TE connectivity VR3/ER3 Two Stage General Purpose RFI Power Line Filter User Guide

Corcom Product Gide

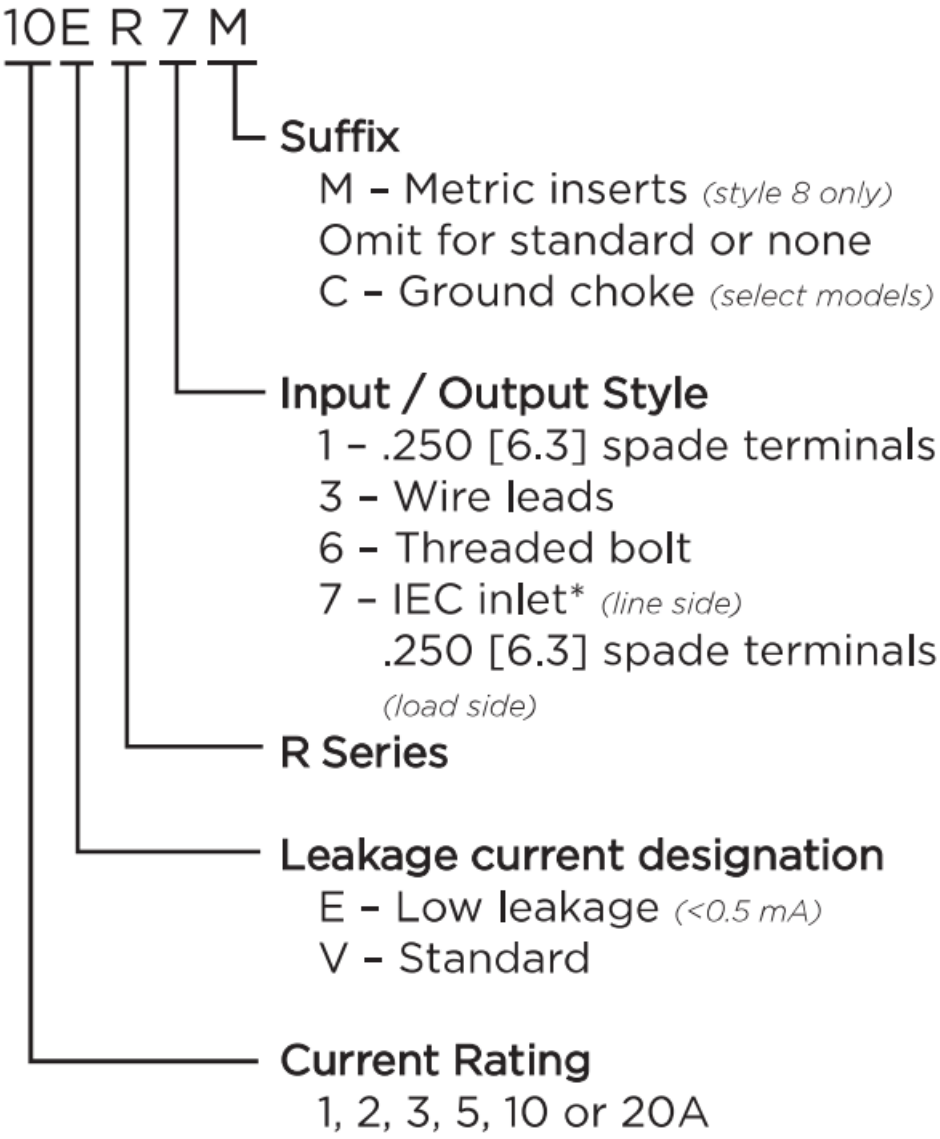
Contents

Two Stage General Purpose RFI Power Line Filter

R Series

- Dual T section RFI filter provides premium performance
- Well suited for low impedance loads where noisy RFI environments are present
- Controls pulsed, continuous and/or intermittent interference
- ER models offer low leakage current without deterioration of insertion loss

Ordering Information



*IEC 60320-1 C14 inlet mates with C13 connector

Specifications

Maximum leakage current for each Line to Ground:

	VR Models	ER Models
@ 120 VAC 60 Hz:	.4 mA	.21 mA
@ 250 VAC 50 Hz:	.7 mA	.36 mA

Hipot rating (one minute):

