schaffner
shaping electrical power

Ultra-compact Low Leakage current EMC/EMI Filter



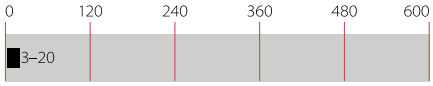
- Ultra-compact four-wire filter for applications lacking space
- Exceptional low operating leakage current
- Equally suitable for star and delta power networks

Performance indicators

Attenuation performance



Rated current [A]



Approvals

Features and benefits

- The FN 355 family of three-phase and neutral line filters provides a cost-effective interference suppression solution for a wide variety of applications
- Available in four versions, with current ratings from 3 to 20 A, the filters employ a single-stage four-wire LC circuit with saturating resistant chokes, and have a very low operational leakage current
- FN 355 filters are contained within an extremely compact metal housing, making them ideal for use in situations where space is at a premium

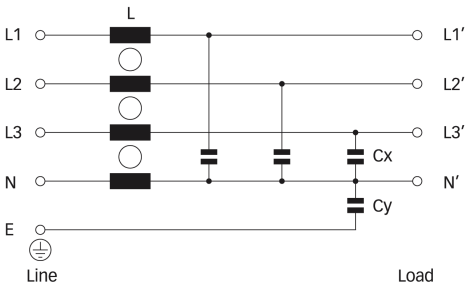
Technical specifications

Maximum continuous operating voltage	3x 440/250 VAC
Operating frequency	DC to 400 Hz
Rated currents	3 to 20 A @ 40°C
High potential test voltage	P/N –> E 2000 VAC for 2 sec P –> P 1350 VDC for 2 sec P -> N 800 VAC for 2 sec
Overload capability	4x rated current at switch on, 1.5x rated current for 1 minute, once per hour
Temperature range (operation and storage)	-25°C to +100°C (25/100/21)
Flammability corresponding to	UL 94 V-2 or better
Design corresponding to	UL 1283, CSA 22.2 No. 8 1986, IEC/EN 60939
MTBF @ 40°C/230 V (Mil-HB-217F)	850,000 hours

Typical applications

- Office equipment
- Medical equipment
- General purpose four-wire filtering
- Applications with tight space conditions

Typical electrical schematic



Filter selection table

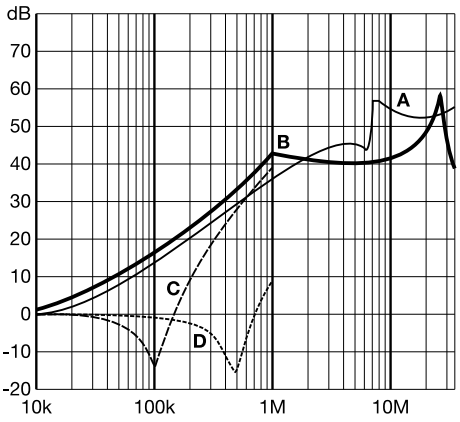
Filter	Rated current @ 40°C (25°C) [A]	Leakage current* @ 440 VAC/50 Hz [mA]	Power loss @ 25 °C/ 50Hz [W]	Input/Output connections			weight [kg]
					-05		
FN 355-3-05	3 (3.4)	0.0	1.4		-05		0.15
FN 355-6-05	6 (6.9)	0.0	1.5		-05		0.21
FN 355-10-05	10 (11.5)	0.0	1.8		-05		0.25
FN 355-20-06	20 (23)	0.1	3.4		-06		0.29
FN 355-20-03	20 (23)	0.1	3.4	-03			0.29
FN 355-30-44	30 (34)	0.2	4.1			-44	0.44

* Standardized calculated leakage current acc. IEC60939 under normal operating conditions.

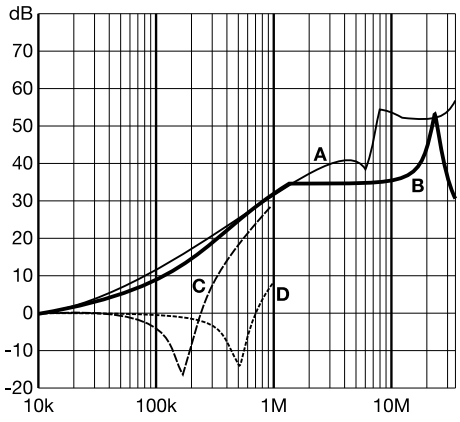
Typical filter attenuation

Per CISPR 17; A=50 Ω/50 Ω sym; B=50 Ω/50 Ω asym; C=0.1 Ω/100 Ω sym; D=100 Ω/0.1 Ω sym

