

General-purpose filter

FN 2020

- Current ratings from 1 to 60A
- High differential mode attenuation
- Optional medical versions (B types)
- Optional safety versions (A types)
- Nennströme von 1 bis 60A
- Hohe Dämpfung im symmetrischen Betrieb
- Optionale medizinische Versionen (Typ B)
- Optionale Sicherheitsversionen (Typ A)
- Courants de service de 1 à 60 A
- Bonne atténuation en mode différentiel
- En option version pour appareils médicaux (type B)
- En option version pour la sécurité (type A)



Filter selection table

Choose the filter FN xxxx-x with the required current rating and features, and add /?? to determine input/output (line/load) connection style. Example: FN 2020-10/06 is a 10A filter with fast-on connections.

Approvals



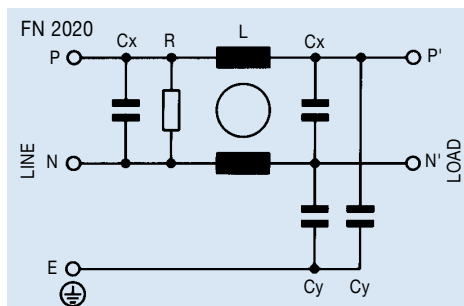
Filter	Connections			Current ratings at 40°C (25°) A	Inductance L mH	Capacitance		Resistance R MΩ	Housing	Weight g
						Cx μF	Cy nF			
FN 2020 -1 /??	/06	/07		1 (1.15)	12	0.15	4.7	1	F2	80
FN 2020 -3 /??	/06	/07		3 (3.45)	2.5	0.15	4.7	1	F2	80
FN 2020 -6 /??	/06	/07		6 (6.9)	1	0.15	4.7	1	F2	80
FN 2020 -10 /??	/06	/07		10 (11.5)	0.8	0.15	4.7	1	F2	85
FN 2020 -12 /??	/06	/07		12 (13.8)	0.7	0.15	4.7	1	F2	85
FN 2020 -16 /??	/06	/07		16 (18.4)	0.65	0.15	4.7	1	H2	140
FN 2020 -20 /??	/06		/08	20 (23)	0.6	0.15	4.7	1	K1	210
FN 2020 -30 /??			/08	30 (34.5)	0.67	0.47	10	0.47	P	470
FN 2020 -60 /??			/24	60 (69)	1	1.5	10	0.22	L2	1100

Additional specifications

Filter type	Maximum operating voltage		Operating frequency Hz	Hipot test voltage		MTBF Per Mil-HB-217F at 40°C 230V hours	Maximum leakage mA/phase
	VAC	Hz		PN→E VAC	P→N VDC		
Standard types	250	50/60	DC to 400	2000	1700	1 000 000	0.4*
B medical types (no Y capacitors)	250	50/60	DC to 400	2500	1700	1 750 000	0.002
A safety types (lower capacitance)	250	50/60	DC to 400	2500	1700	1 000 000	0.040

* 1mA for 30A and 60A versions

Electrical schematic

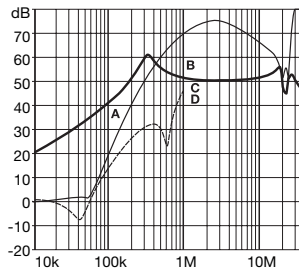


See tables for component values.

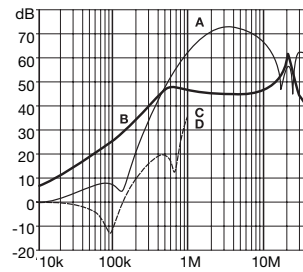
FN 2020 insertion loss

Per CISPR 17; A = 50Ω/50Ω sym, B = 50Ω/50Ω asym, C = 0.1Ω/100Ω sym, D = 100Ω/0.1Ω sym

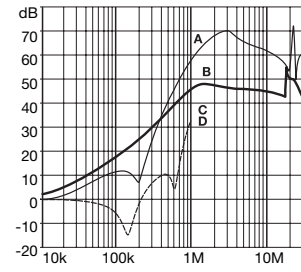
1A types



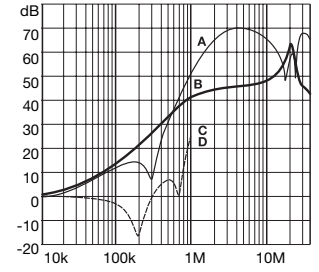
3A types



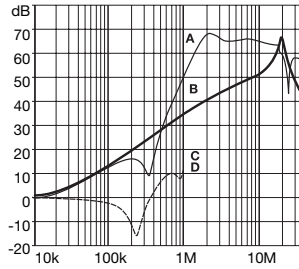
6A types



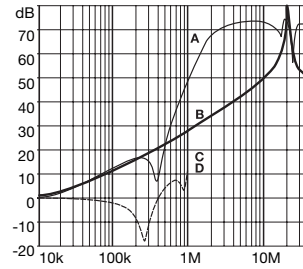
10A types (12A*)