The line to Ground:	2250 VDC
Line to Line:	1450 VDC

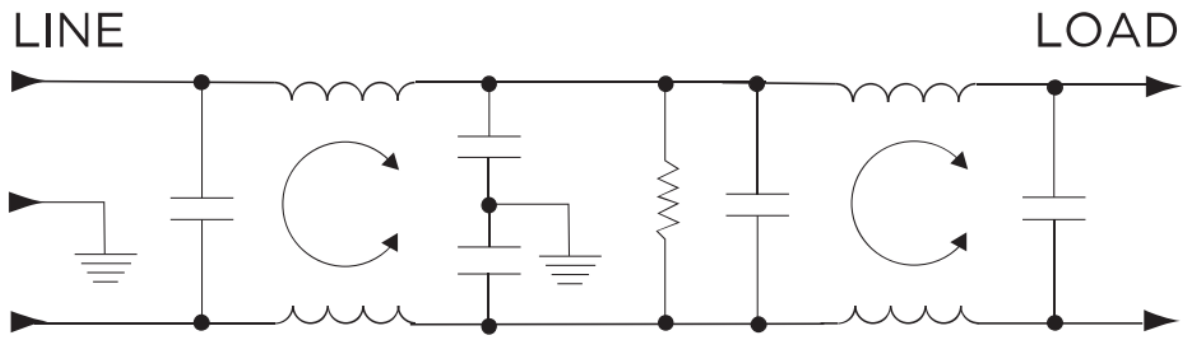
Rated Voltage (max): 250 VAC
Operating Frequency: 50/60 Hz
Rated Current: 1 to 20A

Operating Ambient Temperature Range
(at rated current Ir): -10°C to +40°C
In an ambient temperature (Ta) higher than +40°C the maximum operating current (1_o) is calculated as follows: $I_o = Ir\sqrt{(85\text{-}Ta)/45}$

Available Part Numbers

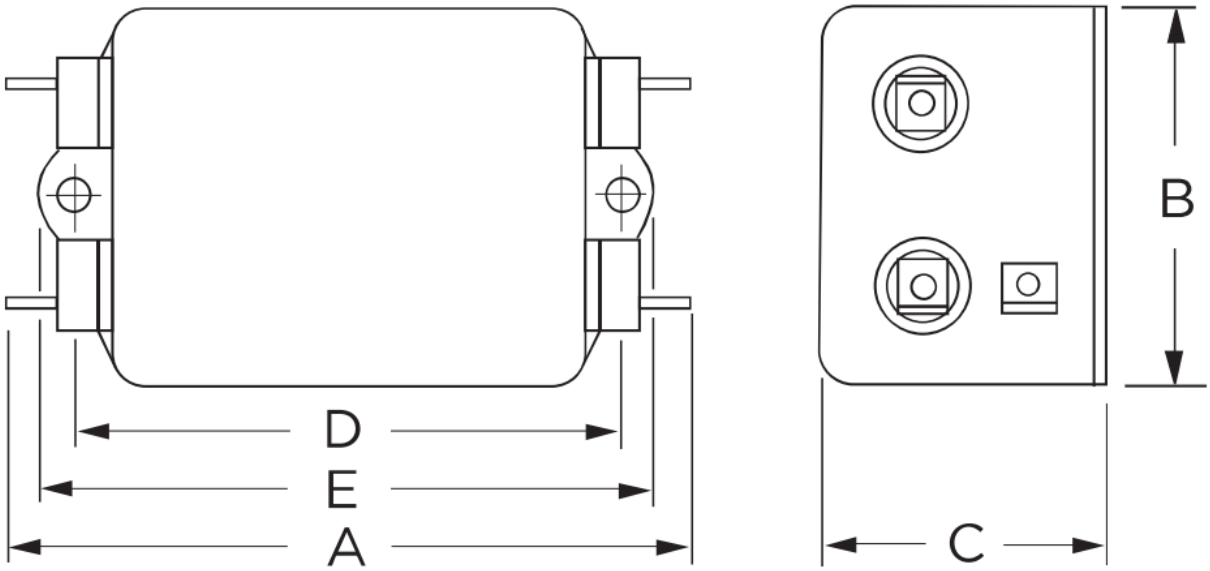
1VR1	1ER1
1VR3	1ER3
2VR1	2ER1
2VR3	2ER3
3VR1	3ER1
3VR3	3ER3
3VR7	3ER7
3VR7M	3ER7M
5VR1	5ER1
5VR3	5ER3
5VR7	5ER7
5VR7M	5ER7M
10VR1	10ER1
10VR3	10ER3
10VR6	10ER7
10VR7	10ER7M
10VR7M	20ER1
20VR1	
20VR6	