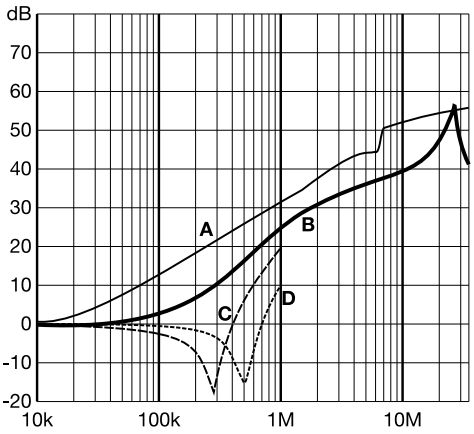
3 A types



6 A types

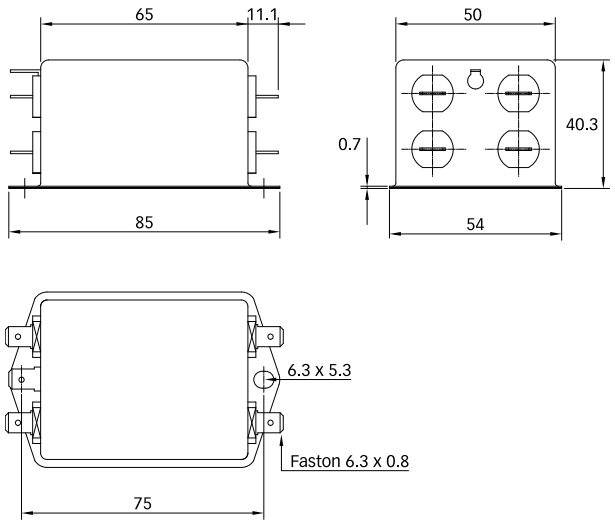


10 and 30A types

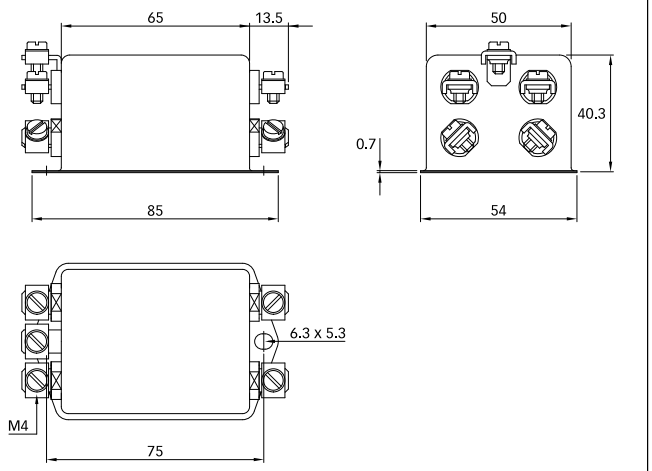


Mechanical data

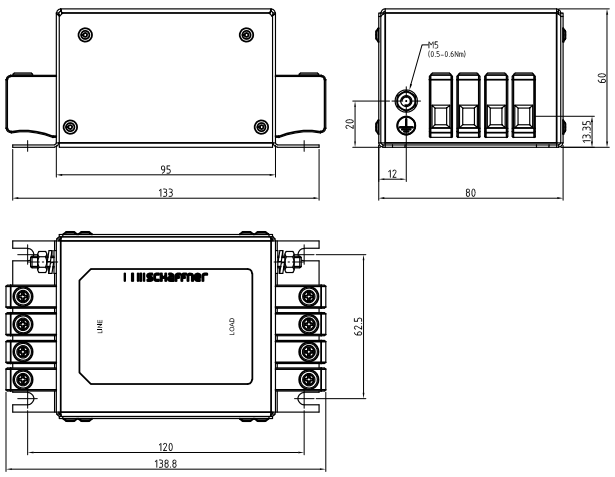
Filters with faston terminals (3 to 20 A types)



Filters with clamp terminals with M4 screw (20 A types)



Filters with terminal blocks (30 A type)



All dimensions in mm; 1 inch = 25.4 mm
Tolerances according: ISO 2768-m / EN 22768-m

Please visit www.schaffner.com to find more details on connectors.

Filter input/output connector cross sections

	-44
Solid wire	0.5-10 mm^2
Flex wire	0.5-6 mm^2
Flex wire AWG	AWG 20-8
Recommended torque	1.0-1.2 Nm

Please visit www.schaffner.com to find more details on filter connectors.

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