

Multipurpose Power Line RFI Filter for Emission Control



AMI-M12R/M12S Series

Metal Enclosure Single Phase Two Stage Filters

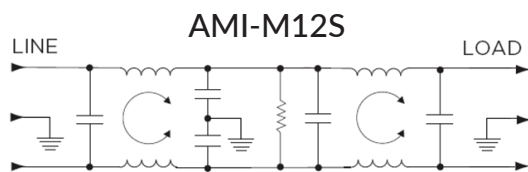
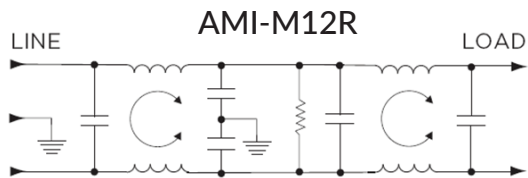
AMI Designation	Input/output Style				Current Rating	Inductance	Capacitance		Resistor	Leakage Current @ 120 VAC 60Hz/250 VAC 50 Hz	TIL Insertion Loss	Case Style
							Cx	Cy				
Available Part Numbers	6.3mm Spade Terminals	Wire Leads	Threaded Bolts	IEC	A	mH	nF	pF	KΩ			
							AMI-M12R-1-1-B-1	1				
AMI-M12R-3-1-B-1	-	3	-	-	1	3.72	300	5500	680	0.4/0.7	005	C
AMI-M12R-1-2-B-1	1	-	-	-	2	1.078	300	5500	680	0.4/0.7	006	A
AMI-M12R-3-2-B-1	-	3	-	-	2	1.078	300	5500	680	0.4/0.7	006	C
AMI-M12R-1-3-B-1	1	-	-	-	3	3.52	300	5500	680	0.4/0.7	007	A
AMI-M12R-3-3-B-1	-	3	-	-	3	3.52	300	5500	680	0.4/0.7	007	C
AMI-M12S-7-3-B-1	-	-	-	7	3	3.52	300	5500	680	0.4/0.7	007	F
AMI-M12S-7M-3-B-1	-	-	-	7	3	3.52	300	5500	680	0.4/0.7	007	F
AMI-M12R-1-5-B-1	1	-	-	-	5	1.032	300	5500	680	0.4/0.7	008	A
AMI-M12R-3-5-B-1	-	3	-	-	5	1.032	300	5500	680	0.4/0.7	008	C
AMI-M12S-7-5-B-1	-	-	-	7	5	1.032	300	5500	680	0.4/0.7	008	F
AMI-M12S-7M-5-B-1	-	-	-	7	5	1.032	300	5500	680	0.4/0.7	008	F
AMI-M12R-1-10-B-1	1	-	-	-	10	0.99	300	5500	680	0.4/0.7	009	A
AMI-M12R-3-10-B-1	-	3	-	-	10	0.99	300	5500	680	0.4/0.7	009	C
AMI-M12R-6-10-B	-	-	6	-	10	0.99	300	5500	680	0.4/0.7	009	D
AMI-M12S-7-10-B-1	-	-	-	7	10	0.99	300	5500	680	0.4/0.7	009	F
AMI-M12S-7M-10-B-1	-	-	-	7	10	0.99	300	5500	680	0.4/0.7	009	F
AMI-M12R-1-20-B-1	1	-	-	-	20	0.88	300	5500	680	0.4/0.7	010	B

