AC Feedthrough Filter



- IEC/EN 60939 approval
- Rated currents from 10 to 63 A
- 5 kV pulse test capability
- Class Y2 capacitor

Technical Specifications

Maximum continuous operating voltage	300 VAC, 50/60 Hz (ENEC) 250 VAC, 50/60 Hz (UL) 1000 VDC max
Rated currents	10 to 63 A @ 60°C
Operating frequency	DC to 60 Hz
High potential test voltage	3000 VDC for 2 sec
Temperature range (operation and storage)	-40°C to +100°C (40/100/21)
Flammability corresponding to	UL 94 V-0
Capacitor class	Y2
MTBF (Mil-HB-217F)	<200 A:>675,000 h @ 60°C/300 V =200 A:>494,000 h @ 60°C/300 V

Approvals & Compliances

Feedthrough filters offer a high insertion loss across a broad band of frequencies from a few tens of kHz up to the GHz region. In general, feedthrough filters offer a higher level of EMI suppression than feedthrough capacitors of the same current rating. This is particularly relevant to applications where source impedance is smaller than 50 Î©. Different versions are available offering a wide selection on operating currents and performance levels. AC feedthrough filters are designed and approved for up to 300 VAC 50/60 Hz operation.

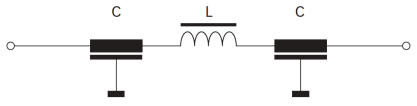
Features and Benefits

- Very low internal series inductance
- Very high self-resonant frequency
- Self-healing dielectric
- High quality and reliability
- Through-bulkhead mounting
- Anti-twist protection
- Custom-specific or dual-versions on request

Typical Applications

- Power line filter for 110/240 VAC power lines
- Increasing system and information security
- Power supplies
- Switching and cellular equipment
- Computer servers
- UPS power supplies
- Medical equipment
- Shielded rooms

Typical electrical schematic



Feedthrough Selector Table

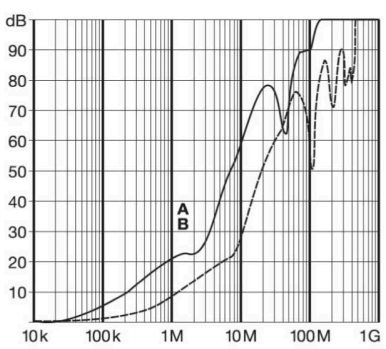
Feedthrough	Rated current @ 60°C [A]	Leakage current* @ 250 VAC/50 Hz [mA]	Capacitance** C [nF]	Inductance L @ 10 kHz [nH]	DC resistance*** R @ 25°C [mΩ]	Weight [g]
FN 7611-10-M3	10	1.89	10	70	1.2	55
FN 7612-10-M3	10	8.86	47	70	1.52	70
FN 7611-16-M4	16	4.15	22	70	0.65	80
FN 7612-16-M4	16	18.85	100	70	0.92	90
FN 7611-32-M4	32	4.15	22	70	0.65	80
FN 7612-32-M4	32	18.85	100	70	0.92	90
FN 7611-63-M6	63	28.3	150	186	0.47	250

