

Dual Stage RFI Power Line Filters for Switching Mode Power Supplies



AMI-M12B/M12C Series

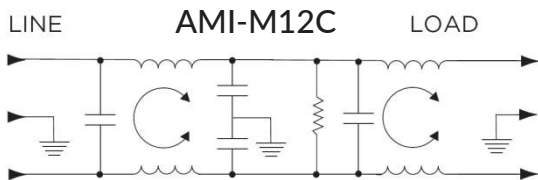
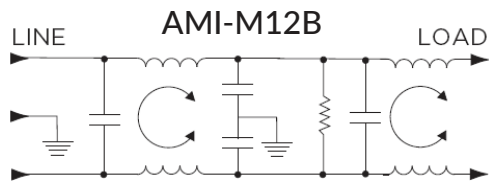
Metal Enclosure Single Phase Dual Stage Filters

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/ 6.3mm Spade Terminals		mH	nF	pF	KΩ	mA		
						AMI-M12B-1-3-B	1	-	-	-	3	14.12
AMI-M12B-3-3-B	-	3	-	-	3	14.12	740	2800	330	0.21/0.36	001	C
AMI-M12C-7-3-B	-	-	-	7	3	14.12	740	2800	330	0.21/0.36	001	D
AMI-M12C-7M-3-B	-	-	-	7	3	14.12	740	2800	330	0.21/0.36	001	D
AMI-M12B-1-6-B	1	-	-	-	6	17.46	740	2800	330	0.21/0.36	002	A
AMI-M12B-3-6-B	-	3	-	-	6	17.46	740	2800	330	0.21/0.36	002	C
AMI-M12B-1-7-B	1	-	-	-	7	14.6	2000	2800	165	0.21/0.36	003	A
AMI-M12B-3-7-B	-	3	-	-	7	14.6	2000	2800	165	0.21/0.36	003	C
AMI-M12B-1-10-B	1	-	-	-	10	14.26	740	2800	330	0.21/0.36	004	A
AMI-M12B-3-10-B	-	3	-	-	10	14.26	740	2800	330	0.21/0.36	004	A
AMI-M12B-1-12-B	1	-	-	-	12	7.88	2000	2800	165	0.21/0.36	005	A
AMI-M12B-3-12-B	-	3	-	-	12	7.88	2000	2800	165	0.21/0.36	005	D
AMI-M12B-1-20-B	1	-	-	-	20	4.56	2000	2800	165	0.21/0.36	006	B
AMI-M12B-6-20-B	-	-	6	-	20	4.56	2000	2800	165	0.21/0.36	006	E
AMI-M12B-1-20-C	1	-	-	-	20	4.56	2000	10000	165	0.73/1.27	007	C
AMI-M12B-6-20-C	-	-	6	-	20	4.56	2000	10000	165	0.73/1.27	007	E