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AMI Designation	Input/output Style				Current Rating	Inductance	Capacitance		Resistor	Leakage Current @ 120 VAC 60Hz/250 VAC 50 Hz	TIL Insertion Loss	Case Style
							Cx	Cy				
Available Part Numbers	6.3mm Spade Terminals	Wire Leads	Threaded Bolts	IEC	A	mH	nF	pF	K Ω			
AMI-M12R-6-20-B	-	-	6	-	20	0.88	300	5500	680	0.4/0.7	010	E
AMI-M12R-1-1-B-2	1	-	-	-	1	3.72	300	2800	680	0.21/0.36	001	A
AMI-M12R-3-1-B-2	-	3	-	-	1	3.72	300	2800	680	0.21/0.36	001	C
AMI-M12R-1-2-B-2	1	-	-	-	2	1.078	300	2800	680	0.21/0.36	004	A
AMI-M12R-3-2-B-2	-	3	-	-	2	1.078	300	2800	680	0.21/0.36	004	C
AMI-M12R-1-3-B-2	1	-	-	-	3	3.52	300	2800	680	0.21/0.36	002	A
AMI-M12R-3-3-B-2	-	3	-	-	3	3.52	300	2800	680	0.21/0.36	002	C
AMI-M12S-7-3-B-2	-	-	-	7	3	3.52	300	2800	680	0.21/0.36	002	F
AMI-M12S-7M-3-B-2	-	-	-	7	3	3.52	300	2800	680	0.21/0.36	002	F
AMI-M12R-1-5-B-2	1	-	-	-	5	1.032	300	2800	680	0.21/0.36	003	A
AMI-M12R-3-5-B-2	-	3	-	-	5	1.032	300	2800	680	0.21/0.36	003	C
AMI-M12S-7-5-B-2	-	-	-	7	5	0.99	300	2800	680	0.21/0.36	003	F
AMI-M12S-7M-5-B-2	-	-	-	7	5	0.99	300	2800	680	0.21/0.36	005	F
AMI-M12R-1-10-B-2	1	-	-	-	10	0.99	300	2800	680	0.21/0.36	004	A
AMI-M12R-3-10-B-2	-	3	-	-	10	0.99	300	2800	680	0.21/0.36	004	C
AMI-M12S-7-10-B-2	-	-	-	7	10	0.99	300	2800	680	0.21/0.36	004	F
AMI-M12S-7M-10-B-2	-	-	-	7	10	0.99	300	2800	680	0.21/0.36	004	F
AMI-M12R-1-20-B-2	1	-	-	-	20	0.88	300	2800	680	0.21/0.36	004	B

Multipurpose Power Line RFI Filter for Emission Control

Electrical Schematic



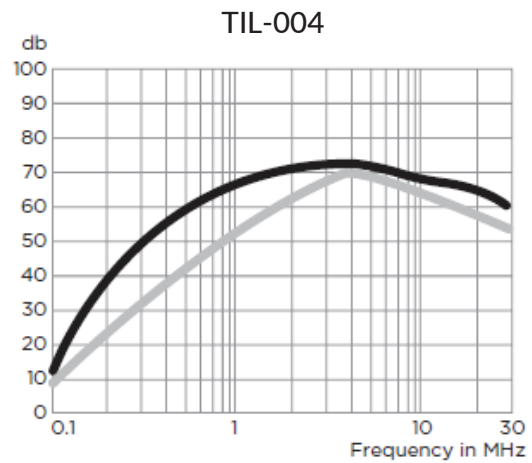
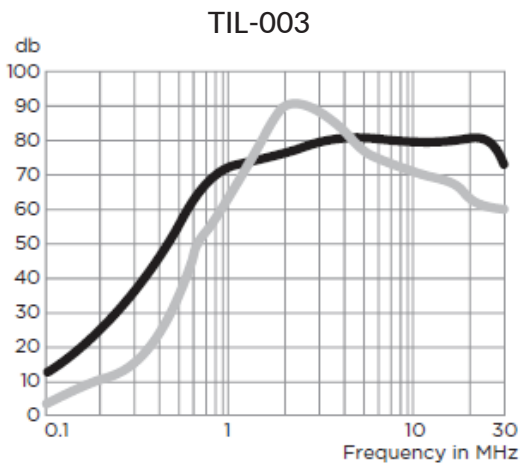
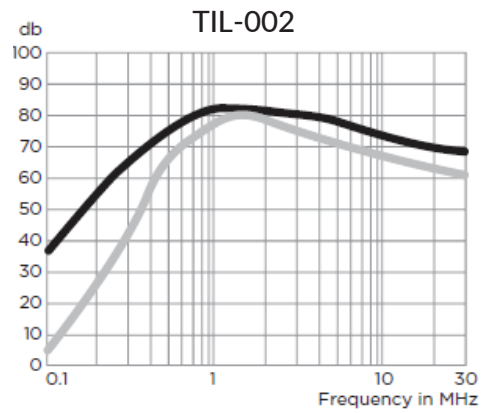
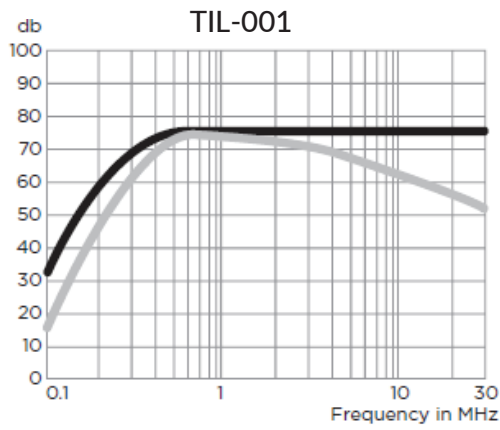
Specifications:

