

# DC Feedthrough Capacitor



- EN/IEC 60384-14 approval

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- Rated currents from 10 to 200 A

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- 2.5 kV pulse test capability

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- Class Y4 capacitor

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## Approvals & Compliances



Feedthrough capacitors offer a high insertion loss across a broad band of frequencies from a few tens of kHz up to the GHz region. The construction of feedthrough capacitors cause a better suppression performance over a much wider frequency range than a conventional two-wire capacitor of equivalent value. Different versions are available offering a wide selection on operating currents and performance levels. DC feedthrough capacitors 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

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- Very high self-resonant frequency

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- Self-healing dielectric

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- High quality and reliability

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- Through-bulkhead mounting

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- Anti-twist protection

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- Custom-specific or dual-versions on request

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## Typical applications

- Power line filter for 48 VDC battery power

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- Increasing system and information security

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- Telecom base stations

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- Switching and cellular equipment

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- Computer servers

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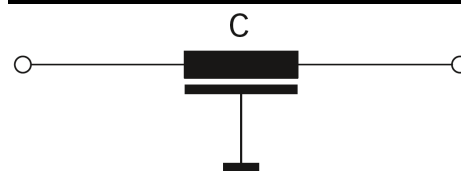
- UPS power supplies

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- Medical equipment

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## Typical electrical schematic



### Feedthrough selector table

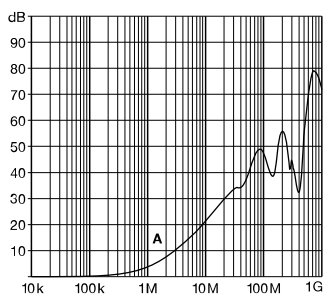
Feedthrough	Rated current @ 60°C [A]	Leakage current* @ 130 VAC/50 Hz [mA]	Capacitance** C [nF]	DC resistance*** R @ 25°C [mΩ]	Weight [g]
FN 7560-10-M3	10	0.49	10	0.8	15
FN 7562-16-M4	16	4.9	100	0.62	34
FN 7563-16-M4	16	23	470	0.63	78
FN 7562-32-M4	32	4.9	100	0.62	34
FN 7563-32-M4	32	23	470	0.63	79
FN 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

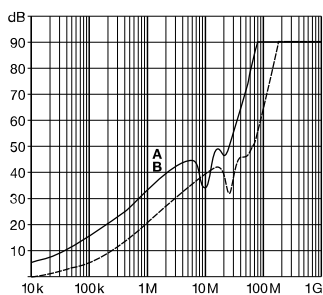
Full load, 50 Ω system

10 A types



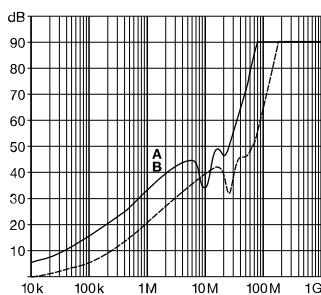
A = FN 7560-10-M3

16 A types



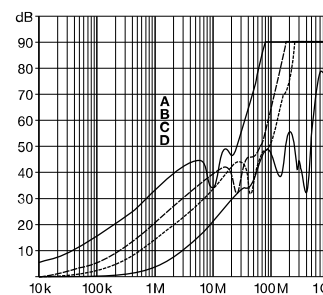
A = FN 7563-16-M4  
 B = FN 7562-16-M4

32 A types



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

63 A types



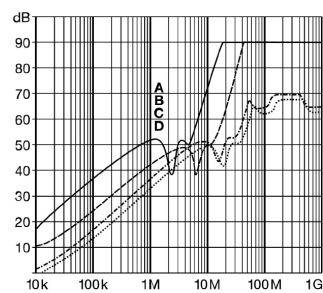
A = FN 7563-63-M6  
 B = FN 7562-63-M6  
 C = FN 7561-63-M6  
 D = FN 7560-63-M6

100 A types



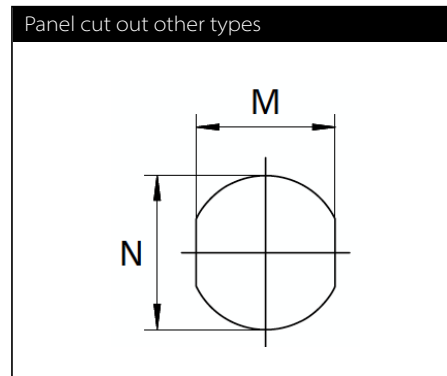
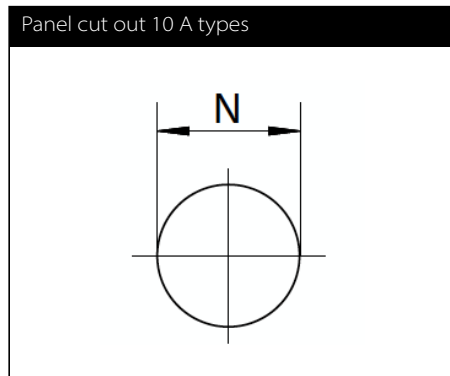
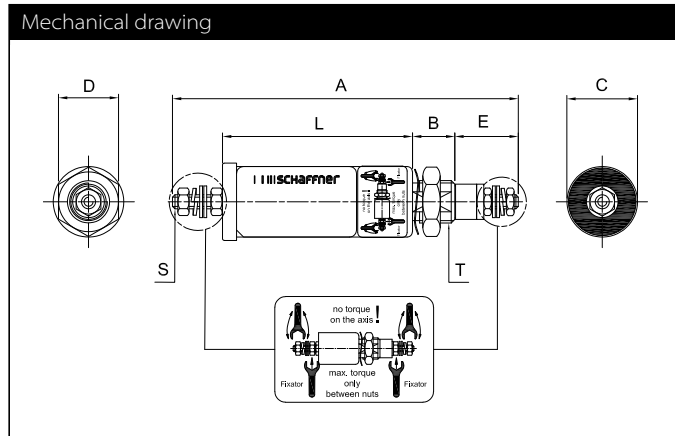
A = FN 7563-100-M8  
 B = FN 7562-100-M8  
 C = FN 7561-100-M8  
 D = FN 7560-100-M8

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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