

1-phase filters FN 670

Two-stage performance EMI filter

SCHAFFNER
safety for electronic systems



- Rated currents from 1.8 to 10A
- Very high differential and common-mode attenuation
- Good high frequency attenuation

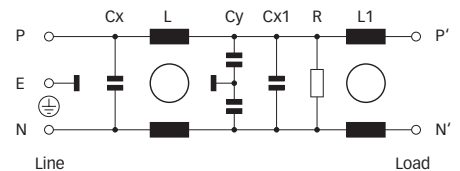
Approvals



Technical specifications

Maximum continuous operating voltage:	250VAC, 50/60Hz
Operating frequency:	dc to 400Hz
Rated currents:	1.8 to 10A @ 40°C max.
High potential test voltage:	P → E 2000VAC for 2 sec P → N 1100VDC for 2 sec
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, IEC/EN 60939
MTBF @ 40°C/230V (Mil-HB-217F):	300,000 hours

Typical electrical schematic



Features and benefits

- FN 670 filters are designed for easy and fast chassis mounting.
- FN 670 filters offer a perfect combination of performance/size ratio.
- FN 670 two-stage filters provide a high differential and common-mode attenuation performance, based on chokes with high saturation resistance and excellent thermal behavior.
- FN 670 two-stage filters are designed for very high noise suppression and high frequency attenuation.
- Various terminal options allow you to select the desired connection style.
- Custom-specific versions on request.

Typical applications

- Electrical and electronic equipment
- Consumer goods
- Power supplies
- Building automation
- Elevators and cranes
- Office automation equipment
- Datacom equipment

Filter selection table

Filter*	Rated current @ 40°C (25°C) [A]	Leakage current** @ 230VAC/50Hz [μA]	Inductance		Cx [nF]	Capacitance		Resistance R [kΩ]	Input/Output connections		Weight	
			L [mH]	L1 [mH]		Cx1 [nF]	Cy [nF]		-06 [g]	-07 [g]		
FN 670-1.8-..	1.8 (2)	190	7.2	7.2	470	150	2.2	470	-06	-07	225	240
FN 670-3-..	3 (3.4)	190	12.2	1.8	470	150	2.2	470	-06	-07	240	245
FN 670-6-..	6 (6.7)	190	7	7	470	150	2.2	470	-06	-07	245	260
FN 670-10-..	10 (11.2)	190	10.4	2.7	470	150	2.2	470	-06	-07	570	620

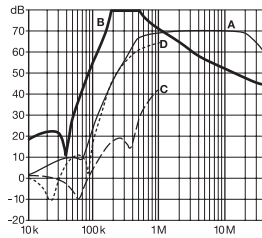
* To compile a complete part number, please replace the .. with the required I/O connection style (e.g. FN 670-1.8-06, FN 670-10-07).

** Maximum leakage under normal operating conditions. Note: if the neutral line is interrupted, worst case leakage could reach twice this level.

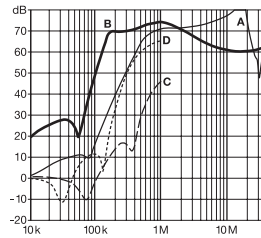
Typical filter attenuation

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

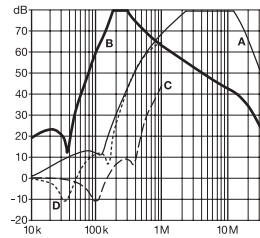
1.8A types



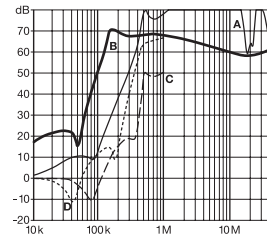
3A types



6A types

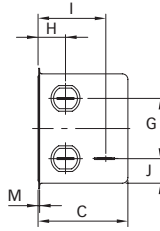
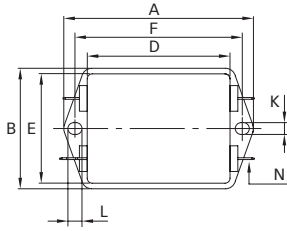


10A types

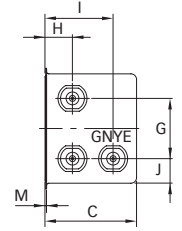
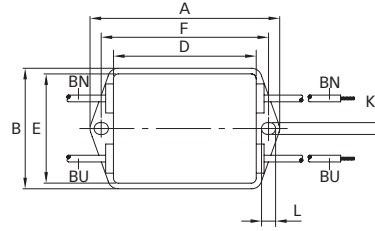


Mechanical data

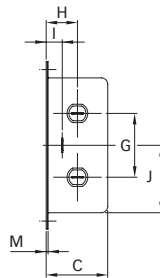
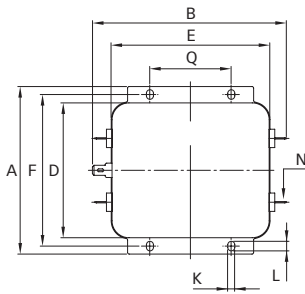
Connection style -06, 1.8 to 6A types



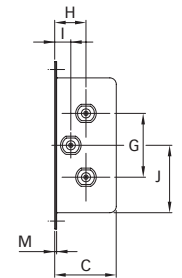
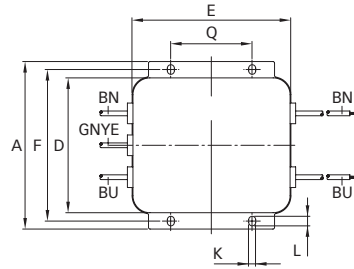
Connection style -07, 1.8 to 6A types



Connection style -06, 10A types



Connection style -07, 10A types



Dimensions

	1.8A	3A	6A	10A	Tolerances
A	85	85	85	105	±0.5
B	54	54	54	126 ±1	±0.5
C	40.3	40.3	40.3	38	±1
D	64.8	64.8	64.8	84.5	±1
E	49.8	49.8	49.8	98.5	±1
F	75	75	75	95	±0.2
G	27	27	27	40	±0.5
H	12.6	12.6	29.8	19	±0.5
I	29.8	29.8	12.6	9.5	±0.5
J	11.4	11.4	11.4	42.25	±0.5
K	5.3	5.3	5.3	4.4	
L	6.3	6.3	6.3	6	
M	0.7	0.7	0.7		
N	6.3 x 0.8	6.3 x 0.8	6.3 x 0.8	6.3 x 0.8	
Q				51	±0.1

Connection style -07

AWG type wire	AWG 18	AWG 18	AWG 16	AWG 14	
Wire length	140	140	140	140	+5

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

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