

Overview Harmonic filter

Power at a glance

AC 3-phase	Type	Rated voltage	THD-I	Power													Page		
				5,5 kW	11 kW	15 kW	20 kW	26 kW	45 kW	55 kW	90 kW	110 kW	132 kW	160 kW	230 kW	260 kW		250 kW	
	HF1K	3 x 400 Vac	<8 %	10 A	19 A	26 A	35 A	43 A	72 A	101 A	144 A								48
	HFM-FB	3 x 400 Vac	5 %	10 A	19 A	26 A	35 A	43 A	72 A	101 A	144 A	180 A	217 A	289 A	325 A	370 A	433 A		52
		3 x 480 Vac		10 A	19 A	26 A	35 A	43 A	72 A	101 A	144 A	180 A	217 A	289 A	325 A	370 A			





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Harmonic Filter **HF1K**



General Data

Rated voltage 3 x 400 Vac
Rated current 3 x 10.00 - 3 x 144.00 A
THD-I 8 % in rated operation
Load rated capacity 5.5 - 90 kW
Insulation class H
Ambient temperature -10° C to +40° C
Degree of protection IP 00

Advantages

Sinusoidal current consumption from the mains in devices with uncontrolled B6U diode rectifiers
Compliance with EN 61000-3-2, EN 61000-3-12
Support in the compliance with IEEE 519, D-A-CH-CZ
$\cos(\phi) > 0,95$ at rated current
Hardly any intermediate circuit voltage dip by comparison with a 4 % uK line reactor
Harmonic filter with minimum capacitive idle reactive power
Very good corrosion protection and low noise thanks to BLOCKIMPEX vacuum impregnation
Operation at 50 - 60 Hz possible
Use of the HF1K as a central hum filter for multiple converters possible

Applications

Harmonic filter module to ensure sinusoidal mains currents, reduction of mains harmonic currents, increase in system service life and system reliability and compliance with power quality standards such as IEEE 519, TEC 61000-3-2, IEC 61000-3-12.

Standards



Harmonic filter in accordance with
EN 61558 Part 1, EN 61558 Part 20, UL 508 17th Ed., CSA 22.2 No. 14-10

Certifications



UL 506, CSA 22.2



Harmonic Filter HF1K

Type	HF1K 7-400	HF1K 13-400	HF1K 18-400	HF1K 24-400	HF1K 30-400	HF1K 50-400
Electrical data						
<u>Operating data</u>						
Rated 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
Voltage range	360-440 Vac	360-440 Vac	360-440 Vac	360-440 Vac	360-440 Vac	360-440 Vac
Rated current	3 x 10 A	3 x 19 A	3 x 26 A	3 x 35 A	3 x 43 A	3 x 72 A
Rated frequency	50 Hz	50 Hz	50 Hz	50 Hz	50 Hz	50 Hz
THD-I	8 % (nominal load)	8 % (nominal load)	8 % (nominal load)	8 % (nominal load)	8 % (nominal load)	8 % (nominal load)
Rated load power*	5.5 kW	11 kW	11 kW	20 kW	26 kW	45 kW
Description of the load	Symmetrical loading by converters with B6U input rectifiers	Symmetrical loading by converters with B6U input rectifiers	Symmetrical loading by converters with B6U input rectifiers	Symmetrical loading by converters with B6U input rectifiers	Symmetrical loading by converters with B6U input rectifiers	Symmetrical loading by converters with B6U input rectifiers
Overtopping Capacity	150 % for 60 sec. every 10 min.	150 % for 60 sec. every 10 min.	150 % for 60 sec. every 10 min.	150 % for 60 sec. every 10 min.	150 % for 60 sec. every 10 min.	150 % for 60 sec. every 10 min.
Power loss	90.0 W	160.0 W	180.0 W	230.0 W	290.0 W	412.0 W
Efficiency	99 %	99 %	99 %	99 %	99 %	99 %
	1.7 kVAr	1.8 kVAr	2.9 kVAr	3.8 kVAr	4.9 kVAr	10.0 kVAr
<u>Approvals</u>						
Approvals	cURus	cURus	cURus	cURus	cURus	cURus
<u>Environment</u>						
Ambient temperature	-10° C to +40° C, without condensation	-10° C to +40° C, without condensation	-10° C to +40° C, without condensation	-10° C to +40° C, without condensation	-10° C to +40° C, without condensation	-10° C to +40° C, without condensation
Cooling method	AN	AN	AN	AN	AN	AN
MTBF @ 50°C/500 V (MIL-HB-217F)	>500.000 h @ 40°C/400Vac	>500.000 h @ 40°C/400Vac	>500.000 h @ 40°C/400Vac	>500.000 h @ 40°C/400Vac	>500.000 h @ 40°C/400Vac	>500.000 h @ 40°C/400Vac
<u>Safety and protection</u>						
Type	open type	open type	open type	open type	open type	open type
Class of Insulation System	H	H	H	H	H	H
Protection index	IP 00	IP 00	IP 00	IP 00	IP 00	IP 00
Safety class	I	I	I	I	I	I
<u>Notes</u>						
*	IE2 efficiencies of the motors and an efficiency >96 % assumed	IE2 efficiencies of the motors and an efficiency >96 % assumed	IE2 efficiencies of the motors and an efficiency >96 % assumed	IE2 efficiencies of the motors and an efficiency >96 % assumed	IE2 efficiencies of the motors and an efficiency >96 % assumed	IE2 efficiencies of the motors and an efficiency >96 % assumed
<u>Order numbers</u>						
Order Number	HF1K 7-400	HF1K 13-400	HF1K 18-400	HF1K 24-400	HF1K 30-400	HF1K 50-400