- Rated Voltage (max): 250 VAC
- Operating Frequency: 50/60 Hz
- Operating Current: 1 to 20 A
- Hi-pot Rating (one minute): Line to Ground: 2250 VDC
Line to Line: 1450 VDC
- Operating Ambient Temperature Range (at rated current I_r): -10°C to $+40^{\circ}\text{C}$. In an ambient temperature (T_a) higher than $+40^{\circ}\text{C}$ the maximum operating current (I_o) is calculated as follows: $I_o = I_r \sqrt{[(85 - T_a)/45]}$

Multipurpose Power Line RFI Filter for Emission Control

Performance Data Typical Insertion Loss

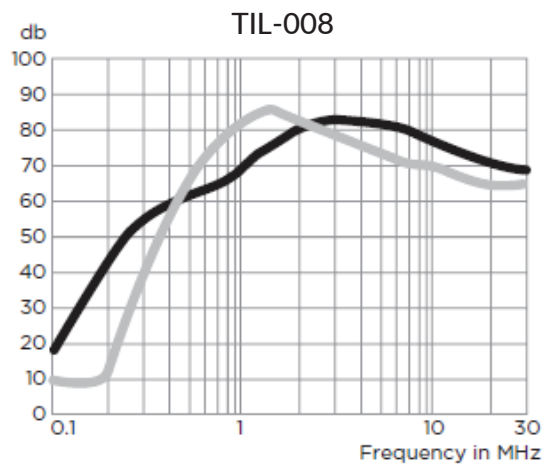
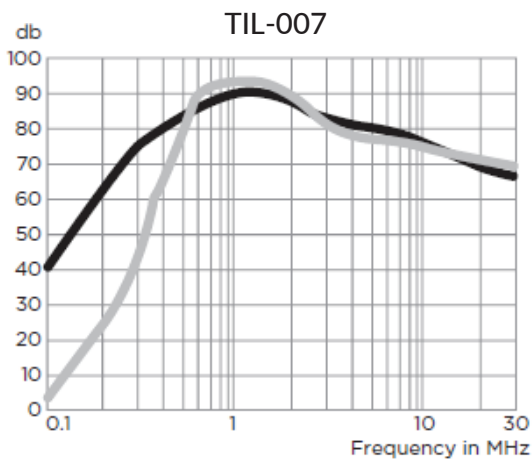
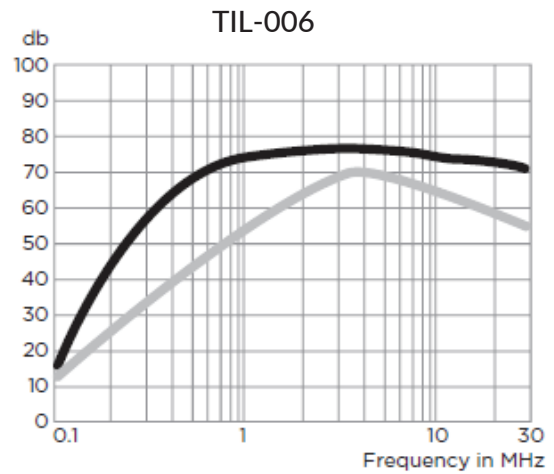
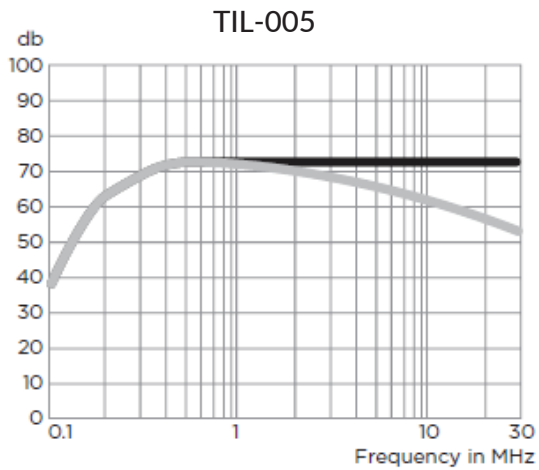
Measured in closed 50 Ohm system