Electrical Schematic



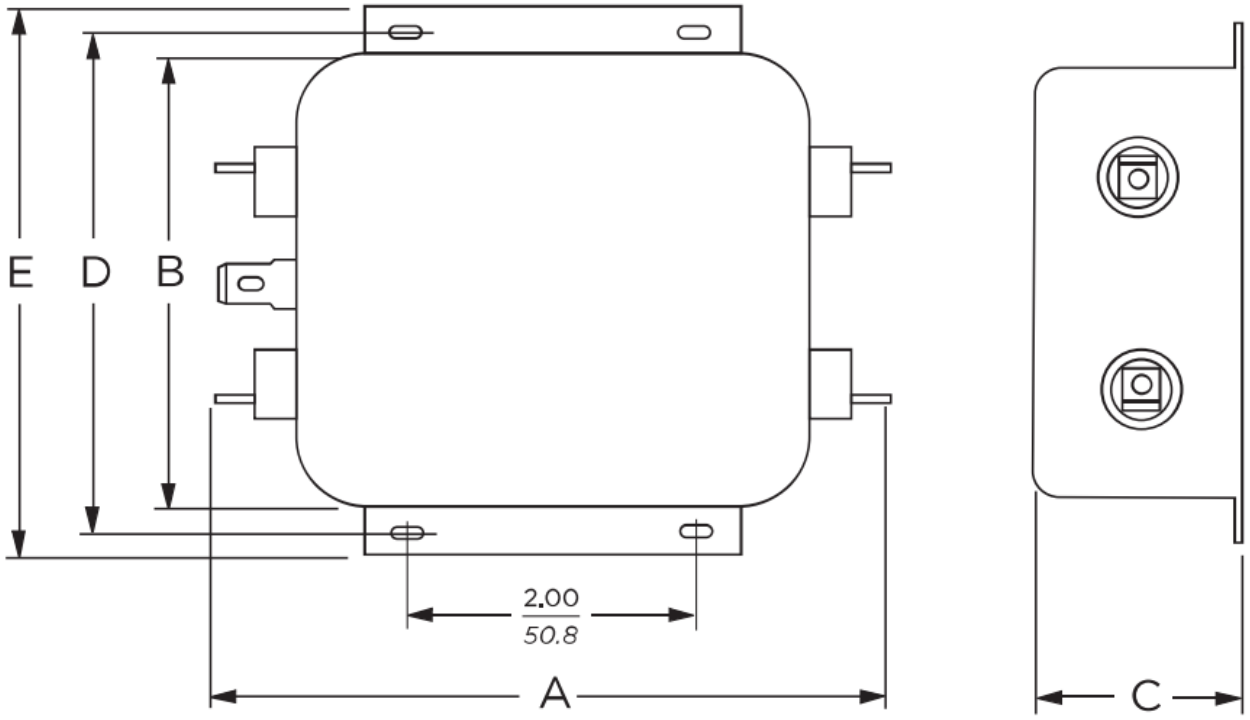
Case Styles

R1 (1, 2, 3, 5, 10A)



