

# Multi-stage EMI Filter



- Rated currents from 6 to 30 A
- Surge pulse protection up to 2 kA
- Solder or screw connection



### Performance indicators

Attenuation performance



Rated current [A]



## Technical specifications

<b>Maximum continuous operating voltage</b>	250 VAC, 50/60 Hz
<b>Operating frequency</b>	dc to 400 Hz
<b>Rated currents</b>	6 to 30 A @ 40°C max.
<b>High potential test voltage</b>	P → PE 2000 VAC for 2 sec P → N 350 VDC for 2 sec
<b>Energy absorption</b>	40J
<b>Temperature range (operation and storage)</b>	-25°C to +85°C (25/85/21)
<b>Flammability corresponding to</b>	UL 94 V-2 or better
<b>Design corresponding to</b>	UL 1283, CSA 22.2 No. 8 1986, IEC/EN 60939
<b>MTBF @ 40°C/230 V (Mil-HB-217F)</b>	230,000 hours
<b>Surge pulse protection</b>	2 kV IEC 61000-4-5

### Approvals



### Features and benefits

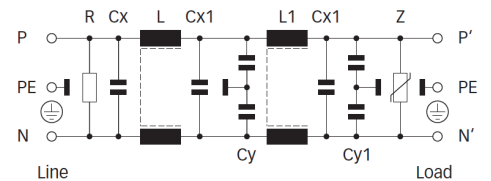
- FN 352 Z series is developed to meet high filter attenuation requirements by using multi-stage filter design
- Additional high surge pulse voltage protection up to 2 kA is integrated to protect sensitive equipment
- Choosing FN 352 Z product line brings you the rapid availability of a standard filter 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 multi-stage design and chokes with high saturation resistance and excellent thermal behavior
- Various connection options
- Custom-specific versions on request

### Typical applications

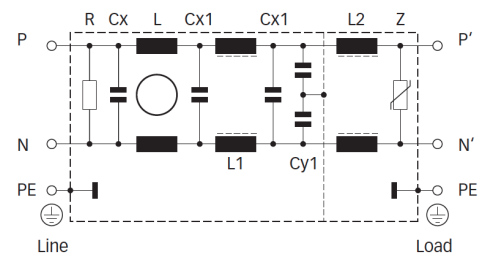
- Facility management
- Industrial
- Telecommunication
- Data processing
- Electrical and electronic equipment

### Typical electrical schematic

6A types



10 to 30A types



### Filter selection table

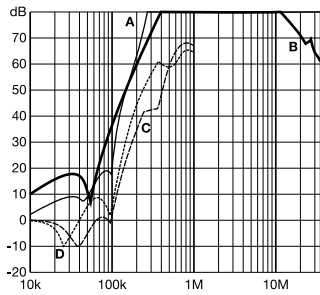
Filter	Rated current @ 40°C (25°C) [A]	Leakage current* @ 230 VAC/50 Hz [µA]	Inductance			Capacitance				Resistance R [MΩ]	Energy absorption [J]	Input/Output connections	Weight [g]
			L [mH]	L1 [mH]	L2 [mH]	Cx [nF]	Cx1 [nF]	Cy [nF]	Cy1 [nF]				
<b>FN 352 Z-6-06</b>	6 (7.2)	420	3	3		470	220	3.3	1.5	0.47	40	-06	575
<b>FN 352 Z-10-29</b>	10 (12)	1300	5	0.06	0.003	220	220	15	15	0.47	40	-29	1320
<b>FN 352 Z-20-29</b>	20	1300	3.5	0.06	0.0035	220	220	15	15	0.47	40	-29	2950
<b>FN 353 Z-30-33</b>	24 (30)	1300	2.3	0.025	0.035	470	220	15	15	0.23	40	-33	3100

