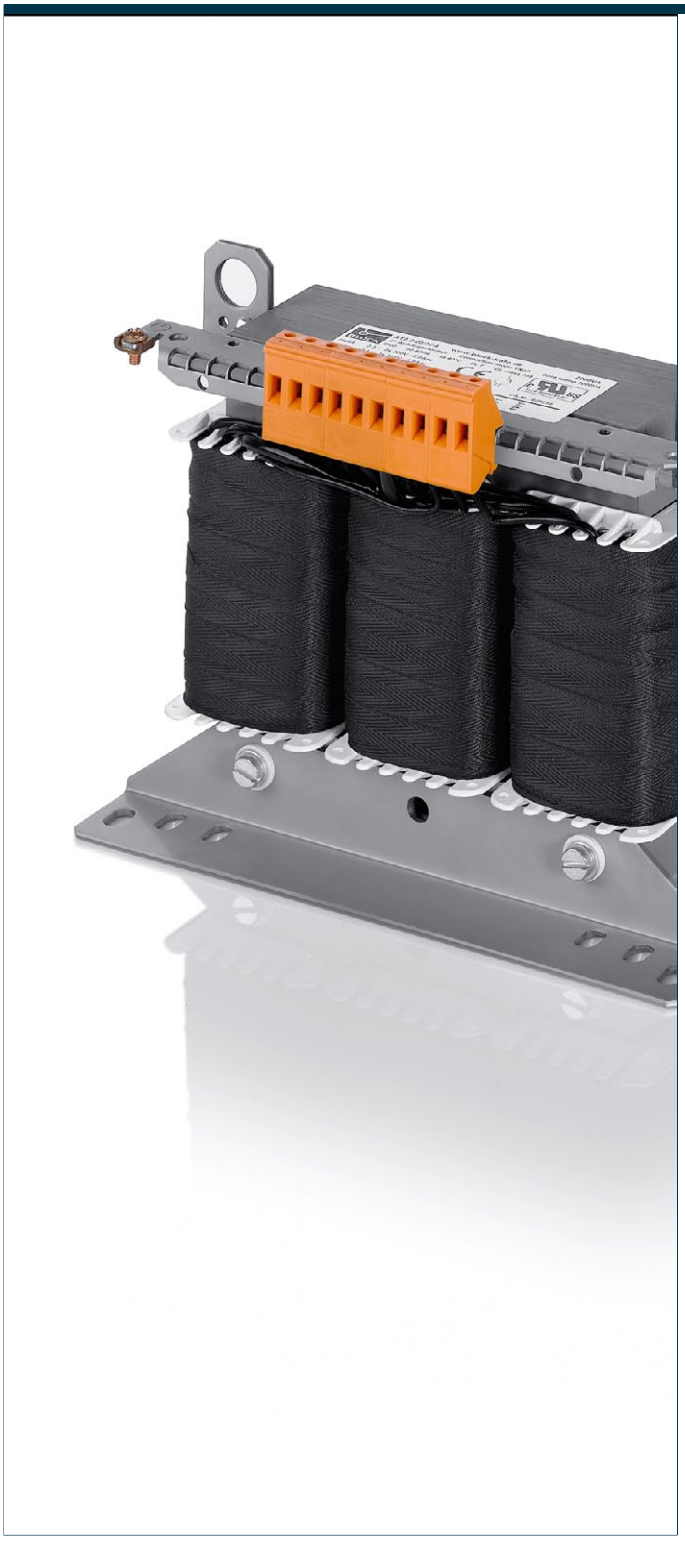


Autotransformer
AT3



General Data

Rated input voltage 3 x 200/208 - 3 x 690 Vac
Rated output voltage 3 x 400 Vac
Rated power 2000 - 250000 VA
Insulation class F
Maximum ambient temperature 40 °C
Efficiency up to 98 %
Degree of protection IP 00
Optionally adapted package for higher degrees of protection

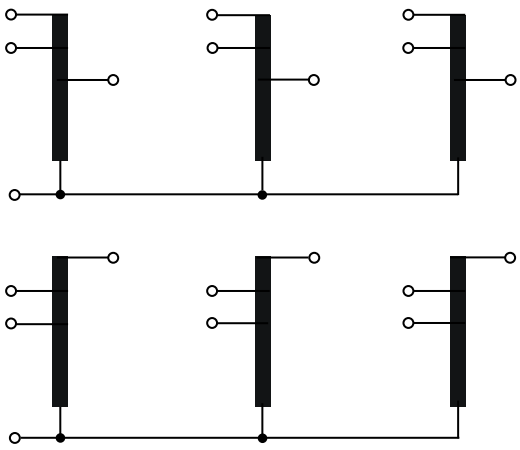
Advantages

Low weight and small size (compared to isolating transformers)
Very high efficiency
Patented assembly technology to lower heat losses
Very good corrosion protection and low noise thanks to vacuum impregnation
Fixed, contact protected screw connection terminals complying with UVV BGV A3
Multifunctional fixing rails with 12 oval slots
Enlarged fixing rail for easy installation from above
Integrated crane eyes

Applications

Autotransformer for adjustment of the voltage on the input and output sides with no requirement for electrical isolation.

Sample application



Standards

Autotransformer
to: VDE 0570 Teil 2-13, DIN EN 61558-2-13, EN 61558-2-13, IEC 61558-2-13, UL 5085-1/-2, CSA 22.2 No.66

Approvals

UL 5085-1/-2, CSA 22.2 No.66

Autotransformer
AT3

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Electrical data

Typ	AT3 2-20/21-4	AT3 2-22/23-4	AT3 2-24/35-4	AT3 2-38/42-4	AT3 2-44/46-4	AT3 2-48/50-4
Input						
Rated input voltage	3 x 200/208 Vac	3 x 220/230 Vac	3 x 240/346 Vac	3 x 380/415 Vac	3 x 440/460 Vac	3 x 480/500 Vac
Frequency range	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
Output						
Rated output voltage	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac
Rated Power	2.000 VA	2.000 VA	2.000 VA	2.000 VA	2.000 VA	2.000 VA
Vector group	YNaO	YNaO	YNaO	YNaO	YNaO	YNaO
Efficiency	91.0 %	90.0 %	90.0 %	78.0 %	87.0 %	90.0 %
Approvals						
Approvals	cURus	cURus	cURus	cURus	cURus	cURus
Environment						
Ambient temperature max.	40 °C	40 °C	40 °C	40 °C	40 °C	40 °C
Safety and protection						
Type	Open type	Open type	Open type	Open type	Open type	Open type
Insulation class	F	F	F	F	F	F
Protection index	IP 00	IP 00	IP 00	IP 00	IP 00	IP 00
Safety class (prepared)	I	I	I	I	I	I
Short circuit strength	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof
Test voltage	4000 Vac, 50 Hz	4000 Vac, 50 Hz	4000 Vac, 50 Hz	4000 Vac, 50 Hz	4000 Vac, 50 Hz	4000 Vac, 50 Hz
Order numbers						
Recommended enclosure	BGUK 10	BGUK 10	BGUK 10	BGUK 3	BGUK 10	BGUK 10
Order Number	**AT3 2-20/21-4**	**AT3 2-22/23-4**	**AT3 2-24/35-4**	**AT3 2-38/42-4**	**AT3 2-44/46-4**	**AT3 2-48/50-4**

Electrical data

Typ	AT3 2-58/60-4	AT3 2-69-4	AT3 3,5-20/21-4	AT3 3,5-22/23-4	AT3 3,5-24/35-4	AT3 3,5-38/42-4
Input						
Rated input voltage	3 x 575/600 Vac	3 x 600/690 Vac	3 x 200/208 Vac	3 x 220/230 Vac	3 x 240/346 Vac	3 x 380/415 Vac
Frequency range	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
Output						
Rated output voltage	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac
Rated Power	2.000 VA	2.000 VA	3.500 VA	3.500 VA	3.500 VA	3.500 VA
Vector group	YNaO	YNaO	YNaO	YNaO	YNaO	YNaO
Efficiency	88.0 %	90.0 %	93.0 %	93.0 %	91.0 %	86.0 %
Approvals						
Approvals	cURus	cURus	cURus	cURus	cURus	cURus
Environment						
Ambient temperature max.	40 °C	40 °C	40 °C	40 °C	40 °C	40 °C
Safety and protection						
Type	Open type	Open type	Open type	Open type	Open type	Open type
Insulation class	F	F	F	F	F	F
Protection index	IP 00	IP 00	IP 00	IP 00	IP 00	IP 00
Safety class (prepared)	I	I	I	I	I	I
Short circuit strength	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof
Test voltage	4000 Vac, 50 Hz	4000 Vac, 50 Hz	4000 Vac, 50 Hz	4000 Vac, 50 Hz	4000 Vac, 50 Hz	4000 Vac, 50 Hz
Order numbers						
Recommended enclosure	BGUK 10	BGUK 10	BGUK 20	BGUK 20	BGUK 20	BGUK 10
Order Number	**AT3 2-58/60-4**	**AT3 2-69-4**	**AT3 3,5-20/21-4**	**AT3 3,5-22/23-4**	**AT3 3,5-24/35-4**	**AT3 3,5-38/42-4**

Autotransformer
AT3

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Electrical data

Typ	AT3 3,5-44/46-4	AT3 3,5-48/50-4	AT3 3,5-58/60-4	AT3 3,5-69-4	AT3 10-20/21-4	AT3 10-22/23-4
Input						
Rated input voltage	3 x 440/460 Vac	3 x 480/500 Vac	3 x 575/600 Vac	3 x 600/690 Vac	3 x 200/208 Vac	3 x 220/230 Vac
Frequency range	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
Output						
Rated output voltage	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac
Rated Power	3.500 VA	3.500 VA	3.500 VA	3.500 VA	10.000 VA	10.000 VA
Vector group	YNaO	YNaO	YNaO	YNaO	YNaO	YNaO
Efficiency	88.0 %	90.0 %	92.0 %	92.0 %	95.0 %	94.0 %
Approvals						
Approvals	cURus	cURus	cURus	cURus	cURus	cURus
Environment						
Ambient temperature max.	40 °C	40 °C	40 °C	40 °C	40 °C	40 °C
Safety and protection						
Type	Open type	Open type	Open type	Open type	Open type	Open type
Insulation class	F	F	F	F	F	F
Protection index	IP 00	IP 00	IP 00	IP 00	IP 00	IP 00
Safety class (prepared)	I	I	I	I	I	I
Short circuit strength	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof
Test voltage	4000 Vac, 50 Hz	4000 Vac, 50 Hz	4000 Vac, 50 Hz	4000 Vac, 50 Hz	4000 Vac, 50 Hz	4000 Vac, 50 Hz
Order numbers						
Recommended enclosure	BGUK 10	BGUK 10	BGUK 20	BGUK 20	BGE-065	BGE-065
Order Number	**AT3 3,5-44/46-4**	**AT3 3,5-48/50-4**	**AT3 3,5-58/60-4**	**AT3 3,5-69-4**	**AT3 10-20/21-4**	**AT3 10-22/23-4**

Electrical data

Typ	AT3 10-24/35-4	AT3 10-38/42-4	AT3 10-44/46-4	AT3 10-48/50-4	AT3 10-58/60-4	AT3 10-69-4
Input						
Rated input voltage	3 x 240/346 Vac	3 x 380/415 Vac	3 x 440/460 Vac	3 x 480/500 Vac	3 x 575/600 Vac	3 x 600/690 Vac
Frequency range	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
Output						
Rated output voltage	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac
Rated Power	10.000 VA	10.000 VA	10.000 VA	10.000 VA	10.000 VA	10.000 VA
Vector group	YNaO	YNaO	YNaO	YNaO	YNaO	YNaO
Efficiency	95.0 %	84.0 %	91.0 %	93.0 %	94.0 %	95.0 %
Approvals						
Approvals	cURus	cURus	cURus	cURus	cURus	cURus
Environment						
Ambient temperature max.	40 °C	40 °C	40 °C	40 °C	40 °C	40 °C
Safety and protection						
Type	Open type	Open type	Open type	Open type	Open type	Open type
Insulation class	F	F	F	F	F	F
Protection index	IP 00	IP 00	IP 00	IP 00	IP 00	IP 00
Safety class (prepared)	I	I	I	I	I	I
Short circuit strength	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof
Test voltage	4000 Vac, 50 Hz	4000 Vac, 50 Hz	4000 Vac, 50 Hz	4000 Vac, 50 Hz	4000 Vac, 50 Hz	4000 Vac, 50 Hz
Order numbers						
Recommended enclosure	BGE-065	BGUK 10	BGUK 20	BGUK 20	BGE-050	BGE-065
Order Number	**AT3 10-24/35-4**	**AT3 10-38/42-4**	**AT3 10-44/46-4**	**AT3 10-48/50-4**	**AT3 10-58/60-4**	**AT3 10-69-4**

Autotransformer
AT3

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Electrical data

Typ	AT3 15-20/21-4	AT3 15-22/23-4	AT3 15-24/35-4	AT3 15-38/42-4	AT3 15-44/46-4	AT3 15-48/50-4
Input						
Rated input voltage	3 x 200/208 Vac	3 x 220/230 Vac	3 x 240/346 Vac	3 x 380/415 Vac	3 x 440/460 Vac	3 x 480/500 Vac
Frequency range	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
Output						
Rated output voltage	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac
Rated Power	15.000 VA	15.000 VA	15.000 VA	15.000 VA	15.000 VA	15.000 VA
Vector group	YNaO	YNaO	YNaO	YNaO	YNaO	YNaO
Efficiency	96.0 %	96.0 %	95.0 %	89.0 %	93.0 %	93.0 %
Approvals						
Approvals	cURus	cURus	cURus	cURus	cURus	cURus
Environment						
Ambient temperature max.	40 °C	40 °C	40 °C	40 °C	40 °C	40 °C
Safety and protection						
Type	Open type	Open type	Open type	Open type	Open type	Open type
Insulation class	F	F	F	F	F	F
Protection index	IP 00	IP 00	IP 00	IP 00	IP 00	IP 00
Safety class (prepared)	I	I	I	I	I	I
Short circuit strength	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof
Test voltage	4000 Vac, 50 Hz	4000 Vac, 50 Hz	4000 Vac, 50 Hz	4000 Vac, 50 Hz	4000 Vac, 50 Hz	4000 Vac, 50 Hz
Order numbers						
Recommended enclosure	BGE-065	BGE-065	BGE-065	BGUK 10	BGUK 20	BGE-050
Order Number	**AT3 15-20/21-4**	**AT3 15-22/23-4**	**AT3 15-24/35-4**	**AT3 15-38/42-4**	**AT3 15-44/46-4**	**AT3 15-48/50-4**

Electrical data

Typ	AT3 15-58/60-4	AT3 15-69-4	AT3 25-20/21-4	AT3 25-22/23-4	AT3 25-24/35-4	AT3 25-38/42-4
Input						
Rated input voltage	3 x 575/600 Vac	3 x 600/690 Vac	3 x 200/208 Vac	3 x 220/230 Vac	3 x 240/346 Vac	3 x 380/415 Vac
Frequency range	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
Output						
Rated output voltage	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac
Rated Power	15.000 VA	15.000 VA	25.000 VA	25.000 VA	25.000 VA	25.000 VA
Vector group	YNaO	YNaO	YNaO	YNaO	YNaO	YNaO
Efficiency	95.0 %	95.0 %	97.0 %	96.0 %	96.0 %	90.0 %
Approvals						
Approvals	cURus	cURus	cURus	cURus	cURus	cURus
Environment						
Ambient temperature max.	40 °C	40 °C	40 °C	40 °C	40 °C	40 °C
Safety and protection						
Type	Open type	Open type	Open type	Open type	Open type	Open type
Insulation class	F	F	F	F	F	F
Protection index	IP 00	IP 00	IP 00	IP 00	IP 00	IP 00
Safety class (prepared)	I	I	I	I	I	I
Short circuit strength	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof
Test voltage	4000 Vac, 50 Hz	4000 Vac, 50 Hz	4000 Vac, 50 Hz	4000 Vac, 50 Hz	4000 Vac, 50 Hz	4000 Vac, 50 Hz
Order numbers						
Recommended enclosure	BGE-065	BGE-065				BGUK 20
Order Number	**AT3 15-58/60-4**	**AT3 15-69-4**	**AT3 25-20/21-4**	**AT3 25-22/23-4**	**AT3 25-24/35-4**	**AT3 25-38/42-4**

