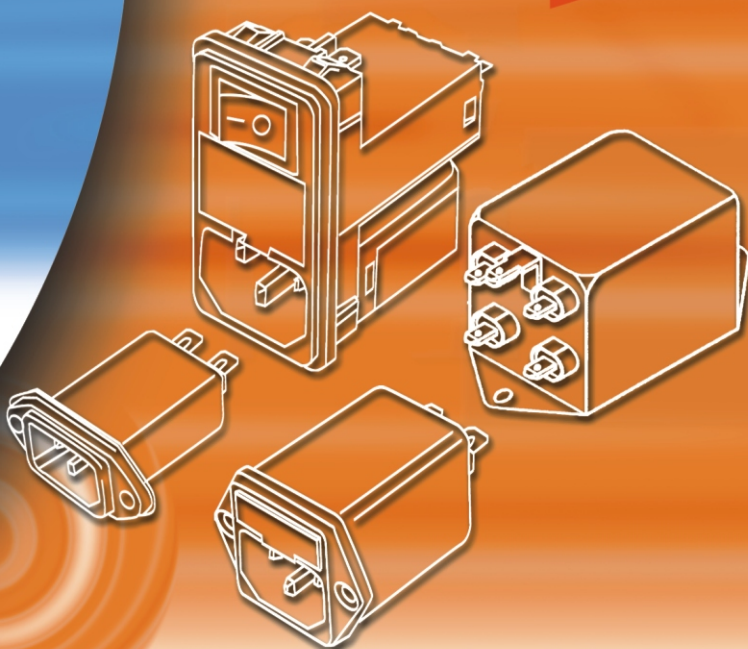


EMI FILTERS

CATALOG





Quality Makes The Difference
ISO-9001 & ISO-14001 Approved

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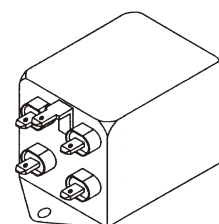
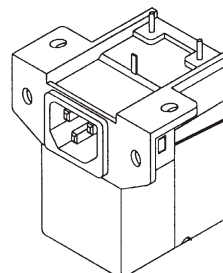
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The data contained in this catalogue is intended to be a general product description.

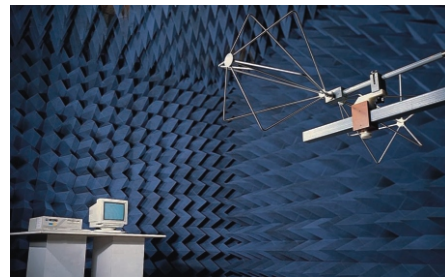
DELTA reserves the right to make changes in specifications without notice.

Please contact us for custom designs.

Delta Strength and Capability

TECHNOLOGY & TECHNICAL SERVICE

Since 1981, Delta has been producing reliable, quality consistent, dependable EMI filters that cater to power supplies, monitors, instruments, networking and medical equipments, and many other devices around the world. Our extensive years of experience have made us the prime leader of these product. We have flexible engineering and supporting groups that enable us to provide solutions to our customer's problems in a timely manner. And with our very own international recognized test facilities such as shielding rooms and anechoic chamber, test for total EMC compatibility can be done and certified right away. Our technical expertise is demonstrated by over 1000 standard part numbers that are approved with UL, CSA and VDE.



EMI/RFI Shielding Room

QUALITY

Delta's commitment to quality can be summed up in the numerous awards we have received from major world-class leaders such as Dell, HP, IBM, NEC, Sony, Fujitsu, Intel, GE and many others. All our EMI/RFI Filters meet international safety standards and have undergone Statistical Process Control and Total Quality Control before mass production. Our full commitment in quality starts from the design stage and continues through the production stages. All Delta plants are certified with ISO-9000/ISO-14001 and our EMI/RFI filter plant has been qualified under the IECQ system.



MANUFACTURING

Delta's manufacturing base for EMI/RFI filters is located within all our ISO-14001 certified Thailand plants. State-of-the-art automation equipments have been installed in these plants and through this, we are able to greatly increase our production capacity and maintain a consistent quality level for our products. Our automation equipment includes automated winding, assembly and test systems. All these systems are developed and produced by our own automated engineering department. To assure our clients of a continuous supply of stock all year round, our global operation with sales and marketing are located in key cities around the world.



Manufacturing Plant in Thailand



Marketing and R&D in Taoyuan, Taiwan



Automated Assembly Line

PRODUCT OFFERING

Delta has been moving forward with continual product improvement. Our three-phase filters with maximum amperes of 600A and voltage rating of up to 520 VAC are presently in mass production, and have been used to a large extent in AC motor drives and machine tool applications. In the meantime, development of high frequency products for telecom & networking market are underway.

Our present products covers IEC inlet filters with a maximum of 20A, chassis mounting filters with maximum of 60A and the three-phase filters. Thanks to our long experience working with multi-national companies, we have the capability to deliver customized products within a short period of time, whatever the quantity is. Our facilities, experience, services, compounded with the latest technology are there to offer EMI filters to meet our customers' utmost satisfaction.

FEATURES AND BENEFITS FOR OEM USERS

1. UL, CSA, VDE/ TUV, SEV, SEMKO, DEMKO AND SETI Safety Standards

All Delta filters are designed to meet UL standard 1283, CSA STANDARDS C22.2 No.0, No.8, and VDE STANDARD EN60939-2, including conformity to temperature range (-25°C to +100°C) and full current rating usage at both 115 VAC and 250 VAC. All filters in this catalog are UL recognized and CSA certified, and over 1000 types are VDE approved under the following file numbers:

UL file no. E79109

CSA file no. LR48852C

VDE file no. 11641-4730 or SEMKO.

2. FCC and VDE Emission Compliance

Delta offers a wide range of filter characteristics, both in standard and custom form, to help you meet all applicable FCC, VDE and VCCI conducted emission standards, including FCC, VDE and VCCI class B requirements.

3. Construction and Design

- ① - Toroid cover for perfect insulation, with built-in spacers to maintain creepage distance between windings.
- ② - Precision balance of inductance between windings to prevent core saturation at full load.
- ③ - Only capacitors that comply with VDE 0565-1 are used.
- ④ - Low leakage current.
- ⑤ - Both crimped and soldered connections.
- ⑥ - Anti-rotation terminals to prevent open connections.
- ⑦ - Corrosion-proof case.

4. Quality Control

- 100% tested for Hipot, leakage current and insertion loss.
- Less than 200 parts-per-million (ppm) defect rate.
- Approved for Ship-to-Stock program (no incoming inspection) at major computer manufacturers' facilities.

5. Availability

Stock of standard items are maintained in Northern California for immediate shipment to OEM customers and at distributors located throughout North America.

