

# DC Feedthrough Capacitor



- EN/IEC 60384-14 approval
- Rated currents from 10 to 200 A
- 2.5 kV pulse test capability
- Class Y4 capacitor



## Approvals



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 Ω. Different versions are available offering a wide selection on operating currents and performance levels. DC feedthrough filters are designed and approved for 130 VDC/130 VAC 50/60 Hz operation.

## Technical specifications

<b>Maximum continuous operating voltage</b>	130 DC (UL, ENEC) 130 VAC, 50/60 Hz (UL, ENEC) 650 VDC max.
<b>Rated currents</b>	10 to 200 A @ 60°C max.
<b>Capacitor class</b>	Y4
<b>High potential test voltage</b>	1700 VDC for 2 sec
<b>Insulation resistance (100VDC after 60 sec)</b>	<0.33 μF, R >1500 MΩ >0.33 μF, τ >5000 s
<b>Temperature range (operation and storage)</b>	-40°C to +100°C (40/100/21)
<b>Flammability corresponding to</b>	UL 94 V-2 or better
<b>MTBF @ 60°C/130 V (Mil-HB-217F)</b>	<200 A: >1,400,000 hours ≥200 A: >450,000 hours

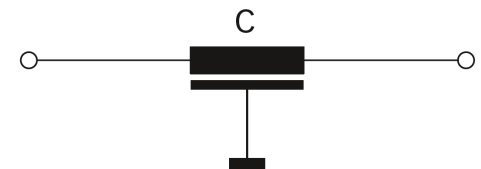
## Features and benefits

- 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 48 VDC battery power
- Increasing system and information security
- Telecom base stations
- Switching and cellular equipment
- Computer servers
- UPS power supplies
- Medical equipment

## Typical electrical schematic



### Feedthrough selector table

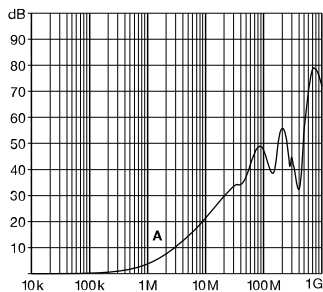
Feedthrough	Rated current @ 60°C [A]	Leakage current* @ 130 VAC/50 Hz [mA]	Capacitance** C [nF]	DC resistance*** R @ 25°C [mΩ]	Weight [g]
FN 7560-10-M3	10	0.49	10	0.8	15
FN 7562-16-M4	16	4.9	100	0.62	34
FN 7563-16-M4	16	23	470	0.63	78
FN 7562-32-M4	32	4.9	100	0.62	34
FN 7563-32-M4	32	23	470	0.63	79
FN 7560-63-M6	63	0.49	10	0.3	70
FN 7561-63-M6	63	2.3	47	0.3	70
FN 7562-63-M6	63	4.9	100	0.3	70
FN 7563-63-M6	63	23	470	0.43	103
FN 7560-100-M8	100	2.3	47	0.23	145
FN 7561-100-M8	100	4.9	100	0.23	145
FN 7562-100-M8	100	23	470	0.23	145
FN 7563-100-M8	100	49	1000	0.25	192
FN 7560-200-M10	200	4.9	100	0.16	160
FN 7561-200-M10	200	23	470	0.16	160
FN 7562-200-M10	200	49	1000	0.18	268
FN 7563-200-M10	200	230	4700	0.14	490

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

### Typical filter attenuation

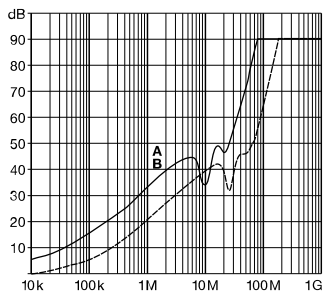
Full load, 50 Ω system

10 A types



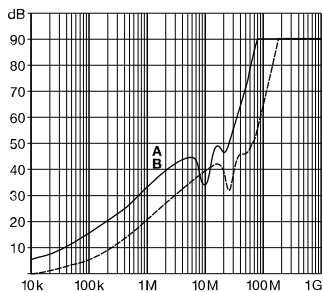
A = FN 7560-10-M3

16 A types



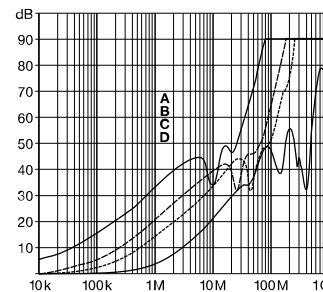
A = FN 7563-16-M4  
 B = FN 7562-16-M4

32 A types



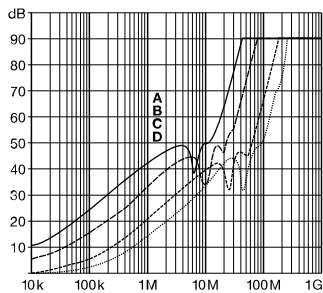
A = FN 7563-32-M4  
 B = FN 7562-32-M4

63 A types



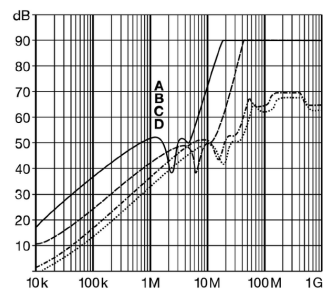
A = FN 7563-63-M6  
 B = FN 7562-63-M6  
 C = FN 7561-63-M6  
 D = FN 7560-63-M6

