

General EMI Filter with High Attenuation Performance

Dual-Stage EMI Filter with Excellent Attenuation Performance AMI-29 Series



- Rated current from 1 to 30 A
- Dual-stage filter
- Very high differential and common mode attenuation
- Optional medical version (Type B)
- Optional safety version (Type A)

Approvals:



Technical Specifications

Maximum continuous operating voltage: 250VAC, 50/60Hz

Operating frequency: DC to 400Hz

Rated currents: 1 to 30A @ 40°C max.

High potential test voltage: L → PE 3000VDC for 2 sec (standard types)

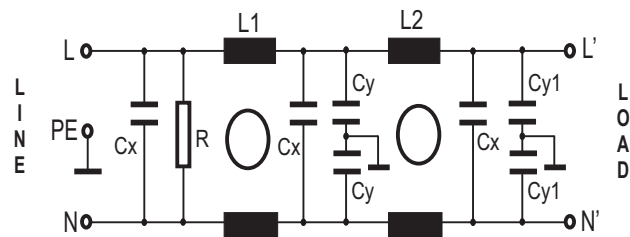
L → PE 3500VDC for 2 sec (B types)

L → N 1100VDC for 2 sec

Temperature range (operation and storage): -25°C to +100°C (25/100/21)

Design corresponding to: UL 1283.

CIRCUIT DIAGRAM:



Features and Benefits

- AMI-29 dual-stage filters are designed for easy and fast chassis mounting.
- The AMI-29 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.
- AMI-29 two-stage filters are designed for noisy applications requiring excellent filter performance.
- The higher inductivity versus amperage offers increased attenuation performance with the same form factor compared to AMI-26 and AMI-28 filter series.
- AMI-29 filters are also available as single stage filters (AMI-23 series).
- Various terminal options allow you to select the desired connection style.

Typical Applications

- Consumer electronics
- Computing & accessories
- Residential appliances
- Medical accessories
- Electronic data processing equipment
- Office automation equipment
- Industrial applications
- Power supplies
- Various noisy applications requiring high filter performance

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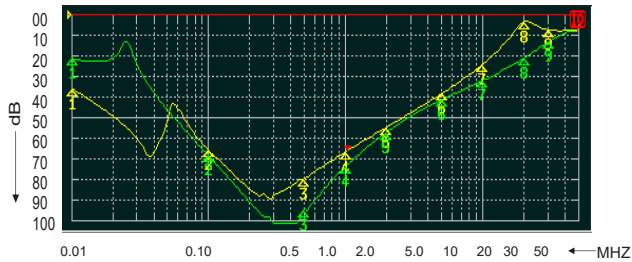
FILTER SELECTION TABLE