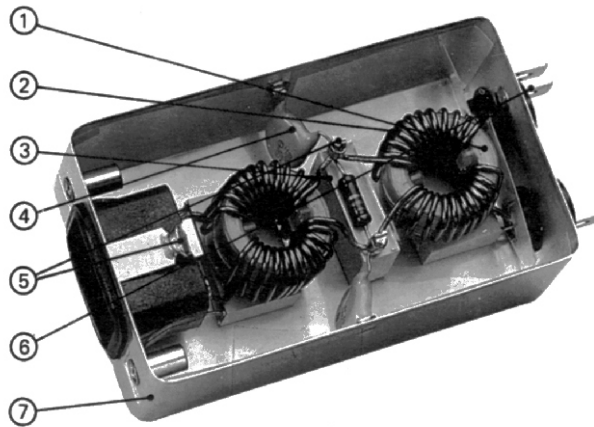
6. Price

Delta filters are very competitively priced due to highly automated lines and cost-saving designs.

7. Custom Design and Testing Services

Delta has engineering labs and shield rooms in Taipei and Northern California. These facilities allow us to design and fabricate custom filters to meet special requirements not met by standard filters and to test customers' equipment for compliance to FCC, VDE and VCCI conducted emission requirements.

FIG.1



BRIEF CONCEPT OF EMI FILTER

◆ EMI NOISE-ORIGIN AND CHARACTERISTICS

Recent decades have witnessed the rapid growth of computers, business machines, industrial controls, medical electronic equipment and many other devices that utilize digital techniques. Concurrent with this growth, the problems of Electro-Magnetic Interference (EMI) found both in the equipment, causing equipment malfunction, and outside of the equipment, causing interference to other equipment of related Emission communication, have become more severe. The frequency ranges of EMI noise are 10KHz to 30MHz by conduction through wires and 30MHz to 1GHz by radiation.

Conducted EMI noise consists of two modes:

1. Common mode interference is EMI noise present on the line and neutral referenced to safety ground. Most noise problems are caused by common mode interference.
2. Differential mode interference is EMI noise present on the phase line referenced to the neutral. Differential mode EMI tends to decline rapidly in the building wiring.

◆ VDE

Products intended for European markets should meet the requirements devised by VDE. VDE 0243 specification limits conducted emission for computing devices and other industrial, scientific and medical equipment to two levels:

Class A:

The user has to apply for a special operating license issued by the BZT (the German equivalent of FCC). If the equipments moved from one location to another, the BZT must be notified.

Class B:

If the equipment meets the B level, it then has general approval and no operating license is required. Most manufacturers attempt to meet Class B for marketing reasons. Conducted EMI regulated by FCC part 15 and VDE 243 are shown in the figure below.

◆ LEGAL REGULATION ON CONDUCTED EMI FCC

In the US, the FCC has imposed legal regulations to control interference at its source. All computing devices, including peripherals, using digital techniques with a clock frequency greater than 10KHz must comply with FCC regulations part 15 after Oct. 1983.

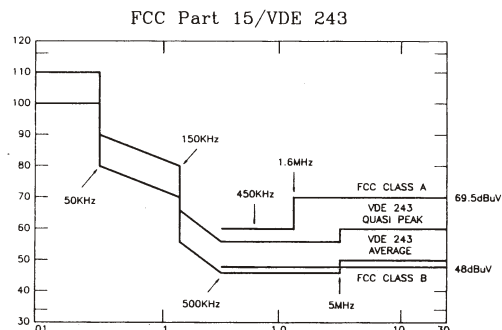
The FCC had divided products into two basic categories:

Class A:

For computing devices marketed for use in a commercial, industrial or business environment. Class A requires verification, which means that the equipment has been tested and complies with the data.

Class B:

For computing devices marketed for use in a residential environment. Class B requires certification, which means that the test data has to be submitted to FCC for the equipment to pass.



◆ ADEQUATE SELECTION OF EMI FILTER

The effectiveness of noise attenuation is undoubtedly the primary concern for selecting an EMI filter. The capability in this aspect usually refers to the reading of insertion loss which is derived from following formula:

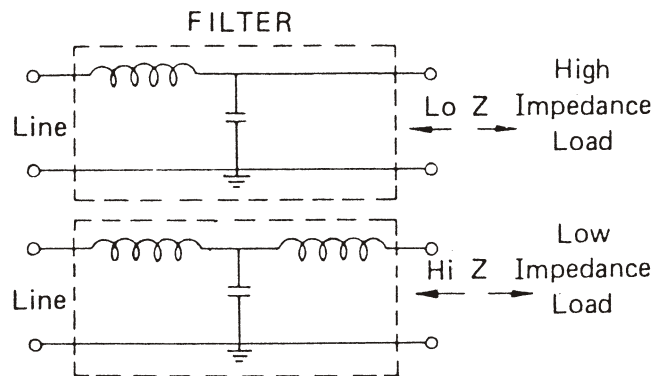
$$\text{Insertion loss (dB)} = 20 \log \frac{V_1}{V_2}$$

Wherein V_1 = EMI voltage without filter

V_2 = EMI voltage with filter

Published insertion loss data assumes that power line and load have the same impedance and all such data are in practice generated from a 50 OHM-50 OHM circuit. However, the said condition seldom exists in actual application. Therefore, insertion loss readings are not supposed to represent actual performance of noise suppression but a reference for comparison among different units or evaluation of product conformity in incoming inspection. To verify actual effectiveness in noise suppression, a filter has to be mounted in the equipment and be subjected to conduct emission test in a shielding room.

The effectiveness of noise attenuation depends heavily on the source and load impedance. EMI filter function as "mismatching networks" between source and load impedance at high frequencies. The greater the mismatch, the more effective the filter will be in attenuating the interference. In most cases, the power line presents low impedance. The filter line side should then present high impedance. Equipment, on the other hand, can be either high or low impedance. High impedance equipment such as linear power supplies should use a filter with low impedance or a shunt capacitor at the load side to create a mismatch. Low impedance equipment such as switching power supplies, synchronous motors or shunt regulators should use a filter with high impedance at the load side and should have a series inductor. The schematics below provide you an easy way for choosing the appropriate filter.



The following factors should also be taken into consideration in your selection process.

- Current and voltage rating
- Environment requirement such as temperature, shock, vibration and humidity
- Physical dimension and terminal configuration
- Availability
- Cost effectiveness
- Safety approval

DELTA PARTS NUMBERING SYSTEM

MODELS OTHER THAN POWER ENTRY MODULE TYPES AND P.C. BOARD MOUNTING TYPES

<u>03</u>	<u>GE</u>	<u>E</u>	<u>G3</u>	<u>V</u>	<u>-R</u>
					Option resistor
					Design sequence: (for cylinder types, the 8th digit designates the outside diameter; S- $\varnothing$ 38mm; M- $\varnothing$ 43mm; L- $\varnothing$ 50mm)
					Input/Output connection: G = lugs; W = PVC wires; S = screws G5 = 5 lugs (6.3*0.8mm) W5 = 5 wires (UL 1015 AWG#18, 4" long)
					Case style: A- Small mounting ears 90 degrees from terminal sides B- Triangle mounting ears 90 degrees from terminal sides C- Triangle mounting ears on terminal sides D- IEC connector with mounting screws E- IEC connector package F- Cylinder types G- Two-hole mounting bars, 90 degrees from terminal sides N- IEC connector with snap-in type
					Series: Electrical circuit, see specific catalog pages
					Current rating: AC rms e.g.: 03 amp