Multipurpose Power Line RFI Filter for Emission Control

Performance Data Typical Insertion Loss

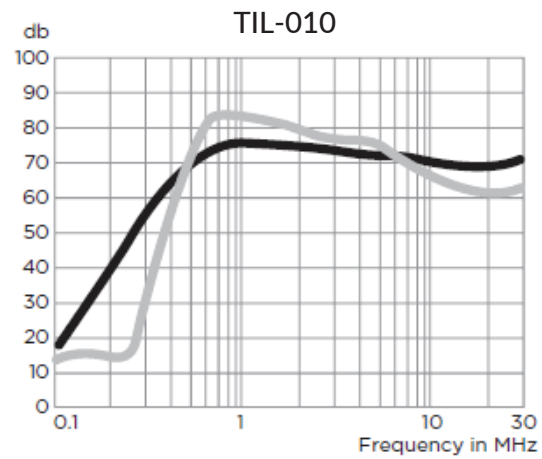
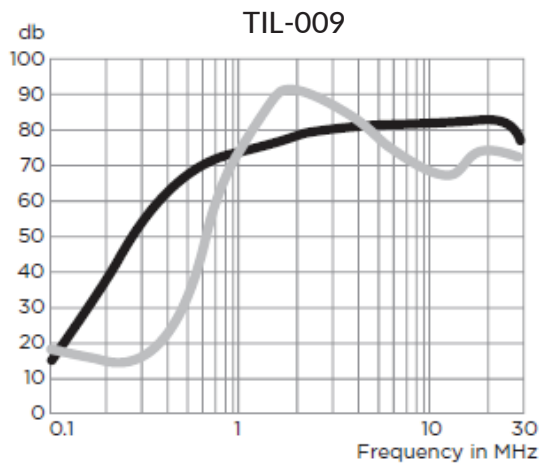
Measured in closed 50 Ohm system



Multipurpose Power Line RFI Filter for Emission Control

Performance Data Typical Insertion Loss

Measured in closed 50 Ohm system



Minimum Insertion Loss

Common Mode/Asymmetrical (Line to Ground)

Current Rating	Frequency-MHz					
	.15	.5	1	5	10	30
<i>AMI-M12R/12S-X-X-B-1</i>						
1A, 3A	30	65	65	65	65	65
6A, 10A, 20A	5	44	60	65	65	60
<i>AMI-M12S-X-X-B</i>						
20A	25	60	65	65	65	65
6A, 10A, 20A	2	35	51	63	60	50

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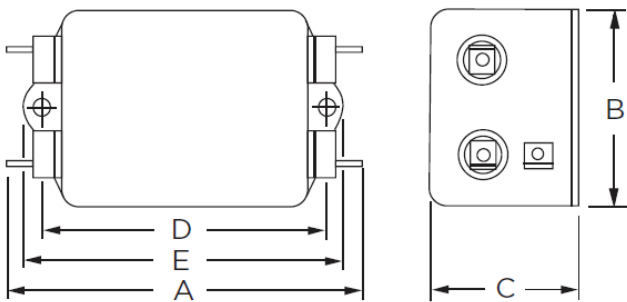
Minimum Insertion Loss

Differential Mode/Symmetrical (Line to Line)

Current Rating	Frequency-MHz					
	.15	.5	1	5	10	30
<i>AMI-M12R/12S-X-X-B-1</i>						
1A, 3A	-	-	65	60	54	46
2A, 5A, 10A, 20A	-	-	35	60	57	45
<i>AMI-M12R/12S-X-X-B</i>						
1A, 3A	-	-	65	60	54	46
6A, 10A, 20A	-	-	35	60	57	45

