

DC Feedthrough Capacitor

SCHAFNER
energy efficiency and reliability



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

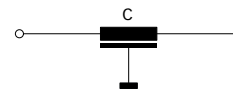
Approvals



Technical specifications

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

Typical electrical schematic



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 130VDC/130VAC 50/60Hz 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 48VDC battery power
- Increasing system and information security
- Telecom base stations
- Switching and cellular equipment
- Computer servers
- UPS power supplies
- Medical equipment

Feedthrough selector table

Feedthrough	Rated current @ 60°C	Leakage current* @ 130VAC/50Hz	Capacitance** C	DC resistance*** R @ 25°C	Weight
	[A]	[mA]	[nF]	[mΩ]	
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%

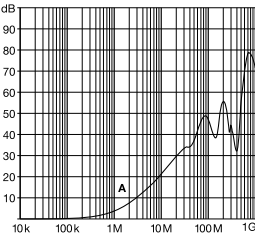
** Tolerance ±20%

*** Tolerance +15%

Typical filter attenuation

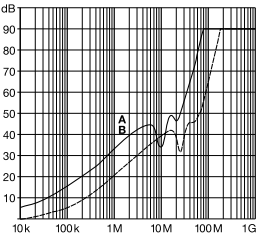
50Ω system

10A types



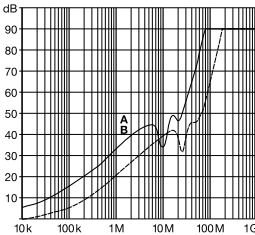
A = FN 7560-10-M3

16A types



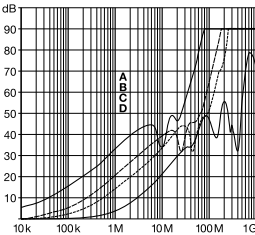
A = FN 7563-16-M4
B = FN 7562-16-M4

32A types



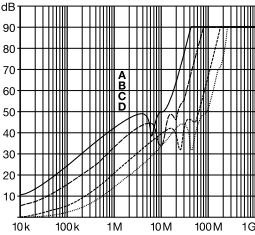
A = FN 7563-32-M4
B = FN 7562-32-M4

63A types



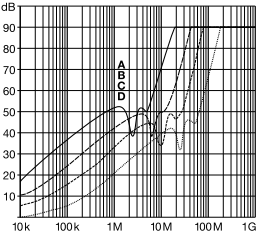
A = FN 7563-63-M6
B = FN 7562-63-M6
C = FN 7561-63-M6
D = FN 7560-63-M6

100A types



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

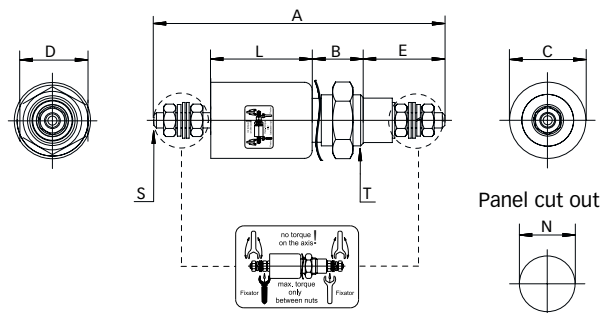
200A types



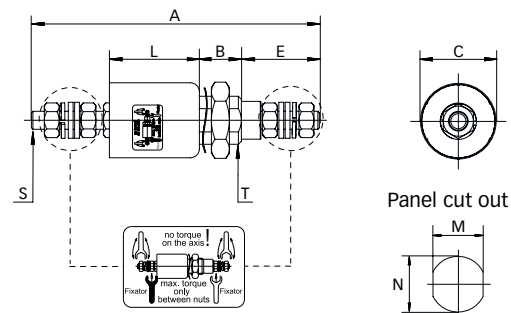
A = FN 7563-200-M10
B = FN 7562-200-M10
C = FN 7561-200-M10
D = FN 7560-200-M10

Mechanical data

10A types



16 to 32A types



Dimensions

	A	B	C	D	E	L	M	N	S	T
FN 7560-10-M3	57	10	15	13	16	19		Ø10.3	M3	M10x1
FN 7562-16-M4	75	12	20	17	18	30	10.3	Ø12.3	M4	M12x1
FN 7563-16-M4	82	16	32	27	18	33	18.3	Ø20.3	M4	M20x1
FN 7562-32-M4	75	12	20	17	18	30	10.3	Ø12.3	M4	M12x1
FN 7563-32-M4	82	16	32	27	18	33	18.3	Ø20.3	M4	M20x1
FN 7560-63-M6	96	14	25	22	26	30	14.3	Ø16.3	M6	M16x1
FN 7561-63-M6	96	14	25	22	26	30	14.3	Ø16.3	M6	M16x1
FN 7562-63-M6	96	14	25	22	26	30	14.3	Ø16.3	M6	M16x1
FN 7563-63-M6	99	16	32	27	26	33	18.3	Ø20.3	M6	M20x1
FN 7560-100-M8	113	16	32	27	32	33	18.3	Ø20.3	M8	M20x1
FN 7561-100-M8	113	16	32	27	32	33	18.3	Ø20.3	M8	M20x1
FN 7562-100-M8	113	16	32	27	32	33	18.3	Ø20.3	M8	M20x1
FN 7563-100-M8	133	19	38	27	32	50	22.3	Ø24.3	M8	M24x1
FN 7560-200-M10	130	19	32	27	40	33	22.3	Ø24.3	M10	M24x1
FN 7561-200-M10	130	19	32	27	40	33	22.3	Ø24.3	M10	M24x1
FN 7562-200-M10	147	19	38	27	40	50	22.3	Ø24.3	M10	M24x1
FN 7563-200-M10	165	19	54	41	40	68	24.3	Ø27.3	M10	M27x1.5
Tolerances	±2					±0.2				

All dimensions in mm; 1 inch = 25.4mm

Tolerances according: ISO 2768-m / EN 22768-m

Recommended torque

	M3	M4	M6	M8	M10	M10x1	M12x1	M16x1	M20x1	M24x1	M27x1.5
Terminal thread	0.5Nm	1.2Nm	2.5Nm	5Nm	8Nm						
Mounting thread						2Nm	3Nm	4Nm	7Nm	8Nm	12Nm

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