

1-phase Filters FN 700Z

Three-stage EMI Filter

SCHAFNER
energy efficiency and reliability



- Rated currents from 6 to 20A
- IEC inlet for 6 and 10A versions
- TEMPEST/NEMP
- Up to 3GHz attenuation
- High surge voltage protection

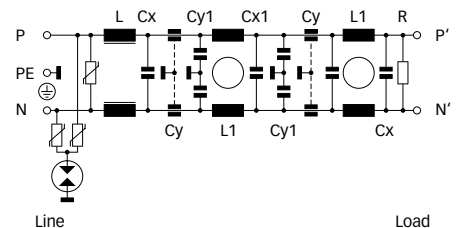
Approvals



Technical specifications

Maximum continuous operating voltage:	250VAC, 50/60Hz
Operating frequency:	dc to 400Hz (6 and 10A types) dc to 60Hz (20A types)
Rated currents:	6 to 20A @ 40°C max.
High potential test voltage:	P → PE 420VAC for 2 sec P → N 420VAC for 2 sec
Temperature range (operation and storage):	-25°C to +85°C (25/85/21)
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):	450,000 hours

Typical electrical schematic



Features and benefits

- FN 700Z series is designed to meet highest filter attenuation requirements over a wide range starting from a few kilohertz up to 3GHz required for TEMPEST protection.
- Additional high surge voltage protection supports NEMP requirement.
- Choosing the FN 700Z product line brings you the rapid availability of a standard filter associated with the necessary safety acceptances.
- Standard filters are a practical solution helping you to pass EMI system approval in a short time.
- Exceptional conducted attenuation performance, based on three-stage design and chokes with high saturation resistance and excellent thermal behavior.
- Integrated gas discharge tubes and suppressors.
- IEC inlet version for 6 and 10A types.
- Custom-specific versions on request.

Typical applications

- Facility management
- Information protection
- Telecommunication
- Data processing
- Medical equipment
- Electrical and electronic equipment

Filter selection table

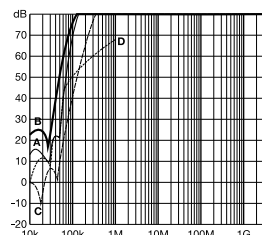
Filter	Rated current @ 40°C (25°C)	Leakage current* @ 230VAC/50Hz	Inductance		Capacitance				Resistance	Input connections		Output connections	Weight
	[A]	[μA]	L [μH]	L1 [mH]	Cx [μF]	Cx1 [μF]	Cy [nF]	Cy1 [nF]	[MΩ]				[kg]
FN 700Z-6-06	6 (6.9)	440	50	17.1	1		2.5		0.33			-06	2
FN 700Z-10-06	10 (11.6)	440	50	9.4	1		2.5		0.33			-06	2.3
FN 700Z-20-03	20 (23)	2600	60	5.5	1	2.2	5	10	0.33	-03		-03	3.5

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

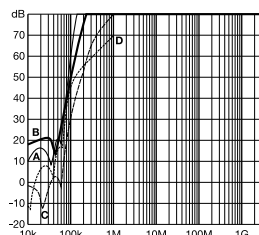
Typical filter attenuation

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

6A types

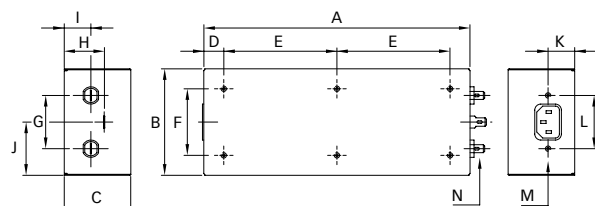


10 and 20A types

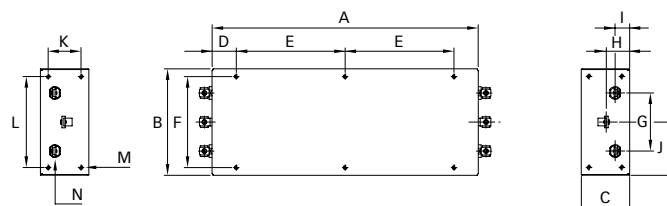


Mechanical data

6 and 10A types



20A types



Dimensions

	6A	10A	20A	Tolerances
A	200	250	275	±0.3
B	80	80	110	±0.3
C	50	50	50	±0.2
D	15	25	25	±0.3
E	85	100	112.5	±0.2
F	50	50	94	±0.2
G	40	40	60	±0.3
H	30	30	15	±0.5
I	20	20	25	±0.3
J	40	40	55	±0.3
K	20	20	34	±0.3
L	40	40	94	±0.1
M	M4 x 6	M4 x 6	M4 x 6	
N	6.3 x 0.8	6.3 x 0.8	M4	

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

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