Case Styles

STYLE A



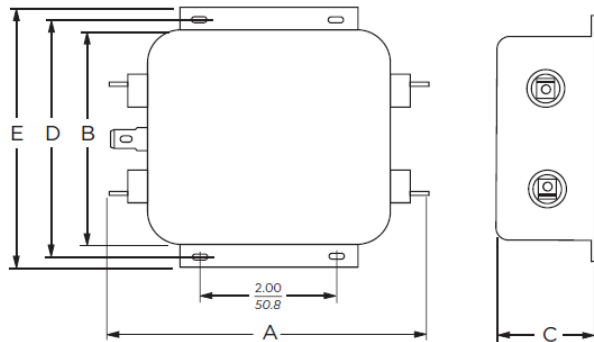
Typical Dimensions:

Line/Load Terminals (4): .250 [6.3] with .07 [1.8] Dia. hole
 Ground Terminal (1): .250 [6.3] with .07 x .16 [1.8 x 3.8] slot
 Mounting Holes (2): .188 [4.78] Dia.

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Case Styles

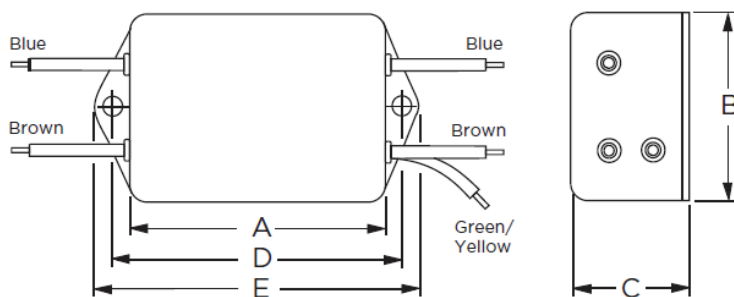
STYLE B



Typical Dimensions:

Line/Load Terminals (4):	.250 [6.3] with .07 [1.8] Dia. hole
Ground Terminal (1):	.250 [6.3] with .07 x .16 [1.8 x 3.8] slot
Mounting Slots (4):	.250 x .156 [6.35 x 3.96] Dia.

STYLE C



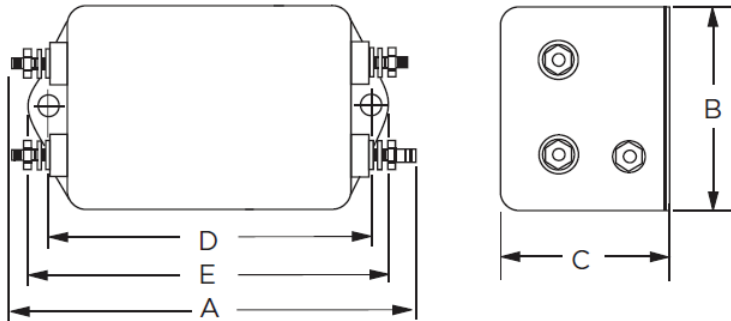
Typical Dimensions:

Wire Leads (5):	4.0 [101.6] Min., AWG18
Mounting Holes (2):	.188 [4.78] Dia.

Multipurpose Power Line RFI Filter for Emission Control

Case Styles

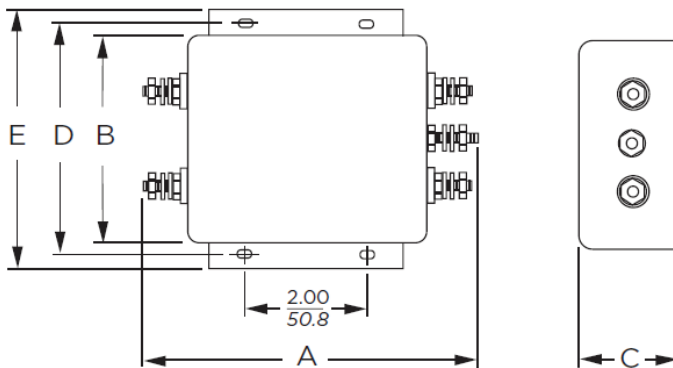
STYLE D



Typical Dimensions:

Terminals (5): 8-32, Torque 18 lbf-in. [2.03 N-m] max. ± 2 [.22]
Mounting Holes (2): .188 [4.78] Dia.