Autotransformer
AT3

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Electrical data

Typ	AT3 25-44/46-4	AT3 25-48/50-4	AT3 25-58/60-4	AT3 25-69-4	AT3 45-20/21-4	AT3 45-22/23-4
Input						
Rated input voltage	3 x 440/460 Vac	3 x 480/500 Vac	3 x 575/600 Vac	3 x 600/690 Vac	3 x 200/208 Vac	3 x 220/230 Vac
Frequency range	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
Output						
Rated output voltage	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac
Rated Power	25.000 VA	25.000 VA	25.000 VA	25.000 VA	45.000 VA	45.000 VA
Vector group	YNaO	YNaO	YNaO	YNaO	YNaO	YNaO
Efficiency	94.0 %	95.0 %	96.0 %	96.0 %	97.0 %	97.0 %
Approvals						
Approvals	cURus	cURus	cURus	cURus	cURus	cURus
Environment						
Ambient temperature max.	40 °C	40 °C	40 °C	40 °C	40 °C	40 °C
Safety and protection						
Type	Open type	Open type	Open type	Open type	Open type	Open type
Insulation class	F	F	F	F	F	F
Protection index	IP 00	IP 00	IP 00	IP 00	IP 00	IP 00
Safety class (prepared)	I	I	I	I	I	I
Short circuit strength	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof
Test voltage	4000 Vac, 50 Hz	4000 Vac, 50 Hz	4000 Vac, 50 Hz	4000 Vac, 50 Hz	4000 Vac, 50 Hz	4000 Vac, 50 Hz
Order numbers						
Recommended enclosure	BGE-050	BGE-065			BGE-080	BGE-080
Order Number	**AT3 25-44/46-4**	**AT3 25-48/50-4**	**AT3 25-58/60-4**	**AT3 25-69-4**	**AT3 45-20/21-4**	**AT3 45-22/23-4**

Electrical data

Typ	AT3 45-24/35-4	AT3 45-38/42-4	AT3 45-44/46-4	AT3 45-48/50-4	AT3 45-58/60-4	AT3 45-69-4
Input						
Rated input voltage	3 x 240/346 Vac	3 x 380/415 Vac	3 x 440/460 Vac	3 x 480/500 Vac	3 x 575/600 Vac	3 x 600/690 Vac
Frequency range	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
Output						
Rated output voltage	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac
Rated Power	45.000 VA	45.000 VA	45.000 VA	45.000 VA	45.000 VA	45.000 VA
Vector group	YNaO	YNaO	YNaO	YNaO	YNaO	YNaO
Efficiency	97.0 %	92.0 %	95.0 %	96.0 %	97.0 %	97.0 %
Approvals						
Approvals	cURus	cURus	cURus	cURus	cURus	-
Environment						
Ambient temperature max.	40 °C	40 °C	40 °C	40 °C	40 °C	40 °C
Safety and protection						
Type	Open type	Open type	Open type	Open type	Open type	Open type
Insulation class	F	F	F	F	F	F
Protection index	IP 00	IP 00	IP 00	IP 00	IP 00	IP 00
Safety class (prepared)	I	I	I	I	I	I
Short circuit strength	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof
Test voltage	4000 Vac, 50 Hz	4000 Vac, 50 Hz	4000 Vac, 50 Hz	4000 Vac, 50 Hz	4000 Vac, 50 Hz	4000 Vac, 50 Hz
Order numbers						
Recommended enclosure	BGE-080	BGE-050	BGE-065		BGE-080	BGE-080
Order Number	**AT3 45-24/35-4**	**AT3 45-38/42-4**	**AT3 45-44/46-4**	**AT3 45-48/50-4**	**AT3 45-58/60-4**	**AT3 45-69-4**

Autotransformer
AT3

ePLAN data portal | BLOCK Website

Electrical data

Typ	AT3 70-20/21-4	AT3 70-22/23-4	AT3 70-24/35-4	AT3 70-38/42-4	AT3 70-44/46-4	AT3 70-48/50-4
Input						
Rated input voltage	3 x 200/208 Vac	3 x 220/230 Vac	3 x 240/346 Vac	3 x 380/415 Vac	3 x 440/460 Vac	3 x 480/500 Vac
Frequency range	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
Output						
Rated output voltage	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac
Rated Power	70.000 VA	70.000 VA	70.000 VA	70.000 VA	70.000 VA	70.000 VA
Vector group	YNaO	YNaO	YNaO	YNaO	YNaO	YNaO
Efficiency	98.0 %	97.0 %	97.0 %	93.0 %	96.0 %	96.0 %
Approvals						
Approvals	cURus	cURus	cURus	cURus	cURus	cURus
Environment						
Ambient temperature max.	40 °C	40 °C	40 °C	40 °C	40 °C	40 °C
Safety and protection						
Type	Open type	Open type	Open type	Open type	Open type	Open type
Insulation class	F	F	F	F	F	F
Protection index	IP 00	IP 00	IP 00	IP 00	IP 00	IP 00
Safety class (prepared)	I	I	I	I	I	I
Short circuit strength	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof
Test voltage	4000 Vac, 50 Hz	4000 Vac, 50 Hz	4000 Vac, 50 Hz	4000 Vac, 50 Hz	4000 Vac, 50 Hz	4000 Vac, 50 Hz
Order numbers						
Recommended enclosure	BGE-085	BGE-085	BGE-085	BGE-065		BGE-080
Order Number	**AT3 70-20/21-4**	**AT3 70-22/23-4**	**AT3 70-24/35-4**	**AT3 70-38/42-4**	**AT3 70-44/46-4**	**AT3 70-48/50-4**

Electrical data

Typ	AT3 70-58/60-4	AT3 70-69-4	AT3 110-20/21-4	AT3 110-22/23-4	AT3 110-24/35-4	AT3 110-38/42-4
Input						
Rated input voltage	3 x 575/600 Vac	3 x 690 Vac	3 x 200/208 Vac	3 x 220/230 Vac	3 x 240/346 Vac	3 x 380/415 Vac
Frequency range	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
Output						
Rated output voltage	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac
Rated Power	70.000 VA	70.000 VA	110.000 VA	110.000 VA	110.000 VA	110.000 VA
Vector group	YNaO	YNaO	YNaO	YNaO	YNaO	YNaO
Efficiency	97.0 %	97.0 %	98.0 %	98.0 %	98.0 %	94.0 %
Approvals						
Approvals	cURus	-	cURus	cURus	cURus	cURus
Environment						
Ambient temperature max.	40 °C	40 °C	40 °C	40 °C	40 °C	40 °C
Safety and protection						
Type	Open type	Open type	Open type	Open type	Open type	Open type
Insulation class	F	F	F	F	F	F
Protection index	IP 00	IP 00	IP 00	IP 00	IP 00	IP 00
Safety class (prepared)	I	I	I	I	I	I
Short circuit strength	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof
Test voltage	4000 Vac, 50 Hz	4000 Vac, 50 Hz	4000 Vac, 50 Hz	4000 Vac, 50 Hz	4000 Vac, 50 Hz	4000 Vac, 50 Hz
Order numbers						
Recommended enclosure	BGE-080	BGE-080	BGE-085	BGE-085	BGE-085	BGE-065
Order Number	**AT3 70-58/60-4**	**AT3 70-69-4**	**AT3 110-20/21-4**	**AT3 110-22/23-4**	**AT3 110-24/35-4**	**AT3 110-38/42-4**

Autotransformer
AT3

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Electrical data

Typ	AT3 110-44/46-4	AT3 110-48/50-4	AT3 110-58/60-4	AT3 110-69-4	AT3 160-20/21-4	AT3 160-22/23-4
Input						
Rated input voltage	3 x 440/460 Vac	3 x 480/500 Vac	3 x 575/600 Vac	3 x 690 Vac	3 x 200/208 Vac	3 x 220/230 Vac
Frequency range	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
Output						
Rated output voltage	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac
Rated Power	110.000 VA	110.000 VA	110.000 VA	110.000 VA	160.000 VA	160.000 VA
Vector group	YNaO	YNaO	YNaO	YNaO	YNaO	YNaO
Efficiency	96.0 %	97.0 %	97.0 %	98.0 %	98.0 %	98.0 %
Approvals						
Approvals	cURus	cURus	cURus	-	cURus	cURus
Environment						
Ambient temperature max.	40 °C	40 °C	40 °C	40 °C	40 °C	40 °C
Safety and protection						
Type	Open type	Open type	Open type	Open type	Open type	Open type
Insulation class	F	F	F	F	F	F
Protection index	IP 00	IP 00	IP 00	IP 00	IP 00	IP 00
Safety class (prepared)	I	I	I	I	I	I
Short circuit strength	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof
Test voltage	4000 Vac, 50 Hz	4000 Vac, 50 Hz	4000 Vac, 50 Hz	4000 Vac, 50 Hz	4000 Vac, 50 Hz	4000 Vac, 50 Hz
Order numbers						
Recommended enclosure	BGE-080	BGE-080	BGE-085	BGE-085	BGE-095	BGE-095
Order Number	**AT3 110-44/46-4**	**AT3 110-48/50-4**	**AT3 110-58/60-4**	**AT3 110-69-4**	**AT3 160-20/21-4**	**AT3 160-22/23-4**

Electrical data

Typ	AT3 160-24/35-4	AT3 160-38/42-4	AT3 160-44/46-4	AT3 160-48/50-4	AT3 160-58/60-4	AT3 160-69-4
Input						
Rated input voltage	3 x 240/346 Vac	3 x 380/415 Vac	3 x 440/460 Vac	3 x 480/500 Vac	3 x 575/600 Vac	3 x 690 Vac
Frequency range	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
Output						
Rated output voltage	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac
Rated Power	160.000 VA	160.000 VA	160.000 VA	160.000 VA	160.000 VA	160.000 VA
Vector group	YNaO	YNaO	YNaO	YNaO	YNaO	YNaO
Efficiency	98.0 %	94.0 %	96.0 %	97.0 %	98.0 %	98.0 %
Approvals						
Approvals	cURus	cURus	cURus	cURus	cURus	-
Environment						
Ambient temperature max.	40 °C	40 °C	40 °C	40 °C	40 °C	40 °C
Safety and protection						
Type	Open type	Open type	Open type	Open type	Open type	Open type
Insulation class	F	F	F	F	F	F
Protection index	IP 00	IP 00	IP 00	IP 00	IP 00	IP 00
Safety class (prepared)	I	I	I	I	I	I
Short circuit strength	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof
Test voltage	4000 Vac, 50 Hz	4000 Vac, 50 Hz	4000 Vac, 50 Hz	4000 Vac, 50 Hz	4000 Vac, 50 Hz	4000 Vac, 50 Hz
Order numbers						
Recommended enclosure	BGE-095		BGE-085	BGE-085	BGE-085	BGE-095
Order Number	**AT3 160-24/35-4**	**AT3 160-38/42-4**	**AT3 160-44/46-4**	**AT3 160-48/50-4**	**AT3 160-58/60-4**	**AT3 160-69-4**

Autotransformer
AT3

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Electrical data

Typ	AT3 250-20/21-4	AT3 250-22/23-4	AT3 250-24/35-4	AT3 250-38/42-4	AT3 250-44/46-4	AT3 250-48/50-4
Input						
Rated input voltage	3 x 200/208 Vac	3 x 220/230 Vac	3 x 240/346 Vac	3 x 380/415 Vac	3 x 440/460 Vac	3 x 480/500 Vac
Frequency range	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
Output						
Rated output voltage	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac
Rated Power	250.000 VA	250.000 VA	250.000 VA	250.000 VA	250.000 VA	250.000 VA
Vector group	YNaO	YNaO	YNaO	YNaO	YNaO	YNaO
Efficiency	98.0 %	98.0 %	98.0 %	95.0 %	96.0 %	98.0 %
Approvals						
Approvals	cURus	cURus	cURus	cURus	cURus	cURus
Environment						
Ambient temperature max.	40 °C	40 °C	40 °C	40 °C	40 °C	40 °C
Safety and protection						
Type	Open type	Open type	Open type	Open type	Open type	Open type
Insulation class	F	F	F	F	F	F
Protection index	IP 00	IP 00	IP 00	IP 00	IP 00	IP 00
Safety class (prepared)	I	I	I	I	I	I
Short circuit strength	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof
Test voltage	4000 Vac, 50 Hz	4000 Vac, 50 Hz	4000 Vac, 50 Hz	4000 Vac, 50 Hz	4000 Vac, 50 Hz	4000 Vac, 50 Hz
Order numbers						
Recommended enclosure	BGE-130	BGE-130	BGE-095		BGE-095	BGE-095
Order Number	**AT3 250-20/21-4**	**AT3 250-22/23-4**	**AT3 250-24/35-4**	**AT3 250-38/42-4**	**AT3 250-44/46-4**	**AT3 250-48/50-4**

Electrical data

Typ	AT3 250-58/60-4	AT3 250-69-4
Input		
Rated input voltage	3 x 575/600 Vac	3 x 690 Vac
Frequency range	50 - 60 Hz	50 - 60 Hz
Output		
Rated output voltage	3 x 400 Vac	3 x 400 Vac
Rated Power	250.000 VA	250.000 VA
Vector group	YNaO	YNaO
Efficiency	98.0 %	98.0 %
Approvals		
Approvals	cURus	-
Environment		
Ambient temperature max.	40 °C	40 °C
Safety and protection		
Type	Open type	Open type
Insulation class	F	F
Protection index	IP 00	IP 00
Safety class (prepared)	I	I
Short circuit strength	non-short-circuit proof	non-short-circuit proof
Test voltage	4000 Vac, 50 Hz	4000 Vac, 50 Hz
Order numbers		
Recommended enclosure	BGE-095	BGE-130
Order Number	**AT3 250-58/60-4**	**AT3 250-69-4**

Autotransformer
AT3

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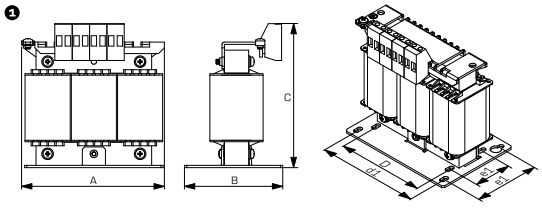
30 Mechanical data

