

General Performance AC/DC EMI FILTER

Feature and Benefits

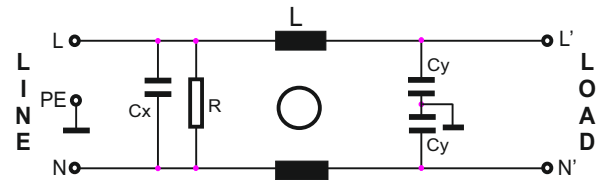
- EN2010 Single-stage filters are designed for easy and fast chassis mounting.
- The EN2010 filters are also available as B versions with no Y-capacitors for medical applications as well as A versions with low capacitance for safety critical applications with a requirement for low leakage currents.
- The EN 2010 Filter can be use to cover broad range of uses and they can offer a good size/amperages ratio
- EN 2010 filters are also available as dual stage filters (EN 2060 & EN2070 series).
- Various terminal options allow you to select the desired connection style



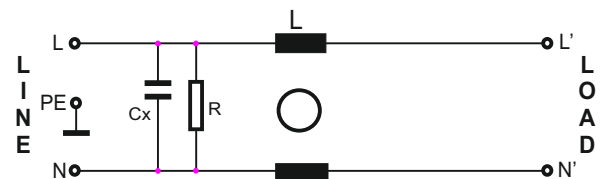
Technical specifications

Maximum continuous operating voltage	250VAC, 50/60Hz
Operating Frequency	DC to 400Hz
Rated Currents	1 to 30A @40°C
High Potential Test voltage	L-GND 2550 VDC for 2 sec L-GND 3500 VDC for 2 sec (B types) L - N 1100 VDC for 2 sec
Temperature range (operation and storage)	-25°C to +100°C (25/100/21)
Certified to	UL 1283,EC/EN60939 (Applies to AC and DC Applications)
Flammability Corresponding to	UL 94V-2 better

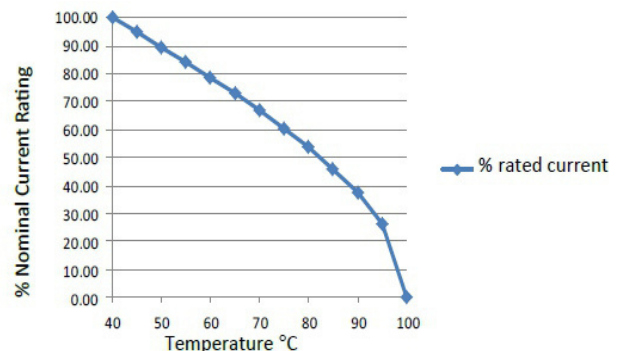
ELECTRICAL SCHEMATIC



Type B (Medical Version)






Temperature Derating Curve for EMC Filters Rated at 40°C Ambient and 100°C Maximum



Typical Application

- Electrical and electronic equipment
- Consumer goods
- Household equipment
- Medical equipment
- Electronic data processing equipment
- Office automation and datacom equipment

FILTER SELECTION TABLE

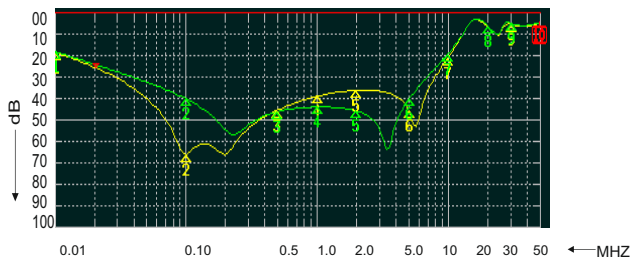
Filters	Rated current @40°C (25°C) A	Leakage current @250V/50 Hz mA	Inductance (L-L) ΣL mH	Capacitance (L-N) ΣCx μF	Capacitance (L-G) ΣCy nF	Resistance (L-N) ΣR K Ω	Connction type		
									