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LINE-SIDE SUPPRESSION/ HARMONIC FILTERS



Harmonic Filter **HF1K**

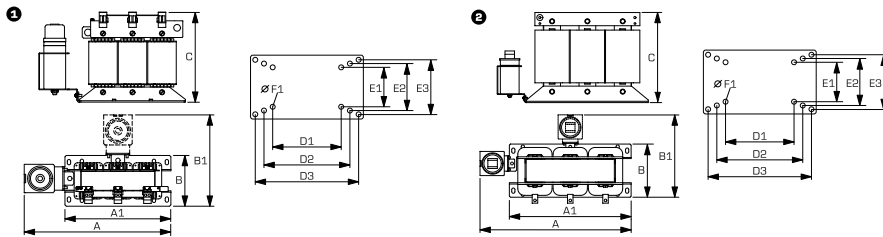
Type		HF1K 70-400	HF1K 100-400
Electrical data	<u>Operating data</u>		
	Rated voltage	3 x 400 Vac	3 x 400 Vac
	Voltage range	360-440 Vac	360-440 Vac
	Rated current	3 x 101 A	3 x 144 A
	Rated frequency	50 Hz	50 Hz
	THD-I	8 % (nominal load)	8 % (nominal load)
	Rated load power*	63 kW	90 kW
	Description of the load	Symmetrical loading by converters with B6U input rectifiers	Symmetrical loading by converters with B6U input rectifiers
	Overtopping Capacity	150 % for 60 sec. every 10 min.	150 % for 60 sec. every 10 min.
	Power loss	550.0 W	750.0 W
	Efficiency	99 %	99 %
		13.5 kVAr	19.0 kVAr
	<u>Approvals</u>		
	Approvals	cURus	cURus
<u>Environment</u>			
Ambient temperature	-10° C to +40° C, without condensation	-10° C to +40° C, without condensation	
Cooling method	AN	AN	
MTBF @ 50°C/500 V (MIL-HB-217F)	>500.000 h @ 40°C/400Vac	>500.000 h @ 40°C/400Vac	
<u>Safety and protection</u>			
Type	open type	open type	
Class of Insulation System	H	H	
Protection index	IP 00	IP 00	
Safety class	I	I	
<u>Notes</u>			
*	IE2 efficiencies of the motors and an efficiency >96 % assumed	IE2 efficiencies of the motors and an efficiency >96 % assumed	
<u>Order numbers</u>			
Order Number	HF1K 70-400	HF1K 100-400	