Typ	Terminals	Fixing method	Fixing screws	Core type	Weight	Dimension picture (in mm)	A	B	C	D	d1	d2	E	e1	e2	F	G	H	I	J	K
AT3 2-20/21-4	Screw-type terminals	Fixing rail	M6	3 UI 90/51,5	10.5 kg	2	220	125	175	136	170	201	77	78	91	-	-	-	-	-	-
AT3 2-22/23-4	Screw-type terminals	Fixing rail	M6	3 UI 90/51,5	10.5 kg	2	220	125	175	136	170	201	77	78	91	-	-	-	-	-	-
AT3 2-24/35-4	Screw-type terminals	Fixing rail	M6	3 UI 90/41,5	9.8 kg	2	220	115	175	136	170	201	67	68	81	-	-	-	-	-	-
AT3 2-38/42-4	Screw-type terminals	Fixing rail	M4	3 UI 60/21	2.2 kg	1	125	85	125	90	105	-	39	70	-	-	-	-	-	-	-
AT3 2-44/46-4	Screw-type terminals	Fixing rail	M5	3 UI 75/26,5	4.1 kg	1	155	95	155	113	135	-	50	80	-	-	-	-	-	-	-
AT3 2-48/50-4	Screw-type terminals	Fixing rail	M5	3 UI 75/41,5	6.1 kg	1	155	110	155	113	135	-	65	95	-	-	-	-	-	-	-
AT3 2-58/60-4	Screw-type terminals	Fixing rail	M6	3 UI 90/31,5	7.5 kg	2	220	105	175	136	170	201	57	58	71	-	-	-	-	-	-
AT3 2-69-4	Screw-type terminals	Fixing rail	M6	3 UI 90/41,5	10.0 kg	2	220	115	175	136	170	201	67	68	81	-	-	-	-	-	-
AT3 3,5-20/21-4	Screw-type terminals	Fixing rail	M6	3 UI 114/64	20.0 kg	2	267	150	220	176	180	249	95	103	122	-	-	-	-	-	-
AT3 3,5-22/23-4	Screw-type terminals	Fixing rail	M6	3 UI 114/64	20.7 kg	2	267	150	220	176	180	249	95	103	122	-	-	-	-	-	-
AT3 3,5-24/35-4	Screw-type terminals	Fixing rail	M6	3 UI 114/40	14.5 kg	2	267	125	215	176	180	249	71	79	98	-	-	-	-	-	-
AT3 3,5-38/42-4	Screw-type terminals	Fixing rail	M5	3 UI 75/26,5	4.3 kg	1	155	95	155	113	135	-	50	80	-	-	-	-	-	-	-
AT3 3,5-44/46-4	Screw-type terminals	Fixing rail	M5	3 UI 75/41,5	6.1 kg	1	155	110	155	113	135	-	65	95	-	-	-	-	-	-	-
AT3 3,5-48/50-4	Screw-type terminals	Fixing rail	M6	3 UI 90/41,5	8.7 kg	2	220	115	175	136	170	201	67	68	81	-	-	-	-	-	-
AT3 3,5-58/60-4	Screw-type terminals	Fixing rail	M6	3 UI 114/40	14.2 kg	2	267	125	215	176	180	249	71	79	98	-	-	-	-	-	-
AT3 3,5-69-4	Screw-type terminals	Fixing rail	M6	3 UI 114/40	15.0 kg	2	267	125	215	176	180	249	71	79	98	-	-	-	-	-	-
AT3 10-20/21-4	Screw-type terminals	Fixing rail	M8	3 UI 150/77	47.6 kg	2	350	192	280	224	240	328	119	129	145	-	-	-	-	-	-
AT3 10-22/23-4	Screw-type terminals	Fixing rail	M8	3 UI 150/77	42.4 kg	2	350	192	280	224	240	328	119	129	145	-	-	-	-	-	-
AT3 10-24/35-4	Screw-type terminals	Fixing rail	M8	3 UI 150/65	39.3 kg	2	350	162	280	224	240	328	107	117	133	-	-	-	-	-	-
AT3 10-38/42-4	Screw-type terminals	Fixing rail	M6	3 UI 90/31,5	7.0 kg	2	220	105	175	136	170	201	57	58	71	-	-	-	-	-	-
AT3 10-44/46-4	Screw-type terminals	Fixing rail	M6	3 UI 114/40	14.4 kg	2	267	125	215	176	180	249	71	79	98	-	-	-	-	-	-
AT3 10-48/50-4	Screw-type terminals	Fixing rail	M6	3 UI 114/64	20.8 kg	2	267	150	220	176	180	249	95	103	122	-	-	-	-	-	-
AT3 10-58/60-4	Screw-type terminals	Fixing rail	M8	3 UI 132/72	32.1 kg	2	315	165	250	200	215	292	102	124	126	-	-	-	-	-	-
AT3 10-69-4	Screw-type terminals	Fixing rail	M8	3 UI 150/65	38.0 kg	2	350	162	280	224	240	328	107	117	133	-	-	-	-	-	-
AT3 15-20/21-4	Screw-type terminals	Fixing rail	M8	3 UI 180/78	67.6 kg	3	410	180	380	264	310	388	140	140	130	-	-	-	-	-	-
AT3 15-22/23-4	Screw-type terminals	Fixing rail	M8	3 UI 180/78	64.9 kg	4	410	195	345	264	310	388	140	140	130	-	-	-	-	-	-
AT3 15-24/35-4	Screw-type terminals	Fixing rail	M8	3 UI 180/63	54.4 kg	4	410	175	345	264	310	388	125	125	115	-	-	-	-	-	-

Dimension pictures

1



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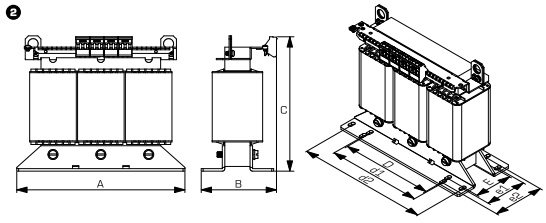

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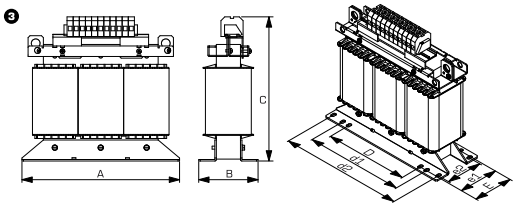

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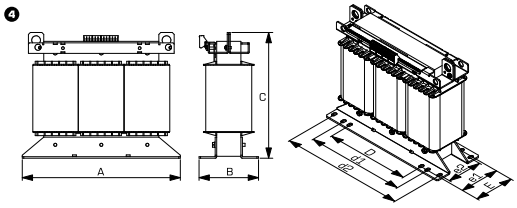


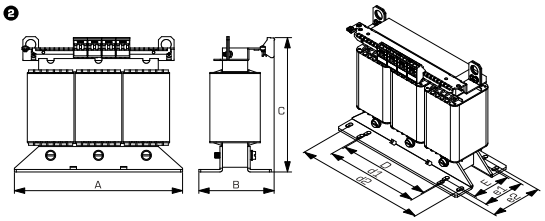
Autotransformer
AT3

Mechanical data 30

Typ	Terminals	Fixing method	Fixing screws	Core type	Weight	Dimension picture (in mm)	A	B	C	D	d1	d2	E	e1	e2	F	G	H	I	J	K
AT3 15-38/42-4	Screw-type terminals	Fixing rail	M6	3 UI 90/51,1	10.0 kg	2	220	125	175	136	170	201	77	78	91	-	-	-	-	-	-
AT3 15-44/46-4	Screw-type terminals	Fixing rail	M6	3 UI 114/64	20.1 kg	2	267	150	215	176	180	249	95	103	122	-	-	-	-	-	-
AT3 15-48/50-4	Screw-type terminals	Fixing rail	M8	3 UI 132/72	29.4 kg	2	315	165	250	200	215	292	102	104	126	-	-	-	-	-	-
AT3 15-58/60-4	Screw-type terminals	Fixing rail	M8	3 UI 150/77	44.0 kg	2	350	177	280	224	240	328	119	129	145	-	-	-	-	-	-
AT3 15-69-4	Screw-type terminals	Fixing rail	M8	3 UI 180/63	58.0 kg	4	410	155	340	264	310	388	125	125	115	-	-	-	-	-	-
AT3 25-20/21-4	Screw-type terminals	Fixing rail	M10	3 UI 210/88	103.0 kg	3	480	220	440	316	370	450	158	166	148	-	-	-	-	-	-
AT3 25-22/23-4	Screw-type terminals	Fixing rail	M10	3 UI 210/88	99.3 kg	3	480	220	440	316	370	450	158	166	148	-	-	-	-	-	-
AT3 25-24/35-4	Screw-type terminals	Fixing rail	M10	3 UI 210/73	83.4 kg	3	480	180	430	316	370	450	143	151	133	-	-	-	-	-	-
AT3 25-38/42-4	Screw-type terminals	Fixing rail	M6	3 UI 114/40	15.0 kg	2	267	145	220	176	180	249	71	79	98	-	-	-	-	-	-
AT3 25-44/46-4	Screw-type terminals	Fixing rail	M8	3 UI 132/72	30.3 kg	2	315	185	255	200	215	292	102	124	126	-	-	-	-	-	-
AT3 25-48/50-4	Screw-type terminals	Fixing rail	M8	3 UI 150/77	44.0 kg	2	350	192	280	224	240	328	119	129	145	-	-	-	-	-	-
AT3 25-58/60-4	Screw-type terminals	Fixing rail	M10	3 UI 210/63	75.6 kg	4	480	182	395	316	370	450	133	141	123	-	-	-	-	-	-
AT3 25-69-4	Screw-type terminals	Fixing rail	M10	3 UI 210/73	83.0 kg	4	480	192	395	316	370	450	143	151	133	-	-	-	-	-	-
AT3 45-20/21-4	Screw-type terminals	Fixing rail	M12	3 UI 240/140	197.0 kg	3	550	290	510	356	430	516	214	240	212	-	-	-	-	-	-
AT3 45-22/23-4	Screw-type terminals	Fixing rail	M12	3 UI 240/110	162.0 kg	3	550	260	510	356	430	516	184	210	182	-	-	-	-	-	-
AT3 45-24/35-4	Screw-type terminals	Fixing rail	M12	3 UI 240/110	149.0 kg	3	550	260	510	356	430	516	184	210	182	-	-	-	-	-	-
AT3 45-38/42-4	Screw-type terminals	Fixing rail	M8	3 UI 132/46	23.9 kg	3	315	170	295	200	215	292	76	78	100	-	-	-	-	-	-
AT3 45-44/46-4	Screw-type terminals	Fixing rail	M8	3 UI 180/63	59.9 kg	3	410	155	380	264	310	388	125	125	115	-	-	-	-	-	-
AT3 45-48/50-4	Screw-type terminals	Fixing rail	M10	3 UI 210/63	77.3 kg	3	480	170	425	316	370	450	133	141	123	-	-	-	-	-	-
AT3 45-58/60-4	Screw-type terminals	Fixing rail	M12	3 UI 240/83	125.0 kg	3	550	240	480	356	430	516	157	183	155	-	-	-	-	-	-
AT3 45-69-4	Screw-type terminals	Fixing rail	M12	3 UI 240/110	116.0 kg	3	550	260	485	356	430	516	184	210	182	-	-	-	-	-	-
AT3 70-20/21-4	Screw-type terminals	Fixing rail	M12	3 UI 240/140	239.0 kg	3	550	290	520	356	430	516	214	240	212	-	-	-	-	-	-

Dimension pictures

2



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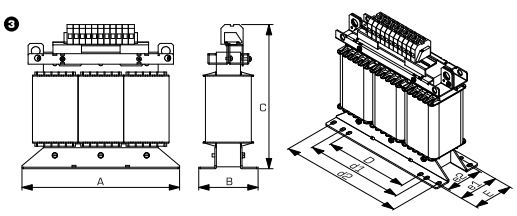

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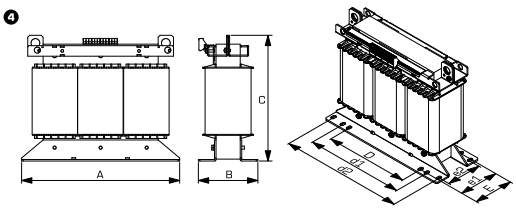


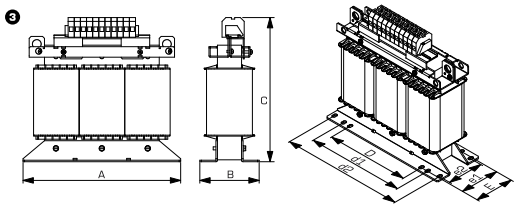
Autotransformer
AT3

Mechanical data 30

Typ	Terminals	Fixing method	Fixing screws	Core type	Weight	Dimension picture (in mm)	A	B	C	D	d1	d2	E	e1	e2	F	G	H	I	J	K
AT3 70-22/23-4	Screw-type terminals	Fixing rail	M12	3 UI 240/140	218.0 kg	3	550	290	520	356	430	516	214	240	212	-	-	-	-	-	-
AT3 70-24/35-4	Screw-type terminals	Fixing rail	M12	3 UI 240/140	212.0 kg	3	550	290	520	356	430	516	214	240	212	-	-	-	-	-	-
AT3 70-38/42-4	Screw-type terminals	Fixing rail	M8	3 UI 150/65	38.9 kg	3	350	185	320	224	240	328	107	117	133	-	-	-	-	-	-
AT3 70-44/46-4	Screw-type terminals	Fixing rail	M10	3 UI 210/63	83.2 kg	3	480	195	440	316	370	450	133	141	123	-	-	-	-	-	-
AT3 70-48/50-4	Screw-type terminals	Fixing rail	M12	3 UI 240/83	123.0 kg	3	550	240	485	356	430	516	157	183	155	-	-	-	-	-	-
AT3 70-58/60-4	Screw-type terminals	Fixing rail	M12	3 UI 240/140	192.0 kg	3	550	290	485	356	430	516	214	240	212	-	-	-	-	-	-
AT3 70-69-4	Screw-type terminals	Fixing rail	M12	3 UI 240/140	199.0 kg	3	550	290	485	356	430	516	214	240	212	-	-	-	-	-	-
AT3 110-20/21-4	Screw-type terminals	Fixing rail	M12	3 UI 270/135	264.0 kg	5	530	430	500	180	490	-	200	-	-	-	-	-	-	-	-
AT3 110-22/23-4	Screw-type terminals	Fixing rail	M12	3 UI 270/120	258.0 kg	5	530	415	500	180	490	-	185	-	-	-	-	-	-	-	-
AT3 110-24/35-4	Screw-type terminals	Fixing rail	M12	3 UI 270/120	243.0 kg	5	530	400	500	180	490	-	185	-	-	-	-	-	-	-	-
AT3 110-38/42-4	Screw-type terminals	Fixing rail	M8	3 UI 180/63	54.4 kg	3	410	165	415	264	310	388	125	125	115	-	-	-	-	-	-
AT3 110-44/46-4	Screw-type terminals	Fixing rail	M12	3 UI 240/83	123.0 kg	3	550	240	520	356	430	516	157	183	155	-	-	-	-	-	-
AT3 110-48/50-4	Screw-type terminals	Fixing rail	M12	3 UI 240/110	166.0 kg	3	550	260	520	356	430	516	184	210	182	-	-	-	-	-	-
AT3 110-58/60-4	Screw-type terminals	Fixing rail	M12	3 UI 270/120	220.0 kg	5	530	380	500	180	490	-	185	-	-	-	-	-	-	-	-
AT3 110-69-4	Screw-type terminals	Fixing rail	M12	3 UI 270/120	251.0 kg	5	530	380	500	180	490	-	185	-	-	-	-	-	-	-	-
AT3 160-20/21-4	Screw-type terminals	Fixing rail	M12	3 UI 300/150	380.0 kg	6	600	420	635	200	540	-	215	-	-	-	-	-	-	-	-
AT3 160-22/23-4	Screw-type terminals	Fixing rail	M12	3 UI 300/125	336.0 kg	6	600	390	635	200	540	-	190	-	-	-	-	-	-	-	-
AT3 160-24/35-4	Screw-type terminals	Fixing rail	M12	3 UI 300/125	310.0 kg	6	600	390	635	200	540	-	190	-	-	-	-	-	-	-	-
AT3 160-38/42-4	Screw-type terminals	Fixing rail	M10	3 UI 210/63	82.0 kg	3	480	235	490	316	370	450	133	141	123	-	-	-	-	-	-
AT3 160-44/46-4	Screw-type terminals	Fixing rail	M12	3 UI 240/110	166.0 kg	3	550	260	545	356	430	516	184	210	182	-	-	-	-	-	-
AT3 160-48/50-4	Screw-type terminals	Fixing rail	M12	3 UI 240/140	213.0 kg	3	550	290	520	356	430	516	214	240	212	-	-	-	-	-	-
AT3 160-58/60-4	Screw-type terminals	Fixing rail	M12	3 UI 270/120	269.0 kg	5	545	400	500	180	490	-	185	-	-	-	-	-	-	-	-

Dimension pictures

3



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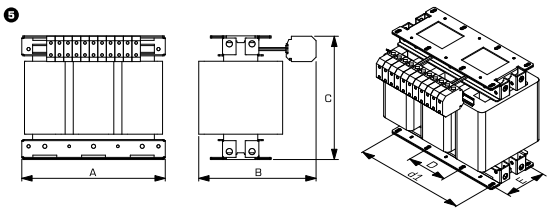