EN2010-1-X	1(1.15)	0.74	12	0.1	9.4	1000	F	W	
EN2010-3-X	3(3.45)	0.74	2.5	0.1	9.4	1000	F	W	
EN2010-6-X	6(6.90)	0.74	1.0	0.1	9.4	1000	F	W	
EN2010-10-X	10(11.5)	0.74	0.8	0.1	9.4	1000	F	W	
EN2010-12-X	12(13.8)	0.74	0.7	0.1	9.4	1000	F	W	
EN2010-13-X	13(15.0)	0.74	0.7	0.1	9.4	1000	F	W	
EN2010-16-X	16(18.4)	0.74	0.6	0.1	9.4	1000	F	W	
EN2010-20-X	20(23.0)	1.45	0.7	0.47	20	1000	F	W	S
EN2010-30-S	30(34.5)	1.45	0.7	0.47	20	1000			S
EN2010-60-S	60(69.0)	1.45	1.0	1.50	20	1000			S
Low Leakage Version									
EN2010A-1-X	1(1.15)	0.074	12	0.1	0.94	1000	F	W	
EN2010A-3-X	3(3.45)	0.074	2.5	0.1	0.94	1000	F	W	
EN2010A-6-X	6(6.90)	0.074	1.0	0.1	0.94	1000	F	W	
EN2010A-10-X	10(11.5)	0.074	0.8	0.1	0.94	1000	F	W	
EN2010A-12-X	12(13.8)	0.074	0.7	0.1	0.94	1000	F	W	
EN2010A-13-X	13(00.0)	0.074	0.7	0.1	0.94	1000	F	W	
EN2010A-16-X	16(18.4)	0.074	0.6	0.1	0.94	1000	F	W	
EN2010A-20-X	20(23.0)	0.074	0.7	0.47	0.94	1000	F	W	S
EN2010A-30-S	30(34.5)	0.074	0.7	0.47	20	1000			S
EN2010A-60-S	60(69.0)	0.074	1.0	1.50	20	1000			S
Medical Version Without Y cap									
EN2010B-1-X	1(1.15)	0.002	12	0.1		1000	F	W	
EN2010B-3-X	3(3.45)	0.002	2.5	0.1		1000	F	W	
EN2010B-6-X	6(6.90)	0.002	1.0	0.1		1000	F	W	
EN2010B-10-X	10(11.5)	0.002	0.8	0.1		1000	F	W	
EN2010B-13-X	12(13.8)	0.002	0.7	0.1		1000	F	W	
EN2010B-12-x	13(00.0)	0.002	0.7	0.1		1000	F	W	
EN2010B-16-X	16(18.4)	0.002	0.6	0.1		1000	F	W	
EN2010B-20-X	20(23.0)	0.002	0.7	0.47		1000	F	W	S
EN2010B-30-S	30(34.5)	0.002	0.7	0.47		1000			S
EN2010B-60-S	60(69.0)	0.002	1.0	1.50		1000			S

To compile a complete part number, please replace the -.. with the required I/O connection style (e.g. EN 2010-30-S, EN 2010B-10-F). The different letters code the
 ** Maximum leakage under usual AC operating conditions (acc. IEC 60939-3). Note: if the neutral line is interrupted, worst case leakage could reach twice this level.

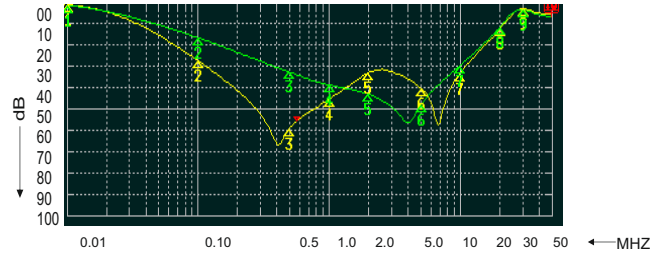
TYPICAL INSERTION LOSS, dB (50/50 Ohm)