* Tolerance +20%
** Tolerance ±20%
*** Tolerance +15%

Typical Filter Attenuation

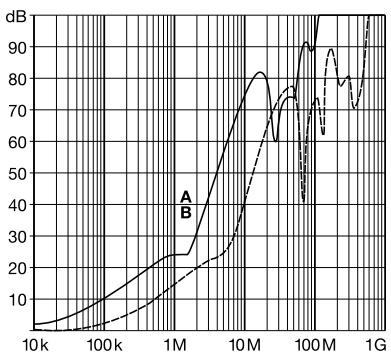
Full load, 50 Ω system

10 A types



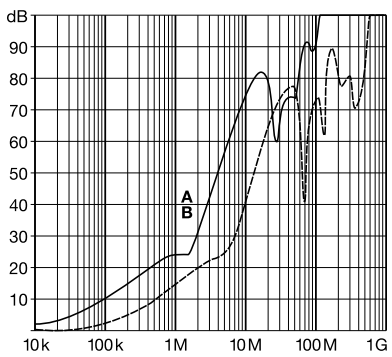
A = FN 7612-10-M3
B = FN 7611-10-M3

16 A types



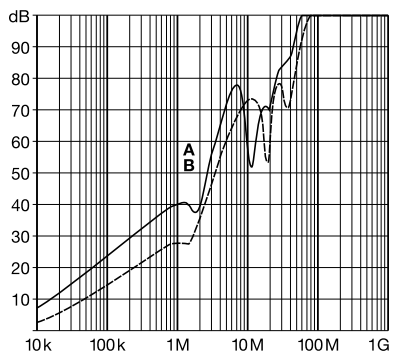
A = FN 7612-16-M4
B = FN 7611-16-M4

32 A types



A = FN 7612-32-M4
B = FN 7611-32-M4

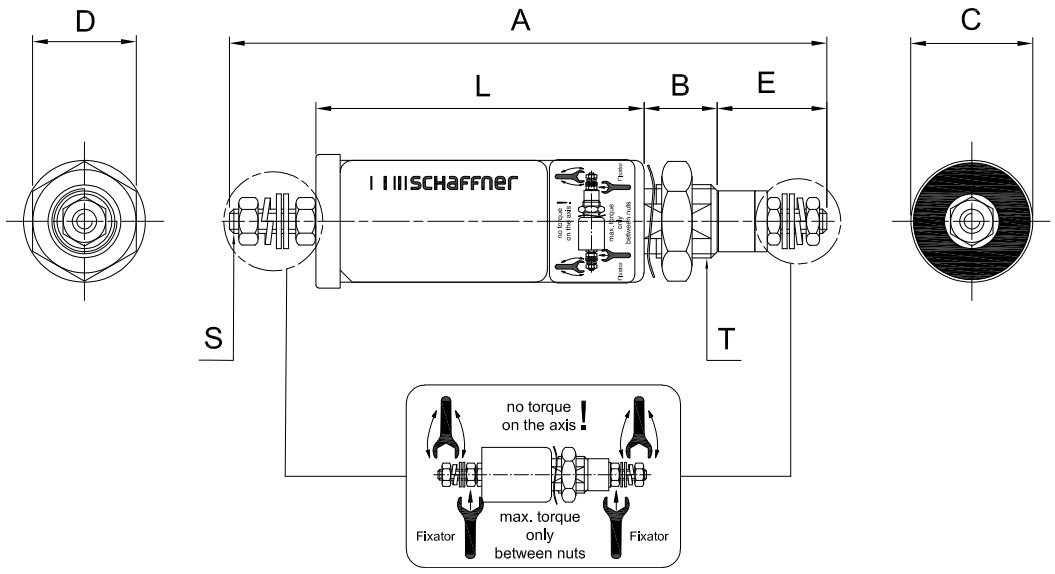
63 A types



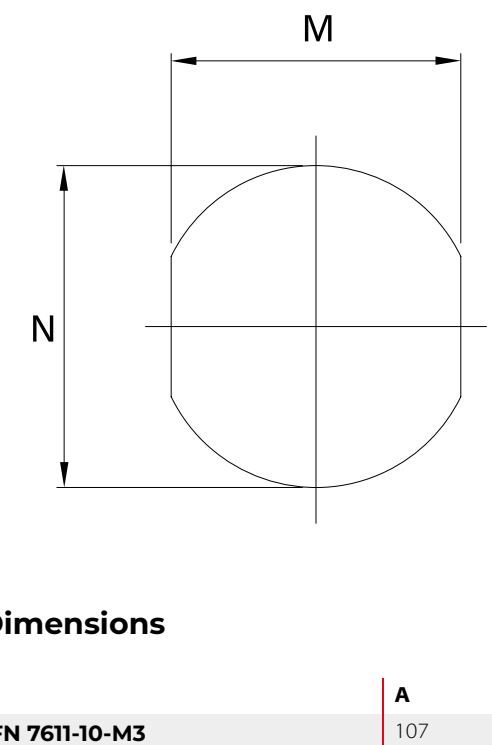
A = FN 7612-63-M6
B = FN 7611-63-M6

Mechanical Data

FN 761x 10 A



Panel cut out



Dimensions

	A	B	C	D	E	L	M	N	S	T
FN 7611-10-M3	107	12	20	17	16	66	10.3	Ø12.3	M3	M12x1
FN 7612-10-M3	140	12	20	17	16	99	10.3	Ø12.3	M3	M12x1
FN 7611-16-M4	116	14	25	22	18	69	14.3	Ø16.3	M4	M16x1
FN 7612-16-M4	148	14	25	22	18	101	14.3	Ø16.3	M4	M16x1
FN 7611-32-M4	116	14	25	22	18	69	14.3	Ø16.3	M4	M16x1
FN 7612-32-M4	148	14	25	22	18	101	14.3	Ø16.3	M4	M16x1
FN 7611-63-M6	173	16	32	27	26	105	18.3	Ø20.3	M6	M20x1
FN 7612-63-M6	189	19	54	41	26	118	24.3	Ø27.3	M6	M27x1.5
Tolerances					±2		±0.2			

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

Recommended Torque

	M3	M4	M6	M8	M12	M12x1	M16x1	M20x1	M27x1.5	M32x1.5
Terminal thread	0.5 Nm	1.2 Nm	2.5 Nm	5 Nm	11 Nm					
Mounting thread						3 Nm	4 Nm	7 Nm	12 Nm	14 Nm

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