Harmonic Filter HF1K

Typ	Connections phase/N	Connections PE	Fixing method	Weight	Dimension picture (in mm)	A	A1	B	B1	C	D1	D2	D3	E1	E2	E3	F1
						①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩	⑪	⑫
HF1K 7-400	Screw clamp, 10 mm ²	Bolt, M5	Mounting lugs	14.00 kg	①	375	260	115	230	235	175	225	-	85	84	-	6.5
HF1K 13-400	Screw clamp, 10 mm ²	Bolt, M5	Mounting lugs	28.00 kg	①	440	325	160	275	270	200	215	292	90	114	112	9
HF1K 18-400	Screw clamp, 10 mm ²	Bolt, M5	Mounting lugs	31.00 kg	①	425	325	175	272	270	200	215	292	102	126	124	9
HF1K 24-400	Screw clamp, 10 mm ²	Bolt, M5	Mounting lugs	36.20 kg	①	460	360	265	215	315	224	240	328	107	133	117	9
HF1K 30-400	Screw clamp, 10 mm ²	Bolt, M5	Mounting lugs	59.10 kg	①	545	420	165	290	350	264	310	388	125	125	115	9
HF1K 50-400	Copper tab, M8 bolt	Bolt, M8	Mounting lugs	75.50 kg	②	545	420	192	320	315	264	310	388	155	155	145	9
HF1K 70-400	Copper tab, M8 bolt	Bolt, M8	Mounting lugs	125.00 kg	②	685	560	223	348	460	356	430	516	156	182	154	13.5
HF1K 100-400	Copper tab, M8 bolt	Bolt, M8	Mounting lugs	163.00 kg	②	685	560	250	375	460	356	430	516	182	219	181	13.5

Dimension pictures



The placement of the capacitor between the two positions shown is arbitrary and can subsequently be adapted to the conditions of the installation.

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Harmonic Filter **HFM-FB**



General Data

Rated voltage 3 x 400 - 3 x 480 Vac
Rated current 3 x 10.00 - 3 x 433.00 A
THD-I 5 % in rated operation
Load rated capacity 5 - 250 kW
Insulation class F
Ambient temperature -10 °C to +40 °C
Degree of protection IP 00
SCCR 100 kA (without preliminary fuse)

Advantages

Sinusoidal current consumption from the mains in devices with uncontrolled B6U diode rectifiers or controlled B6C thyristor bridges
Compliance with EN 61000-3-2, EN 61000-3-12
Support in the compliance with IEEE 519, D-A-CH-CZ
Cos(phi)>0.95 at rated current
Hardly any intermediate circuit voltage dip by comparison with a 4 % uK line reactor
Use of the HFM as a central hum filter for multiple converters possible

Applications

Harmonic filter module to ensure sinusoidal mains currents, reduction of mains harmonic currents, increase in system service life and system reliability and compliance with power quality standards such as IEEE 519, TEC 61000-3-2, IEC 61000-3-12.

Standards



Harmonic filter in accordance with
EN 61558 Part 1, EN 61558 Part 20, UL 508 17th Ed., CSA 22.2 No. 14-10

Certifications



UL 506, CSA 22.2



Harmonic Filter HFM-FB

Type	HFM-FB 7-400	HFM-FB 8-460	HFM-FB 13-400	HFM-FB 15-460	HFM-FB 18-400	HFM-FB 21-460
Electrical data						
<u>Operating data</u>						
Rated voltage	3 x 400 Vac	3 x 460 Vac	3 x 400 Vac	3 x 460 Vac	3 x 400 Vac	3 x 460 Vac
Rated current	3 x 10.00 A	3 x 10.00 A	3 x 19.00 A	3 x 19.00 A	3 x 26.00 A	3 x 26.00 A
Voltage range	380 - 440 Vac	460 - 500 Vac	380 - 440 Vac	460 - 500 Vac	380 - 440 Vac	460 - 500 Vac
Rated frequency	50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz
THD-I	5 % (nominal load)	5 % (nominal load)	5 % (nominal load)	5 % (nominal load)	5 % (nominal load)	5 % (nominal load)
Rated load power*	5.0 kW	5.5 kW	7.5 kW	11.0 kW	11.0 kW	15.0 kW
Description of the load	Balanced load by inverter	Balanced load by inverter	Balanced load by inverter	Balanced load by inverter	Balanced load by inverter	Balanced load by inverter
Overtating Capacity	150 % for 60 sec. every 10 min.	150 % for 60 sec. every 10 min.	150 % for 60 sec. every 10 min.	150 % for 60 sec. every 10 min.	150 % for 60 sec. every 10 min.	150 % for 60 sec. every 10 min.
Efficiency	99 %	99 %	99 %	99 %	99 %	99 %
<u>Approvals</u>						
Approvals	cURus	cURus	cURus	cURus	cURus	cURus
<u>Environment</u>						
Ambient temperature	-10 °C to +40 °C, without condensation	-10 °C to +40 °C, without condensation	-10 °C to +40 °C, without condensation	-10 °C to +40 °C, without condensation	-10 °C to +40 °C, without condensation	-10 °C to +40 °C, without condensation
MTBF @ 50°C/500 V (Mil-HB-217F)	>200.000 h	>200.000 h	>200.000 h	>200.000 h	>200.000 h	>200.000 h
<u>Safety and protection</u>						
Type	Metal enclosure	Metal enclosure	Metal enclosure	Metal enclosure	Metal enclosure	Metal enclosure
Class of Insulation System	IEC=F, UL=class 155	IEC=F, UL=class 155	IEC=F, UL=class 155	IEC=F, UL=class 155	IEC=F, UL=class 155	IEC=F, UL=class 155
Protection index	IP 00	IP 00	IP 00	IP 00	IP 00	IP 00
Safety class	I	I	I	I	I	I
SCCR**	100 kA	100 kA	100 kA	100 kA	100 kA	100 kA
<u>Notes</u>						
*	IE2 efficiencies of the motors and an efficiency >96 % assumed	IE2 efficiencies of the motors and an efficiency >96 % assumed	IE2 efficiencies of the motors and an efficiency >96 % assumed	IE2 efficiencies of the motors and an efficiency >96 % assumed	IE2 efficiencies of the motors and an efficiency >96 % assumed	IE2 efficiencies of the motors and an efficiency >96 % assumed
**	with corresponding preliminary fuse	with corresponding preliminary fuse	with corresponding preliminary fuse	with corresponding preliminary fuse	with corresponding preliminary fuse	with corresponding preliminary fuse
<u>Order numbers</u>						
Order Number	HFM-FB 7-400	HFM-FB 8-460	HFM-FB 13-400	HFM-FB 15-460	HFM-FB 18-400	HFM-FB 21-460

