

3-phase + neutral line filters FN 355

Ultra-compact three-phase + neutral line filter with very low leakage current

SCHAFNER
safety for electronic systems



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

Approvals

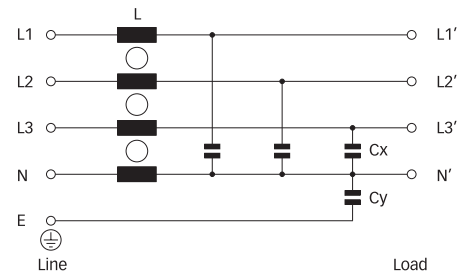


RoHS
2002/95/EC

Technical specifications

Maximum continuous operating voltage:	3x 440/250VAC
Operating frequency:	dc to 400Hz
Rated currents:	3 to 20A @ 40°C
High potential test voltage:	P → E 2000VAC for 2 sec P → P 1900VDC for 2 sec
Protection category:	IP20
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 94V-2 or better
Design corresponding to:	UL 1283, CSA 22.2 No. 8 1986, EN 133200
MTBF @ 40°C/400V (Mil-HB-217F):	850,000 hours

Typical electrical schematic



Features and benefits

- The FN 355 family of three-phase + 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 20A, 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.

Typical applications

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

Filter selection table

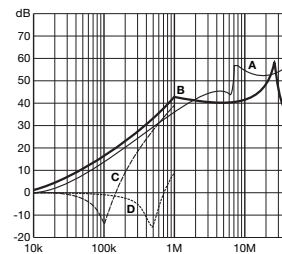
Filter	Rated current @ 40°C (25°C)	Leakage current* @ 400VAC/50Hz	Power loss @ 25°C/50Hz	Input/Output connections		Weight
	[A]	[mA]	[W]			[kg]
FN 355-3-05	3 (3.4)	0.07	1.4		-05	0.25
FN 355-6-05	6 (6.9)	0.07	1.5		-05	0.25
FN 355-10-05	10 (11.5)	0.07	1.8		-05	0.25
FN 355-20-03	20 (23)	0.29	3.4	-03		0.29

* Maximum leakage under normal operating conditions, based on the assumption, that all three phases and the neutral conductor are connected to the supply and the consumer. In this case, the current will mainly return through the neutral line, not as earth leakage.

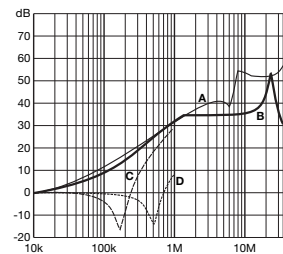
Typical filter attenuation

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

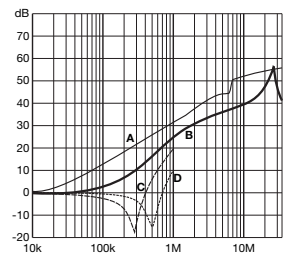
3A types



6A types

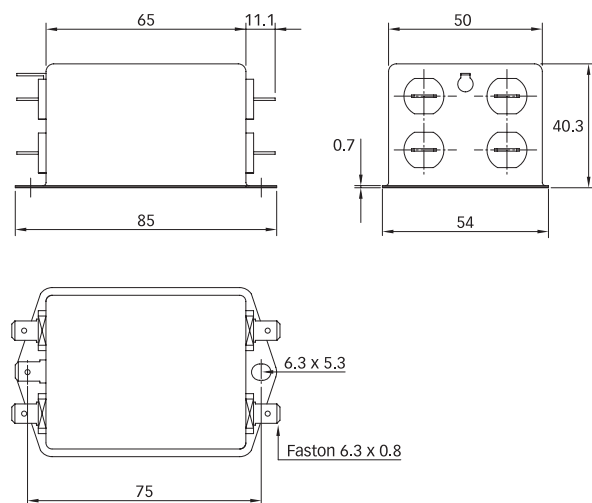


10 and 20A types

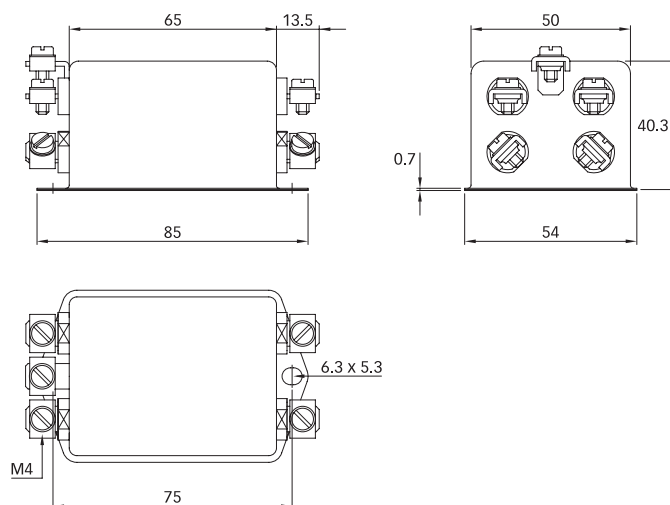


Mechanical data

Filters with faston terminals (3 to 10A types)



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



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