*(M) = Metric Inserts

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Electrical Schematic



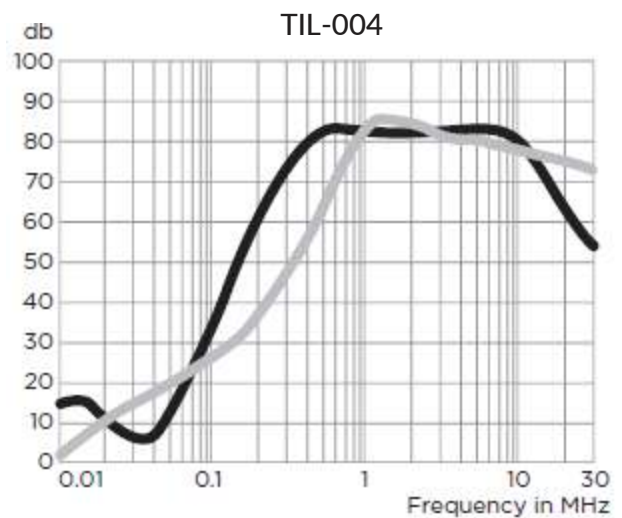
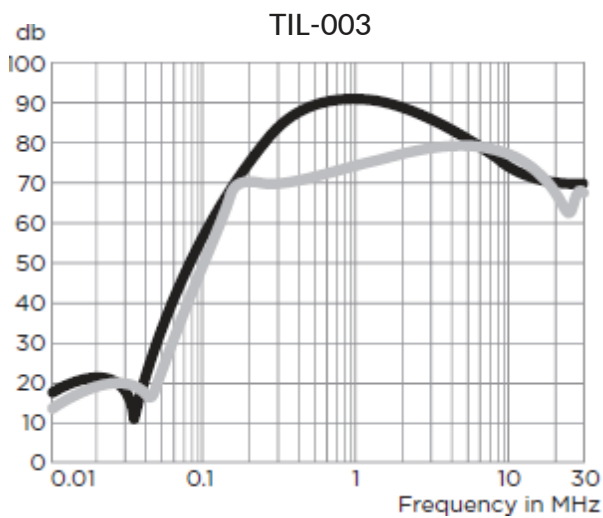
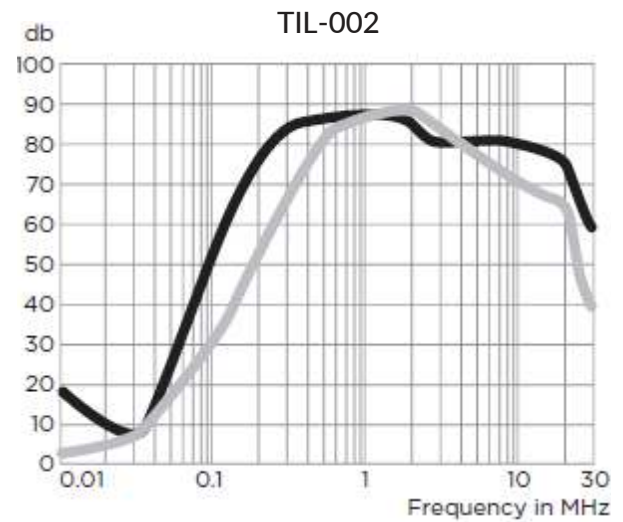
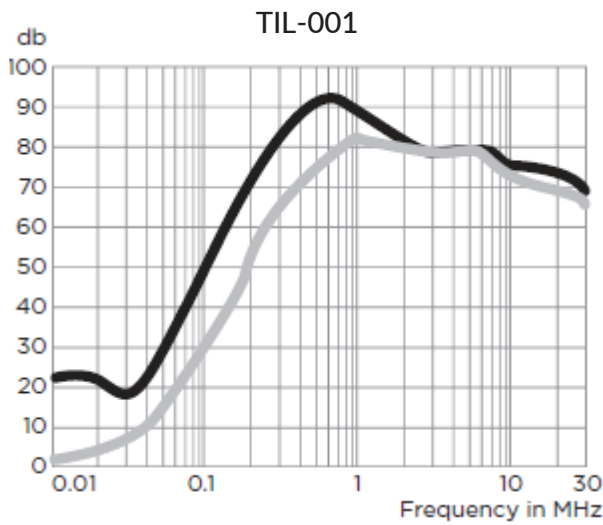
Specifications:

- Rated Voltage (max): 250 VAC
- Operating Frequency: 50/60 Hz
- Operating Current: 3 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: $I_o = I_r \sqrt{[(85 - T_a)/45]}$

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Performance Data Typical Insertion Loss

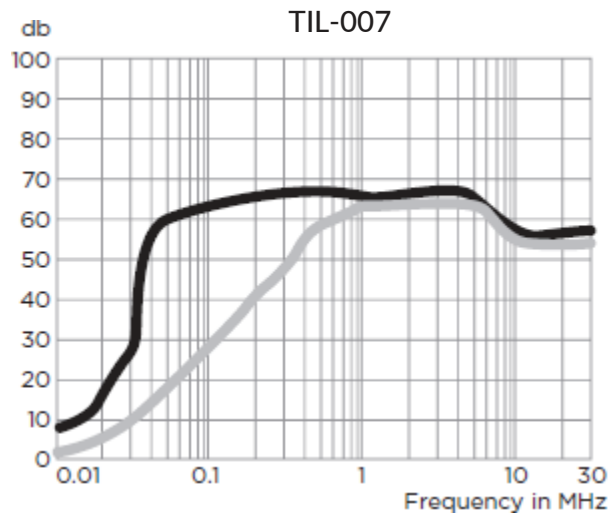
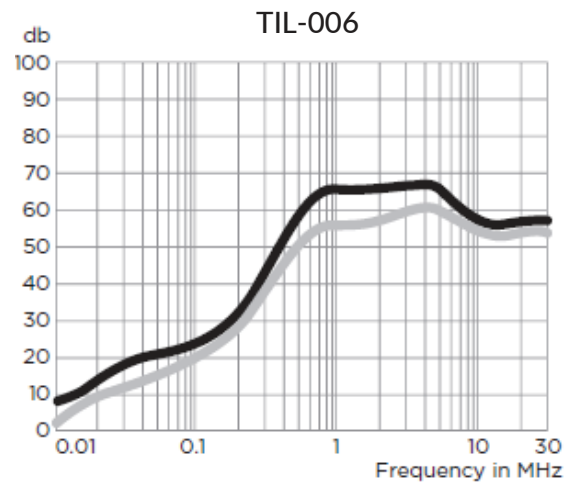
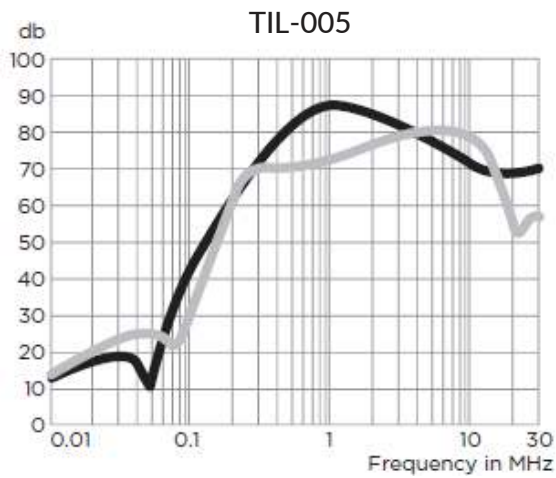
Measured in closed 50 Ohm system



