EMC-Power Line Filters for 1-Phase Systems

FMLB Series, all-purpose filters to Protection Class I, conform to EN 133200, UL 1283 and IEC 60950

Nominal current: 6 – 20 A @ 40 °C
Rated voltage U_R (U_{max}): 125/250 VAC 50/60 Hz
Attenuation: Standard
Leakage current: for Standard and Medical applications
Test voltages: L/N → E 2.7 kVDC, 2 sec
L → N 1.7 kVDC, 2 sec *
Climatic category: 25/100/21 acc. to IEC 60068-1
50% saturation typ.: 2 to 3 x I_N @ 20 °C
Inrush current: 1.5 x I_N 1 min. per hour
MTBF @ 40 °C / U_R (U_{max}): > 200'000 h acc. To MIL-HB-217 F

* without resistor

Approvals:

The SCHURTER filter family has been specially developed for universal industrial applications such as:

- Control systems
- Power supplies
- Stepper motor drives
- Power converters

International approvals center (i.e. UL) today demand high filter performance with regard to attenuation and loading characteristics. During the design, special considerations were made for applications that require high attenuation at the specified maximum load or where asymmetrical loading of the filter occur independently from line impedance at the installation site. The implemented filter range wholly conforms to the requirements of the international standards EN 133200, UL 1283 and IEC 60950 and is ideally suited for applications with EN 55011, EN 55014and EN 55022 requirements.

- Version with quick connect terminals (flat pins, 6.3 x 0.8 mm) is produced as standard series.
- Key features of the high-current filter series:
  - simple, space-saving installation
  - excellent price/performance ratio
  - good common mode attenuation characteristics (from 10 kHz to 300 MHz)
- To maximize the filter performance, the following EMC rules should be considered:
  - physical separation of filter input and output lines
  - physical separation of the interference source itself

Optional versions:

- Version with cable connections in place of the quick connect terminals
- Medical version M80* with leakage current < 80µA

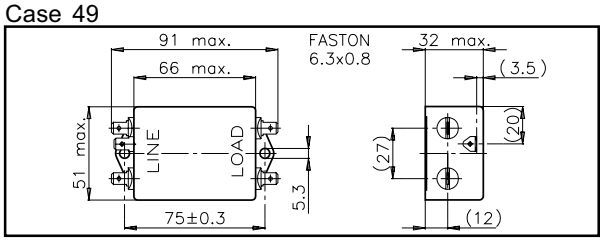
*Contact Schurter for minimum order quantity

Order Numbers and Technical Data

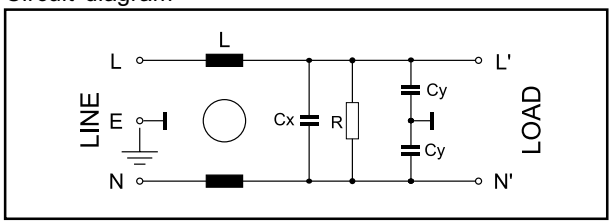
Type **FMLB** Standard	I_N (1) @ ϑa 40 °C [A]	U_R (Umax) [VAC]	L_N (2) -30% / +50% [mH]	Leakage current (3) @ 250 V / 50 Hz [mA]	Cx(X2) [µF]	Cy(Y2) [nF]	R [MΩ]	Case
5500.2035	6	250	2 x 14.0	< 0.35	0.1	3.3	-	49
5500.2036	10	250	2 x 5.0	< 0.35	0.1	3.3	-	49
5500.2037	16	250	2 x 2.0	< 0.35	0.1	3.3	-	49
5500.2038	20	250	2 x 1.5	< 0.35	0.1	3.3	-	49
Type **FMLB** Medical M5	I_N (1) @ ϑa 40 °C [A]	U_R (Umax) [VAC]	L_N (2) -30% / +50% [mH]	Leakage current (3) @ 250 V / 50 Hz [µA]	Cx(X2) [µF]	Cy(Y2) [nF]	R [MΩ]	Case
5500.2082	6	250	2 x 14.0	< 5	0.1	-	1	49
5500.2083	10	250	2 x 5.0	< 5	0.1	-	1	49
5500.2084	16	250	2 x 2.0	< 5	0.1	-	1	49
5500.2085	20	250	2 x 1.5	< 5	0.1	-	1	49

(1) Current derating over 40°C : $I = I_N \times \sqrt{(100-\vartheta a)/60}$
(2) Nominal inductance measured according to EN 138100, see introduction of this catalog, paragraph 3.4
(3) Measured according to IEC 60950 5.2.3 Annex D, see introduction of this catalog, paragraph 3.5
Versions with connecting cables are available on request: min. order 100 pieces.

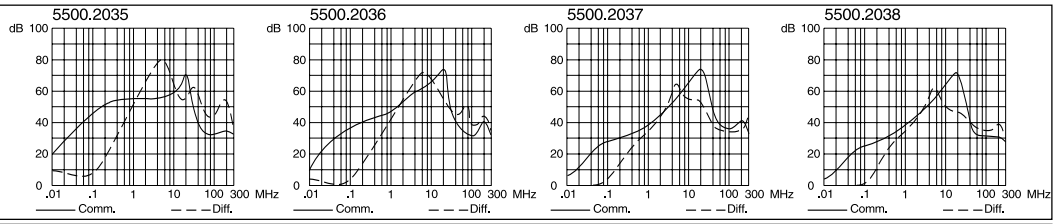
Case 49



Circuit diagram



Insertion loss - Standard



Insertion loss - Medical M5