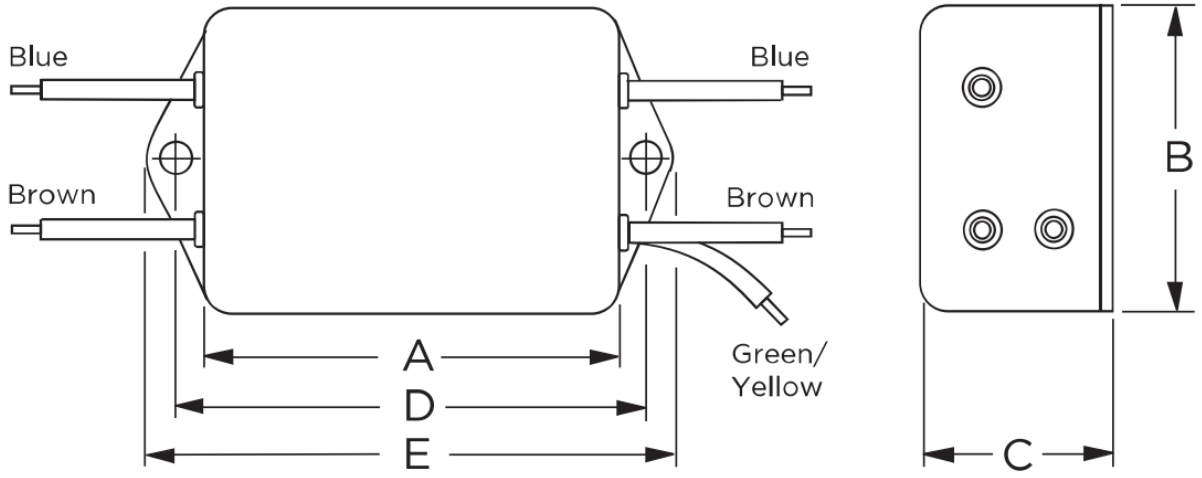
Typical Dimensions:
Line/Load Terminals (4): .250 [6.3] with .07 [1.8] Dia. hole
Ground Terminal (1): .250 [6.3] with .07 x .16 [1.8 x 3.8] slot
Mounting Holes (2): .188 [4.78] Dia.

R1 (20A)



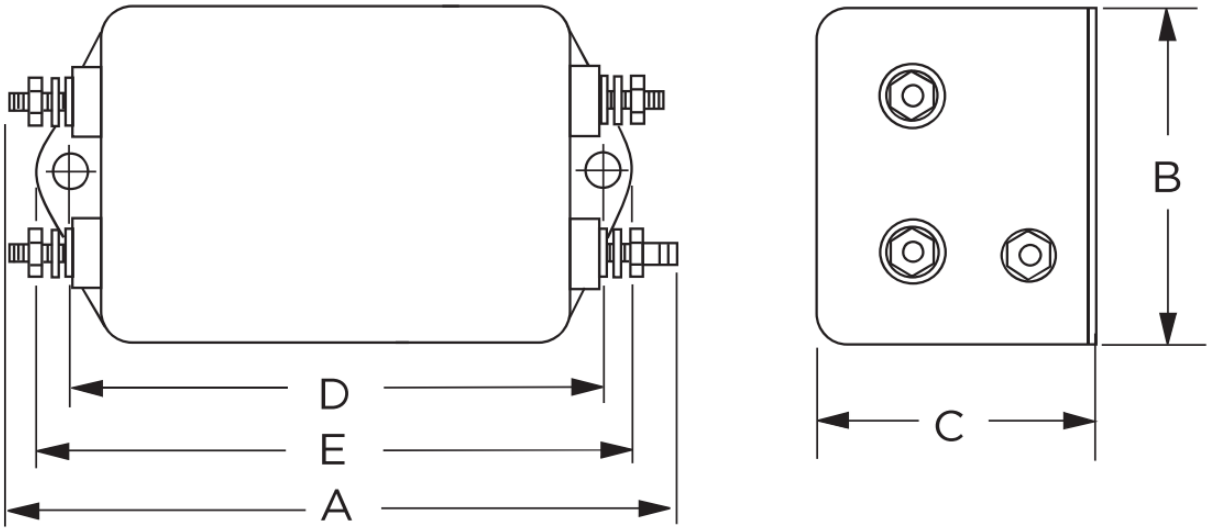
Typical Dimensions:
Line/Load Terminals (4): .250 [6.3] with .07 [1.8] Dia. hole
Ground Terminal (1): .250 [6.3] with .07 x .16 [1.8 x 3.8] slot
Mounting Slots (4): .250 x .156 [6.35 x 3.96] Dia.