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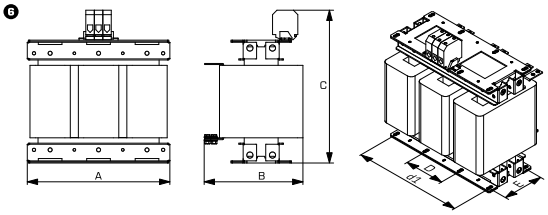


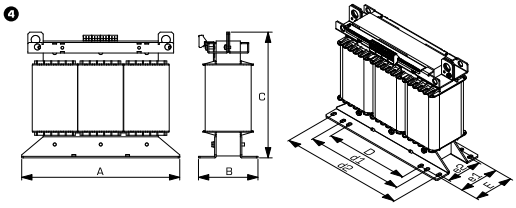
Autotransformer
AT3

Mechanical data

Typ	Terminals	Fixing method	Fixing screws	Core type	Weight	Dimension picture (in mm)	A	B	C	D	d1	d2	E	e1	e2	F	G	H	I	J	K
AT3 160-69-4	Screw-type terminals	Fixing rail	M12	3 UI 300/125	334.0 kg	5	600	480	550	200	540	-	190	-	-	-	-	-	-	-	-
AT3 250-20/21-4	Screw-type terminals	Fixing rail	M16	3 UI 375/150	545.0 kg	8	750	605	730	500	-	-	490	-	-	-	-	-	-	-	-
AT3 250-22/23-4	Screw-type terminals	Fixing rail	M16	3 UI 375/150	550.0 kg	8	750	605	730	500	-	-	490	-	-	-	-	-	-	-	-
AT3 250-24/35-4	Screw-type terminals	Fixing rail	M12	3 UI 300/175	439.0 kg	8	600	510	550	200	540	-	240	-	-	-	-	-	-	-	-
AT3 250-38/42-4	Screw-type terminals	Fixing rail	M10	3 UI 210/88	104.0 kg	4	480	270	395	316	370	450	158	166	148	-	-	-	-	-	-
AT3 250-44/46-4	Screw-type terminals	Fixing rail	M12	3 UI 270/120	210.0 kg	5	530	415	500	180	490	-	185	-	-	-	-	-	-	-	-
AT3 250-48/50-4	Screw-type terminals	Fixing rail	M12	3 UI 270/120	266.0 kg	5	530	415	500	180	490	-	185	-	-	-	-	-	-	-	-
AT3 250-58/60-4	Screw-type terminals	Fixing rail	M12	3 UI 300/150	390.0 kg	5	600	505	550	200	540	-	215	-	-	-	-	-	-	-	-
AT3 250-69-4	Screw-type terminals	Fixing rail	M16	3 UI 375/150	510.0 kg	8	750	605	730	500	-	-	490	-	-	-	-	-	-	-	-

Dimension pictures

4



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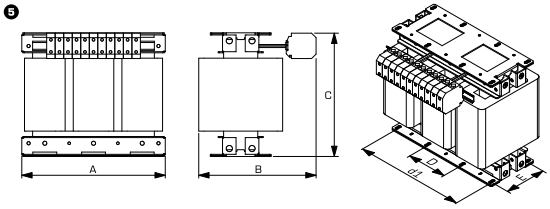

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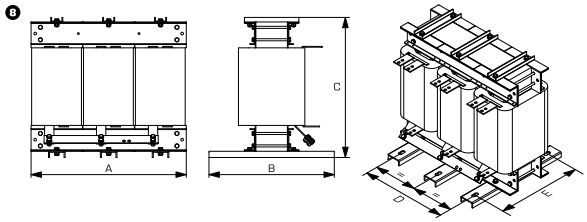
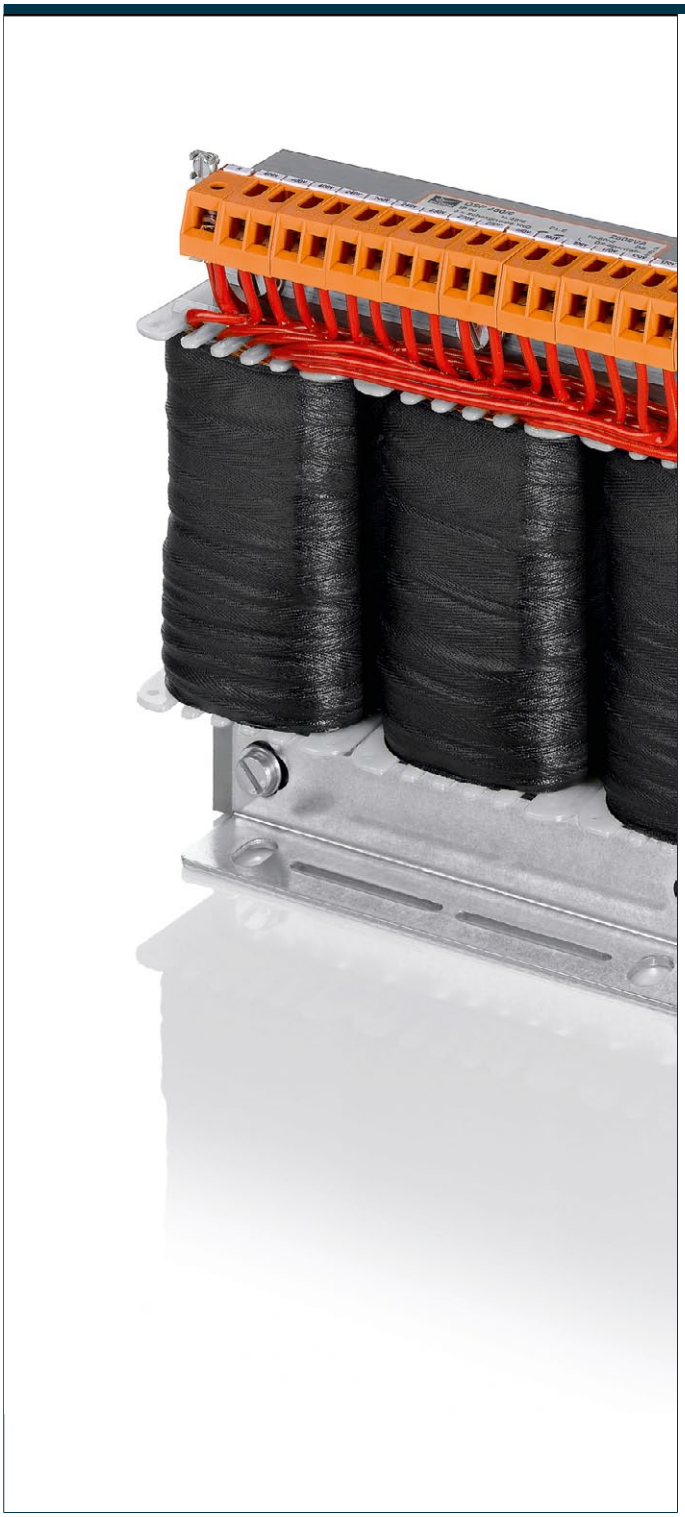


Autotransformer
DSP

BLOCK Website



General Data

Rated input voltage 3 x 400 Vac
Rated output voltage 3 x 130 - 3 x 240 Vac (5 stages)
Rated current 3 x 1.5 - 3 x 15 A
Insulation class E
Maximum ambient temperature 40 °C
Degree of protection IP 00

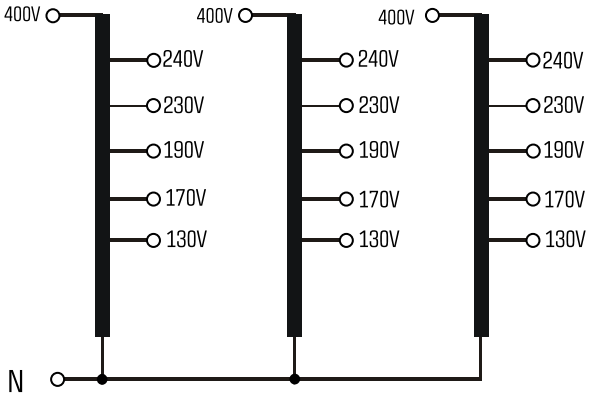
Advantages

Low weight and small size (compared to isolating transformers)
Very high efficiency
Very good moisture protection and low noise thanks to vacuum impregnation
Contact protected screw connection terminals complying with UVV BGV A3
Simple mounting thanks to robust metal fixing rail with oval slots

Applications

Autotransformer for example for setting the speed of single-phase fan motors.

Sample application



Standards

Autotransformer
to: VDE 0570 Teil 2-13, DIN EN 61558-2-13, EN 61558-2-13, IEC 61558-2-13

Approvals

EAC

Autotransformer
DSP

BLOCK Website

Electrical data

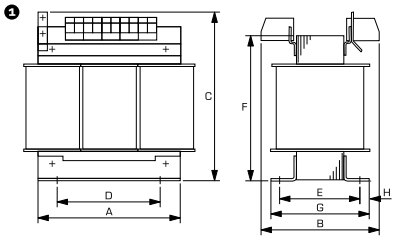
Typ	DSP 400/1,5	DSP 400/3	DSP 400/6	DSP 400/9	DSP 400/15
Input					
Rated input voltage	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac
Frequency range	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
Output					
Rated output voltage	3 x 240 Vac/3 x 230 Vac 3 x 190 Vac/3 x 170 Vac/3	3 x 240 Vac/3 x 230 Vac 3 x 190 Vac/3 x 170 Vac/3	3 x 240 Vac/3 x 230 Vac 3 x 190 Vac/3 x 170 Vac/3	3 x 240 Vac/3 x 230 Vac 3 x 190 Vac/3 x 170 Vac/3	3 x 240 Vac/3 x 230 Vac 3 x 190 Vac/3 x 170 Vac/3
Rated output current	3 x 1.5 A	3 x 3 A	3 x 6 A	3 x 9 A	3 x 15 A
Vector group	YNaO	YNaO	YNaO	YNaO	YNaO
Environment					
Ambient temperature max.	40 °C	40 °C	40 °C	40 °C	40 °C
Safety and protection					
Insulation class	E	E	E	E	E
Protection index	IP 00	IP 00	IP 00	IP 00	IP 00
Safety class (prepared)	I	I	I	I	I
Short circuit strength	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof
Order numbers					
Order Number	**DSP 400/1,5**	**DSP 400/3**	**DSP 400/6**	**DSP 400/9**	**DSP 400/15**

Mechanical data

Safety and protection					
Type	Open type	Open type	Open type	Open type	Open type
Terminal and mounting					
Terminals	Screw-type terminals	Screw-type terminals	Screw-type terminals	Screw-type terminals	Screw-type terminals
Fixing method	Fixing rail	Fixing rail	Fixing rail	Fixing rail	Fixing rail
Fixing screws	M5	M6	M6	M8	M8
Measures and weights					
Weight	3.80 kg	6.50 kg	13.50 kg	17.80 kg	30.00 kg
Dimension picture (in mm)	❶	❶	❶	❶	❶
A	150	179	238	263	263
B	90	97	112	110	137
C	160	180	220	243	243
D	113	136	140	200	200
E	49	56	82	75	101
F	133	158	202	230	230
G	67	76	112	107	133
H	9	10	15.5	16	16

Dimension pictures

❶



Variable transformer
ESS

BLOCK Website

General Data

Rated input voltage 230 Vac
Rated output voltage 0 - 250 Vac
Rated current 0.8 - 20 A
Insulation class B
Maximum ambient temperature 45 °C
Degree of protection IP 00

Advantages

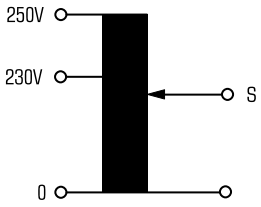
- Stepless adjustment of the AC voltage from zero to the maximum value
- Self-cleaning of the exposed contact tracks
- 4-point flange mounting
- Rotary knobs and scales optionally available

Applications

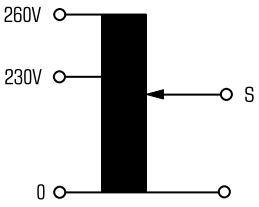
Variable auto transformer for continuous adjustment of AC voltages or currents under load.

Sample application

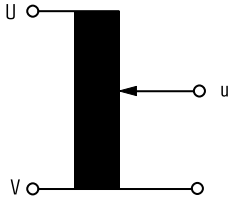
Serie 100



Serie 300



Serie 9000



Standards

Variable transformer
to: VDE 0552

Approvals

EAC

Variable transformer
ESS

BLOCK Website

Electrical data

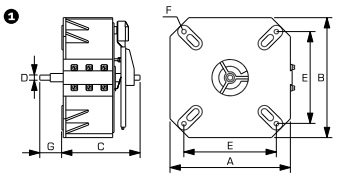
Typ	ESS 102	ESS 103	ESS 104	ESS 106	ESS 108	ESS 110
Input						
Rated input voltage	230 Vac	230 Vac	230 Vac	230 Vac	230 Vac	230 Vac
Frequency range	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
Output						
Angle of rotation	320 °	320 °	320 °	320 °	320 °	320 °
Rated output voltage	0...230/250 Vac	0...230/250 Vac	0...230/250 Vac	0...230/250 Vac	0...230/250 Vac	0...230/250 Vac
Rated output current	2.00 A	3.15 A	4.00 A	6.30 A	8.00 A	10.00 A
Environment						
Ambient temperature max.	45 °C	45 °C	45 °C	45 °C	45 °C	45 °C
Safety and protection						
Insulation class	B	B	B	B	B	B
Protection index	IP 00	IP 00	IP 00	IP 00	IP 00	IP 00
Test voltage control spindle	4 kV	4 kV	4 kV	4 kV	4 kV	4 kV
Order numbers						
Order Number	**ESS 102**	**ESS 103**	**ESS 104**	**ESS 106**	**ESS 108**	**ESS 110**

Mechanical data

Terminal and mounting						
Terminals	Screw-type terminals	Screw-type terminals	Screw-type terminals	Screw-type terminals	Screw-type terminals	Screw-type terminals
Fixing method	4-point bolted flange joint	4-point bolted flange joint	4-point bolted flange joint	4-point bolted flange joint	4-point bolted flange joint	4-point bolted flange joint
Measures and weights						
Weight	2.60 kg	3.80 kg	3.80 kg	5.20 kg	7.80 kg	7.80 kg
Accessory						
Rotary knob (optional)	AZ 50/6-1	AZ 50/6-1	AZ 50/6-1	AZ 50/6-1	AZ 50/8-1	AZ 50/8-1
Scale (optional)	SK/120	SK/120	SK/120	SK/120	SK/120	SK/120
Dimension picture (in mm)	❶	❶	❶	❶	❶	❶
A	137	159	159	159	197	197
B	125	147	147	147	185	185
C	84	84	84	103	118	118
D	6	6	6	6	8	8
E	96	112	112	112	142	142
F	5.8	5.8	5.8	7	7	7
G	32	32	32	32	32	32

Dimension pictures

❶



Variable transformer
ESS

BLOCK Website

Electrical data

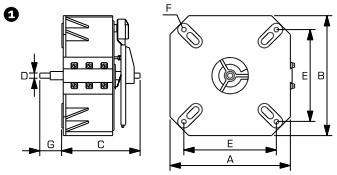
Typ	ESS 118	ESS 120	ESS 302	ESS 303	ESS 305	ESS 308
Input						
Rated input voltage	230 Vac	230 Vac	230 Vac	230 Vac	230 Vac	230 Vac
Frequency range	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
Output						
Angle of rotation	320 °	320 °	320 °	320 °	320 °	320 °
Rated output voltage	0...230/250 Vac	0...230/250 Vac	0...230/260 Vac	0...230/260 Vac	0...230/260 Vac	0...230/260 Vac
Rated output current	18.00 A	20.00 A	1.80 A	3.15 A	5.00 A	8.00 A
Environment						
Ambient temperature max.	45 °C	45 °C	45 °C	45 °C	45 °C	45 °C
Safety and protection						
Insulation class	B	B	B	B	B	B
Protection index	IP 00	IP 00	IP 00	IP 00	IP 00	IP 00
Test voltage control spindle	4 kV	4 kV	4 kV	4 kV	4 kV	4 kV
Order numbers						
Order Number	**ESS 118**	**ESS 120**	**ESS 302**	**ESS 303**	**ESS 305**	**ESS 308**

