

6609016-7 Product Details



6609016-7
(3ED4)

TE Internal Number: 6609016-7



EMI/RFI Filters and Accessories

 Always EU RoHS/ELV Compliant (Statement of Compliance)

Product Highlights:

- Filter - EMI/RFI
- Filter Type = Power Line
- ED (1-15 Amp) Series
- General Purpose Application
- Mount Style = Flanged

Documentation & Additional Information

Product Drawings:

- [CUSTOMER DRAWING 3ED4](#) (PDF, English)

Catalog Pages/Data Sheets:

- [1654001_Corcom_Product_Guide_ED_Series](#) (PDF, English)

Product Specifications:

- None Available

Application Specifications:

- None Available

Instruction Sheets:

- None Available

CAD Files: (CAD Format & Compression Information)

- [2D Drawing](#) (DXF, Version B)
- [3D Model](#) (IGES, Version B)
- [3D Model](#) (STEP, Version B)

Additional Information:

- [Product Line Information](#)

Additional Product Images:

- [Insertion Loss/Specifications](#)

Related Products:

- [Tooling](#)

Product Features (Please use the Product Drawing for all design activity)

Product Type Features:

- [Product Type](#) = Filter - EMI/RFI
- [Filter Type](#) = Power Line
- [Series](#) = ED (1-15 Amp)
- Ground Choke Option = Without
- [Filtered](#) = Yes
- [Type of Connector](#) = IEC 320/C-14

Electrical Characteristics:

- [Current Rating \(A\)](#) = 3
- [Voltage \$\leq\$ \(VAC\)](#) = 250
- Leakage Current (Line-to-Ground) Max. @ 250 VAC 50 Hz (mA) = 0.38
- Leakage Current (Line-to-Ground) Max. @ 120 VAC 60 Hz (mA) = 0.22

Termination Features:

- [Terminal Input - Output Combination](#) = IEC - Wire Lead

Body Features:

- [Mount Style](#) = Flanged
- Terminal Style Output = Right Angle

Industry Standards:

- [RoHS/ELV Compliance](#) = RoHS compliant, ELV compliant
- [Lead Free Solder Processes](#) = Not relevant for lead free process
- RoHS/ELV Compliance History = Always was RoHS compliant
- Approved Standards = VDE Approved, UL Recognized, CSA Certified

Conditions for Usage:

- Facility Installation = No
- Need Min Size With IEC Connector = Yes
- Need Optional Switch, Fusing, Or Voltage Selector = No

Operation/Application:

- [Application](#) = General Purpose

Other:

- Brand = Corcom

Medium Performance Compact EMI Power Inlet Filter

ED Series



UL Recognized
CSA Certified
VDE Approved*



ED Series

- Two element circuit provides medium attenuation
- Available with an internal ground-circuit inductor (C versions) to isolate equipment chassis from power line ground at radio frequencies
- Versions up to 15A*
- Similar to EEJ Series with alternative termination options
- See the EC Series for better differential mode performance

Ordering Information



*15A versions are tested by Underwriters Laboratories to US and Canadian requirements and are VDE approved at 10A, 250VAC

Specifications

- Maximum leakage current each Line to Ground:**
- @ 120 VAC 60 Hz: .22 mA
 - @ 250 VAC 50 Hz: .38 mA
- Hipot rating (one minute):**
- Line to Ground: 2250 VDC
 - Line to Line: 1450 VDC
- Rated Voltage (max.):** 250 VAC
- Operating Frequency:** 50/60 Hz
- Rated Current:** 1 to 15A*
- Operating Ambient Temperature Range (at rated current I_r):** -10°C to +40°C
- In an ambient temperature (T_a) higher than +40°C the maximum operating current (I_O) is calculated as follows: $I_O = I_r \sqrt{(85-T_a)/45}$

Available Part Numbers

1ED1	1ED2	1ED4	1ED8
3ED1	3ED2	3ED4	3ED8
6ED1	6ED2	6ED4	6ED8
10ED1			
15ED1			15ED8
Ground Circuit Inductor Versions			
6ED1C		6ED4C	6ED8C
10ED1C			

Electrical Schematic



Note 1: C versions only

Medium Performance Compact EMI Power Inlet Filter (continued)

ED Series

Case Styles

ED1 & ED1C



Typical Dimensions:
 Mounting holes (2): .132 [3.35] Dia. with .236 [5.99] Dia. x 90° countersink for #4 flathead screw
 Line Inlet (1): IEC 60320-1 C14
 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

ED2



Typical Dimensions:
 Mounting holes (2): .132 [3.35] Dia. with .236 [5.99] Dia. x 90° countersink for #4 flathead screw
 Line Inlet (1): IEC 60320-1 C14
 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

ED4 & ED4C



Typical Dimensions:
 Mounting holes (2): .132 [3.35] Dia. with .236 [5.99] Dia. x 90° countersink for #4 flathead screw
 Line Inlet (1): IEC 60320-1 C14
 Wire Leads: 4.0 [101.6] Min., 18AWG, UL1015