| | Rated current @40°C (25°C) | Leakage current @ 250VAC/50Hz @ 120VAC/60Hz | Inductance ΣL | Capacitance ΣCx | Capacitance ΣCy | Resistance ΣR | Connetion type | | |
|--------------|-------------------------------|---|--------------------------|----------------------------|----------------------------|--------------------------|----------------|---|---|
| | A | mA | mH | μF | nF | K_{Ω} | | | |
| AMI-29-1-X | 1 (1.1) | 0.5 (0.29) | 40 | 0.66 | 6.4 | 680 | 1 | 3 | |
| AMI-29-3-X | 3 (3.4) | 0.5 (0.29) | 28 | 0.99 | 6.4 | 470 | 1 | 3 | |
| AMI-29-4-X | 4 (4.5) | 0.5 (0.29) | 28 | 0.99 | 6.4 | 470 | 1 | 3 | |
| AMI-29-6-X | 6 (6.7) | 0.67 (0.39) | 16 | 1.41 | 8.6 | 330 | 1 | 3 | |
| AMI-29-8-X | 8 (8.9) | 0.67 (0.39) | 16 | 1.41 | 8.6 | 330 | 1 | 3 | |
| AMI-29-10-X | 10 (11.2) | 0.67 (0.39) | 16 | 1.41 | 8.6 | 330 | 1 | 3 | |
| AMI-29-12-X | 12 (13.4) | 1.73 (1.0) | 8 | 3.0 | 22 | 220 | 1 | 3 | |
| AMI-29-16-X | 16 (17.9) | 1.73 (1.0) | 8 | 3.0 | 22 | 220 | 1 | 3 | |
| AMI-29-20-X | 20 (22.4) | 1.73 (1.0) | 5.4 | 3.0 | 22 | 220 | 1 | | 6 |
| AMI-29-30-X | 30 (33.5) | 1.73 (1.0) | 3.0 | 3.0 | 22 | 220 | | | 6 |
| | | | | | | | | | |
| AMI-29A-1-X | 1 (1.1) | 0.08 (0.04) | 40 | 0.66 | 1.88 | 680 | 1 | 3 | |
| AMI-29A-3-X | 3 (3.4) | 0.08 (0.04) | 28 | 0.99 | 1.88 | 470 | 1 | 3 | |
| AMI-29A-4-X | 4 (4.5) | 0.08 (0.04) | 28 | 0.99 | 1.88 | 470 | 1 | 3 | |
| AMI-29A-6-X | 6 (6.7) | 0.08 (0.04) | 16 | 1.41 | 1.88 | 330 | 1 | 3 | |
| AMI-29A-8-X | 8 (8.9) | 0.08 (0.04) | 16 | 1.41 | 1.88 | 330 | 1 | 3 | |
| AMI-29A-10-X | 10 (11.2) | 0.08 (0.04) | 16 | 1.41 | 1.88 | 330 | 1 | 3 | |
| AMI-29A-12-X | 12 (13.4) | 0.08 (0.04) | 8 | 3.0 | 1.88 | 220 | 1 | 3 | |
| AMI-29A-16-X | 16 (17.9) | 0.08 (0.04) | 8 | 3.0 | 1.88 | 220 | 1 | 3 | |
| AMI-29A-20-X | 20 (22.4) | 0.08 (0.04) | 5.4 | 3.0 | 1.88 | 220 | 1 | | 6 |
| AMI-29A-30-X | 30 (33.5) | 0.08 (0.04) | 3.0 | 3.0 | 1.88 | 220 | | | 6 |
| | | | | | | | | | |
| AMI-29B-1-X | 1 (1.1) | 0.002 (0.001) | 40 | 0.66 | | 680 | 1 | 3 | |
| AMI-29B-3-X | 3 (3.4) | 0.002 (0.001) | 28 | 0.99 | | 470 | 1 | 3 | |
| AMI-29B-4-X | 4 (4.5) | 0.002 (0.001) | 28 | 0.99 | | 470 | 1 | 3 | |
| AMI-29B-6-X | 6 (6.7) | 0.002 (0.001) | 16 | 1.41 | | 330 | 1 | 3 | |
| AMI-29B-8-X | 8 (8.9) | 0.002 (0.001) | 16 | 1.41 | | 330 | 1 | 3 | |
| AMI-29B-10-X | 10 (11.2) | 0.002 (0.001) | 16 | 1.41 | | 330 | 1 | 3 | |
| AMI-29B-12-X | 12 (13.4) | 0.002 (0.001) | 8 | 3.0 | | 220 | 1 | 3 | |
| AMI-29B-16-X | 16 (17.9) | 0.002 (0.001) | 8 | 3.0 | | 220 | 1 | 3 | |
| AMI-29B-20-X | 20 (22.4) | 0.002 (0.001) | 5.4 | 3.0 | | 220 | 1 | | 6 |
| AMI-29B-30-X | 30 (33.5) | 0.002 (0.001) | 3.0 | 3.0 | | 220 | | | 6 |

