DATA SHEET | BL 2090

BLA ETECH
The Next Stage

Dual-stage EMI Filter with Excellent Attenuation Performance

Feature and Benefits

- BL 2090 two-stage filters are designed for easy and fast chassis mounting.
- BL 2090 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.
- All filters provide an exceptional conducted attenuation performance, based on chokes with high permeable core material and excellent thermal behavior.
- BL 2090 filters are also available as Single stage filters (BL 2030)
- BL 2090 filters offers an optimized filter range for enhanced performance AC and DC applications
- Various terminal options allow you to select the desired connection style
- Rated currents from 1 to 30A Approvals
- Two-stage filter
- Very high differential and common-mode attenuation
- Optional medical versions (B type)
- Optional safety versions (A type)
- Optional overvoltage protection (Z type)

Technical specifications

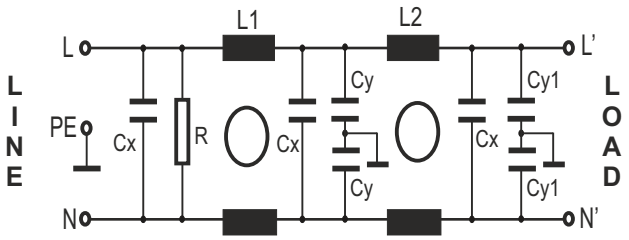
Maximum continuous operating voltage	250VAC, 50/60Hz
Operating Frequency	DC to 400Hz
Rated Currents	1 to 30A @40°C
High Potential Test voltage	L-GND 2550 VDC for 2 sec L-GND 3500 VDC for 2 sec (B types) L - N 1100 VDC for 2 sec
Temperature range (operation and storage)	-25°C to +100°C (25/100/21)
Certified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

* maximum RMS operating voltage at rated frequency or the maximum DC operating voltage

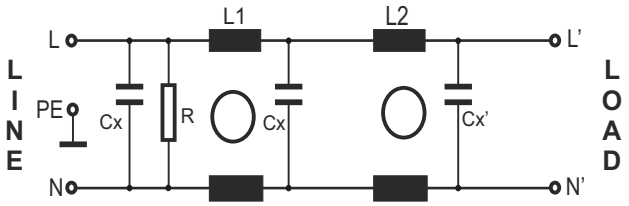
Typical Application

- Electrical and electronic equipment
- Consumer goods
- Household equipment
- Medical equipment
- Electronic data processing equipment
- Office automation and datacomequipment
- EV application
- Various noisy applications requiring high filter performance

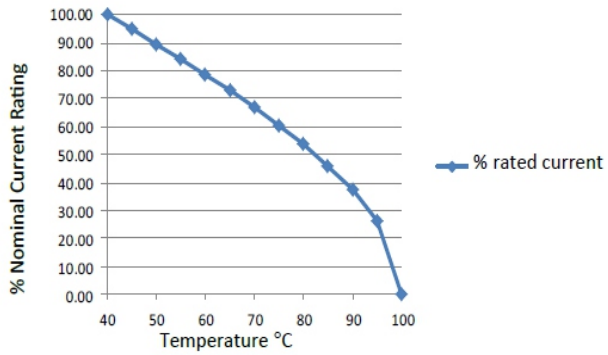
ELECTRICAL SCHEMATIC



Type B (Medical Version)



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



BLA ETECH PVT. LTD.
EMC, EMI FILTER & POWER SOLUTION
www.blaetech.com
info@blaetech.com
sales@blaetech.com
+91- 9899107050
+91-11-47483290