STYLE E



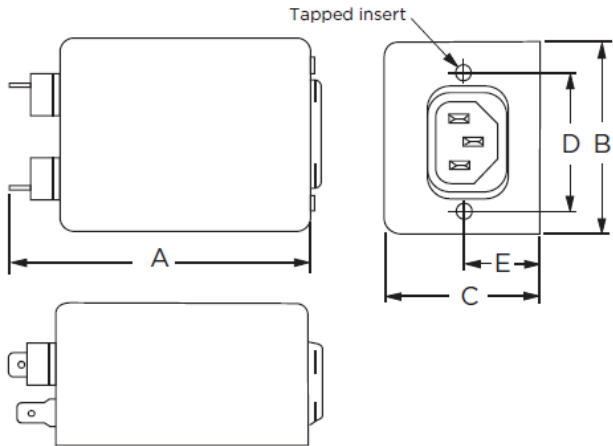
Typical Dimensions:

Terminals (5): 8-32, Torque 18 lbf-in. [2.03 N-m] max. ± 2 [.22]
Mounting Slots (4): .250 x .156 [6.35 x 3.96] Dia.

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Case Styles

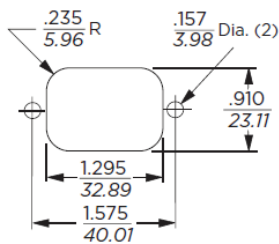
STYLE F



Typical Dimensions:

Load Terminals (2):	.250 [6.3] with .07 [1.8] Dia. hole
Ground Terminal (1):	.250 [6.3] with .07 x .16 [1.8 x 3.8] slot
Line Inlet (1):	IEC 60320-1 C14
K7 Tapped Inserts (2):	6-32 x 1/4
K7M Tapped Inserts (2):	M3 x .5

Recommended Panel Cutout



Tolerance $\pm .005$ [0.13]

Multipurpose Power Line RFI Filter for Emission Control

Case Dimensions:

Model Number	A max	B max	C max	D max	E max
AMI-M12R-1-1/2	3.35"/85.1mm	1.81"/46.0mm	1.16"/29.5mm	2.375"/60.33mm	2.78"/70.6mm
AMI-M12R-3-1/2	2.07"/85.1mm	1.81"/46.0mm	1.16"/29.5mm	2.375"/60.33mm	2.78"/70.6mm
AMI-M12R-1-3/5	3.85"/97.8mm	2.07"/52.6mm	1.16"/29.5mm	2.938"/74.63mm	3.35"/85.1mm
AMI-M12R-3-3/5	2.56"/65.0mm	2.07"/52.6mm	1.16"/29.5mm	2.938"/74.63mm	3.35"/85.1mm
AMI-M12S-7-3	4.33"/110mm	2.25"/57.2mm	1.28"/32.5mm	1.575"/40.01mm	0.64"/16.3mm
AMI-M12S-7-5	4.33"/110mm	2.25"/57.2mm	1.28"/32.5mm	1.575"/40.01mm	0.64"/16.3mm
AMI-M12R-1-10	3.85"/97.8mm	2.07"/52.6mm	1.53"/38.9mm	2.938"/74.63mm	3.35"/85.1mm
AMI-M12R-3-10	2.56"/65.0mm	2.07"/52.6mm	1.53"/38.9mm	2.938"/74.63mm	3.35"/85.1mm
AMI-M12R-6-10	3.96"/100.6mm	2.07"/52.6mm	1.53"/38.9mm	2.938"/74.63mm	3.35"/85.1mm
AMI-M12S-7-10	4.33"/110mm	2.25"/57.2mm	1.53"/38.9mm	1.575"/40.01mm	0.88"/22.4mm
AMI-M12R-1-20	5.23"/132.8mm	3.37"/85.6mm	1.53"/38.9mm	3.75"/95.25mm	4.20"/106.7mm
AMI-M12R-6-20	5.34"/135.6mm	3.37"/85.6mm	1.53"/38.9mm	3.75"/95.25mm	4.20"/106.7mm