

# General-purpose filter

# FN 610

- Current ratings from 1 to 30A
  - General-purpose filtering performance
  - Optional medical version (B types)
  - Optional safety version (A types)
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- Nennströme von 1 bis 30A
  - Universelle Filterleistung
  - Für medizinische Geräte als Option (Typ B)
  - Optionale Sicherheitsversion (Typ A)
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- Courants de service de 1 à 30A
  - Filtrage universel
  - Version pour appareils médicaux en option (type B)
  - Version pour la sécurité en option (type A)



### Filter selection table

Choose the family FN xxx with the required current rating and features, and add /?? to determine input/output (line/load) connection style. Example: FN 610-10/06 is a 10A filter with fast-on connections.

### Approvals



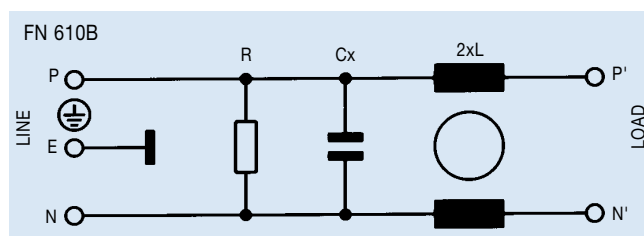
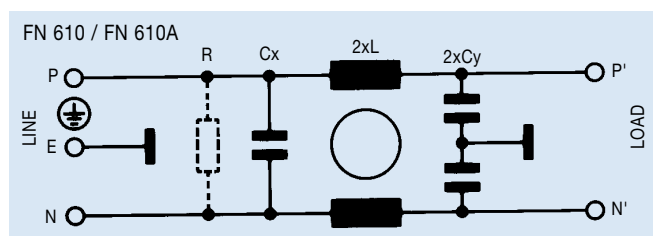
Family	Connections			Current ratings at 40°C (25°) A	Inductance L mH	Housing	Weight g	
							/??	/07
FN 610 -1 /??		/06	/07	1 (1.15)	3	F1	55	65
FN 610 -3 /??		/06	/07	3 (3.4)	2	F1	60	70
FN 610 -6 /??		/06	/07	6 (6.9)	0.75	F1	60	70
FN 610 -10 /??		/06	/07	10 (11.5)	0.45	F2	85	95
FN 610 -20 /??		/06		20 (23)	0.48	J1	220	
FN 610 -30 /??	/03			30 (34)	0.61	L1	630	

### Additional specifications

Filter type	Capacitance		Res. R MΩ	Maximum leakage μA/phase	Maximum operating voltage		Operating frequency Hz	Hipot test voltage	
	Cx nF	Cy nF			VAC	Hz		PN→E VAC	P→N VAC
Standard types	33	2.2		190	250	50/60	DC to 400	2000	1700
A types (safety)	33	0.47	1	40	250	50/60	DC to 400	2500	1700
B types (medical)	33		1	2	250	50/60	DC to 400	2500	1700

MTBF at 40°C, 230V, per Mil-HB-217F: 1,200,000 hours.

### Electrical schematics

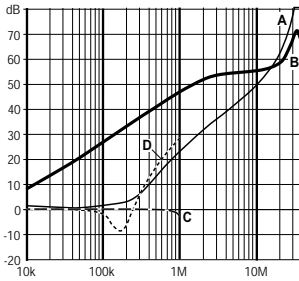


See tables for component values.