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LINE-SIDE SUPPRESSION/ HARMONIC FILTERS



Harmonic Filter HFM-FB

Type		HFM-FB 24-400	HFM-FB 28-460	HFM-FB 30-400	HFM-FB 34-460	HFM-FB 50-400	HFM-FB 57-460
Electrical data	<u>Operating data</u>						
	Rated voltage	3 x 400 Vac	3 x 460 Vac	3 x 400 Vac	3 x 460 Vac	3 x 400 Vac	3 x 460 Vac
	Rated current	3 x 35.00 A	3 x 35.00 A	3 x 43.00 A	3 x 43.00 A	3 x 72.00 A	3 x 72.00 A
	Voltage range	380 - 440 Vac	460 - 500 Vac	380 - 440 Vac	460 - 500 Vac	380 - 440 Vac	460 - 500 Vac
	Rated frequency	50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz
	THD-I	5 % (nominal load)	5 % (nominal load)	5 % (nominal load)	5 % (nominal load)	5 % (nominal load)	5 % (nominal load)
	Rated load power*	15.0 and 18.5 kW	22.0 kW	22.0 kW	30.0 kW	30.0 and 37.0 kW	345.0 kW
	Description of the load	Balanced load by inverter	Balanced load by inverter	Balanced load by inverter	Balanced load by inverter	Balanced load by inverter	Balanced load by inverter
	Overtopping Capacity	150 % for 60 sec. every 10 min.	150 % for 60 sec. every 10 min.	150 % for 60 sec. every 10 min.	150 % for 60 sec. every 10 min.	150 % for 60 sec. every 10 min.	150 % for 60 sec. every 10 min.
	Efficiency	99 %	99 %	99 %	99 %	99 %	99 %
<u>Approvals</u>							
Approvals	cURus	cURus	cURus	cURus	cURus	cURus	
<u>Environment</u>							
Ambient temperature	-10 °C to +40 °C, without condensation	-10 °C to +40 °C, without condensation	-10 °C to +40 °C, without condensation	-10 °C to +40 °C, without condensation	-10 °C to +40 °C, without condensation	-10 °C to +40 °C, without condensation	
MTBF @ 50°C/500 V (Mil-HB-217F)	>200.000 h	>200.000 h	>200.000 h	>200.000 h	>200.000 h	>200.000 h	
<u>Safety and protection</u>							
Type	Metal enclosure	Metal enclosure	Metal enclosure	Metal enclosure	Metal enclosure	Metal enclosure	
Class of Insulation System	IEC=F, UL=class 155	IEC=F, UL=class 155	IEC=F, UL=class 155	IEC=F, UL=class 155	IEC=F, UL=class 155	IEC=F, UL=class 155	
Protection index	IP 00	IP 00	IP 00	IP 00	IP 00	IP 00	
Safety class	I	I	I	I	I	I	
SCCR**	100 kA	100 kA	100 kA	100 kA	100 kA	100 kA	
<u>Notes</u>							
*	IE2 efficiencies of the motors and an efficiency >96 % assumed	IE2 efficiencies of the motors and an efficiency >96 % assumed	IE2 efficiencies of the motors and an efficiency >96 % assumed	IE2 efficiencies of the motors and an efficiency >96 % assumed	IE2 efficiencies of the motors and an efficiency >96 % assumed	IE2 efficiencies of the motors and an efficiency >96 % assumed	
**	with corresponding preliminary fuse	with corresponding preliminary fuse	with corresponding preliminary fuse	with corresponding preliminary fuse	with corresponding preliminary fuse	with corresponding preliminary fuse	
<u>Order numbers</u>							
Order Number	HFM-FB 24-400	HFM-FB 28-460	HFM-FB 30-400	HFM-FB 34-460	HFM-FB 50-400	HFM-FB 57-460	