Dual Stage RFI Power Line Filters for Switching Mode Power Supplies

Performance Data Typical Insertion Loss

Measured in closed 50 Ohm system



— Common Mode / Asymmetrical (L-G)
— Differential Mode / Symmetrical (L-L)

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Minimum Insertion Loss

Measured in closed 50 Ohm system

Common Mode/Asymmetrical (Line to Ground)

	Frequency-MHz							
Current Rating	.01	.05	.15	.5	1	5	10	30
<i>AMI-M12C-X-X-B</i>								
3A	12	10	58	65	65	66	62	30
6, 10A	10	15	60	65	65	65	60	35
7A	15	28	63	75	78	75	75	55
12A	12	7	52	68	70	70	70	45
20A	3	6	28	50	55	60	55	55
<i>AMI-M12B-X-X-C/D</i>								
20A	3	2	42	60	65	65	55	55

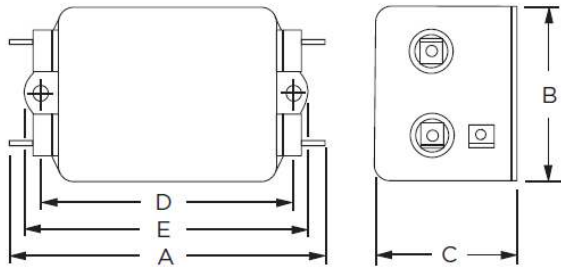
Differential Mode/Symmetrical (Line to Line)

	Frequency-MHz							
Current Rating	.01	.05	.15	.5	1	5	10	30
<i>AMI-M12C-X-X-B</i>								
3A	1	3	36	65	65	65	58	58
6, 10A	1	3	30	65	65	65	65	35
7A	10	13	55	65	68	70	65	50
12A	11	7	43	70	70	70	65	45
20A	8	25	60	65	65	58	58	58
<i>AMI-M12B-X-X-C</i>								
20A	8	-	25	60	65	65	58	58

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Case Styles

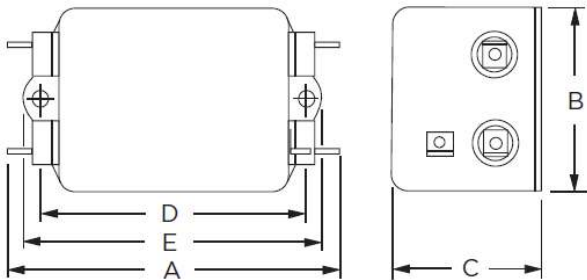
STYLE A



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.

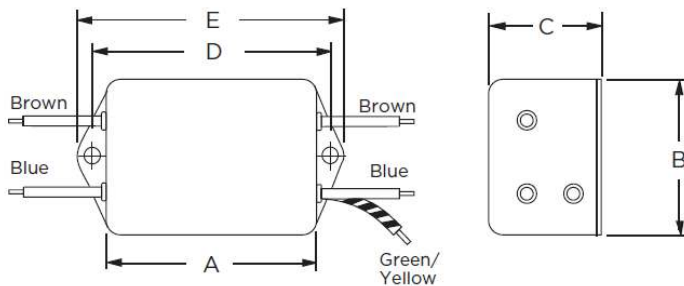
STYLE B



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 Holes (2): .188 [4.78] Dia.