100 A types



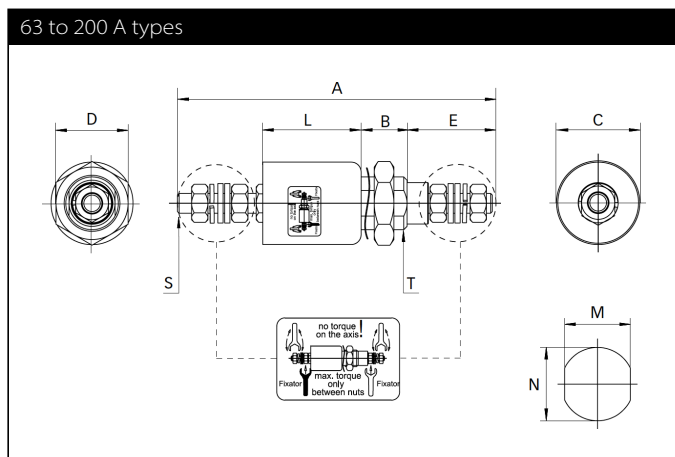
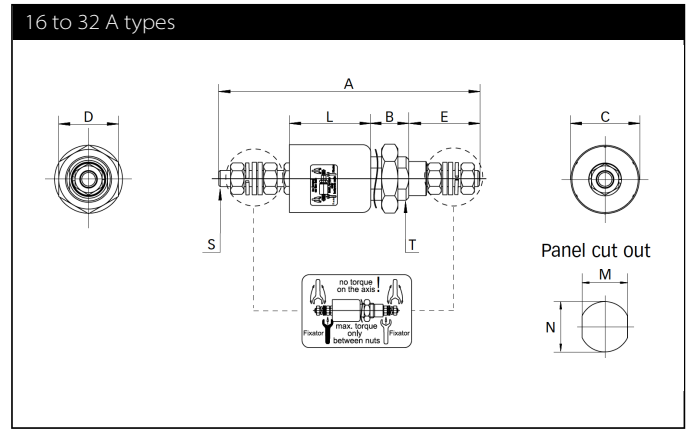
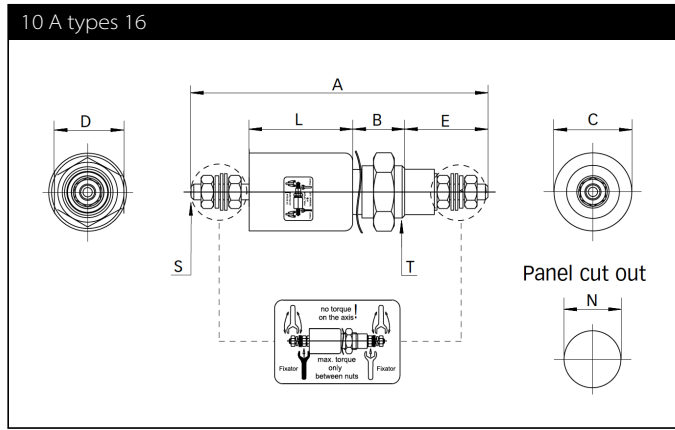
A = FN 7563-100-M8  
 B = FN 7562-100-M8  
 C = FN 7561-100-M8  
 D = FN 7560-100-M8

200 A types



A = FN 7563-200-M10  
 B = FN 7562-200-M10  
 C = FN 7561-200-M10  
 D = FN 7560-200-M10

### Mechanical data



### Dimensions

	A	B	C	D	E	L	M	N	S	T
<b>FN 7560-10-M3</b>	57	10	15	13	16	19		Ø10.3	M3	M10x1
<b>FN 7562-16-M4</b>	75	12	20	17	18	30	10.3	Ø12.3	M4	M12x1
<b>FN 7563-16-M4</b>	82	16	32	27	18	33	18.3	Ø20.3	M4	M20x1
<b>FN 7562-32-M4</b>	75	12	20	17	18	30	10.3	Ø12.3	M4	M12x1
<b>FN 7563-32-M4</b>	82	16	32	27	18	33	18.3	Ø20.3	M4	M20x1
<b>FN 7560-63-M6</b>	96	14	25	22	26	30	14.3	Ø16.3	M6	M16x1
<b>FN 7561-63-M6</b>	96	14	25	22	26	30	14.3	Ø16.3	M6	M16x1
<b>FN 7562-63-M6</b>	96	14	25	22	26	30	14.3	Ø16.3	M6	M16x1
<b>FN 7563-63-M6</b>	99	16	32	27	26	33	18.3	Ø20.3	M8	M20x1
<b>FN 7560-100-M8</b>	113	16	32	27	32	33	18.3	Ø20.3	M8	M20x1
<b>FN 7561-100-M8</b>	113	16	32	27	32	33	18.3	Ø20.3	M8	M20x1
<b>FN 7562-100-M8</b>	113	16	32	27	32	33	18.3	Ø20.3	M8	M20x1
<b>FN 7563-100-M8</b>	133	19	38	27	32	50	22.3	Ø24.3	M8	M24x1
<b>FN 7560-200-M10</b>	130	19	32	27	40	33	22.3	Ø24.3	M10	M24x1
<b>FN 7561-200-M10</b>	130	19	32	27	40	33	22.3	Ø24.3	M10	M24x1
<b>FN 7562-200-M10</b>	147	19	38	27	40	50	22.3	Ø24.3	M10	M24x1
<b>FN 7563-200-M10</b>	165	19	54	41	40	68	24.3	Ø27.3	M10	M27x1.5
<b>Tolerances</b>					±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	M10	M10x1	M12x1	M16x1	M20x1	M24x1	M27x1.5
<b>Terminal thread</b>	0.5 Nm	1.2 Nm	2.5 Nm	5 Nm	8 Nm						
<b>Mounting thread</b>						2 Nm	3 Nm	4 Nm	7 Nm	8 Nm	12 Nm



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