BLA ETECH
The Next Stage

FILTER SELECTION TABLE

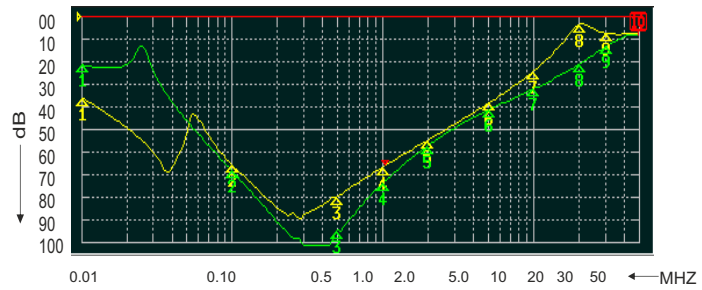
Filters**	Rated current @40°C A	Leakage current @250V/50Hz mA	Inductance (L-L) ΣL mH	Capacitance (L-N) ΣCx µF	Capacitance (L-G) ΣCy nF	Resistance (L-N) ΣR KΩ	Connetion type			Weight gram (g)
BL2090-1-X	1(1.15)	0.5	40	0.66	6.2	680	F	W		70
BL2090-3-X	3(3.45)	0.5	28	0.99	6.2	470	F	W		155
BL2090-4-X	4(4.50)	0.5	28	0.99	6.2	470	F	W		155
BL2090-6-X	6(6.90)	0.67	16	1.41	8.6	330	F	W		190
BL2090-8-X	8(8.90)	0.67	16	1.41	8.6	330	F	W		320
BL2090-10-X	10(11.5)	0.67	16	1.41	8.6	330	F	W		350
BL2090-12-X	12(13.8)	1.02	8	3.00	22	220	F	W		390
BL2090-16-X	16(18.4)	1.02	8	3.00	22	220	F	W		440
BL2090-20-X	20(23.0)	1.02	5.4	3.00	22	220	F		S	530
BL2090-30-S	30(34.5)	1.02	3	3.00	22	220			S	550
Low Leakage Version										
BL2090A-1-X	1(1.15)	0.08	40	0.66	1.88	680	F	W		70
BL2090A-3-X	3(3.45)	0.08	28	0.99	1.88	470	F	W		155
BL2090A-4-X	4(4.50)	0.08	28	0.99	1.88	470	F	W		155
BL2090A-6-X	6(6.90)	0.08	16	1.41	1.88	330	F	W		190
BL2090A-8-X	8(8.90)	0.08	16	1.41	1.88	330	F	W		320
BL2090A-10-X	10(11.5)	0.08	16	1.41	1.88	330	F	W		350
BL2090A-12-X	12(13.8)	0.08	8	3.00	1.88	220	F	W		390
BL2090A-16-X	16(18.4)	0.08	8	3.00	1.88	220	F	W		440
BL2090A-20-X	20(23.0)	0.08	5.4	3.00	1.88	220	F		S	530
BL2090A-30-S	30(34.5)	0.08	3	3.00	1.88	220			S	550
Medical Version Without Y cap										
BL2090B-1-X	1(1.15)	0.002	40	0.66		680	F	W		70
BL2090B-3-X	3(3.45)	0.002	28	0.99		470	F	W		155
BL2090B-4-X	4(4.50)	0.002	28	0.99		470	F	W		155
BL2090B-6-X	6(6.90)	0.002	16	1.41		330	F	W		190
BL2090B-8-X	8(8.90)	0.002	16	1.41		330	F	W		320
BL2090B-10-X	10(11.5)	0.002	16	1.41		330	F	W		350
BL2090B-12-x	13(00.0)	0.002	8	3.00		220	F	W		390
BL2090B-16-X	16(18.4)	0.002	8	3.00		220	F	W		440
BL2090B-20-X	20(23.0)	0.002	5.4	3.00		220	F		S	530
BL2090B-30-S	30(34.5)	0.002	3	3.00		220			S	550

To compile a complete part number, please replace the -.. with the required I/O connection style (e.g. BL 2090-30-S, BL 2090B-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.