Insertion Loss: Common mode - —
Differential mode- —

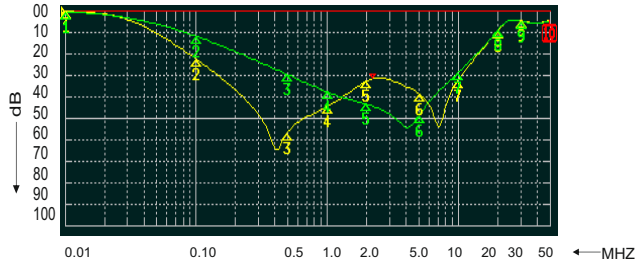
1 to 3 A



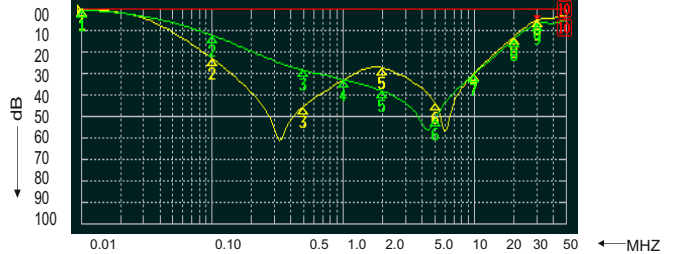
6 to 10 A



12 to 16 A



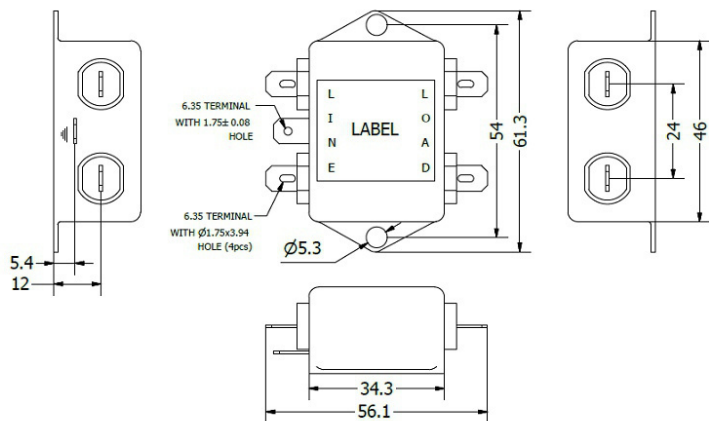
20A to 30 A



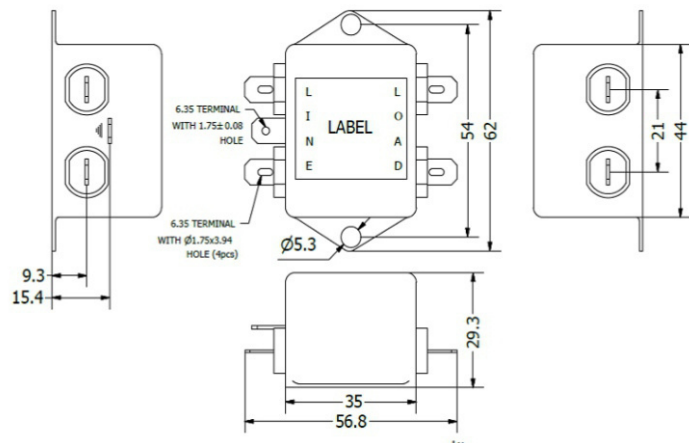
MECHANICAL DETAILS

Mechanical Drawing

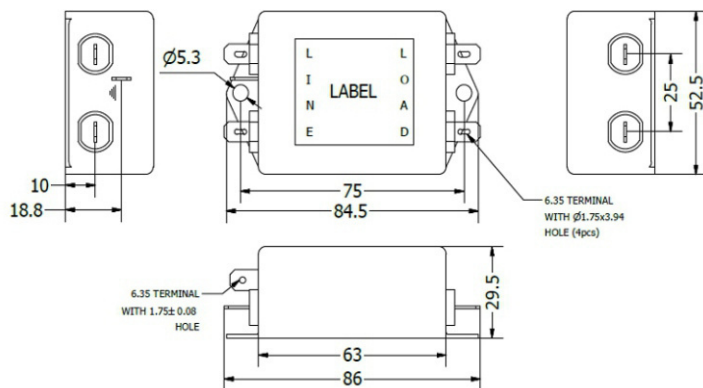
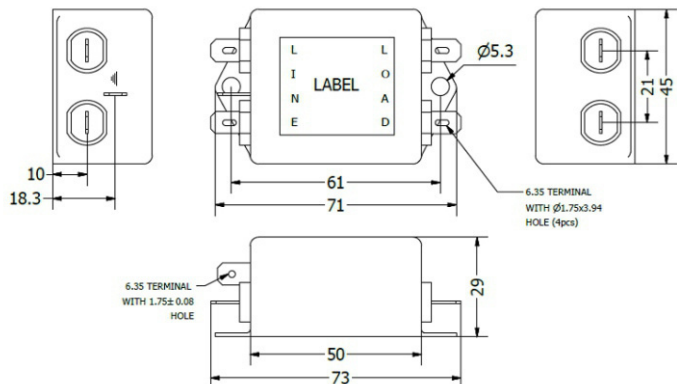
1 to 6 & 13Amp Faston Terminal