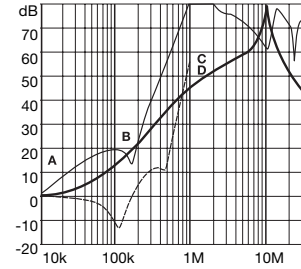
16A types



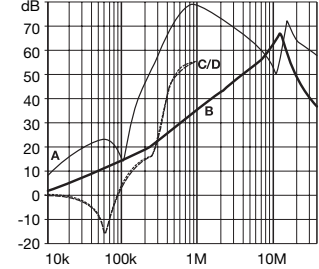
20A types



30A types



60A types



* attenuation performance of the 12A version is similar to the 10A component.

Mechanical data

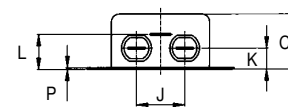
Housing style	F2	H2	K1	Tol.* ± mm
A	64 ± 0.3	71	85	± 0.5
B	35	46.6	54	± 0.5
C	29.3		30.3	± 0.5
D	43.5	50.5	64.8	± 0.5
F	54	61	75	± 0.3
J	21		27	± 0.2
K	8.3 [§] /9.3	10.8/8.3 [§]	12.3/8.3 [§]	± 0.5
L	15.3	19.3	20.8/23.3	± 0.5
M		5.3		± 0.1
N		6.3		± 0.1
P		0.7		± 0.1
S		20.1/30.5 [§]	19.9/34.9 [§] /21.4 [†]	± 0.5

[§] with /07 connections

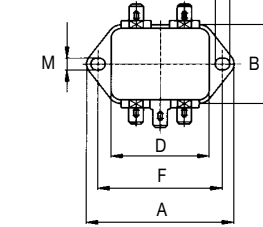
[†] with /08 connections
wire length of /07: 140 +5 mm

* Measurements share this common tolerance unless otherwise stated.

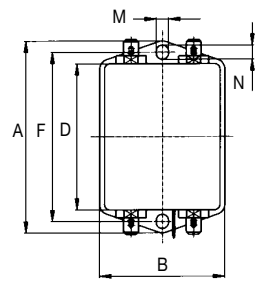
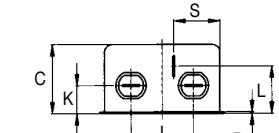
Front



Top



Housing F2

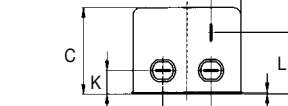


Housings H2, K1

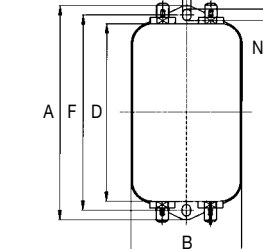
Housing style	P	L2	Tol.* ± mm
A	113.5	105 ± 0.5	± 1
B	57.5	99.5	± 1
C	45.4 ± 1.2	57.6	± 1
D	94	84.5	± 1
F	103	95	± 0.3
J	25	40	± 0.2
K	12.4	10.1	± 0.5
L	32.4	20	± 0.5
M		4.4	± 0.1
N		6	± 0.1
P	0.9	79	± 0.1
R		51	± 0.2
S	15.5		± 0.5

* Measurements share this common tolerance unless otherwise stated.

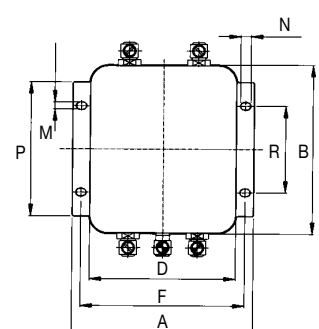
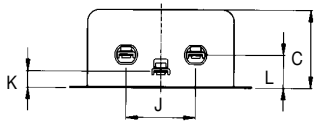
Front



Top



Housing P



Housing L2

All dimensions in mm; 1 inch = 25.4 mm