R3



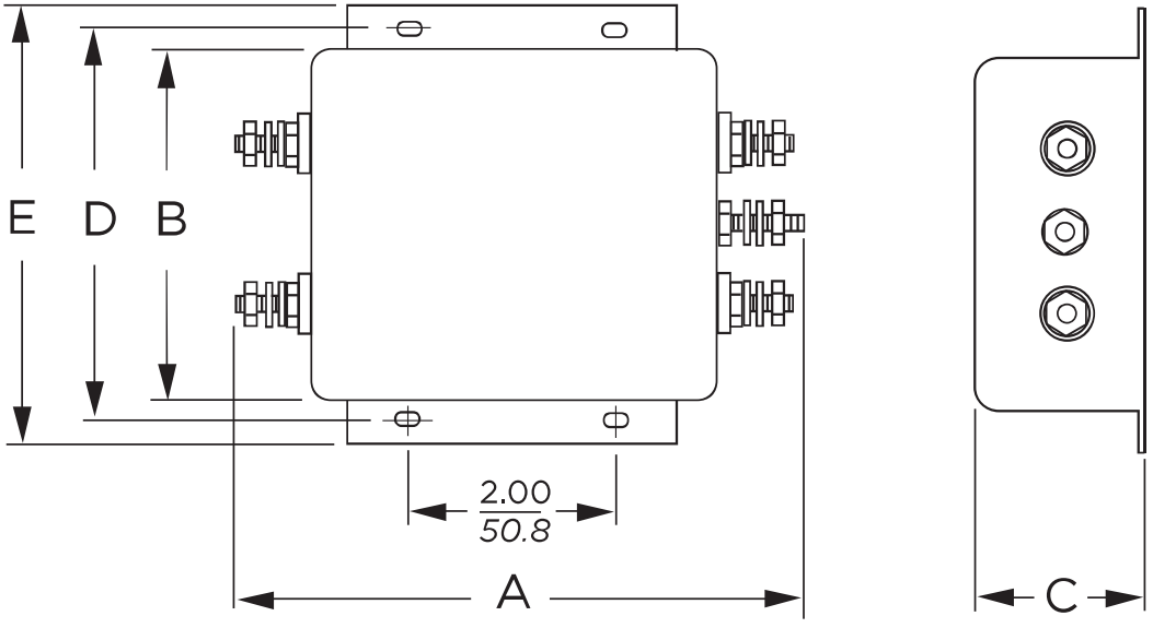
Typical Dimensions:
Wire Leads (5): 4.0 [101.6] Min., AWG18
Mounting Holes (2): .188 [4.78] Dia.

10VR6



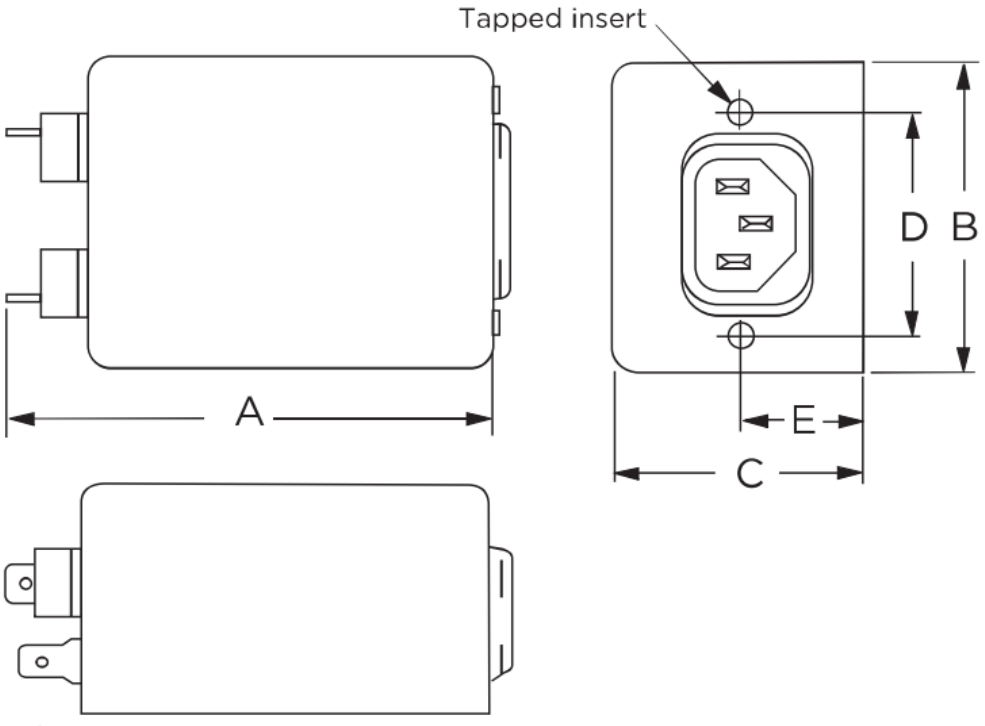
Typical Dimensions:
Terminals (5): 8-32, Torque 18 lbf-in. [2.03 N-m] max. ± 2 [.22]
Mounting Holes (2): .188 [4.78] Dia.