POWER ENTRY MODULE TYPES

<u>06</u>	<u>AR</u>	<u>2</u>	<u>D</u>
			Special design: A- with ground choke D- with double pole power switch for models AB, AK, AR series
			Module construction: 1- IEC connector & fuse holder 2- IEC connector, fuse holder and power switch 3- IEC connector, fuse holder, power switch and voltage selector switch 4- IEC connector, fuse holder & voltage selector switch 5- For models other than CK, CR series; same construction as 4 but with voltage selector switch at front panel
			Series: Electric circuit, see specific catalog pages
			Current rating: AC rms e.g.: 06 amp

PCB MOUNTING TYPES

<u>03</u>	<u>ME</u>	<u>3</u>	<u>A</u>	<u>-R</u>
				Option resistor
				Special design: A: with ground choke
				Design sequence
				Series: Electrical circuit, see specific catalog page
				Current rating: AC rms e.g. :03 amp

DELTA PARTS NUMBERING SYSTEM

3-Phase Types

10

TD

S6

D

Special Design:
Dual: diff. and common choke

Input/Output connection :

G = lugs; W = PVC wires; S = screws; T = terminal blocks

e.g.

G6 = 6 lugs

W6 = 6 wires

T2: 2 terminal blocks

TIW4: 1 terminal block / 4 wires

Series:

TD: used in "△" system

TDH: used in "△" system

TDR: used in "△" system, vertical style

TDV: used in "△" system, vertical style

TDS: used in "△" system, screw style

TY: used in both "△" & "y" system

TYS: used in "△" & "y" system, screw style

TYT: used in "△" & "y" system terminal block style

PT: P.C.B. Filter

PY: P.C.B. Filter

Current rating: AC rms
e.g.: 10 amp



INTRODUCTIONS

- 15DEEG3X: Filter with 120°C temperature socket
- 15DEEG3X(D): Filter with 65°C temperature socket
- Safety Approval:
EG3HA/(D): UL, CSA,
EG3E/(X)/(DX): —
EG3M(D): —
EG3HAX/(X)/(DX): UL, CSA, VDE
EG3E-R/(X)/(DX): —
• (X): (1), (2), (3)
- UL, CSA approved 15A at 115VAC & 250VAC;
VDE-10A at 250 VAC

COMPONENTS

PART NO.	Cx (uF)	Lg (uH)	L (mH)
15DEEG3HA/(D)	—	6	0.12
15DEEG3HAX/(D)	0.1		
15DEEG3HAX(2)/(D)	0.033		
15DEEG3HAX(3)/(D)	0.047		
15DEEG3E-R/(D)	0.1	—	
15DEEG3E-R(1)/(D1)	0.0047		
15DEEG3E-R(2)/(D2)	0.033		
15DEEG3E-R(3)/(D3)	0.047		
15DEEG3E/(D)	0.1		
15DEEG3E(1)/(D1)	0.0047		
15DEEG3E(2)/(D2)	0.033		
15DEEG3E(3)/(D3)	0.047		
15DEEG3M(D)	0.1		
15DEEG3M(D2)	0.033	0.15	
15DEEG3M(D3)	0.047		

15DEEG3E

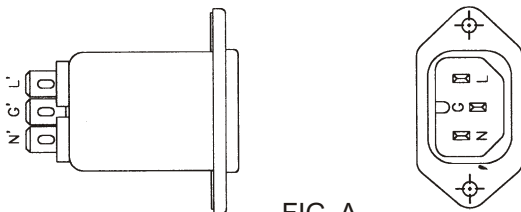


FIG. A

15DEEG3E (D)

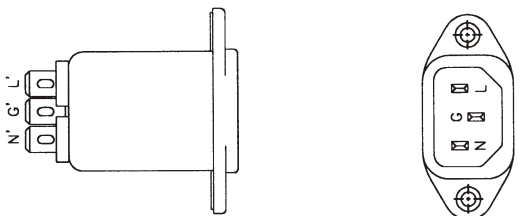


FIG. B

SPECIFICATIONS

- Maximum leakage current each
line-to-ground @ 115VAC 60Hz: 0.20mA
@ 250VAC 50Hz: 0.40mA
- Hipot rating (one minute)
line-to-ground: 2250VDC
line-to-line: 1450VDC
- Operating frequency: 50/60Hz
- Rated voltage: 115/250VAC

ELECTRICAL SCHEMATIC

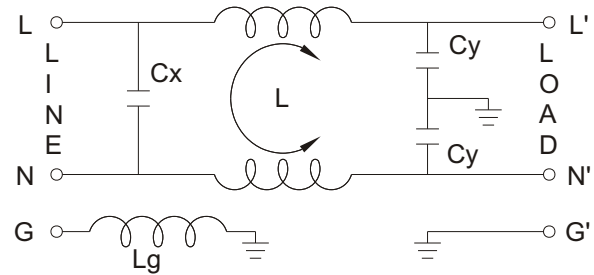
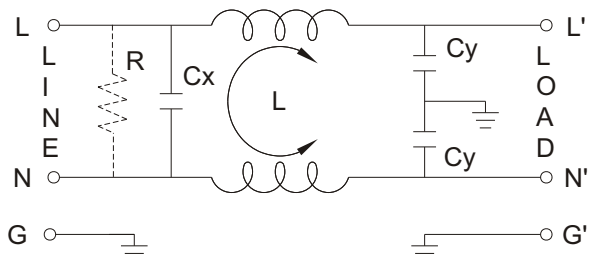


FIG. A: 15DEEG3HAX(X)/(DX)
Cy: 2200pF



15DEEG3E-R(X)/(DX)
FIG. B: 15DEEG3E(X)/(DX)
15DEEG3M(X)/(DX)

R: 1M
Cy: 2200pF

◆15DE Series P/N System

15DE Series has different combinations on socket and Cx, please see the following:

A: SOCKET

- EX. P/N: 15DEEG3E used socket (FIG. A).
- EX. P/N: 15DEEG3E(D), P/N with suffix: "(D)" used socket (FIG. B).