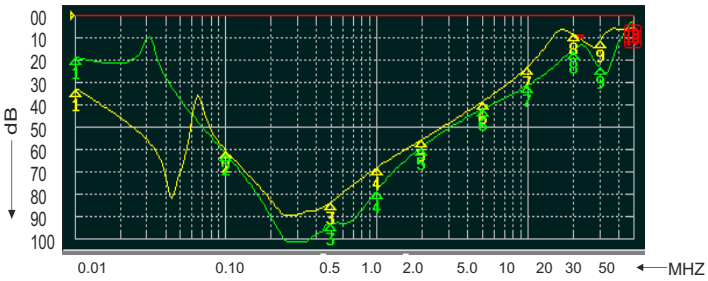
TYPICAL INSERTION LOSS, dB (50/50 Ohm)

Insertion Loss: Common mode - ——
Differential mode- ——

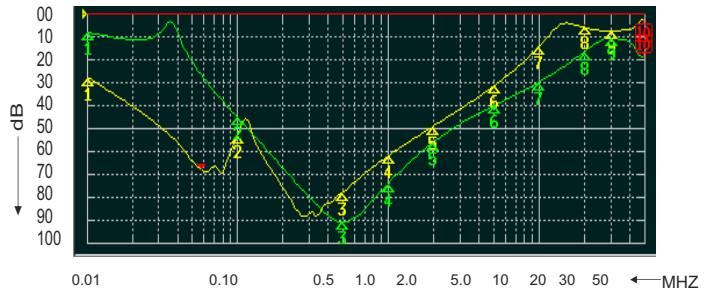
1 to 6 A



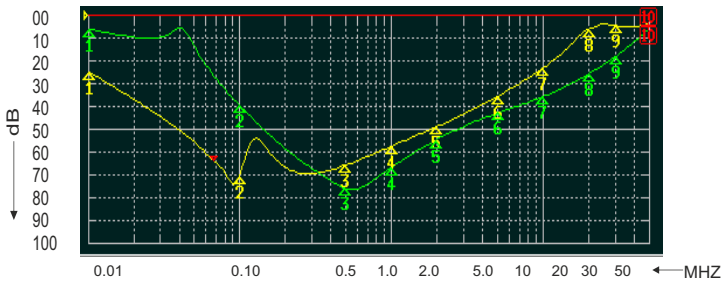
8 to 12 A



16 to 20 A



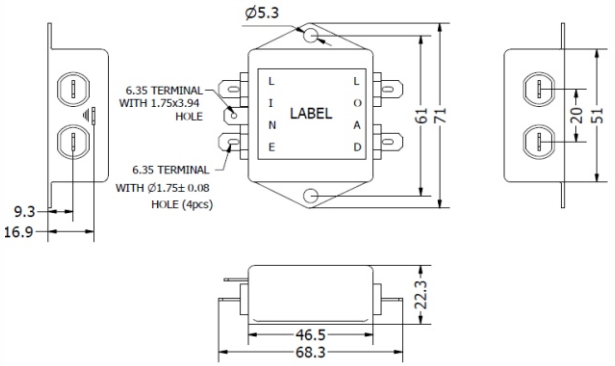
30 A