20VR6



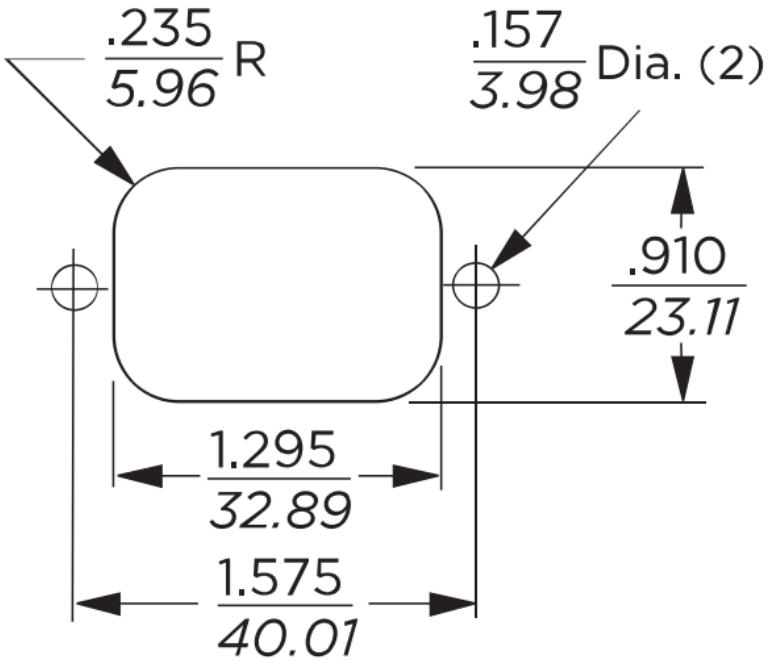
Typical Dimensions:
Terminals (5): 8-32, Torque 18 lbf-in. [2.03 N-m] max. ± 2 [.22]
Mounting Slots (4): .250 x .156 [6.35 x 3.96] Dia.

R7 & R7M



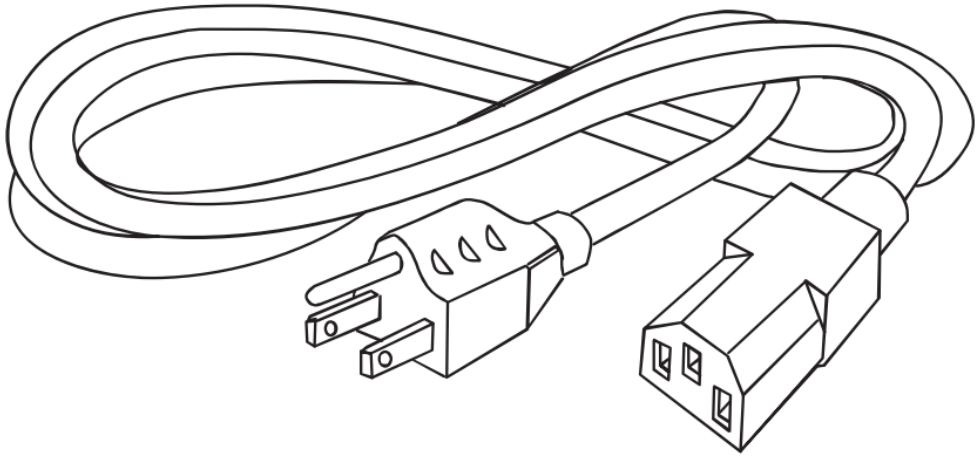
Typical Dimensions:
Load Terminals (2): .250 [6.3] with .07 [1.8] Dia. hole
Ground Terminal (1): .250 [6.3] with .07 x .16 [1.8 x 3.8] slot
Line Inlet (1): IEC 60320-1 C14
K7 Tapped Inserts (2): 6-32 x 1/4
K7M Tapped Inserts (2): M3 x .5