B. Cx

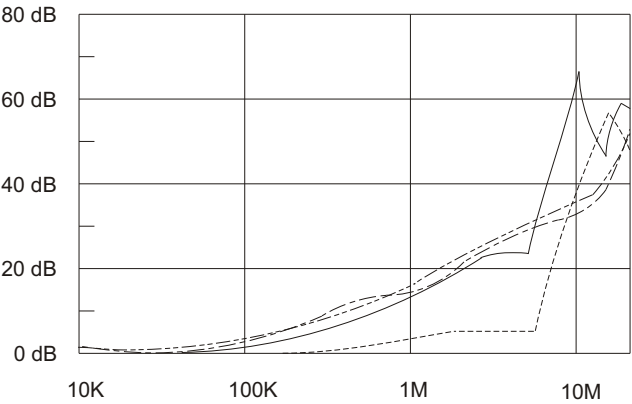
- EX. P/N: 15DEEG3E Cx: 0.1uF
- P/N with suffix "(1)" & "(D1)" Cx: 0.0047uF
- P/N with suffix "(2)" & "(D2)" Cx: 0.033uF
- P/N with suffix "(3)" & "(D3)" Cx: 0.047uF

MINIMUM INSERTION LOSS IN dB

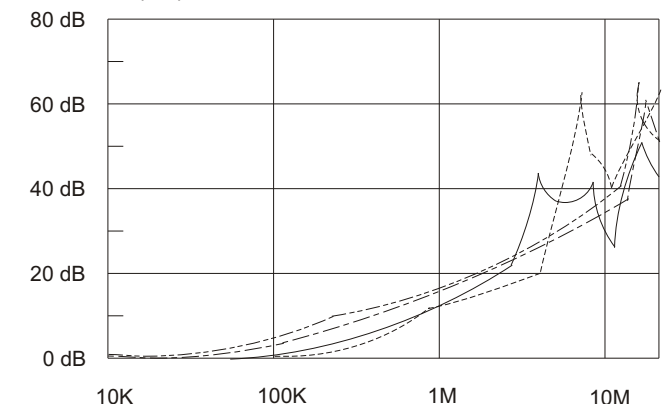
COMMON MODE (L-G) IN 50 OHM SYSTEM								DIFFERENTIAL MODE (L-L) IN 50 OHM SYSTEM							
PART NO.	FREQUENCY-MHz							PART NO.	FREQUENCY-MHz						
	.10	.15	.50	1.0	5.0	10	30		.10	.15	.50	1.0	5.0	10	30
15DEEG3E(D)/-R	1	2	8	10	20	25	40	15DEEG3E(D)/-R	1	2	10	15	25	25	40
15DEEG3E(D1)/-R		0	5	10	20	25	40	15DEEG3E(D1)/-R		0	0	1	3	30	40
15DEEG3E(D2)/-R	1	2	8	10	20	25	40	15DEEG3E(D2)/-R	0	1	5	8	20	30	40
15DEEG3E(D3)/-R	1	2	8	10	20	25	40	15DEEG3E(D3)/-R	0	1	5	10	20	30	40
15DEEG3HAX(D)	1	3	8	10	20	25	40	15DEEG3HAX(D)	1	4	10	20	15	20	25
15DEEG3HAX(D2)	1	3	8	10	20	25	40	15DEEG3HAX(D2)		0	4	10	15	25	35
15DEEG3HAX(D3)	1	3	8	10	20	25	40	15DEEG3HAX(D3)	0	1	7	15	15	20	35
15DEEG3M(D)	1	2	7	10	20	25	40	15DEEG3M(D)	1	4	10	10	20	20	35
15DEEG3M(D2)		2	6	10	20	25	35	15DEEG3M(D2)		0	5	8	25	20	35
15DEEG3M(D3)		1	6	10	20	25	35	15DEEG3M(D3)		1	8	10	20	25	35
15DEEG3HA(D)		1	5	10	20	28	35	15DEEG3HA(D)					1	8	30

INSERTION LOSS (TYPICAL)

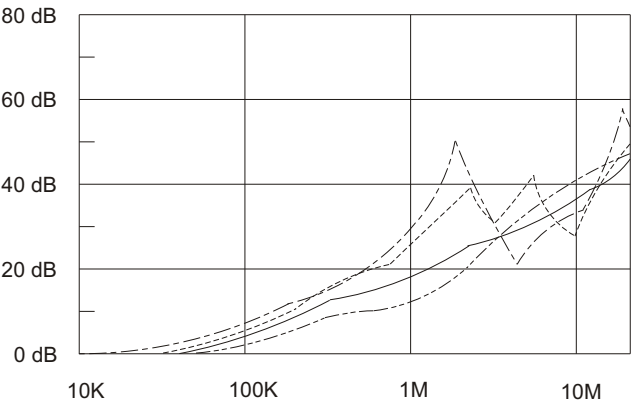
15DEEG3E(D1) ----- COMMON MODE ----- DIFF. MODE
15DEEG3E(D3) ----- COMMON MODE ----- DIFF. MODE



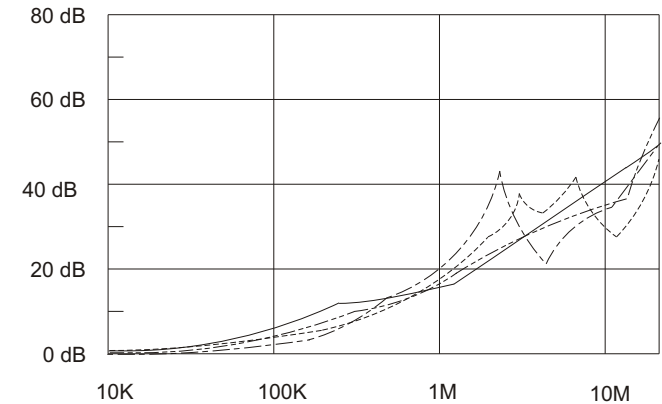
15DEEG3E(D2) ----- COMMON MODE ----- DIFF. MODE
15DEEG3M(D2) ----- COMMON MODE ----- DIFF. MODE