Harmonic Filter HFM-FB

Type	HFM-FB 70-400	HFM-FB 80-460	HFM-FB 100-400	HFM-FB 115-460	HFM-FB 125-400	HFM-FB 145-460
Electrical data						
<u>Operating data</u>						
Rated voltage	3 x 400 Vac	3 x 460 Vac	3 x 400 Vac	3 x 460 Vac	3 x 400 Vac	3 x 460 Vac
Rated current	3 x 101.00 A	3 x 101.00 A	3 x 144.00 A	3 x 144.00 A	3 x 180.00 A	3 x 180.00 A
Voltage range	380 - 440 Vac	460 - 500 Vac	380 - 440 Vac	460 - 500 Vac	380 - 440 Vac	460 - 500 Vac
Rated frequency	50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz
THD-I	5 % (nominal load)	5 % (nominal load)	5 % (nominal load)	5 % (nominal load)	5 % (nominal load)	5 % (nominal load)
Rated load power*	55.0 kW	55.0 kW	75.0 kW	90.0 kW	90.0 kW	110.0 kW
Description of the load	Balanced load by inverter	Balanced load by inverter	Balanced load by inverter	Balanced load by inverter	Balanced load by inverter	Balanced load by inverter
Overrating Capacity	150 % for 60 sec. every 10 min.	150 % for 60 sec. every 10 min.	150 % for 60 sec. every 10 min.	150 % for 60 sec. every 10 min.	150 % for 60 sec. every 10 min.	150 % for 60 sec. every 10 min.
Efficiency	99 %	99 %	99 %	99 %	99 %	99 %
<u>Approvals</u>						
Approvals	cURus	cURus	cURus	cURus	cURus	cURus
<u>Environment</u>						
Ambient temperature	-10 °C to +40 °C, without condensation	-10 °C to +40 °C, without condensation	-10 °C to +40 °C, without condensation	-10 °C to +40 °C, without condensation	-10 °C to +40 °C, without condensation	-10 °C to +40 °C, without condensation
MTBF @ 50°C/500 V (Mil-HB-217F)	>200.000 h	>200.000 h	>200.000 h	>200.000 h	>200.000 h	>200.000 h
<u>Safety and protection</u>						
Type	Metal enclosure	Metal enclosure	Metal enclosure	Metal enclosure	Metal enclosure	Metal enclosure
Class of Insulation System	IEC=F, UL=class 155	IEC=F, UL=class 155	IEC=F, UL=class 155	IEC=F, UL=class 155	IEC=F, UL=class 155	IEC=F, UL=class 155
Protection index	IP 00	IP 00	IP 00	IP 00	IP 00	IP 00
Safety class	I	I	I	I	I	I
SCCR**	100 kA	100 kA	100 kA	100 kA	100 kA	100 kA
<u>Notes</u>						
*	IE2 efficiencies of the motors and an efficiency >96 % assumed	IE2 efficiencies of the motors and an efficiency >96 % assumed	IE2 efficiencies of the motors and an efficiency >96 % assumed	IE2 efficiencies of the motors and an efficiency >96 % assumed	IE2 efficiencies of the motors and an efficiency >96 % assumed	IE2 efficiencies of the motors and an efficiency >96 % assumed
**	with corresponding preliminary fuse	with corresponding preliminary fuse	with corresponding preliminary fuse	with corresponding preliminary fuse	with corresponding preliminary fuse	with corresponding preliminary fuse
<u>Order numbers</u>						
Order Number	HFM-FB 70-400	HFM-FB 80-460	HFM-FB 100-400	HFM-FB 115-460	HFM-FB 125-400	HFM-FB 145-460