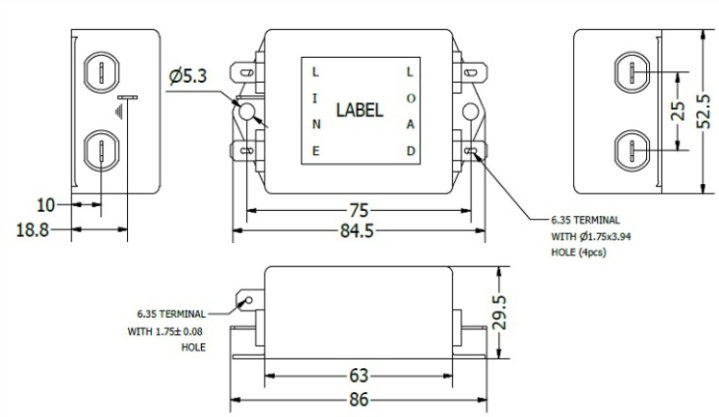
BLA ETECH
The Next Stage

MECHNICAL DETAILS

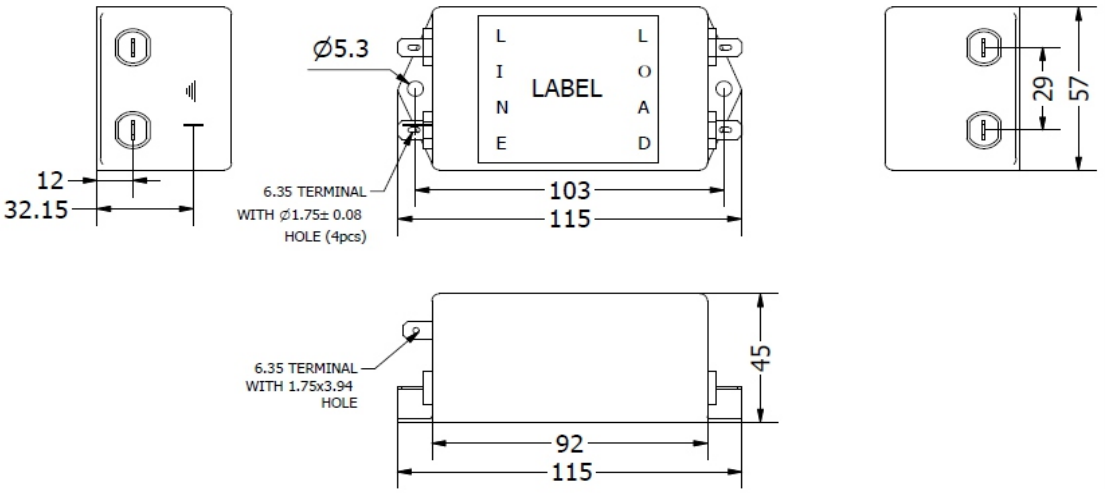
1 Amp Faston Terminal



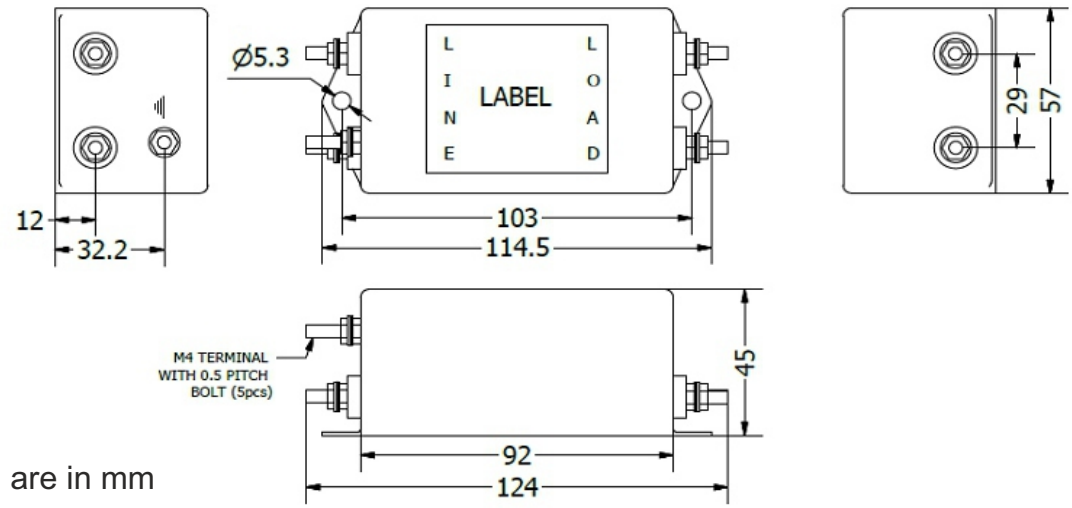
3 to 6 Amp Faston Terminal



8 to 20 Amp Faston Terminal



20 & 30 Amp Screw Terminal (M4)



**All Dimension are in mm