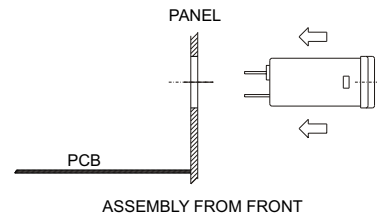


15DEEG3M(D) ----- COMMON MODE ----- DIFF. MODE
15DEEG3HAX(D) ----- COMMON MODE ----- DIFF. MODE



15DEEG3M(D3) ----- COMMON MODE ----- DIFF. MODE
15DEEG3HAX(D3) ----- COMMON MODE ----- DIFF. MODE

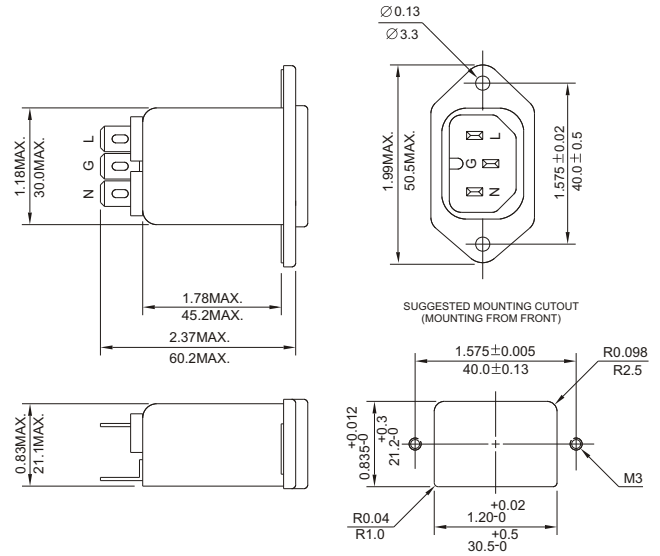




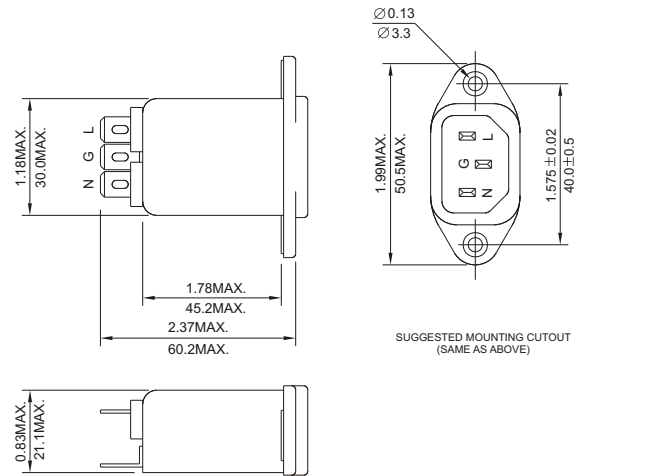
MECHANICAL CONSTRUCTION



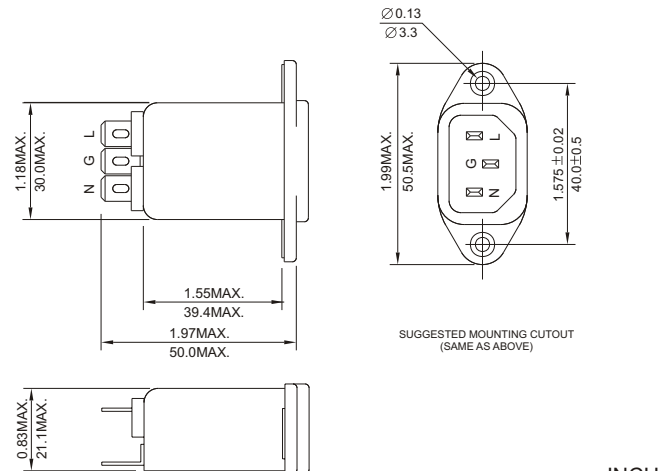
EG3HA, EG3HAX(X)
EG3E-R(X), EG3E(X)



EG3HA(D), EG3HAX(D)
EG3E(D), EG3E-R(D)



EG3M(D)



UNIT: INCH
mm



GE SERIES

HIGH PERFORMANCE IEC
CONNECTOR FILTERS

INTRODUCTIONS

1. A high performance general purpose filter with an IEC connector providing effective EMI suppression.
2. Bleeder resistor can be added with suffix "-R" on part numbers, except "G3H", "G3V", "W3V", "G3J", "W3J", types.
3. All part numbers are UL recognized, CAS certified and VDE approved.
4. With optional Y-Cap from 100pF to 3300pF.
5. Safety under apply for 03/06/10GEEG3U series.

COMPONENTS

PART NO.	Cx (uF)	L (mH)	Cy (pF)	R (Ω)
01GEEG3E/W3E/-R	0.1	6.5	2200	1M
01GEEG3H/G3V/W3V		3	3300	-
01GEEG3S/-R		10.5	-	-
03GEEG3E/W3E/W3ES/G3U/-R		2.5	2200	1M
• 03GEEW3ES/-R			-	-
03GEEG3H/G3V/W3V		4	3300	-
03GEEG3S/-R			-	-
• 03GEEG3Q/W3Q-R		2.4	2200	1M
03GEEW3J		0.8	-	-
03GEHG3J			-	-
06GEEG3E/W3E/W3ES/G3U/-R		1.05	3300	1M
06GEEG3H/G3V/W3V		1.5	-	-
06GEEG3S/-R		0.4	-	-
•• 06GEEG3Q/W3Q-R		0.2	2200	1M
••• 10GEEG3C/W3C/-R		0.3	-	-
10GEEG3E/W3E/W3ES/G3U/-R		0.2	-	-
10GEEG3S/-R		0.3	-	-
*10GEEG3Q/W3Q-R		0.2	-	-
**15GEEG3E/W3E/-R		0.3	-	-
***20GEEG3E/W3E/-R		0.3	-	-

• UL, CSA approved to 4A 115/250V
 •• UL, CSA approved to 8A 115/250V
 ••• VDE approved to 8A/250V

* UL, CSA approved to 13A 115/250V
 ** VDE approved to 10A/250V
 *** VDE approved to 16A/250V

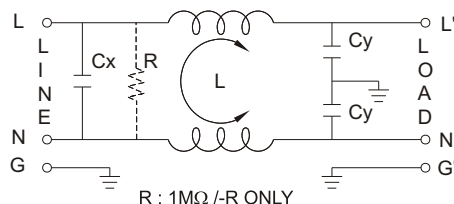
MINIMUM INSERTION LOSS IN dB

COMMON MODE (L-G) IN 50 OHM SYSTEM						
CURRENT RATING	FREQUENCY-MHz					
	.15	.50	1.0	5.0	10	30
1A(E)(S)	28	35	38	38	40	40
1A(H)	26	36	44	54	55	55
1A(G3V)	24	35	42	50	55	55
1A(W3V)	24	35	42	50	55	55
3A(E)(S)(Q)	20	25	30	38	40	40
3A(H)	24	30	38	50	55	40
3A(G3J,W3J)	20	25	30	38	40	40
3A(G3V)(W3V)	20	29	36	48	46	50
6A(E)(S)	12	18	24	35	40	40
6A(H)	15	25	28	35	45	45
6A(Q)	15	20	24	35	40	55
6A(G3V)(W3V)	14	23	30	42	45	50
10A(E)(S)	4	10	13	28	35	40
10A(C)	10	15	15	25	30	35
10A(Q)	10	12	15	30	32	45
15A(E)	4	10	13	28	35	40
20A	8	10	15	25	30	35

SPECIFICATIONS

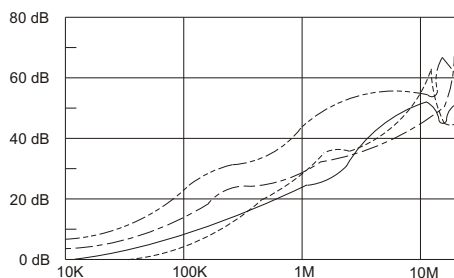
1. Maximum leakage current each line-to-ground @ 115VAC 60Hz: 0.25mA @ 250VAC 50Hz: 0.45mA
2. Hipot rating (one minute) line-to-ground: 2250VDC line-to-line: 1450VDC
3. Operating frequency: 50/60Hz
4. Rated voltage: 115/250VAC

ELECTRICAL SCHEMATIC

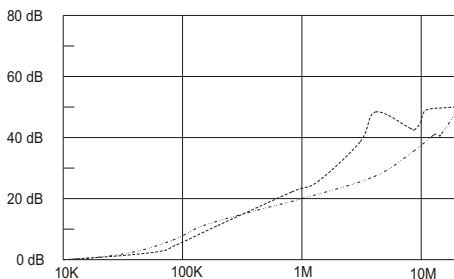


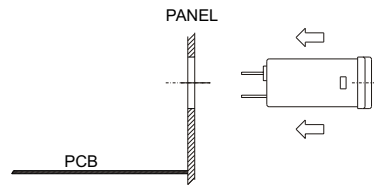
INSERTION LOSS (TYPICAL)