Recommended Panel Cutout



Tolerance ± .005[0.13]

Accessories
GA400: NEMA 5-15P to IEC 60320-1 C-13 line cord



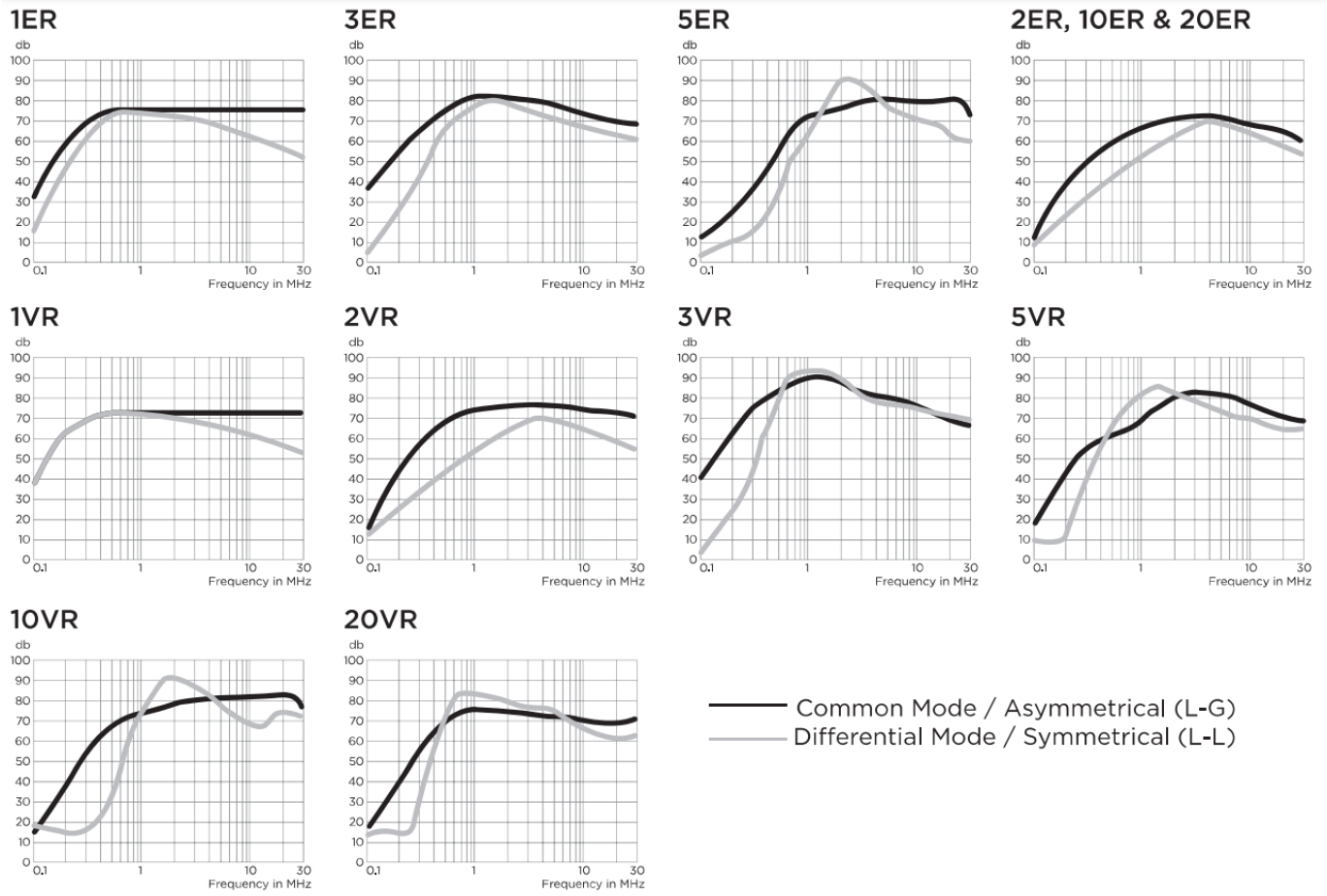
Case Dimensions

Part No.	A (max)	B (max)	C (max)	D ± .015 / ± .38	E (max)
1VR1, 1ER1, 2VR1, 2ER1	**3.35** *85.1*	**1.81** *46.0*	**1.16** *29.5*	**2.375** *60.33*	**2.78** *70.6*
1VR3, 1ER1, 2VR3, 2ER3	**2.07** *52.6*	**1.81** *46.0*	**1.16** *29.5*	**2.375** *60.33*	**2.78** *70.6*
3VR1, 3ER1, 5VR1, 5ER1	**3.85** *97.8*	**2.07** *52.6*	**1.16** *29.5*	**2.938** *74.63*	**3.35** *85.1*
3VR3, 3ER3, 5VR3, 5ER3	**2.56** *65.0*	**2.07** *52.6*	**1.16** *29.5*	**2.938** *74.63*	**3.35** *85.1*
3VR7/7M, 3ER7/7M	**4.33** *110.0*	**2.25** *57.2*	**1.28** *32.5*	**1.575** *40.01*	**0.64*** *16.3**
5VR7/7M, 5ER7/7M	**4.33** *110.0*	**2.25** *57.2*	**1.28** *32.5*	**1.575** *40.01*	**0.64*** *16.3**
10VR1, 10ER1	**3.85** *97.8*	**2.07** *52.6*	**1.53** *38.9*	**2.938** *74.63*	**3.35** *85.1*
10VR3, 10ER3	**2.56** *65.0*	**2.07** *52.6*	**1.53** *38.9*	**2.938** *74.63*	**3.35** *85.1*
10VR6	**3.96** *100.6*	**2.07** *52.6*	**1.53** *38.9*	**2.938** *74.63*	**3.35** *85.1*
10VR7/7M, 10ER7/7M	**4.33** *110.0*	**2.25** *57.2*	**1.53** *38.9*	**1.575** *40.01*	**0.88*** *22.4**
20VR1, 20ER1	**5.23** *132.8*	**3.37** *85.6*	**1.53** *38.9*	**3.75** *95.25*	**4.20** *106.7*