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LINE-SIDE SUPPRESSION/ HARMONIC FILTERS



Harmonic Filter HFM-FB

Type	HFM-FB 150-400	HFM-FB 175-460	HFM-FB 200-400	HFM-FB 225-400	HFM-FB 230-460	HFM-FB 255-400
Electrical data						
<u>Operating data</u>						
Rated voltage	3 x 400 Vac	3 x 460 Vac	3 x 400 Vac	3 x 400 Vac	3 x 460 Vac	3 x 400 Vac
Rated current	3 x 217.00 A	3 x 217.00 A	3 x 289.00 A	3 x 325.00 A	3 x 289.00 A	3 x 370.00 A
Voltage range	380 - 440 Vac	460 - 500 Vac	380 - 440 Vac	380 - 440 Vac	380 - 440 Vac	380 - 420 Vac
Rated frequency	50 Hz	60 Hz	50 Hz	50 Hz	60 Hz	50 Hz
THD-I	5 % (nominal load)	5 % (nominal load)	5 % (nominal load)	5 % (nominal load)	5 % (nominal load)	5 % (nominal load)
Rated load power*	110.0 kW	132.0 kW	160.0 kW	180.0 kW	160.0 kW	200.0 kW
Description of the load	Balanced load by inverter	Balanced load by inverter	Balanced load by inverter	Balanced load by inverter	Balanced load by inverter	Balanced load by inverter
Overrating Capacity	150 % for 60 sec. every 10 min.	150 % for 60 sec. every 10 min.	150 % for 60 sec. every 10 min.	150 % for 60 sec. every 10 min.	150 % for 60 sec. every 10 min.	150 % for 60 sec. every 10 min.
Efficiency	99 %	99 %	99 %	99 %	99 %	99 %
<u>Approvals</u>						
Approvals	cURus	cURus	cURus	cURus	cURus	cURus
<u>Environment</u>						
Ambient temperature	-10 °C to +40 °C, without condensation	-10 °C to +40 °C, without condensation	-10 °C to +40 °C, without condensation	-10 °C to +40 °C, without condensation	-10 °C to +40 °C, without condensation	-10 °C to +40 °C, without condensation
MTBF @ 50°C/500 V (Mil-HB-217F)	>200.000 h	>200.000 h	>200.000 h	>200.000 h	>200.000 h	>200.000 h
<u>Safety and protection</u>						
Type	Metal enclosure	Metal enclosure	Metal enclosure	Metal enclosure	Metal enclosure	Metal enclosure
Class of Insulation System	IEC=F, UL=class 155	IEC=F, UL=class 155	IEC=F, UL=class 155	IEC=F, UL=class 155	IEC=F, UL=class 155	IEC=F, UL=class 155
Protection index	IP 00	IP 00	IP 00	IP 00	IP 00	IP 00
Safety class	I	I	I	I	I	I
SCCR**	100 kA	100 kA	100 kA	100 kA	100 kA	100 kA
<u>Notes</u>						
*	IE2 efficiencies of the motors and an efficiency >96 % assumed	IE2 efficiencies of the motors and an efficiency >96 % assumed	IE2 efficiencies of the motors and an efficiency >96 % assumed	IE2 efficiencies of the motors and an efficiency >96 % assumed	IE2 efficiencies of the motors and an efficiency >96 % assumed	IE2 efficiencies of the motors and an efficiency >96 % assumed
**	with corresponding preliminary fuse	with corresponding preliminary fuse	with corresponding preliminary fuse	with corresponding preliminary fuse	with corresponding preliminary fuse	with corresponding preliminary fuse
<u>Order numbers</u>						
Order Number	HFM-FB 150-400	HFM-FB 175-460	HFM-FB 200-400	HFM-FB 225-400	HFM-FB 230-460	HFM-FB 255-400