03GEEG3E ----- COMMON MODE ----- DIFF. MODE
 06GEEG3E ----- COMMON MODE ----- DIFF. MODE



20GEEG3E ----- COMMON MODE ----- DIFF. MODE





ASSEMBLY FROM FRONT

MECHANICAL CONSTRUCTION



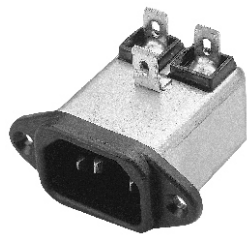
EG3E, EG3Q (Optional soldering lug or wire type)



EG3S



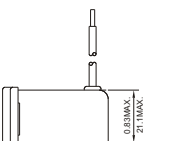
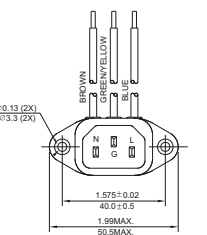
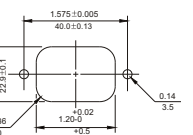
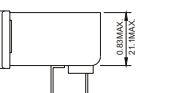
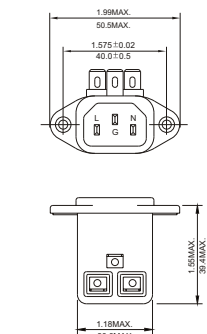
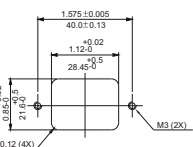
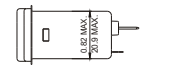
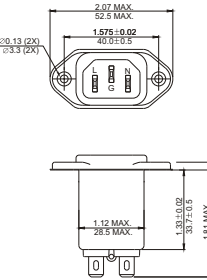
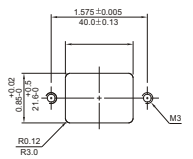
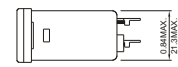
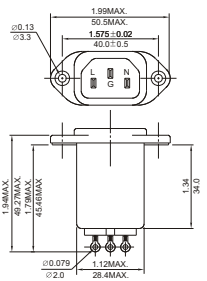
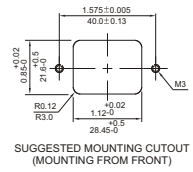
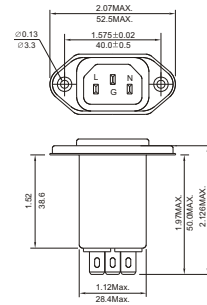
EG3U (With Compact Size)



EG3V



EW3V



SUGGESTED MOUNTING CUTOUT (SAME AS ABOVE)

ALL WIRE LEADS 4.0" LONG MIN.

UNIT: INCH
mm

2-6



GE SERIES

SNAP-IN MOUNTING HIGH PERFORMANCE IEC CONNECTOR FILTERS



INTRODUCTIONS

1. Snap-in mounting type to reduce labor cost.
Compact and reliable at low cost.
2. Bleeder resistor can be added with suffix "-R"
on part numbers, except G3H, G3V, W3V, G3J, W3J, types.
3. Optional side snap-in mounting clip type with suffix (H) on part numbers.
4. All part numbers are UL recognized, CSA certified and VDE approved.
5. With optional Y-Cap from 100pF to 3300pF.
6. Safety under apply for 03/06/10GENG3U series.

COMPONENTS

PART NO.	Cx (uF)	L (mH)	Cy (pF)	R (Ω)
01GENG3E/W3E/-R	0.1	6.5	2200	1M
03GENG3E/W3E/G3U/-R		2.5		
• 03GENW3ES/-R		2.5		
• 03GENG3Q/W3Q/-R		4		
06GENG3E/W3E/G3U/-R		0.8		
•• 06GENG3Q/W3Q/-R		1.5		
06GENW3ES/-R		0.8		
10GENG3E/W3E/G3U/-R		0.2		
••• 10GENG3C/W3C/-R		0.4		
* 10GENG3Q/W3Q/-R		0.3		
10GENW3ES/-R		0.2		
** 15GENG3E/W3E/-R		0.2		
*** 20GENG3E/W3E/-R		0.3		

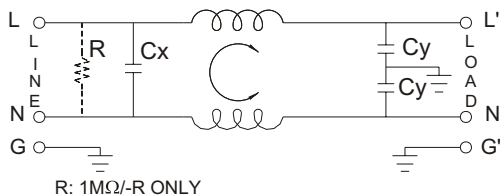
• UL, CSA approved to 4A 115/250V
 •• UL, CSA approved to 8A 115/250V
 ••• VDE approved to 8A/250V

* UL, CSA approved to 13A 115/250V
 ** VDE approved to 10A/250V
 *** VDE approved to 16A/250V

MINIMUM INSERTION LOSS IN dB

COMMON MODE (L-G) IN 50 OHM SYSTEM						
CURRENT RATING	FREQUENCY-MHz					
	.15	.50	1.0	5.0	10	30
1A	28	35	38	38	40	40
3A	20	25	30	38	40	40
6A	12	18	24	35	40	40
6A (G3Q)	15	20	24	35	40	55
10A	4	10	13	28	35	40
10A (G3C)	10	15	15	25	30	35
10A (G3Q)	10	12	15	30	32	45
15A	4	10	13	28	35	40
20A	8	10	15	25	30	35

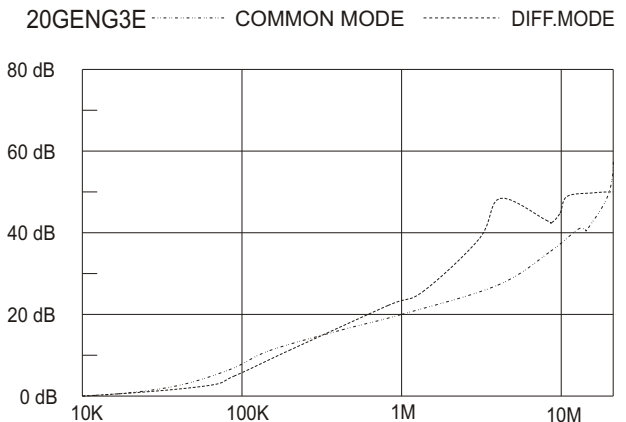
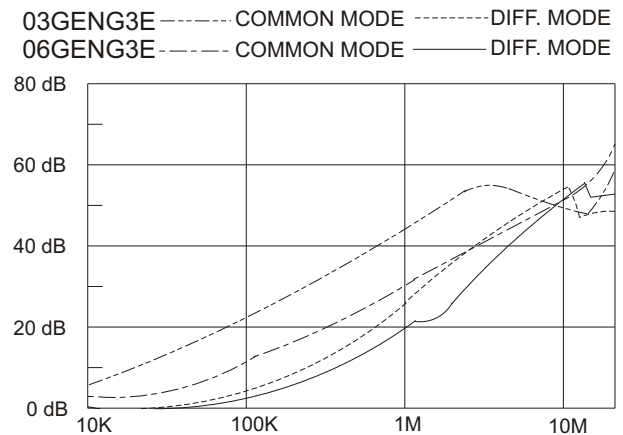
ELECTRICAL SCHEMATIC