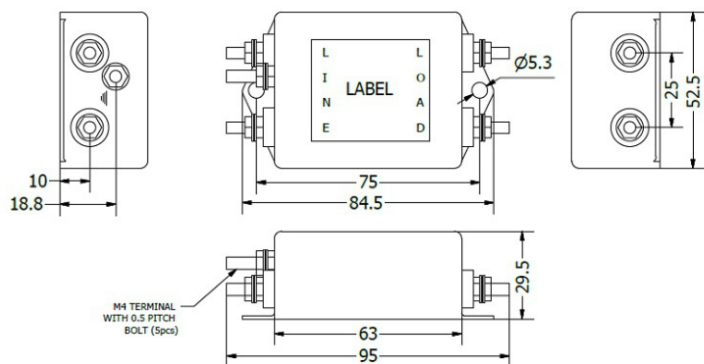
10 and 12 Amp Faston Terminal



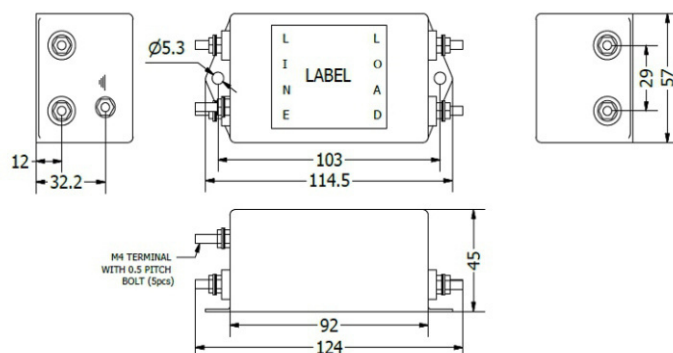
16Amp Faston Terminal



20Amp Screw Terminal



30Amp Screw Terminal (M4)



**All Dimension are in mm



FILTERS RECOMMENDATIONS

Contact Us: 0044 (0) 1704-516 501 enquiries@united-automation.com www.united-automation.com



APPLICATION AND BASIC DIFFERENCE OF ALL EN20XX SERIES

Sn	Series	Type	Rated Current (A)	Stage	Performance	Circuit details	Application	Medical Version	Low Leakage	Surge Protection
1	EN2010	Single Phase	1, 3, 6, 10, 12, 13, 16, 20, 30	Single	General Attenuation		General Purpose Application, Household equipment, medical equipment office automation & Electrical and Electronics equipment	Available	Available	
2	EN2020	Single Phase	1, 3, 6, 10, 12, 16, 20, 30	Single	High differential Mode Attenuation		General Purpose Application, Household equipment, medical Equipment office automation, datacom application & Electrical and Electronics equipment	Available	Available	
3	EN2030	Single Phase	1, 3, 4, 6, 8, 10, 12, 16, 20, 30	Single	High differential Mode Attenuation		General Purpose Applications, Household equipment, medical Equipment office automation & Electrical and Electronics equipment, high noise application	Available	Available	**Available, 2KV IEC 61000-4-5
4	EN2060	Single Phase	1, 3, 6, 10, 12, 16, 20, 30	Dual	High differential & Common Mode attenuation		Industrial Applications, Building Automation, Household equipment, medical equipment office automation, Electronics data processing equipment & Various Noisy applications, Motor drives and applications.	Available	Available	
5	EN2070	Single Phase	1, 3, 6, 10, 12, 16, 25, 36	Dual	High differential & Common Mode attenuation		Industrial Applications, Building Automation, Household equipment, Medical Equipment office automation, Electronics data processing equipment & Various Noisy applications, Motor drives and applications.	Available	Available	
6	EN2080	Single Phase	1, 3, 6, 10, 12, 16	Dual	High differential & Common Mode attenuation		Industrial Applications, Building Automation, Household equipment, medical equipment, office automation, Electronics data processing equipment & Various Noisy applications, Motor drives and applications.	Available	Available	
7	EN2090	Single Phase	1, 3, 4, 6, 8, 10, 12, 16, 20, 30	Dual	Very high differential & Common Mode attenuation		Industrial applications, Building Automation, Household equipment, Medical Equipment, office automation, Electronics data processing equipment & Various Noisy applications, Motor drives and applications.	Available	Available	**Available, 2KV IEC 61000-4-5

Note: ** Surge protection Filter is only CE and ROHS Approved



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