Harmonic Filter HFM-FB

Type	HFM-FB 260-460	HFM-FB 295-460	HFM-FB 300-400
Electrical data			
<u>Operating data</u>			
Rated voltage	3 x 460 Vac	3 x 460 Vac	3 x 400 Vac
Rated current	3 x 325,00 A	3 x 370,00 A	3 x 433,00 A
Voltage range	460 - 500 Vac	460 - 500 Vac	380 - 420 Vac
Rated frequency	60 Hz	60 Hz	50 Hz
THD-I	5 % (nominal load)	5 % (nominal load)	5 % (nominal load)
Rated load power*	230.0 kW	260.0 kW	250.0 kW
Description of the load	Balanced load by inverter	Balanced load by inverter	Balanced load by inverter
Overtating Capacity	150 % for 60 sec. every 10 min.	150 % for 60 sec. every 10 min.	150 % for 60 sec. every 10 min.
Efficiency	99 %	99 %	99 %
<u>Approvals</u>			
Approvals	cURus	cURus	cURus
<u>Environment</u>			
Ambient temperature	-10 °C to +40 °C, without condensation	-10 °C to +40 °C, without condensation	-10 °C to +40 °C, without condensation
MTBF @ 50°C/500 V (Mil-HB-217F)	>200.000 h	>200.000 h	>200.000 h
<u>Safety and protection</u>			
Type	Metal enclosure	Metal enclosure	Metal enclosure
Class of Insulation System	IEC=F, UL=class 155	IEC=F, UL=class 155	IEC=F, UL=class 155
Protection index	IP 00	IP 00	IP 00
Safety class	I	I	I
SCCR**	100 kA	100 kA	100 kA
<u>Notes</u>			
*	IE2 efficiencies of the motors and an efficiency >96 % assumed	IE2 efficiencies of the motors and an efficiency >96 % assumed	IE2 efficiencies of the motors and an efficiency >96 % assumed
**	with corresponding preliminary fuse	with corresponding preliminary fuse	with corresponding preliminary fuse
<u>Order numbers</u>			
Order Number	HFM-FB 260-460	HFM-FB 295-460	HFM-FB 300-400

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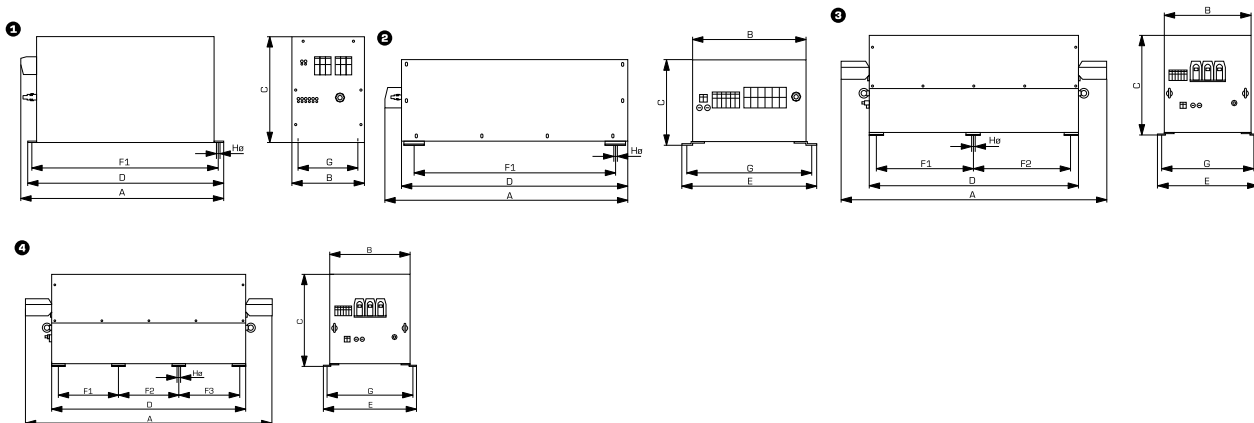
3.5