Mechanical data

Terminal and mounting						
Terminals	Screw-type terminals	Screw-type terminals	Screw-type terminals	Screw-type terminals	Screw-type terminals	Screw-type terminals
Fixing method	4-point bolted flange joint	4-point bolted flange joint	4-point bolted flange joint	4-point bolted flange joint	4-point bolted flange joint	4-point bolted flange joint
Measures and weights						
Weight	14.00 kg	14.00 kg	2.60 kg	3.80 kg	5.20 kg	7.80 kg
Accessory						
Rotary knob (optional)	AZ 50/8-1	AZ 50/8-1	AZ 50/6-1	AZ 50/6-1	AZ 50/6-1	AZ 50/8-1
Scale (optional)	SK/120	SK/120	SK/120	SK/120	SK/120	SK/120
Dimension picture (in mm)	❶	❶	❶	❶	❶	❶
A	243	243	137	159	159	197
B	231	231	125	147	147	185
C	121	121	84	84	103	118
D	8	8	6	6	6	8
E	180	180	96	112	112	142
F	11	11	5.8	5.8	7	7
G	32	32	32	32	32	32

Dimension pictures

❶



Variable transformer
ESS

BLOCK Website

Electrical data

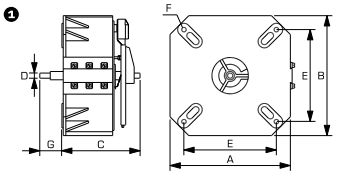
Typ	ESS 318	ESS 9008	ESS 9013
Input			
Rated input voltage	230 Vac	230 Vac	230 Vac
Frequency range	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
Output			
Angle of rotation	320 °	320 °	320 °
Rated output voltage	0...230/260 Vac	0...230 Vac	0...230 Vac
Rated output current	18.00 A	0.80 A	1.25 A
Environment			
Ambient temperature max.	45 °C	45 °C	45 °C
Safety and protection			
Insulation class	B	B	B
Protection index	IP 00	IP 00	IP 00
Test voltage control spindle	4 kV	4 kV	4 kV
Order numbers			
Order Number	**ESS 318**	**ESS 9008**	**ESS 9013**

Mechanical data

Terminal and mounting			
Terminals	Screw-type terminals	Screw-type terminals	Screw-type terminals
Fixing method	4-point bolted flange joint	Fixing hole	Fixing hole
Measures and weights			
Weight	14.00 kg	1.40 kg	1.40 kg
Accessory			
Rotary knob (optional)	AZ 50/8-1	AZ 50/6-1	AZ 50/6-1
Scale (optional)	SK/120	SK/85	SK/120
Dimension picture (in mm)	❶	❷	❷
A	243	94.5	94.5
B	231	98	95
C	121	58	58
D	8	6	6
E	180	-	-
F	11	3	3
G	32	23	28

Dimension pictures

❶



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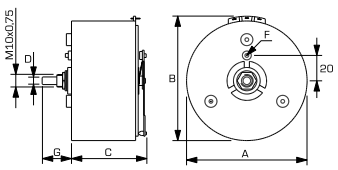
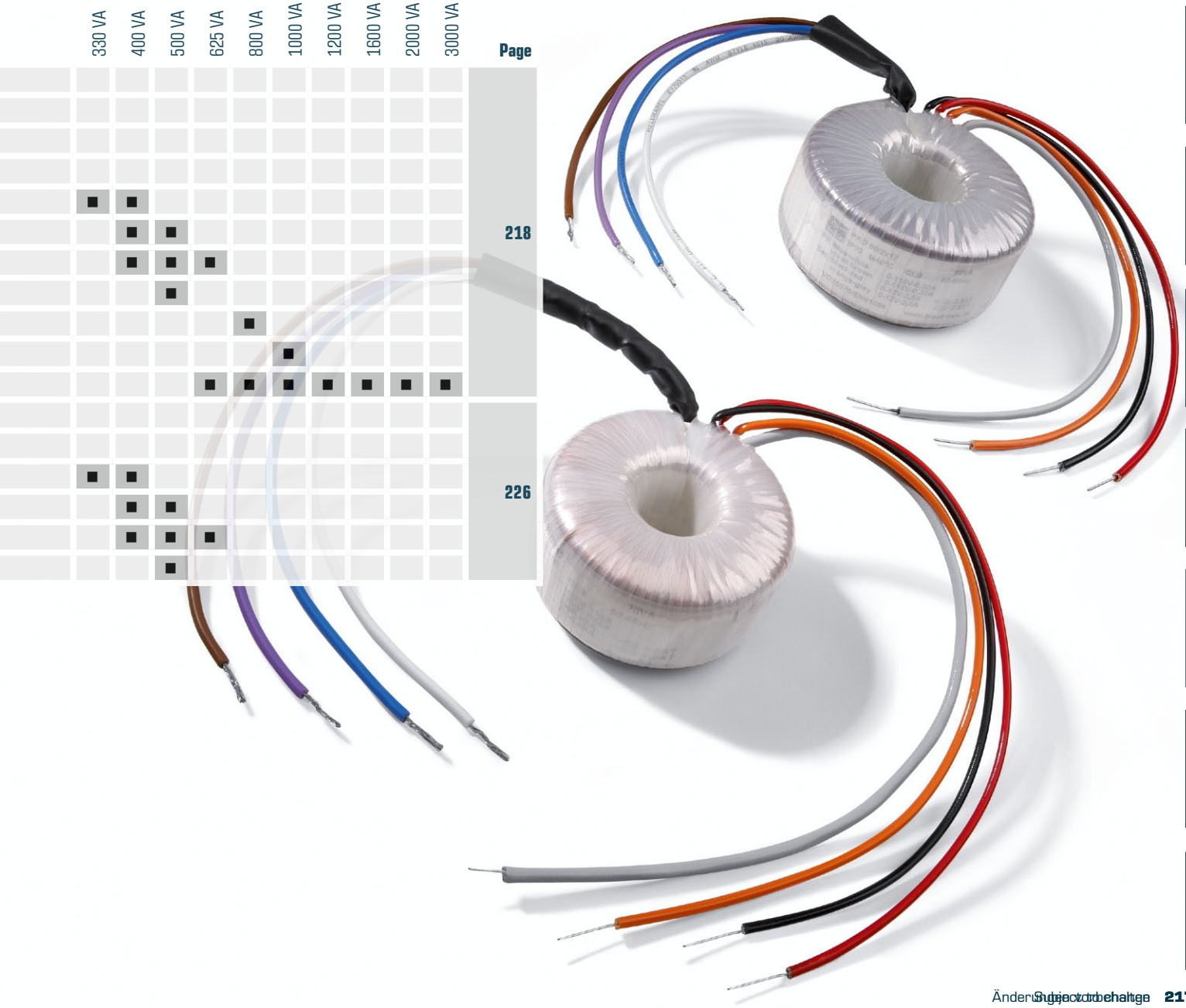


OVERVIEW
TOROIDAL TRANSFORMERS

Type	Features	Rated input voltage	Rated output voltage	15 VA	20 VA	30 VA	40 VA	50 VA	60 VA	80 VA	100 VA	120 VA	160 VA	200 VA	225 VA	250 VA	300 VA
RKD	Double input voltage	2 x 115 Vac	2 x 6 Vac	■		■	■		■								
			2 x 9 Vac	■		■	■		■		■	■					
			2 x 12 Vac	■	■	■	■	■	■	■	■	■	■	■	■	■	■
			2 x 15 Vac	■	■	■	■	■	■	■	■	■	■	■	■		
			2 x 18 Vac	■	■	■	■	■	■	■	■	■	■	■	■	■	■
			2 x 24 Vac		■	■	■	■	■	■	■	■	■	■	■	■	■
			2 x 30 Vac													■	
			2 x 35 Vac														
			2 x 40 Vac														
			2 x 50 Vac														
			2 x 115 Vac														
RTE	Integral temperature fuse	230 Vac	2 x 12 Vac	■	■	■	■	■	■	■	■	■	■	■	■	■	
			2 x 15 Vac	■	■	■	■	■	■	■	■	■	■	■	■		
			2 x 18 Vac	■	■	■	■	■	■	■	■	■	■	■	■	■	■
			2 x 24 Vac		■	■	■	■	■	■	■	■	■	■	■	■	■
			2 x 30 Vac													■	
			2 x 35 Vac														

330 VA	400 VA	500 VA	625 VA	800 VA	1000 VA	1200 VA	1600 VA	2000 VA	3000 VA	Page
	■	■								218
	■	■	■							
		■								
				■						
					■					
			■	■	■	■	■	■	■	
■	■									226
	■	■								
	■	■	■							
		■								



Toroidal safety isolating and isolating transformer
RKD

BLOCK Website

General Data

Rated input voltage 2 x 115 Vac
Rated output voltage 2 x 6 - 2 x 115 Vac
Power 15 - 3000 VA
Insulation class B
Maximum ambient temperature 40 °C
Efficiency up to 98 %
Degree of protection IP 00

Advantages

Minimum size at high power
Low weight
Double input voltage for series or parallel connection
Minimal no-load losses
Outstanding temperature behaviour thanks to low magnetic leakage field
Very low noise field

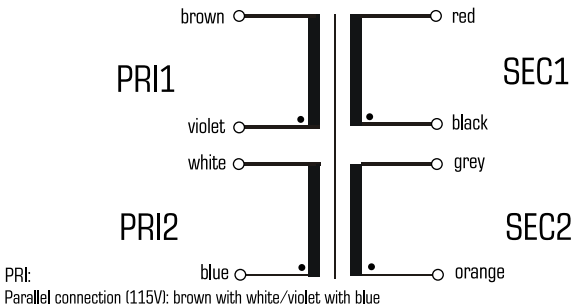
Applications

As a mains transformer for adjustment of the voltage and simple electrical isolation.

As an isolating transformer for the safe electrical isolation of the input and output sides. The transformer may be used to set up protective separation as a protective measure in accordance with VDE 0100.

As a safety isolating transformer for the safe electrical isolation of the input and output sides. The transformer is suitable for creating SELV and PELV circuits because of the limit on the output voltage.

Sample application



PRI:
Parallel connection (115V): brown with white/violet with blue
Series connection (230V): violet with white

SEC:
Parallel connection: red with gresy/black with orange
Series connection: black with grey

Standards

Mains transformer
to: VDE 0570 Teil 2-1, DIN EN 61558-2-1, EN 61558-2-1, IEC 61558-2-1, UL 5085-1/-2, CSA 22.2 No.66

Isolating transformer
to: VDE 0570 Part 2-4, DIN EN 61558-2-4, EN 61558-2-4, IEC 61558-2-4, UL 5085-1/-2, CSA 22.2 No.66

Safety isolating transformer
to: VDE 0570 Part 2-6, DIN EN 61558-2-6, EN 61558-2-6, IEC 61558-2-6, UL 5085-1/-2, CSA 22.2 No.66

Approvals

UL 5085-1/-2, CSA 22.2 No.66

Toroidal safety isolating and isolating transformer
RKD

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Electrical data

Typ	RKD 15/..	RKD 20/..	RKD 30/..	RKD 40/..
Input				
Rated input voltage	2 x 115 Vac	2 x 115 Vac	2 x 115 Vac	2 x 115 Vac
Rated frequency	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
Output				
Rated output voltage: Order no.	2x6 Vac: RKD 15/2x6 2x9 Vac: RKD 15/2x9 2x12 Vac: RKD 15/2x12 2x15 Vac: RKD 15/2x15 2x18 Vac: RKD 15/2x18	2x12 Vac: RKD 20/2x12 2x15 Vac: RKD 20/2x15 2x18 Vac: RKD 20/2x18 2x24 Vac: RKD 20/2x24*	2x6 Vac: RKD 30/2x6 2x9 Vac: RKD 30/2x9 2x12 Vac: RKD 30/2x12 2x15 Vac: RKD 30/2x15 2x18 Vac: RKD 30/2x18 2x24 Vac: RKD 30/2x24**	2x6 Vac: RKD 40/2x6 2x9 Vac: RKD 40/2x9 2x12 Vac: RKD 40/2x12 2x15 Vac: RKD 40/2x15 2x18 Vac: RKD 40/2x18 2x24 Vac: RKD 40/2x24**
Rated Power	15 VA	20 VA	30 VA	40 VA
No-load voltage (app. x factor)	1.35	1.29	1.20	1.20
No-load loss (typ.)	0.30 W	0.33 W	0.45 W	0.45 W
Efficiency	73.0 %	77.0 %	80.0 %	82.0 %
Standards				
Classification	Safety isolating transformer	Safety isolating transformer *Mains transformer	Safety isolating transformer *Mains transformer	Safety isolating transformer **Isolating transformer
Approvals				
Approvals	cURus	cURus	cURus	cURus
Environment				
Ambient temperature max.	40 °C	40 °C	40 °C	40 °C
Safety and protection				
Type	Open type	Open type	Open type	Open type
Insulation class	VDE=B, UL=class 105	VDE=B, UL=class 105	VDE=B, UL=class 105	VDE=B, UL=class 105
Protection index	IP 00	IP 00	IP 00	IP 00
Safety class (prepared)	II	II	II	II
Short circuit strength	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof
Test voltage	4000 Vac, 50 Hz	4000 Vac, 50 Hz	4000 Vac, 50 Hz	4000 Vac, 50 Hz
Order numbers				
Order Number	**see rated output voltage**	**see rated output voltage**	**see rated output voltage**	**see rated output voltage**

Toroidal safety isolating and isolating transformer
RKD

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Electrical data

Typ	RKD 50/..	RKD 60/..	RKD 80/..	RKD 100/..
Input				
Rated input voltage	2 x 115 Vac	2 x 115 Vac	2 x 115 Vac	2 x 115 Vac
Rated frequency	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
Output				
Rated output voltage: Order no.	2x12 Vac: RKD 50/2x12 2x15 Vac: RKD 50/2x15 2x18 Vac: RKD 50/2x18 2x24 Vac: RKD 50/2x24**	2x6 Vac: RKD 60/2x6 2x9 Vac: RKD 60/2x9 2x12 Vac: RKD 60/2x12 2x15 Vac: RKD 60/2x15 2x18 Vac: RKD 60/2x18 2x24 Vac: RKD 60/2x24** 2x30 Vac: RKD 60/2x30**	2x12 Vac: RKD 80/2x12 2x15 Vac: RKD 80/2x15 2x18 Vac: RKD 80/2x18 2x24 Vac: RKD 80/2x24**	2x9 Vac: RKD 100/2x9 2x12 Vac: RKD 100/2x12 2x15 Vac: RKD 100/2x15 2x18 Vac: RKD 100/2x18 2x24 Vac: RKD 100/2x24** 2x30 Vac: RKD 100/2x30**
Rated Power	50 VA	60 VA	80 VA	100 VA
No-load voltage (app. x factor)	1.20	1.14	1.12	1.10
No-load loss (typ.)	0.40 W	0.70 W	1.00 W	0.90 W
Efficiency	82.5 %	85.0 %	86.0 %	88.0 %
Standards				
Classification	Safety isolating transformer **Isolating transformer	Safety isolating transformer **Isolating transformer	Safety isolating transformer **Isolating transformer	Safety isolating transformer **Isolating transformer
Approvals				
Approvals	cURus	cURus	cURus	cURus
Environment				
Ambient temperature max.	40 °C	40 °C	40 °C	40 °C
Safety and protection				
Type	Open type	Open type	Open type	Open type
Insulation class	VDE=B, UL=class 105	VDE=B, UL=class 105	VDE=B, UL=class 105	VDE=B, UL=class 105
Protection index	IP 00	IP 00	IP 00	IP 00
Safety class (prepared)	II	II	II	II
Short circuit strength	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof
Test voltage	4000 Vac, 50 Hz	4000 Vac, 50 Hz	4000 Vac, 50 Hz	4000 Vac, 50 Hz
Order numbers				
Order Number	**see rated output voltage**	**see rated output voltage**	**see rated output voltage**	**see rated output voltage**