ED8 & ED8C



Typical Dimensions:
 Mounting holes (2): .132 [3.35] Dia. with .236 [5.99] Dia. x 90° countersink for #4 flathead screw
 Line Inlet (1): IEC 60320-1 C14
 Wire Leads: 4.0 [101.6] Min., 18AWG, UL1015

Case Dimensions

Part No.	A (max.)	B (max.)	C (max.)	D $\pm .015$ $\pm .38$	E (max.)	F (ref.)
1ED1, 3ED1, 6ED1	2.21	1.19	0.81	1.575	1.98	-
1ED2, 3ED2, 6ED2	1.55	1.19	0.85	1.575	1.98	-
1ED4, 3ED4, 6ED4	1.55	1.19	0.85	1.575	1.98	.295
1ED8, 3ED8, 6ED8	1.55	1.19	0.81	1.575	1.98	.295
6ED1C	2.62	1.19	0.81	1.575	1.98	-
6ED4C	1.98	1.19	0.85	1.575	1.98	.295
6ED8C	1.98	1.19	0.81	1.575	1.98	.295
10ED1 /1C, 15ED1	2.62	1.19	0.81	1.575	1.98	-
15ED8	1.98	1.19	0.81	1.575	1.98	-

Medium Performance Compact EMI Power Inlet Filter *(continued)*

ED Series

Recommended Panel Cutouts



Note 1: ED1 and ED8 allow for front or back mounting
Note 2: ED2 and ED4 allow for back mounting only

Accessories

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



FA601: Insulating Shroud



Performance Data

Typical Insertion Loss

Measured in closed 50 Ohm system

1ED



3ED



6ED



6ED1C



10ED1 & 10ED1C



15ED



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

Medium Performance Compact EMI Power Inlet Filter *(continued)*

ED Series

Performance Data *(continued)*

Minimum Insertion Loss

Measured in closed 50 Ohm system

Common Mode / Asymmetrical (Line to Ground)

Current Rating	Frequency – MHz					
	.15	.5	1	5	10	30
ED1, ED2, ED4 & ED8						
1A	24	35	42	49	52	54
3A	20	29	36	45	50	54
6A	14	23	30	41	45	50
10A	8	14	20	35	39	45
15A	4	9	12	28	34	40
ED1C						
6A	14	20	25	37	42	50
10A	8	14	20	35	39	45
ED4C & ED8C						
6A	14	20	25	37	42	50

Differential Mode / Symmetrical (Line to Line)

Current Rating	Frequency – MHz					
	.15	.5	1	5	10	30
ED1, ED2, ED4 & ED8						
1A	3	15	20	37	37	36
3A	3	15	20	37	37	36
6A	3	15	20	31	35	34
10A	6	15	20	23	44	47
15A	6	18	23	33	44	47
ED1C						
6A	7	17	23	36	42	42
10A	6	15	20	23	44	47
ED4C & ED8C						
6A	7	17	23	29	38	42



SAFETY ORGANIZATIONS

THIS FILTER HAS BEEN FORMALLY RECOGNIZED, CERTIFIED OR APPROVED BY THE LISTED AGENCY. THEREFORE, ALL TEST/REQUIREMENTS SPECIFIED IN THE LATEST REVISION OF THE FOLLOWING AGENCY STANDARDS HAVE BEEN MET:

- UL RECOGNIZED: UL 1283
- CSA CERTIFIED: CSA 22.2, # 8
- VOE APPROVED: EN 133200

OPERATING SPECIFICATIONS

LINE CURRENT/VOLTAGE: 3 AMP/40°C 120/250VAC

LINE FREQUENCY: 50-60Hz

MAXIMUM LEAKAGE CURRENT,
EACH LINE TO GROUND: 0.22mA @ 120V, 60Hz
0.38mA @ 250V, 50Hz

OPERATING AMBIENT TEMP. RANGE: -10°C TO +40°C @ RATED CURRENT, I_r.

IN AN AMBIENT, T₀, HIGHER THAN 40°C, THE MAXIMUM OPERATING CURRENT, I₀, IS AS FOLLOWS:

$$I_0 = I_r \sqrt{\frac{100 - T_0}{60}}$$

RELIABILITY SPECIFICATIONS:

STORAGE TEMPERATURE: -40°C TO +85°C
HUMIDITY: 21 DAYS @ 40°C 95% RH.
CURRENT OVERLOAD TEST: 6 TIMES I_r FOR 8 SECONDS

TEST SPECIFICATIONS:

INDUCTANCE: 2.0mH NOMINAL
CAPACITANCE: (MEASURED @ 1KHz, 0.250VAC MAX., 25°C±1°C)
LINE TO GROUND: 0.0059µF ±20%
LINE TO LINE: 0.1015µF ±20%
DISCHARGE RESISTOR: 3.3MΩ
L/G AND L/L I.R.: 6000MΩ (MIN.) @ 100VDC, 20°C AND 50% RH