Harmonic Filter HFM-FB

Typ	Connections phase/N	Connections PE	Fixing method	Weight	Dimension picture (in mm)	Dimension picture (in mm)										
						A	B	C	D	E	F1	F2	F3	G	H	
HFM-FB 7-400	Screw clamp, 16 mm ²	Bolt, M8	Mounting lugs	27.00 kg	1	455	165	242	440	-	416	-	-	135	6.5	
HFM-FB 8-460	Screw clamp, 16 mm ²	Bolt, M8	Mounting lugs	27.00 kg	1	455	165	242	440	-	416	-	-	135	6.5	
HFM-FB 13-400	Screw clamp, 16 mm ²	Bolt, M8	Mounting lugs	28.00 kg	1	455	165	242	440	-	416	-	-	135	6.5	
HFM-FB 15-460	Screw clamp, 16 mm ²	Bolt, M8	Mounting lugs	28.00 kg	1	455	165	242	440	-	416	-	-	135	6.5	
HFM-FB 18-400	Screw clamp, 16 mm ²	Bolt, M8	Mounting lugs	40.00 kg	2	645	302	225	600	365.5	532.5	-	-	333.5	11	
HFM-FB 21-460	Screw clamp, 16 mm ²	Bolt, M8	Mounting lugs	41.00 kg	2	645	302	225	600	365.5	532.5	-	-	333.5	11	
HFM-FB 24-400	Screw clamp, 50 mm ²	Bolt, M8	Mounting lugs	49.00 kg	2	645	302	225	600	356.5	532.5	-	-	333.5	11	
HFM-FB 28-460	Screw clamp, 50 mm ²	Bolt, M8	Mounting lugs	49.00 kg	2	645	302	225	600	356.5	532.5	-	-	333.5	11	
HFM-FB 30-400	Screw clamp, 50 mm ²	Bolt, M8	Mounting lugs	52.00 kg	2	885	302	225	840	356.5	772.5	-	-	333.5	11	
HFM-FB 34-460	Screw clamp, 50 mm ²	Bolt, M8	Mounting lugs	56.00 kg	2	885	302	225	840	356.5	772.5	-	-	333.5	11	
HFM-FB 50-400	Screw clamp, 50 mm ²	Bolt, M8	Mounting lugs	88.00 kg	2	885	302	225	840	356.5	772.5	-	-	333.5	11	
HFM-FB 57-460	Screw clamp, 50 mm ²	Bolt, M8	Mounting lugs	80.00 kg	2	885	302	225	840	356.5	772.5	-	-	333.5	11	
HFM-FB 70-400	Screw clamp, 50 mm ²	Bolt, M8	Mounting lugs	150.00 kg	3	1060	345	400	830	393	377	395	-	370	11	
HFM-FB 80-460	Screw clamp, 50 mm ²	Bolt, M8	Mounting lugs	98.00 kg	3	1060	345	400	830	393	377	395	-	370	11	
HFM-FB 100-400	Screw clamp, 50 mm ²	Bolt, M8	Mounting lugs	167.00 kg	3	1060	345	400	830	393	377	395	-	370	11	
HFM-FB 115-460	Screw clamp, 50 mm ²	Bolt, M8	Mounting lugs	130.00 kg	3	1060	345	400	830	393	377	395	-	370	11	
HFM-FB 125-400	Screw clamp, 150 mm ²	Bolt, M8	Mounting lugs	178.00 kg	3	1160	406	420	900	454	430	412	-	430	11	
HFM-FB 145-460	Screw clamp, 150 mm ²	Bolt, M8	Mounting lugs	151.00 kg	3	1160	406	420	900	454	430	412	-	430	11	
HFM-FB 150-400	Screw clamp, 150 mm ²	Bolt, M8	Mounting lugs	224.00 kg	3	1160	406	420	900	454	430	412	-	430	11	
HFM-FB 175-460	Screw clamp, 150 mm ²	Bolt, M8	Mounting lugs	171.00 kg	3	1160	406	420	900	454	430	412	-	430	11	
HFM-FB 200-400	Screw clamp, 16 mm ²	Bolt, M8	Mounting lugs	271.00 kg	3	1330	406	420	1070	454	515	497	-	430	11	
HFM-FB 225-400	Screw clamp, 240 mm ²	Bolt, M8	Mounting lugs	284.00 kg	3	1330	406	420	1070	454	515	497	-	430	11	
HFM-FB 230-460	Screw clamp, 240 mm ²	Bolt, M8	Mounting lugs	215.00 kg	3	1330	406	420	1070	454	515	497	-	430	11	
HFM-FB 255-400	Screw clamp, 240 mm ²	Bolt, M8	Mounting lugs	310.00 kg	4	1350	470	420	1100	530	355	355	355	505	11	
HFM-FB 260-460	Screw clamp, 240 mm ²	Bolt, M8	Mounting lugs	240.00 kg	4	1350	470	420	1100	530	355	355	355	505	11	
HFM-FB 295-460	Screw clamp, 240 mm ²	Bolt, M8	Mounting lugs	285.00 kg	4	1350	470	420	1100	530	355	355	355	505	11	
HFM-FB 300-400	Screw clamp, 300 mm ²	Bolt, M8	Mounting lugs	387.00 kg	4	1350	470	420	1100	530	355	355	355	505	11	

Dimension pictures





3.1

3.2

3.3

3.4

3.5