Toroidal safety isolating and isolating transformer
RKD

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Electrical data

Typ	RKD 120/..	RKD 160/..	RKD 200/..	RKD 225/..
Input				
Rated input voltage	2 x 115 Vac	2 x 115 Vac	2 x 115 Vac	2 x 115 Vac
Rated frequency	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
Output				
Rated output voltage: Order no.	2x9 Vac: RKD 120/2x9 2x12 Vac: RKD 120/2x12 2x15 Vac: RKD 120/2x15 2x18 Vac: RKD 120/2x18 2x24 Vac: RKD 120/2x24** 2x30 Vac: RKD 120/2x30	2x12 Vac: RKD 160/2x12 2x15 Vac: RKD 160/2x15 2x18 Vac: RKD 160/2x18 2x24 Vac: RKD 160/2x24** 2x30 Vac: RKD 160/2x30 2x35 Vac: RKD 160/2x35	2x12 Vac: RKD 200/2x12 2x15 Vac: RKD 200/2x15 2x18 Vac: RKD 200/2x18 2x24 Vac: RKD 200/2x24**	2x12 Vac: RKD 225/2x12 2x15 Vac: RKD 225/2x15 2x18 Vac: RKD 225/2x18 2x24 Vac: RKD 225/2x24** 2x30 Vac: RKD 225/2x30**
Rated Power	120 VA	160 VA	200 VA	225 VA
No-load voltage (app. x factor)	1.08	1.08	1.08	1.07
No-load loss (typ.)	1.00 W	1.10 W	1.50 W	1.50 W
Efficiency	91.0 %	91.0 %	91.5 %	92.0 %
Standards				
Classification	Safety isolating transformer **Isolating transformer	Safety isolating transformer **Isolating transformer	Safety isolating transformer **Isolating transformer	Safety isolating transformer **Isolating transformer
Approvals				
Approvals	cURus	cURus	cURus	cURus
Environment				
Ambient temperature max.	40 °C	40 °C	40 °C	40 °C
Safety and protection				
Type	Open type	Open type	Open type	Open type
Insulation class	VDE=B, UL=class 105	VDE=B, UL=class 105	VDE=B, UL=class 105	VDE=B, UL=class 105
Protection index	IP 00	IP 00	IP 00	IP 00
Safety class (prepared)	II	II	II	II
Short circuit strength	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof
Test voltage	4000 Vac, 50 Hz	4000 Vac, 50 Hz	4000 Vac, 50 Hz	4000 Vac, 50 Hz
Order numbers				
Order Number	**see rated output voltage**	**see rated output voltage**	**see rated output voltage**	**see rated output voltage**

Toroidal safety isolating and isolating transformer
RKD

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Electrical data

Typ	RKD 250/..	RKD 300/..	RKD 330/..	RKD 400/..
Input				
Rated input voltage	2 x 115 Vac	2 x 115 Vac	2 x 115 Vac	2 x 115 Vac
Rated frequency	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
Output				
Rated output voltage: Order no.	2x12 Vac: RKD 250/2x12 2x18 Vac: RKD 250/2x18 2x24 Vac: RKD 250/2x24** 2x30 Vac: RKD 250/2x30**	2x12 Vac: RKD 300/2x12 2x18 Vac: RKD 300/2x18 2x24 Vac: RKD 300/2x24**	2x18 Vac: RKD 330/2x18	2x18 Vac: RKD 400/2x18 2x24 Vac: RKD 400/2x24** 2x30 Vac: RKD 400/2x30**
Rated Power	250 VA	300 VA	330 VA	400 VA
No-load voltage (app. x factor)	1.05	1.06	1.04	1.05
No-load loss (typ.)	2.10 W	2.50 W	2.50 W	3.20 W
Efficiency	93.0 %	92.5 %	94.0 %	93.5 %
Standards				
Classification	Safety isolating transformer **Isolating transformer	Safety isolating transformer **Isolating transformer	Safety isolating transformer	Safety isolating transformer **Isolating transformer
Approvals				
Approvals	cURus	cURus	cURus	cURus
Environment				
Ambient temperature max.	40 °C	40 °C	40 °C	40 °C
Safety and protection				
Type	Open type	Open type	Open type	Open type
Insulation class	VDE=B, UL=class 105	VDE=B, UL=class 105	VDE=B, UL=class 105	VDE=B, UL=class 105
Protection index	IP 00	IP 00	IP 00	IP 00
Safety class (prepared)	II	II	II	II
Short circuit strength	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof
Test voltage	4000 Vac, 50 Hz	4000 Vac, 50 Hz	4000 Vac, 50 Hz	4000 Vac, 50 Hz
Order numbers				
Order Number	**see rated output voltage**	**see rated output voltage**	**see rated output voltage**	**see rated output voltage**

Toroidal safety isolating and isolating transformer
RKD

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Electrical data

Typ	RKD 500/..	RKD 625/..	RKD 800/..	RKD 1000/..
Input				
Rated input voltage	2 x 115 Vac	2 x 115 Vac	2 x 115 Vac	2 x 115 Vac
Rated frequency	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
Output				
Rated output voltage: Order no.	2x24 Vac: RKD 500/2x24 2x30 Vac: RKD 500/2x30 2x35 Vac: RKD 500/2x35	2x30 Vac: RKD 625/2x30 2x115 Vac: RKD 625/2x115	2x40 Vac: RKD 800/2x40 2x115 Vac: RKD 800/2x115	2x50 Vac: RKD 1000/2x50 2x115 Vac: RKD 1000/2x115
Rated Power	500 VA	625 VA	800 VA	1000 VA
No-load voltage (app. x factor)	1.04	1.04	1.04	1.02
No-load loss (typ.)	3.40 W	4.90 W	5.30 W	6.50 W
Efficiency	95.0 %	95.0 %	96.0 %	96.0 %
Standards				
Classification	Isolating transformer	Isolating transformer	Isolating transformer	Isolating transformer
Approvals				
Approvals	cURus	cURus	cURus	cURus
Environment				
Ambient temperature max.	40 °C	40 °C	40 °C	40 °C
Safety and protection				
Type	Open type	Open type	Open type	Open type
Insulation class	VDE=B, UL=class 105	VDE=B, UL=class 105	VDE=B, UL=class 105	VDE=B, UL=class 105
Protection index	IP 00	IP 00	IP 00	IP 00
Safety class (prepared)	II	II	II	II
Short circuit strength	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof
Test voltage	4000 Vac, 50 Hz	4000 Vac, 50 Hz	4000 Vac, 50 Hz	4000 Vac, 50 Hz
Order numbers				
Order Number	**see rated output voltage**	**see rated output voltage**	**see rated output voltage**	**see rated output voltage**

Toroidal safety isolating and isolating transformer
RKD

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Electrical data

Typ	RKD 1200/..	RKD 1600/..	RKD 2000/..	RKD 3000/..
Input				
Rated input voltage	2 x 115 Vac	2 x 115 Vac	2 x 115 Vac	2 x 115 Vac
Rated frequency	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
Output				
Rated output voltage: Order no.	2x115 Vac: RKD 1200/2x115	2x115 Vac: RKD 1600/2x115	2x115 Vac: RKD 2000/2x115	2x115 Vac: RKD 3000/2x115
Rated Power	1200 VA	1600 VA	2000 VA	3000 VA
No-load voltage (app. x factor)	1.03	1.02	1.02	1.01
No-load loss (typ.)	7.50 W	9.60 W	10.40 W	12.70 W
Efficiency	96.0 %	97.0 %	97.0 %	98.0 %
Standards				
Classification	Isolating transformer	Isolating transformer	Isolating transformer	Isolating transformer
Approvals				
Approvals	cURus	cURus	cURus	cURus
Environment				
Ambient temperature max.	40 °C	40 °C	40 °C	40 °C
Safety and protection				
Type	Open type	Open type	Open type	Open type
Insulation class	VDE=B, UL=class 105	VDE=B, UL=class 105	VDE=B, UL=class 105	VDE=B, UL=class 105
Protection index	IP 00	IP 00	IP 00	IP 00
Safety class (prepared)	II	II	II	II
Short circuit strength	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof
Test voltage	4000 Vac, 50 Hz	4000 Vac, 50 Hz	4000 Vac, 50 Hz	4000 Vac, 50 Hz
Order numbers				
Order Number	**see rated output voltage**	**see rated output voltage**	**see rated output voltage**	**see rated output voltage**

Toroidal safety isolating and isolating transformer
RKD

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Mechanical data

Typ	Fixing method	Terminals	Major diameter Ø	Outside diameter in the area of the wire lead Ø	Height without mounting	Weight
RKD 15/..	Mounting kit, M4 bolt	Connecting leads, 200 mm	58 mm	60 mm	27 mm	0.29 kg
RKD 20/..	Mounting kit, M4 bolt	Connecting leads, 200 mm	60 mm	62 mm	31 mm	0.32 kg
RKD 30/..	Mounting kit, M4 bolt	Connecting leads, 200 mm	68 mm	71 mm	31 mm	0.46 kg
RKD 40/..	Mounting kit, M6 bolt	Connecting leads, 200 mm	74 mm	77 mm	33 mm	0.52 kg
RKD 50/..	Mounting kit, M6 bolt	Connecting leads, 200 mm	77 mm	79 mm	39 mm	0.68 kg
RKD 60/..	Mounting kit, M6 bolt	Connecting leads, 200 mm	80 mm	83 mm	38 mm	0.75 kg
RKD 80/..	Mounting kit, M6 bolt	Connecting leads, 200 mm	88 mm	91 mm	43 mm	1.10 kg
RKD 100/..	Mounting kit, M6 bolt	Connecting leads, 200 mm	92 mm	94 mm	45 mm	1.20 kg
RKD 120/..	Mounting kit, M6 bolt	Connecting leads, 200 mm	94 mm	96 mm	46 mm	1.40 kg
RKD 160/..	Mounting kit, M6 bolt	Connecting leads, 200 mm	105 mm	107 mm	50 mm	1.70 kg
RKD 200/..	Mounting kit, M8 bolt	Connecting leads, 200 mm	113 mm	115 mm	51 mm	2.10 kg
RKD 225/..	Mounting kit, M8 bolt	Connecting leads, 200 mm	115 mm	117 mm	54 mm	2.30 kg
RKD 250/..	Mounting kit, M8 bolt	Connecting leads, 200 mm	114 mm	117 mm	54 mm	2.50 kg
RKD 300/..	Mounting kit, M8 bolt	Connecting leads, 200 mm	122 mm	126 mm	64 mm	3.10 kg
RKD 330/..	Mounting kit, M8 bolt	Connecting leads, 200 mm	124 mm	127 mm	65 mm	3.20 kg
RKD 400/..	Mounting kit, M8 bolt	Connecting leads, 200 mm	128 mm	131 mm	73 mm	4.10 kg
RKD 500/..	Mounting kit, M8 bolt	Connecting leads, 200 mm	140 mm	143 mm	68 mm	4.80 kg
RKD 625/..	Mounting kit, M8 bolt	Connecting leads, 200 mm	152 mm	154 mm	74 mm	6.10 kg
RKD 800/..	Mounting kit, M8 bolt	Connecting leads, 200 mm	170 mm	172 mm	72 mm	7.00 kg
RKD 1000/..	Mounting kit, M8 bolt	Connecting leads, 200 mm	168 mm	170 mm	85 mm	8.30 kg
RKD 1200/..	Remaining hole casting, with integrated mounting holes	Connecting leads, 200 mm	167 mm	170 mm	100 mm	9.80 kg
RKD 1600/..	Remaining hole casting, with integrated mounting holes	Connecting leads, 200 mm	202 mm	205 mm	105 mm	12.70 kg
RKD 2000/..	Remaining hole casting, with integrated mounting holes	Connecting leads, 200 mm	203 mm	206 mm	110 mm	15.00 kg
RKD 3000/..	Remaining hole casting, with integrated mounting holes	Connecting leads, 200 mm	216 mm	221 mm	125 mm	20.90 kg

Toroidal safety isolating and isolating transformer
RTE

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General Data

Rated input voltage 230 Vac
Rated output voltage 2 x 12 - 2 x 35 Vac
Power 15 - 625 VA
Insulation class B
Maximum ambient temperature 40 °C
Efficiency up to 95 %
Degree of protection IP 00

Advantages

Minimum size at high output
Low weight
Double output voltage for series or parallel connection
Protected against overload by integral temperature fuse
Minimal no-load losses
Outstanding temperature behaviour thanks to low magnetic leakage field
Very low noise field

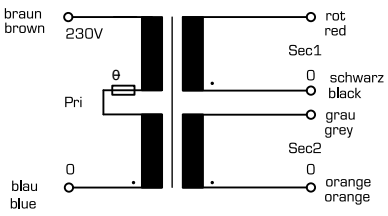
Applications

As a mains transformer for adjustment of the voltage and simple electrical isolation.

As an isolating transformer as specified in EN 61558-2-6 for the safe electrical isolation of the input and output sides. The transformer may be used to set up protective separation as a protective measure in accordance with VDE 0100.

As a safety isolating transformer as specified in EN 61558-2-6 for the safe electrical isolation of the input and output sides. The transformer is suitable for creating SELV and PELV circuits because of the limit on the output voltage.

Sample application



Parallelschaltung: rot mit grau / schwarz mit orange
Parallel connection: red with grey / black with orange

Reihenschaltung: schwarz mit grau
Series connection: black with grey

Standards

Mains transformer
to: VDE 0570 Teil 2-1, DIN EN 61558-2-1, EN 61558-2-1, IEC 61558-2-1, UL 5085-1/-2, CSA 22.2 No.66

Safety isolating transformer
to: VDE 0570 Teil 2-6, DIN EN 61558-2-6, EN 61558-2-6, IEC 61558-2-6, UL 5085-1/-2, CSA 22.2 No.66

Isolating transformer
to: VDE 0570 Part2-4, DIN EN 61558-2-4, EN 61558-2-4, IEC 61558-2-4, UL 5085-1/-2, CSA 22.2 No.66

Approvals

UL 5085-1/-2, CSA 22.2 No.66

Toroidal safety isolating and isolating transformer
RTE

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Electrical data

Typ	RTE 15/..	RTE 20/..	RTE 30/..	RTE 40/..	RTE 50/..	RTE 60/..
Input						
Rated input voltage	230 Vac	230 Vac	230 Vac	230 Vac	230 Vac	230 Vac
Rated frequency	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
Output						
Rated output voltage: Order no.	2x12 Vac: RTE 15/2x12 2x15 Vac: RTE 15/2x15 2x18 Vac: RTE 15/2x18	2x12 Vac: RTE 20/2x12 2x15 Vac: RTE 20/2x15 2x18 Vac: RTE 20/2x18 2x24 Vac: RTE 20/2x24*	2x12 Vac: RTE 30/2x12 2x15 Vac: RTE 30/2x15 2x18 Vac: RTE 30/2x18 2x24 Vac: RTE 30/2x24*	2x12 Vac: RTE 40/2x12 2x15 Vac: RTE 40/2x15 2x18 Vac: RTE 40/2x18 2x24 Vac: RTE 40/2x24**	2x12 Vac: RTE 50/2x12 2x15 Vac: RTE 50/2x15 2x18 Vac: RTE 50/2x18 2x24 Vac: RTE 50/2x24**	2x12 Vac: RTE 60/2x12 2x15 Vac: RTE 60/2x15 2x18 Vac: RTE 60/2x18 2x24 Vac: RTE 60/2x24**
Rated Power	15 VA	20 VA	30 VA	40 VA	50 VA	60 VA
No-load voltage (app. x factor)	1.35	1.29	1.20	1.20	1.20	1.14
No-load loss (typ.)	0.30 W	0.33 W	0.45 W	0.45 W	0.40 W	0.70 W
Efficiency	73.0 %	77.0 %	80.0 %	82.0 %	82.5 %	85.0 %
Standards						
Classification	Safety isolating transformer	Safety isolating transformer *Mains transformer	Safety isolating transformer *Mains transformer	Safety isolating transformer **Isolating transformer	Safety isolating transformer **Isolating transformer	Safety isolating transformer **Isolating transformer
Approvals						
Approvals	cURus	cURus	cURus	cURus	cURus	cURus
Environment						
Ambient temperature max.	40 °C	40 °C	40 °C	40 °C	40 °C	40 °C
Safety and protection						
Type	Open type	Open type	Open type	Open type	Open type	Open type
Insulation class	VDE=B, UL=class 105	VDE=B, UL=class 105	VDE=B, UL=class 105	VDE=B, UL=class 105	VDE=B, UL=class 105	VDE=B, UL=class 105
Protection index	IP 00	IP 00	IP 00	IP 00	IP 00	IP 00
Safety class (prepared)	II	II	II	II	II	II
Short circuit strength	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof
Test voltage	4000 Vac, 50 Hz	4000 Vac, 50 Hz	4000 Vac, 50 Hz	4000 Vac, 50 Hz	4000 Vac, 50 Hz	4000 Vac, 50 Hz
Order numbers						
Order Number	**see rated output voltage**	**see rated output voltage**	**see rated output voltage**	**see rated output voltage**	**see rated output voltage**	**see rated output voltage**