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

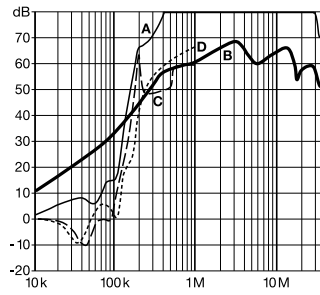
### Typical filter attenuation

Per CISPR 17; A=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

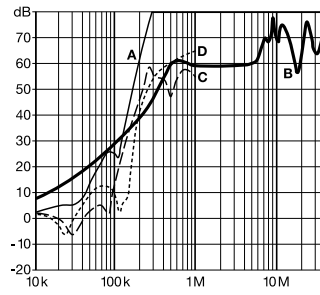
6 A types



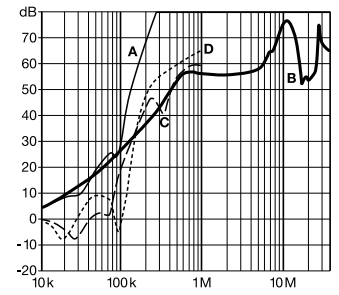
10 A types



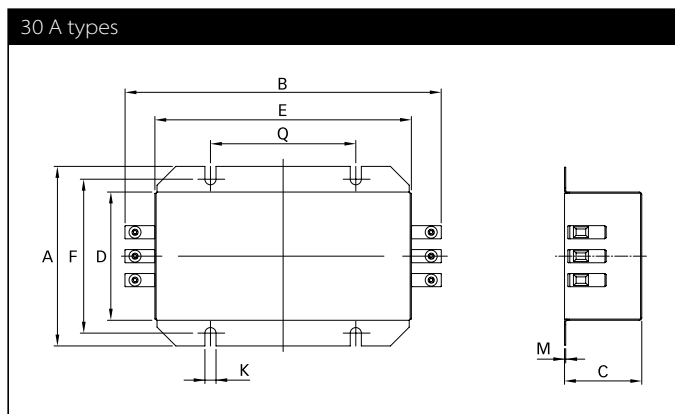
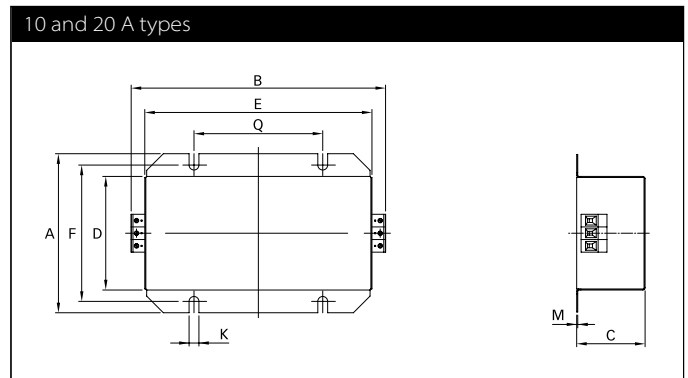
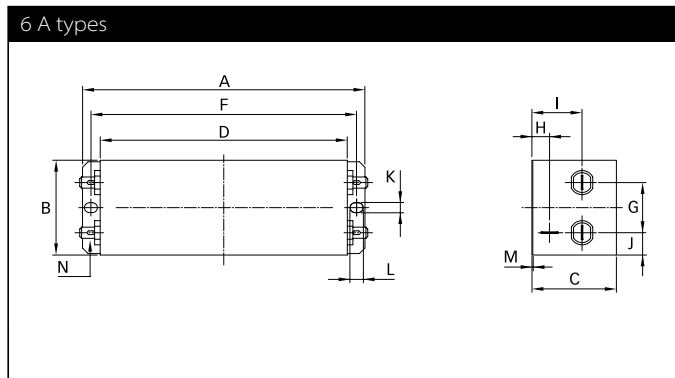
20 A types



30 A types



### Mechanical data



## Dimensions

	6 A	10 A	20 A	30 A	Tolerances
<b>A</b>	152	126	150	150	±0.5
<b>B</b>	51	172.3	221.8	250	±0.5
<b>C</b>	45	55.25	65	65	±0.5
<b>D</b>	133	100.5	119.5	119.5	±0.5
<b>E</b>		150.5	200	200	±0.5
<b>F</b>	143	112	135	135	±0.5
<b>G</b>	27				±0.5
<b>H</b>	9.5				±0.5
<b>I</b>	27				±0.5
<b>J</b>	12				±0.5
<b>K</b>	5.3	6.4	6.4	6.4	
<b>L</b>	7				
<b>M</b>	0.5				
<b>N</b>	6.3 x 0.8				
<b>Q</b>		85	115	115	±0.1

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

## Filter input/output connector cross sections

	-06	-29	-33
<b>Solid wire</b>	n/a	6 mm <sup>2</sup>	16 mm <sup>2</sup>
<b>Flex wire</b>	n/a	4 mm <sup>2</sup>	10 mm <sup>2</sup>
<b>AWG type wire</b>	n/a	AWG 10	AWG 6
<b>Recommended torque</b>	n/a	0.6-0.8 Nm	1.5-1.8 Nm

Please visit [www.schaffner.com](http://www.schaffner.com) to find more details on filter connectors.



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