STYLE C



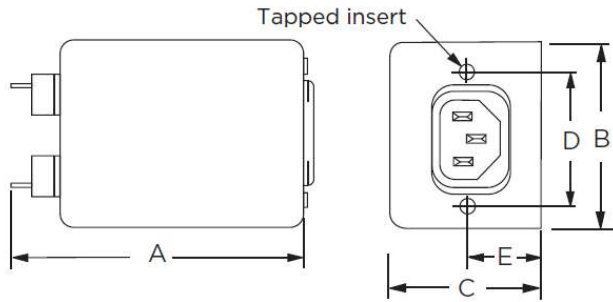
Typical Dimensions:

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

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Case Styles

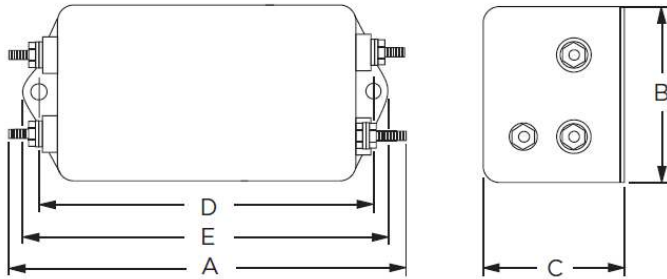
STYLE D



Typical Dimensions:

Load Terminals (2):	.250 [6.3] with .07 [1.8] Dia. hole
Line Inlet (1):	IEC 60320-1 C14
EP7 Tapped Inserts (2):	6-32 x 1/4
EP7M Tapped Inserts (2):	M3 x .5

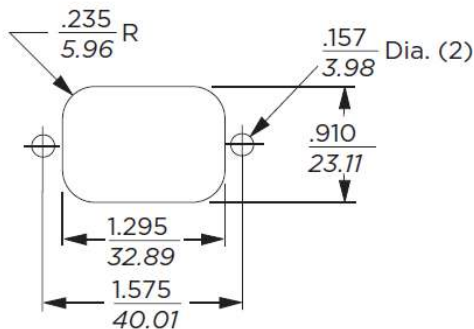
STYLE E



Typical Dimensions:

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

Recommended Panel Cutout



Tolerance ± .005 [0.13]

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Case Dimensions:

Model Number	A max	B max	C max	D $\begin{smallmatrix} \pm .015 \\ \pm .38 \end{smallmatrix}$	E max
AMI-M12B-1-3	3.85"/97.8mm	2.07"/52.6mm	1.78"/45.2mm	2.938"/74.63mm	3.35"/85.1mm
AMI-M12B-3-3	2.56"/65.0mm	2.07"/52.6mm	1.78"/45.2mm	2.938"/74.63mm	3.35"/85.1mm
AMI-M12C-7M-3/ AMI-M12C-7-3	3.21"/81.5mm	2.25"/57.2mm	1.78"/45.2mm	1.575"/40.01mm	0.63"/12.1mm
AMI-M12B-1-6	6.62"/168.1mm	2.07"/52.6mm	2.28"/57.9mm	5.625"/142.8mm	6.03"/153.2mm
AMI-M12B-3-6	5.33"/135.4mm	2.07"/52.6mm	2.28"/57.9mm	5.625"/142.8mm	6.03"/153.2mm
AMI-M12B-1-7	4.79"/121.7mm	2.07"/52.6mm	1.53"/38.9mm	3.947"/10.25mm	4.33"/109.98mm
AMI-M12B-3-7	3.50"/88.9mm	2.07"/52.6mm	1.53"/38.9mm	3.947"/10.25mm	4.33"/109.98mm
AMI-M12HB-1-10	6.62"/168.1mm	2.07"/52.6mm	2.78"/70.6mm	5.625"/142.8mm	6.03"/153.2mm
AMI-M12B-3-10	5.35"/135.9mm	2.03"/52.6mm	2.78"/70.6mm	5.625"/142.8mm	6.03"/153.2mm
AMI-M12B-1-12	4.97"/126.2mm	1.78"/45.2mm	1.78"/45.2mm	4.063"/103.2mm	4.46"/113.28mm
AMI-M12B-3-12	3.624"/92.05mm	1.78"/45.2mm	1.78"/45.2mm	4.063"/103.2mm	4.46"/113.28mm
AMI-M12B-1-20	4.95"/125.7mm	1.8"/45.7mm	1.8"/45.7mm	4.063"/103.2mm	4.47"/113.5mm
AMI-M12B-6-20	5.09"/127.3mm	1.78"/45.2mm	1.78"/45.2mm	4.063"/103.2mm	4.46"/113.3mm

±0.02 [0.5]