Toroidal safety isolating and isolating transformer
RTE

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Electrical data

Typ	RTE 80/..	RTE 100/..	RTE 120/..	RTE 160/..	RTE 200/..	RTE 225/..
Input						
Rated input voltage	230 Vac	230 Vac	230 Vac	230 Vac	230 Vac	230 Vac
Rated frequency	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
Output						
Rated output voltage: Order no.	2x12 Vac: RTE 80/2x12 2x15 Vac: RTE 80/2x15 2x18 Vac: RTE 80/2x18 2x24 Vac: RTE 80/2x24**	2x12 Vac: RTE 100/2x12 2x15 Vac: RTE 100/2x15 2x18 Vac: RTE 100/2x18 2x24 Vac: RTE 100/2x24**	2x12 Vac: RTE 120/2x12 2x15 Vac: RTE 120/2x15 2x18 Vac: RTE 120/2x18 2x24 Vac: RTE 120/2x24**	2x12 Vac: RTE 160/2x12 2x15 Vac: RTE 160/2x15 2x18 Vac: RTE 160/2x18 2x24 Vac: RTE 160/2x24**	2x12 Vac: RTE 200/2x12 2x15 Vac: RTE 200/2x15 2x18 Vac: RTE 200/2x18 2x24 Vac: RTE 200/2x24**	2x12 Vac: RTE 225/2x12 2x15 Vac: RTE 225/2x15 2x18 Vac: RTE 225/2x18 2x24 Vac: RTE 225/2x24**
Rated Power	80 VA	100 VA	120 VA	160 VA	200 VA	225 VA
No-load voltage (app. x factor)	1.12	1.10	1.08	1.08	1.08	1.07
No-load loss (typ.)	1.00 W	0.90 W	1.00 W	1.10 W	1.50 W	1.50 W
Efficiency	86.0 %	88.0 %	91.0 %	91.0 %	91.5 %	92.0 %
Standards						
Classification	Safety isolating transformer **Isolating transformer	Safety isolating transformer **Isolating transformer	Safety isolating transformer **Isolating transformer	Safety isolating transformer **Isolating transformer	Safety isolating transformer **Isolating transformer	Safety isolating transformer **Isolating transformer
Approvals						
Approvals	cURus	cURus	cURus	cURus	cURus	cURus
Environment						
Ambient temperature max.	40 °C	40 °C	40 °C	40 °C	40 °C	40 °C
Safety and protection						
Type	Open type	Open type	Open type	Open type	Open type	Open type
Insulation class	VDE=B, UL=class 105	VDE=B, UL=class 105	VDE=B, UL=class 105	VDE=B, UL=class 105	VDE=B, UL=class 105	VDE=B, UL=class 105
Protection index	IP 00	IP 00	IP 00	IP 00	IP 00	IP 00
Safety class (prepared)	II	II	II	II	II	II
Short circuit strength	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof
Test voltage	4000 Vac, 50 Hz	4000 Vac, 50 Hz	4000 Vac, 50 Hz	4000 Vac, 50 Hz	4000 Vac, 50 Hz	4000 Vac, 50 Hz
Order numbers						
Order Number	**see rated output voltage**	**see rated output voltage**	**see rated output voltage**	**see rated output voltage**	**see rated output voltage**	**see rated output voltage**

Toroidal safety isolating and isolating transformer
RTE

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Electrical data

Typ	RTE 250/..	RTE 300/..	RTE 330/..	RTE 400/..	RTE 500/..	RTE 625/..
Input						
Rated input voltage	230 Vac	230 Vac	230 Vac	230 Vac	230 Vac	230 Vac
Rated frequency	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
Output						
Rated output voltage: Order no.	2x12 Vac: RTE 250/2x12 2x18 Vac: RTE 250/2x18 2x24 Vac: RTE 250/2x24** 2x30 Vac: RTE 250/2x30**	2x18 Vac: RTE 300/2x18 2x24 Vac: RTE 300/2x24**	2x18 Vac: RTE 330/2x18	2x18 Vac: RTE 400/2x18 2x24 Vac: RTE 400/2x24** 2x30 Vac: RTE 400/2x30**	2x24 Vac: RTE 500/2x24 2x30 Vac: RTE 500/2x30 2x35 Vac: RTE 500/2x35	2x30 Vac: RTE 625/2x30
Rated Power	250 VA	300 VA	330 VA	400 VA	500 VA	625 VA
No-load voltage (app. x factor)	1.05	1.06	1.04	1.05	1.04	1.04
No-load loss (typ.)	2.10 W	2.50 W	2.50 W	3.20 W	3.40 W	4.90 W
Efficiency	93.0 %	92.5 %	94.0 %	93.5 %	95.0 %	95.0 %
Standards						
Classification	Safety isolating transformer **Isolating transformer	Safety isolating transformer **Isolating transformer	Safety isolating transformer	Safety isolating transformer **Isolating transformer	Isolating transformer	Isolating transformer
Approvals						
Approvals	cURus	cURus	cURus	cURus	cURus	cURus
Environment						
Ambient temperature max.	40 °C	40 °C	40 °C	40 °C	40 °C	40 °C
Safety and protection						
Type	Open type	Open type	Open type	Open type	Open type	Open type
Insulation class	VDE=B, UL=class 105	VDE=B, UL=class 105	VDE=B, UL=class 105	VDE=B, UL=class 105	VDE=B, UL=class 105	VDE=B, UL=class 105
Protection index	IP 00	IP 00	IP 00	IP 00	IP 00	IP 00
Safety class (prepared)	II	II	II	II	II	II
Short circuit strength	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof	non-short-circuit proof
Test voltage	4000 Vac, 50 Hz	4000 Vac, 50 Hz	4000 Vac, 50 Hz	4000 Vac, 50 Hz	4000 Vac, 50 Hz	4000 Vac, 50 Hz
Order numbers						
Order Number	**see rated output voltage**	**see rated output voltage**	**see rated output voltage**	**see rated output voltage**	**see rated output voltage**	**see rated output voltage**

Toroidal safety isolating and isolating transformer
RTE

BLOCK Website

30 Mechanical data

Typ	Fixing method	Terminals	Major diameter Ø	Outside diameter in the area of the wire lead Ø	Height without mounting	Weight
RTE 15/..	Mounting kit, M4 bolt	Connecting leads, 200 mm	58 mm	60 mm	27 mm	0.29 kg
RTE 20/..	Mounting kit, M4 bolt	Connecting leads, 200 mm	60 mm	62 mm	31 mm	0.32 kg
RTE 30/..	Mounting kit, M4 bolt	Connecting leads, 200 mm	68 mm	70 mm	31 mm	0.46 kg
RTE 40/..	Mounting kit, M6 bolt	Connecting leads, 200 mm	74 mm	77 mm	33 mm	0.52 kg
RTE 50/..	Mounting kit, M6 bolt	Connecting leads, 200 mm	77 mm	79 mm	39 mm	0.68 kg
RTE 60/..	Mounting kit, M6 bolt	Connecting leads, 200 mm	80 mm	83 mm	38 mm	0.75 kg
RTE 80/..	Mounting kit, M6 bolt	Connecting leads, 200 mm	88 mm	91 mm	43 mm	1.10 kg
RTE 100/..	Mounting kit, M6 bolt	Connecting leads, 200 mm	92 mm	94 mm	45 mm	1.20 kg
RTE 120/..	Mounting kit, M6 bolt	Connecting leads, 200 mm	94 mm	96 mm	46 mm	1.40 kg
RTE 160/..	Mounting kit, M6 bolt	Connecting leads, 200 mm	105 mm	107 mm	50 mm	1.70 kg
RTE 200/..	Mounting kit, M8 bolt	Connecting leads, 200 mm	113 mm	115 mm	51 mm	2.10 kg
RTE 225/..	Mounting kit, M8 bolt	Connecting leads, 200 mm	115 mm	117 mm	54 mm	2.30 kg
RTE 250/..	Mounting kit, M8 bolt	Connecting leads, 200 mm	114 mm	117 mm	54 mm	2.52 kg
RTE 300/..	Mounting kit, M8 bolt	Connecting leads, 200 mm	122 mm	126 mm	64 mm	3.10 kg
RTE 330/..	Mounting kit, M8 bolt	Connecting leads, 200 mm	124 mm	127 mm	65 mm	3.20 kg
RTE 400/..	Mounting kit, M8 bolt	Connecting leads, 200 mm	128 mm	131 mm	73 mm	4.10 kg
RTE 500/..	Mounting kit, M8 bolt	Connecting leads, 200 mm	140 mm	143 mm	68 mm	4.80 kg
RTE 625/..	Mounting kit, M8 bolt	Connecting leads, 200 mm	152 mm	154 mm	74 mm	6.10 kg

Inrush current limiter, current-controlled with no-load detection
ESG 6

BLOCK Website

General Data

- Rated voltage 110 - 230 Vac ±10 %
- Rated current 16 A, (UL: 12 A)
- Internal resistance 7.8 Ohms
- Maximum ambient temperature 40 °C
- Degree of protection IP 20

Advantages

- Dynamic limit times for optimum starting of consumers with high inrush currents
- Current-controlled with no-load detection, hence full current limit protection, even if momentarily switched back on
- Robust plastic housing for rail mounting, e.g. in consumer units or meter mounting boards

Applications

Inrush current limiting option for limiting the inrush current in power tools, transformers and other loads with high switch-on or inrush currents.

Approvals

Inrush current limiter, current-controlled with no-load detection
ESG 6

BLOCK Website

Electrical data

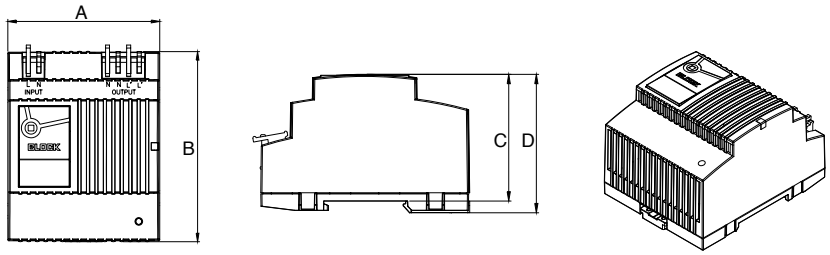
Typ	ESG 6
Operating data	
Rated voltage	110 - 230 Vac ±10 %
Rated frequency	50 - 60 Hz
Rated current	16 A, (UL: 12 A)
Environment	
Ambient temperature max.	40 °C
Safety and protection	
Safety	integrated, non-replaceable thermal fuse in the input circuit
Protection index	IP 20
Safety class (prepared)	II
Internal impedance	7.80 Ω
Order numbers	
Order Number	**ESG 6**

Mechanical data

Terminal and mounting	
Terminals Input	Spring clamp terminal max. 2.5 mm²
Terminals Output	Spring clamp terminal max. 2.5 mm²
Measures and weights	
Dimension (W x H x D)	72 x 90 x 59,2 mm
Weight	0.17 kg
Dimension picture (in mm)	❹
A	72
B	90
C	54.2
D	59.2

Dimension pictures

❶



Inrush current limiter
ES 00 / ES 30

BLOCK Website

General Data

- Rated voltage 220 - 400 Vac
- Maximum rated current 16 A
- Internal resistance 3.75 Ohms
- Maximum ambient temperature 40 °C
- Degree of protection IP 00 / IP 30

Advantages

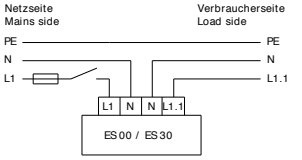
- Very good moisture protection thanks to XtraDenseFill resin encapsulation (ES30)
- ES 00: Robust plastic housing for screwed mounting
- ES 30: Robust plastic housing for rail mounting, e.g. in consumer units or meter mounting boards

Applications

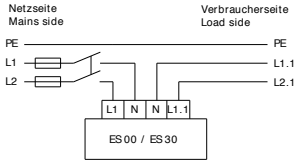
Inrush current limiting option for limiting the inrush current in transformers with high switch-on or inrush currents (not suited for electrical machinery or motors).

Sample applications

Beschaltung für Einphasenverbraucher zwischen L und N
Wiring for single-phase loads between L and N

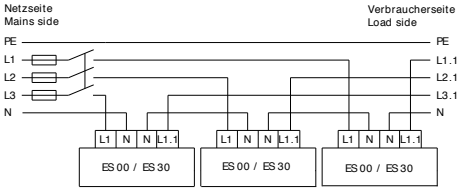


Beschaltung für Einphasenverbraucher zwischen L und L
Wiring for single-phase loads between L and L



Verbraucher dürfen nicht gegen L3 oder gegen N angeschlossen werden!
It's not allowed to connect loads against L3 or N!

Beschaltung für Drehstromverbraucher
Wiring for three-phase consumers



Inrush current limiter
ES 00 / ES 30

BLOCK Website

Electrical data

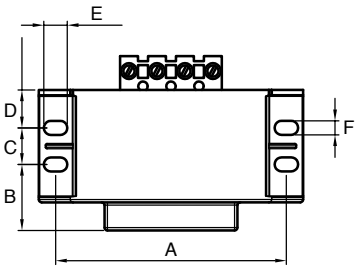
Typ	ES 00	ES 30
Operating data		
Rated voltage	220 - 400 Vac	220 - 400 Vac
Rated frequency	50 - 60 Hz	50 - 60 Hz
Rated current	max. 16 A	max. 16 A
Environment		
Ambient temperature max.	40 °C	40 °C
Safety and protection		
Type	Mounting lugs with fixing holes	Fixing holes and for panel installation on mounting rails
Protection index	IP 00	IP 30
Safety class (prepared)	II	II
Internal impedance	3.75 Ω	3.75 Ω
Safety	integrated, non-replaceable thermal fuse in the input circuit	integrated, non-replaceable thermal fuse in the input circuit
Order numbers		
Order Number	**ES 00**	**ES 30**

Mechanical data

Terminal and mounting		
Terminals	Screw terminal	Screw terminal
Fixing method	Fixing holes in the housing	DIN rail mounting
Measures and weights		
Weight	0.27 kg	0.47 kg
Dimension (W x H x D)	60 x 60 x 94 mm	71 x 90,4 x 58 mm
Dimension picture (in mm)	❶	❷
A	60	90.4
B	23.5	44.6
C	13	71
D	13.5	5
E	8.4	-
F	5	-

Dimension pictures

❶



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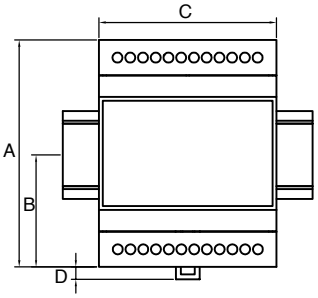


Inrush current limiter
ESG 1 / ESG 2

BLOCK Website

General Data

Rated voltage 220 - 250 Vac
Maximum rated current 16 A
Internal resistance 3.75 Ohms
Maximum ambient temperature 40 °C
Degree of protection IP 20

Advantages

Very good moisture protection thanks to XtraDenseFill resin encapsulation
May be used anywhere for stationary and mobile applications
ESG 1: Integrated safety plug and built-in safety socket
ESG 2: 1.4 m connecting cable with safety plug and built-in safety socket

Applications

Inrush current limiting option for limiting the inrush current in transformers with high switch-on or inrush currents (not suited for electrical machinery or motors).