SPECIFICATIONS

1. Maximum leakage current each
line-to-ground @ 115VAC 60Hz: 0.2mA
@ 250VAC 50Hz: 0.4mA
2. Hipot rating (one minute)
line-to-ground: 2250VDC
line-to-line: 1450VDC
3. Operating frequency: 50/60Hz
4. Rated voltage: 115/250VAC

INSERTION LOSS (TYPICAL)



MECHANICAL CONSTRUCTION



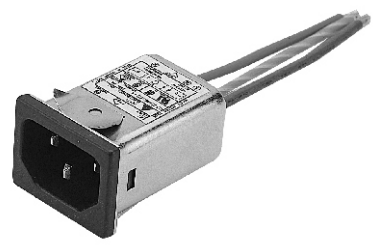
NG3E, NG3C, NG3Q (Optional wire type)



NG3E(H), NG3C(H), NG3Q(H) (Optional wire type)



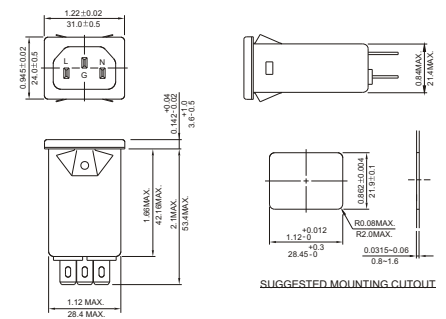
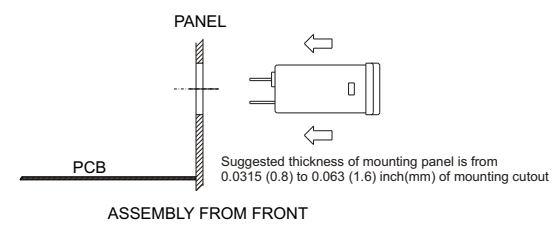
NG3U (With Compact Size)



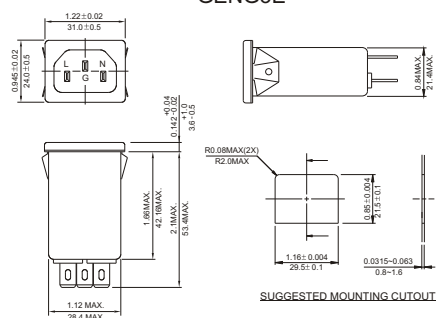
NW3ES



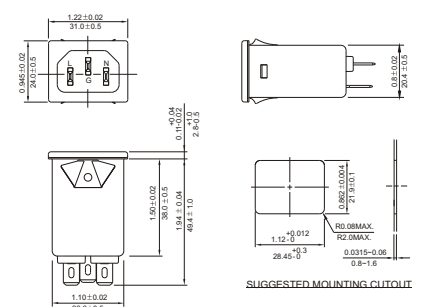
20GENG3E (Optional wire type)



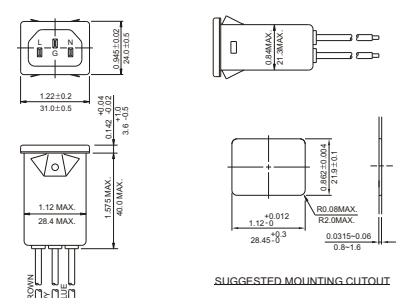
GENG3E



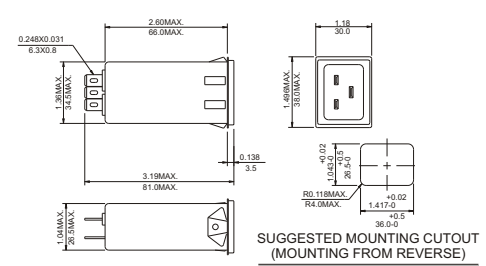
GENG3E(H)



NG3U



NW3ES



UNIT: $\frac{\text{INCH}}{\text{mm}}$



GK SERIES

MOUNTING HIGH PERFORMANCE IEC CONNECTOR FILTERS



INTRODUCTIONS

1. Specially designed with additional X capacitor providing most effective EMI suppression for low frequency noise (ranged 150KHz-500KHz).
2. Bleeder resistor can be added with suffix "-R" on part numbers.
3. With optional Y capacitor from 100pF to 3300pF.
4. All part numbers are UL recognized, CSA certified and VDE approved.

COMPONENTS

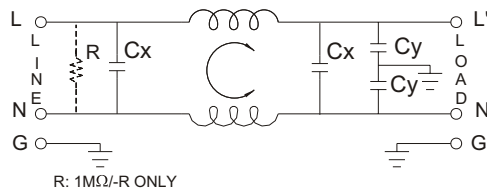
PART NO.	L (mH)	Cx (uF)	Cy (pF)
03GKEG3E/03GKEW3E	3.1	0.1	2200
06GKEG3E/06GKEW3E	1.2	0.1	
10GKEG3E/10GKEW3E	0.36	0.1	

• VDE approved to 9A/250V

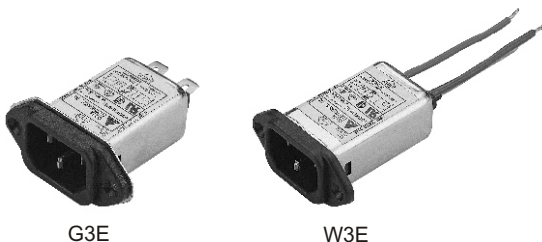
MINIMUM INSERTION LOSS IN dB

COMMON MODE (L-G) IN 50 OHM SYSTEM						
PART Number	FREQUENCY-MHz					
	.15	.50	1.0	5.0	10	30
03GKEG3E/03GKEW3E	20	25	30	40	40	50
06GKEG3E/06GKEW3E	12	20	25	35	45	45
10GKEG3E/10GKEW3E	7	10	15	30	35	50
DIFFERENTIAL MODE (L-L) IN 50 OHM SYSTEM						
03GKEG3E/03GKEW3E	5	25	50	55	53	45
06GKEG3E/06GKEW3E	7	20	35	50	50	40
10GKEG3E/10GKEW3E	7	9	25	50	45	35