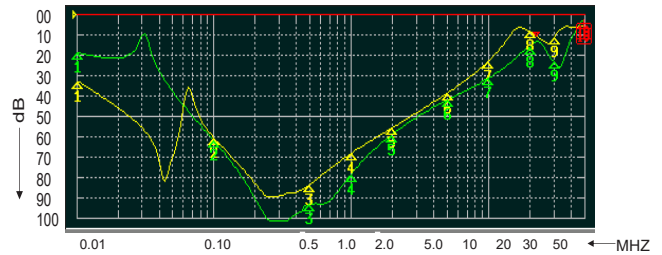
Where X denotes connection style

Insertion Loss: Common mode - —
Differential mode - —

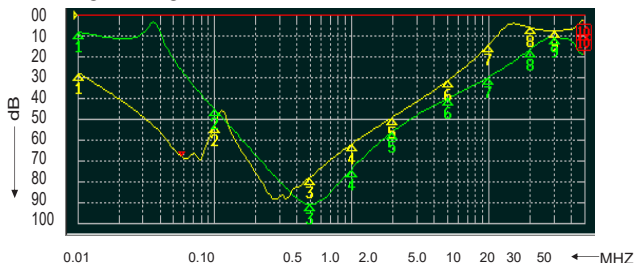
1 to 6 A



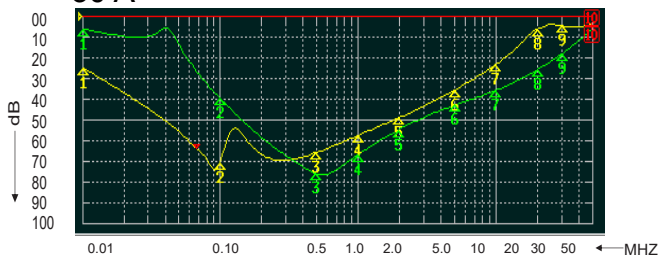
8 to 12 A



16 to 20 A



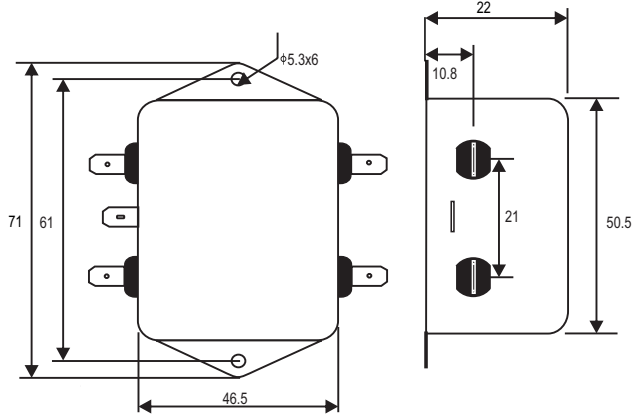
30 A



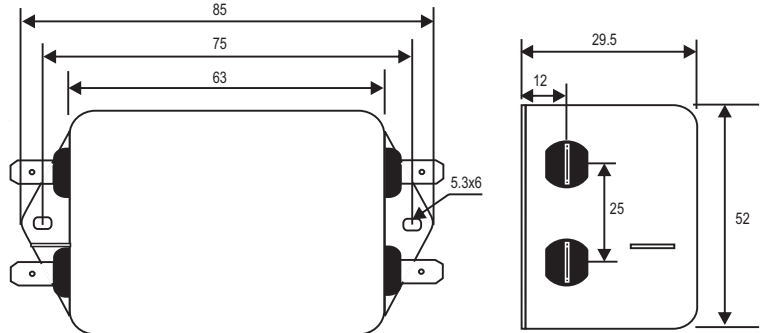
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MECHANICAL DIMENSION (mm):

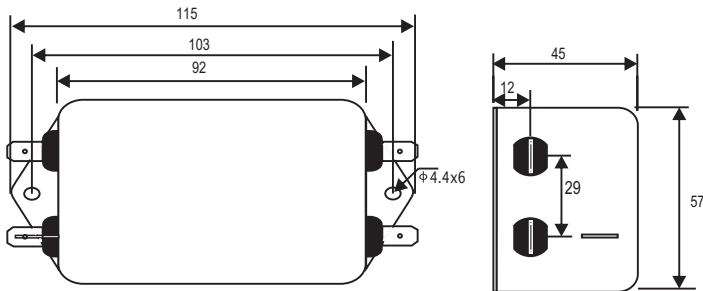
CONNECTION TYPE -1
1A



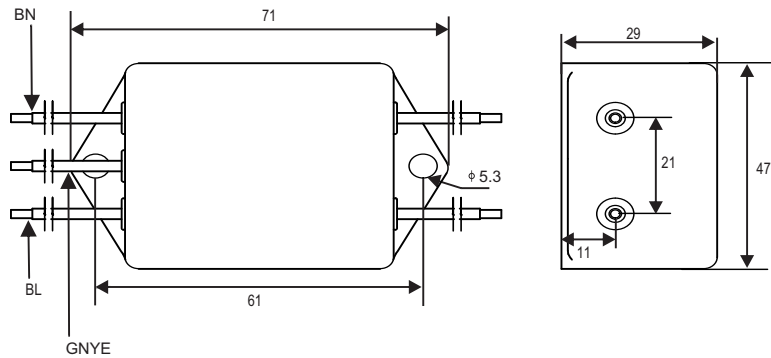
CONNECTION TYPE -1
3A TO 6A



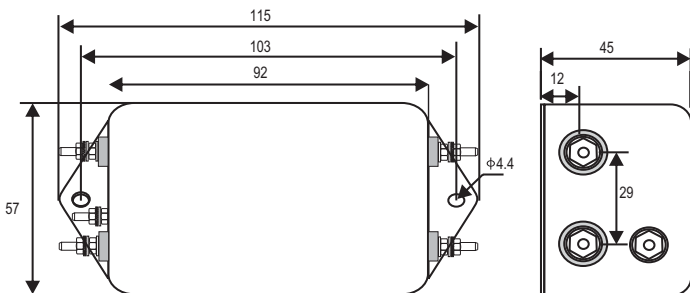
CONNECTION TYPE -1
8A TO 20A



CONNECTION TYPE -3
16A



CONNECTION TYPE -6
20A & 30A



NOTE:

All Dimension in mm

- Connection type: 1 - Spade Terminals (6.3 x 0.8)
- 3 - Wire leads (140mm on both sides)
- 6 - Threaded Bolt Terminals (M4)