RECOMMENDED RECEIVING INSPECTION HIPOT:

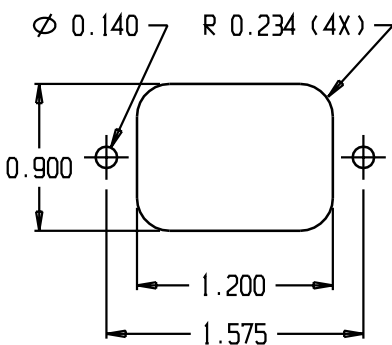
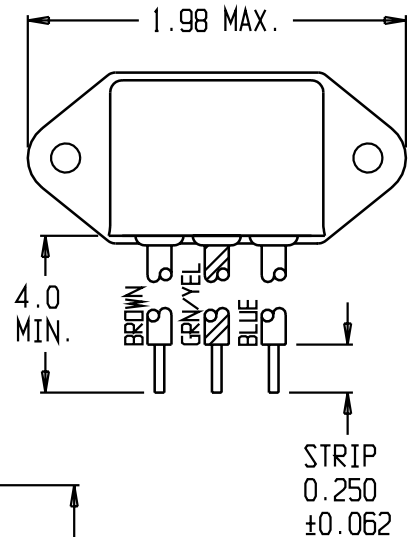
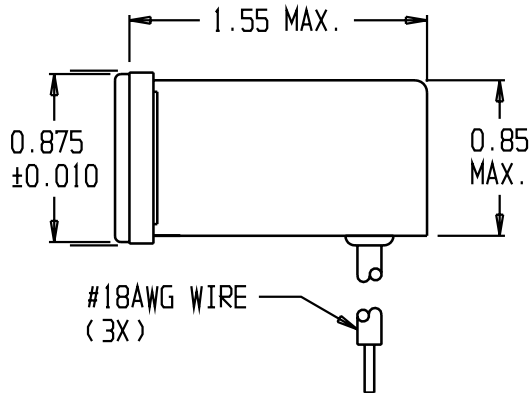
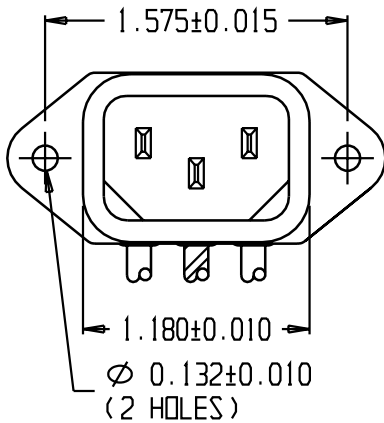
LINE TO GROUND: 1500VAC OR 2250VDC FOR 1 MINUTE
LINE TO LINE: 1450VDC FOR 1 MINUTE

FILTER APPROVAL:

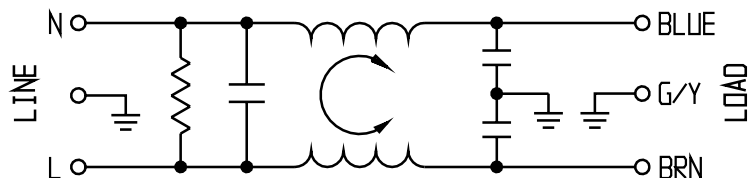
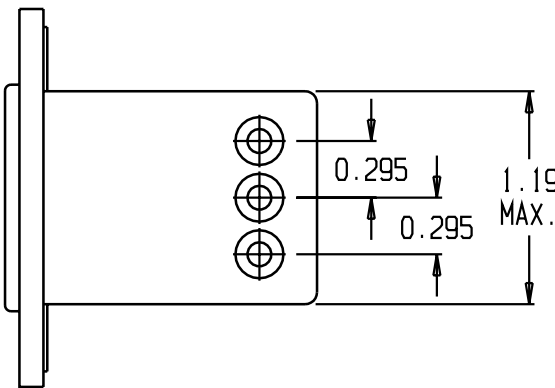
THE BEST WAY TO SELECT AND QUALIFY A FILTER IS FOR YOUR ENGINEERING TO TEST THE UNIT IN YOUR EQUIPMENT.

CATALOG # 3ED4

ECC #	APPRVD.	DATE
	KAW	21NOV06



PANEL CUTOUT (BACK MOUNT)
TOLERANCE ±0.005



50Ω - 50Ω (MINIMUM) INSERTION LOSS

FREQUENCY MHz	0.15	0.5	1.0	2.0	5.0	10	20	30				
COMMON dB	20	30	36	41	45	50	50	54				
DIFF. dB	3	15	20	30	37	37	37	36				

THIRD ANGLE PROJECTION

UNLESS OTHERWISE SPECIFIED,
TOLERANCE TO BE ±.025
MATERIAL & FINISH: AS SUPPLIED

tyco Electronics **corcom**
620 S. BUTTERFIELD ROAD MUNDLEIGH IL 60060

CUSTOMER DRAWING 3ED4

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DRW. BY: JF	ORIG: CW			