20VR6	**5.34** *135.6*	**3.37** *85.6*	**1.53** *38.9*	**3.75** *95.25*	**4.20** *406.7*

Performance Data

Typical Insertion Loss

Measured in a closed 50 Ohm system



Minimum Insertion Loss

Measured in a closed 50 Ohm system
Common Mode / Asymmetrical (Line to Ground)

Current Rating	Frequency – MHz					
	.15	.5	1	5	10	30
VR Models						
1A, 3A	30	65	65	65	65	65
2A, 5A, 10A, 20A	5	44	60	65	65	60
ER Models						
1A, 3A	25	60	65	65	65	65
2A, 5A, 10A, 20A	2	35	51	63	60	50

Differential Mode / Symmetrical (Line to Line)

Current Rating	Frequency – MHz					
	.15	.5	1	5	10	30
VR Models						
1A, 3A	–	–	65	60	54	46
2A, 5A, 10A, 20A	–	–	35	60	57	45
ER Models						
1A, 3A	–	–	65	60	54	46
2A, 5A, 10A, 20A	2-	–	35	60	57	45

Dimensions are in inches and millimeters unless otherwise specified. Values in italics are metric equivalents. Dimensions are shown for reference purposes only. Specifications are subject to change.

UL Recognized
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VDE Approved

For email, phone, or live chat, please go to
te.com/help
corcom.com
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Documents / Resources

	TE connectivity VR3/ER3 Two Stage General Purpose RFI Power Line Filter [pdf] User Guide VR3, ER3, Two Stage General Purpose RFI Power Line Filter, VR3 ER3 Two Stage General Purpose RFI Power Line Filter, VR3 ER3

Manuals+,