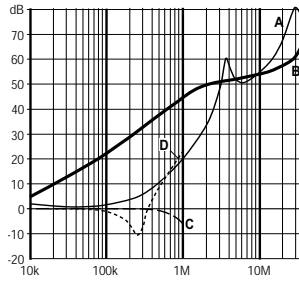
# FN 610 insertion loss

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

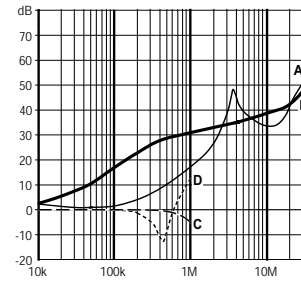
## 1 amp types



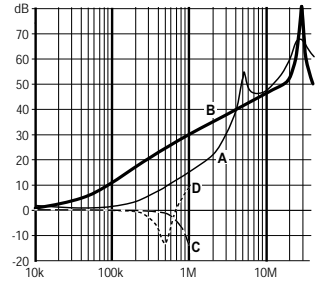
## 3 amp types



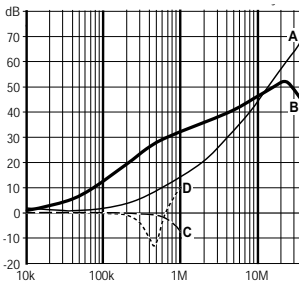
## 6 amp types



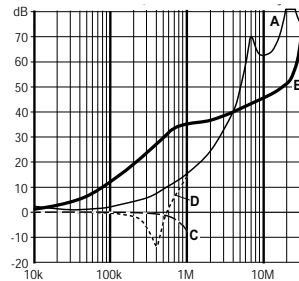
## 10 amp types



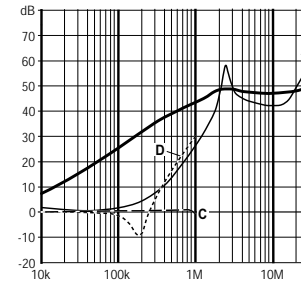
## 20 amp types



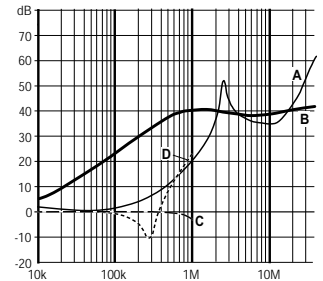
## 30 amp types



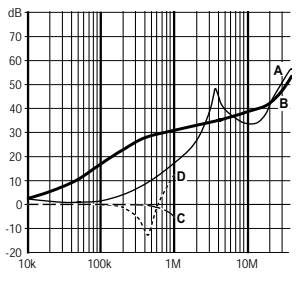
## 1 amp (A types)



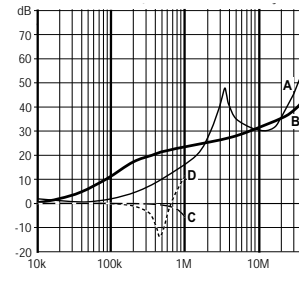
## 3 amp (A types)



## 6 amp (A types)



## 10 amp (A types)

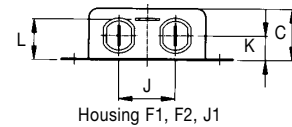


## Mechanical data

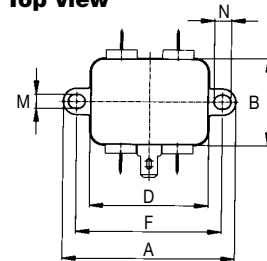
	FN 610 -1-3-6 F1	FN 610 -10 F2	FN 610 -20 J1	Tol.* mm	FN 610 -30 L1	Tol. mm
<b>A</b>	64		71	± 0.5	105	± 0.5
<b>B</b>	33		52.6	± 0.5	99.5	± 1
<b>C</b>	19		29	± 0.5	38	± 1
<b>D</b>	44		50.5 ± 1	± 0.3	84.5	± 1
<b>F</b>	54		61	± 0.2	79	± 0.5
<b>J</b>		21		± 0.5	95	± 0.2
<b>K</b>	9		14	± 0.5	51	± 0.1
<b>L</b>	15		20	± 0.5	40	± 0.5
<b>M</b>		5.3		± 0.1	9.5	± 0.5
<b>N</b>		6.3		± 0.1	19	± 0.5
<b>Y</b>		6		± 1	4.4	± 0.1
<b>Z</b>		140		+ 5	6	± 0.1

\* Measurements share this common tolerance unless otherwise stated.

## Front view

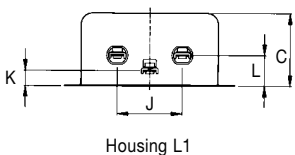


## Top view



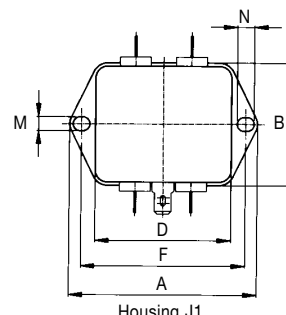
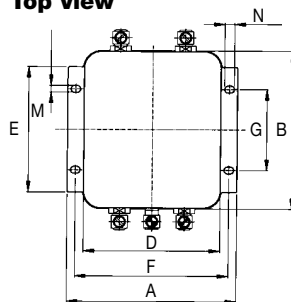
Housing F1, F2

## Front view



Housing L1

## Top view



Housing J1

All dimensions in mm; 1 inch = 25.4 mm