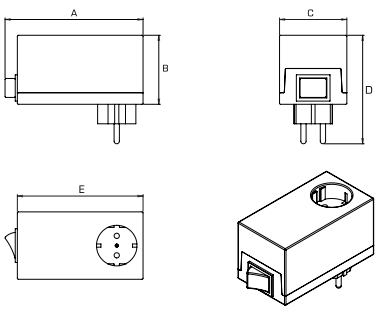
Inrush current limiter
ESG 1 / ESG 2

BLOCK Website

Typ	ESG 1	ESG 2
Electrical data		
Operating data		
Rated voltage	220 - 250 Vac	220 - 250 Vac
Rated frequency	50 - 60 Hz	50 - 60 Hz
Rated current	max. 16 A	max. 16 A
Environment		
Ambient temperature max.	40 °C	40 °C
Safety and protection		
Safety	integrated, non-replaceable thermal fuse in the input circuit	integrated, non-replaceable thermal fuse in the input circuit
Type	Resin encapsulated transformer	Resin encapsulated transformer
Protection index	IP 20	IP 20
Safety class (prepared)	I	I
Internal impedance	3.75 Ω	3.75 Ω
Order numbers		
Order Number	**ESG 1**	**ESG 2**
Mechanical data		
Terminal and mounting		
Terminals Input	Integrated safety plug	Mains connecting cable with safety plug
Terminals Output	Safety socket	Safety socket
Measures and weights		
Weight	0.40 kg	0.55 kg
Dimension (W x H x D)	64 x 132 x 65,5 mm	66 x 145 x 70,5 mm
Dimension picture (in mm)	❶	❷
A	132	145
B	65.5	70.5
C	64	66
D	105	80
E	119.5	121

Dimension pictures

❶



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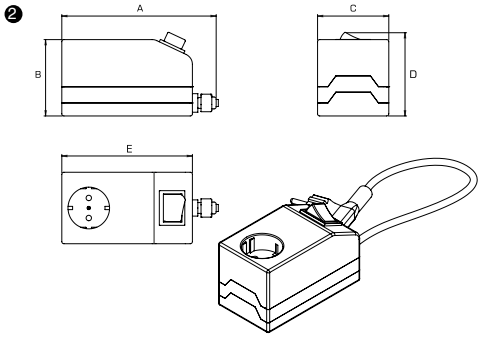


Inrush current limiter, current-controlled with no-load detection
ESG 3 / ESG 7

BLOCK Website

General Data

Rated voltage 230 Vac ±10 %
Maximum rated current 16 A
Internal resistance 7.8 Ohm
Maximum ambient temperature 40 °C
Degree of protection IP 65 (Enclosure); IP 44 (plug/connector)

Advantages

Dynamic limit times for optimum inrush of loads with high inrush currents
Current-controlled with no-load detection, hence full current limit protection, even if momentarily switched back on
Very good moisture protection thanks to XtraDenseFill resin encapsulation
May be used anywhere for stationary and mobile applications
High degree of protection
ESG 3: 2 x Mains cables with safety plug and with safety plug and safety coupling DIN 49440-1 (GER) for mobile use
ESG 7: 2 x Mains cable with low-heat device connection C13 IEC 60321-1 (GER) for mobile use

Applications

Inrush current limiting option for limiting the inrush current in power tools, transformers and other loads with high switch-on or inrush currents.

Approvals

Inrush current limiter, current-controlled with no-load detection
ESG 3 / ESG 7

BLOCK Website

Electrical data

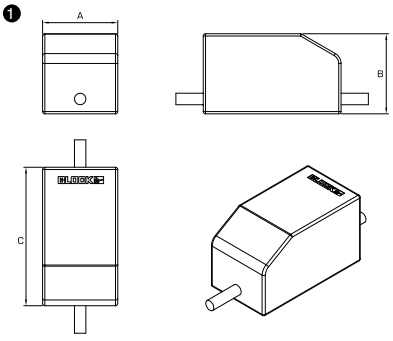
Typ	ESG 3	ESG 7
Operating data		
Rated voltage	230 Vac	230 Vac
Voltage range	99 ... 253 Vac	99 ... 264 Vac
Rated frequency	50 - 60 Hz	50 - 60 Hz
Rated current	16 A	10 A
Internal impedance	7.80 Ω	7.80 Ω
Approvals		
Approvals	-	cURus
Environment		
Ambient temperature max.	40 °C	40 °C
Safety and protection		
Safety	integrated, non-replaceable thermal fuse in the input circuit	integrated, non-replaceable thermal fuse in the input circuit
Type	Resin encapsulated transformer	Resin encapsulated transformer
Protection index	housing IP 65, housing connections IP 44	housing IP 65, housing connections IP 44
Safety class (prepared)	I	I
Order numbers		
Order Number	**ESG 3**	**ESG 7**

Mechanical data

Terminal and mounting		
Terminals Input	Mains connecting cable with DIN49440,1 protected contact plug DIN 49440-1 (GER)	Mains cable with low#heat device plug C14 IEC 60321#1
Terminals Output	Connecting cable with DIN49440,1 protected contact coupling DIN 49440-1 (GER)	Mains cable with low#heat device connection C13 IEC 60321#1 (GER) for mobile use
Measures and weights		
Weight	0.75 kg	0.75 kg
Dimension (W x H x D)	66 x 70 x 121 mm	66 x 70 x 121 mm
Dimension picture (in mm)	❶	❶
A	66	66
B	70	70
C	121	121

Dimension pictures

❶



Inrush current limiter, current-controlled with no-load detection
ESG 4 / ESG 5

BLOCK Website

General Data

- Rated voltage 115 Vac (ESG 5), 230 Vac (ESG 4)
- Rated current 13 A
- Internal resistance 7.8 Ohms (ESG 4), 4.4 Ohms (ESG 5)
- Maximum ambient temperature 40 °C
- Degree of protection IP 65 (Enclosure); IP 20 (plug/connector)

Advantages

- Dynamic limit times for optimum inrush of loads with high inrush currents
- Current-controlled with no-load detection, hence full current limit protection, even if momentarily switched back on
- Very good moisture protection thanks to XtraDenseFill resin encapsulation
- May be used anywhere for stationary and mobile applications
- High degree of protection
- ESG 4: 2 x Connection cable with plug and coupling BS 1363 (UK) for mobile use
- ESG 5: 2 x Connection cable with plug and coupling NEMA5-15 (USA) for mobile use

Applications

Inrush current limiting option for limiting the inrush current in power tools, transformers and other loads with high switch-on or inrush currents.

Approvals

c UL us

Inrush current limiter, current-controlled with no-load detection
ESG 4 / ESG 5

BLOCK Website

Electrical data

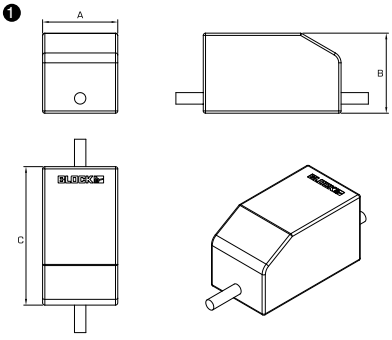
Typ	ESG 4	ESG 5
Operating data		
Rated voltage	230 Vac	115 Vac
Voltage range	99 ... 253 Vac	99 ... 132 Vac
Rated frequency	50 - 60 Hz	50 - 60 Hz
Rated current	13 A	13 A
Internal impedance	7.80 Ω	4.40 Ω
Approvals		
Approvals	-	cURus
Environment		
Ambient temperature max.	40 °C	40 °C
Safety and protection		
Safety	integrated, non-replaceable thermal fuse in the input circuit	integrated, non-replaceable thermal fuse in the input circuit
Type	Resin encapsulated transformer	Resin encapsulated transformer
Protection index	housing IP 65, housing connections IP 20	housing IP 65, housing connections IP 20
Safety class (prepared)	I	I
Order numbers		
Order Number	**ESG 4**	**ESG 5**

Mechanical data

Terminal and mounting		
Terminals Input	Connecting cable with BS 1363 protected contact plug (UK)	Connecting cable with NEMA5-15 protected contact plug (USA)
Terminals Output	Connecting cable with BS 1363 protected contact coupling (UK)	Connecting cable with NEMA5-15 protected contact coupling (USA)
Measures and weights		
Weight	0.75 kg	0.75 kg
Dimension (W x H x D)	66 x 70 x 121 mm	66 x 70 x 121 mm
Dimension picture (in mm)	❶	❶
A	66	66
B	70	70
C	121	121

Dimension pictures

❶



AC current supply for laboratories
BR

BLOCK Website

General Data

Rated input voltage 230 Vac
Rated output voltage 0 - 250 Vac
Rated power 350 - 2200 VA
Insulation class E
Maximum ambient temperature 40 °C
Efficiency up to 93 %
Internal resistance 1.80 - 4.96 Ohms
Self-cooling

Advantages

Non-inherently short-circuit proof
Analogue current and voltage indicator
Output circuit breakers may be operated from the front
Carry handle, mains cable with safety plug, shockproof socket for portable application

Applications

Isolating transformer with controllable output voltage for use in the laboratory.

Standards

Isolating transformer
to: VDE 0570 Part 2-4, DIN EN 61558-2-4, EN 61558-2-4, IEC 61558-2-4

Approvals

EAC

AC current supply for laboratories
BR

BLOCK Website

Electrical data

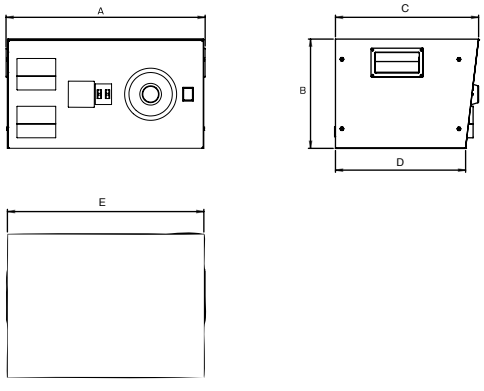
Typ	BR 351	BR 1000	BR 2200
Input			
Rated input voltage	230 Vac	230 Vac	230 Vac
Frequency range	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
Output			
Rated output voltage	0 - 250 Vac	0 - 250 Vac	0 - 250 Vac
Rated Power	350 VA	1.000 VA	2.200 VA
Efficiency	92.0 %	93.0 %	89.0 %
Environment			
Type of cooling	self-cooling	self-cooling	self-cooling
Ambient temperature max.	40 °C	40 °C	40 °C
Safety and protection			
Type	Enclosed	Enclosed	Enclosed
Internal impedance	4.96 Ω	2.25 Ω	1.80 Ω
Insulation class	E	E	E
Test voltage	3750 Vac, 50 Hz	3750 Vac, 50 Hz	3750 Vac, 50 Hz
Protection index	IP 20	IP 20	IP 20
Safety class	II	I	I
Short circuit strength	non-inherently short-circuit proof	non-inherently short-circuit proof	non-inherently short-circuit proof
Order numbers			
Order Number	**BR 351**	**BR 1000**	**BR 2200**

Mechanical data

Terminal and mounting			
Terminals Input	Mains connecting cable with safety plug	Mains connecting cable with safety plug	Mains connecting cable with safety plug
Terminals Output	Protective contact socket	Protective contact socket	Protective contact socket
Measures and weights			
Weight	13.00 kg	20.00 kg	45.00 kg
Dimension (W x H x D)	318 x 195 x 225 mm	400 x 195 x 250 mm	450 x 300 x 340 mm
Cu-Weight	1.00 kg	6.00 kg	9.00 kg
Dimension picture (in mm)	❶	❶	❶
A	315	400	460
B	184	182	251.5
C	203	235	330
D	188	220	300
E	308	391	453

Dimension pictures

❶



AC current supply for laboratories
BRS

BLOCK Website

General Data

Rated input voltage 230 Vac
Rated output voltage 0 - 250 Vac
Rated power 400 - 2200 VA
Insulation class B
Maximum ambient temperature 40 °C
Efficiency up to 93 %
Internal resistance 1.80 - 4.96 Ohms
Self-cooling

Advantages

RMS and peak values of current and voltage
Graphical visualisation of current and voltage curves
Other parameters: active, reactive and apparent power and power factor
Mains connection lead with safety plug, safety socket
Plug-in rack for installation in 19 inches cabinets

Applications

Isolating transformer with controllable output voltage for use in the laboratory.

Standards

Isolating transformer
to: VDE 0411 Teil 1, EN 61010-1, IEC 61010-1

Approvals

EAC

AC current supply for laboratories
BRS

BLOCK Website

Electrical data

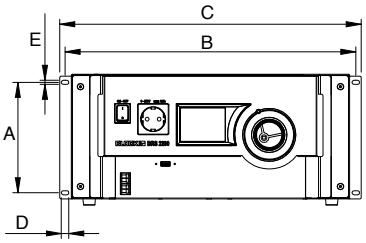
Typ	BRS 400	BRS 1000	BRS 2200
Operating data			
Rated frequency	50 Hz	50 Hz	50 Hz
Input			
Rated input voltage	230 Vac	230 Vac	230 Vac
Output			
Rated output voltage	0 - 250 Vac	0 - 250 Vac	0 - 250 Vac
Rated Power	400 VA	1000 VA	2200 VA
Efficiency	92.0 %	93.0 %	89.0 %
Environment			
Type of cooling	self-cooling	self-cooling	self-cooling
Safety and protection			
Type	Encapsulated in metal housing	Encapsulated in metal housing	Encapsulated in metal housing
Internal impedance	4.96 Ω	2.25 Ω	1.80 Ω
Insulation class	B	B	B
Test voltage	3750 Vac, 50 Hz	3750 Vac, 50 Hz	3750 Vac, 50 Hz
Protection index	IP 20	IP 20	IP 20
Safety class	I	I	I
Short circuit strength	non-inherently short-circuit proof	non-inherently short-circuit proof	non-inherently short-circuit proof
Order numbers			
Order Number	**BRS 400**	**BRS 1000**	**BRS 2200**

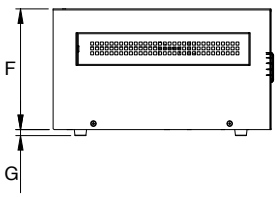
Mechanical data

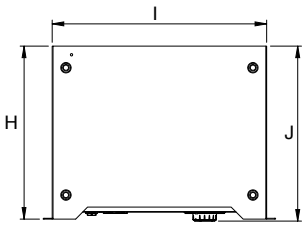
Terminal and mounting			
Terminals Input	Mains connecting cable with safety plug	Mains connecting cable with safety plug	Mains connecting cable with safety plug
Terminals Output	Protective contact socket	Protective contact socket	Protective contact socket
Measures and weights			
Weight	13.00 kg	20.00 kg	45.00 kg
Dimension (W x H x D)	482 x 143 x 364 mm	482 x 180 x 364 mm	482 x 210 x 364 mm
Cu-Weight	1.10 kg	3.60 kg	6.00 kg
Dimension picture (in mm)	❶	❶	❶
A	110	147	177
B	465	465	465
C	482	482	482
D	12	12	12
E	6.5	6.5	6.5
F	133	170	200
G	10	10	10
H	360	360	360
I	445	445	445
J	364	364	364

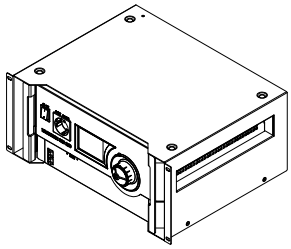
Dimension pictures

❶










ON - OFF
0 - 250V max. 1,6Aac
V
mA
W
152
0
0
Konfig.
Grafik
Tabelle
BLOCK BRS 400
F2
ON - OFF
0 - 250V max. 4,0Aac
V
A
W
136
0.00
0
Konfig.
Grafik
Tabelle
BLOCK BRS 1000
F1
F2