ELECTRICAL SCHEMATIC

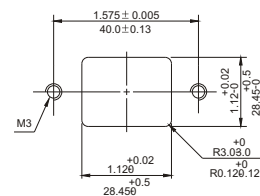
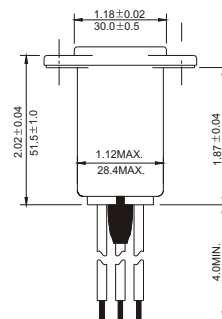
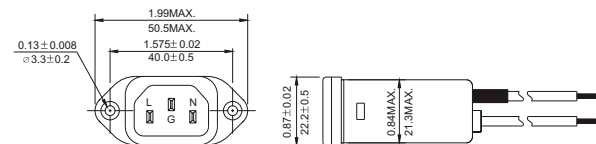


MECHANICAL CONSTRUCTION



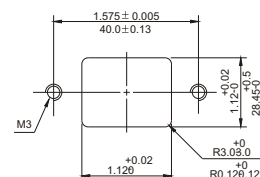
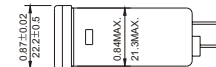
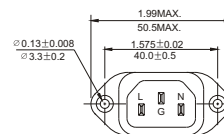
SPECIFICATIONS

1. Maximum leakage current each
line-to-ground @ 115VAC 60Hz: 0.20mA
@ 250VAC 50Hz: 0.40mA
2. Hipot rating (one minute)
line-to-ground: 2250VDC
line-to-line: 1450VDC
3. Operating frequency: 50/60Hz
4. Rated voltage: 115/250VAC



ALL WIRE LEADS 4.0" LONG MIN.

W3E



G3E

UNIT: INCH
mm



GKN SERIES

SNAP-IN MOUNTING HIGH PERFORMANCE IEC CONNECTOR FILTERS



INTRODUCTIONS

1. Specially designed with additional X capacitor providing most effective EMI suppression for low frequency noise (ranged 150KHz-500KHz).
2. Bleeder resistor can be added with suffix "-R" on part numbers.
3. With optional Y capacitor from 100pF to 3300pF.
4. All part numbers are UL recognized, CSA certified and VDE approved.

COMPONENTS

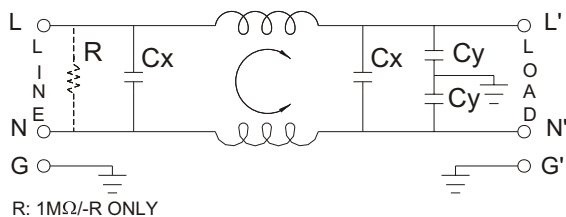
PART Number	L (mH)	Cx (uF)	Cy (pF)
03GKNG3E/03GKNW3E	3.1	0.1	2200
06GKNG3E/06GKNW3E	1.2	0.1	
• 10GKNG3E/• 10GKNW3E	0.36	0.1	

• VDE approved to 9A/250V

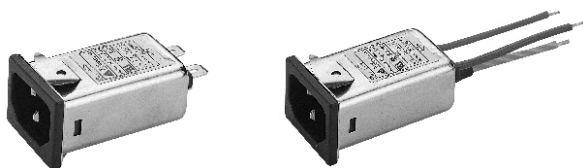
MINIMUM INSERTION LOSS IN dB

COMMON MODE (L-G) IN 50 OHM SYSTEM						
PART NO.	FREQUENCY-MHz					
	.15	.50	1.0	5.0	10	30
03GKNG3E/03GKNW3E	20	25	30	40	40	50
06GKNG3E/06GKNW3E	12	20	25	35	45	45
10GKNG3E/10GKNW3E	7	10	15	30	35	50
DIFFERENTIAL MODE (L-L) IN 50 OHM SYSTEM						
03GKNG3E/03GKNW3E	5	25	50	55	53	45
06GKNG3E/06GKNW3E	7	20	35	50	50	40
10GKNG3E/10GKNW3E	7	9	25	50	45	35

ELECTRICAL SCHEMATIC



MECHANICAL CONSTRUCTION



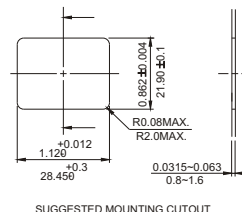
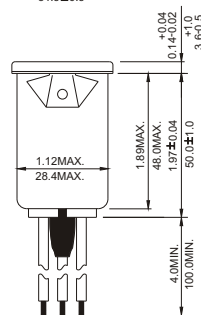
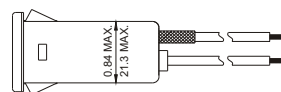
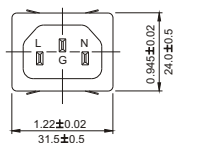
G3E

W3E

SPECIFICATIONS

1. Maximum leakage current each line-to-ground @ 115VAC 60Hz: 0.2mA @ 250VAC 50Hz: 0.4mA
2. Hipot rating (one minute) line-to-ground: 2250VDC line-to-line: 1450VDC
3. Operating frequency: 50/60Hz
4. Rated voltage: 115/250VAC

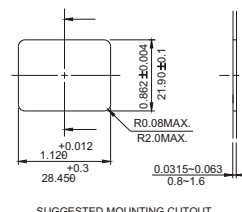
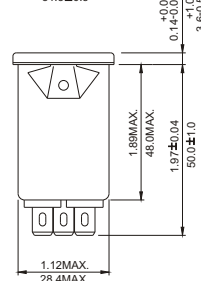
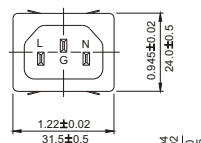
Suggested thickness of mounting panel is from 0.0315 (0.8) to 0.063 (1.6) inch(mm) of mounting cutout



SUGGESTED MOUNTING CUTOUT

ALL WIRE LEADS 4.0" LONG MIN.

W3E



SUGGESTED MOUNTING CUTOUT

G3E

UNIT: INCH
mm

INTRODUCTIONS

1. Specially designed with ground choke providing most effective EMI suppression for high frequency noise (ranged 5MHz-25MHz).
2. Bleeder resistor can be added with suffix "-R" on part numbers.
3. With optional Y capacitor 100pF to 3300pF.
4. All part numbers are UL recognized, CSA certified and VDE approved.

COMPONENTS

PART NO.	L (mH)	Cx (uF)	Cy (pF)	Lg (uH)
03KEEG3EA/03KEEW3EA	3.1	0.1	2200	100
*08KEEG3EA/08KEEW3EA	0.8			
**10KEEG3EA/10KEEW3EA	0.4			
***03KEEG3SA/03KEEW3SA	3.1			
***06KEEG3SA/06KEEW3SA	0.8			
***10KEEG3SA/10KEEW3SA	0.4			

* VDE approved to 6A 250V.

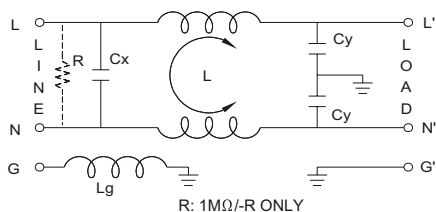
**UL, CSA & VDE approved to 9A 115/250VAC.

*** SEMKO approved , UL& cUL under approve.

MINIMUM INSERTION LOSS IN dB

COMMON MODE (L-G) IN 50 OHM SYSTEM						
PART NO.	FREQUENCY-MHz					
	.15	.50	1.0	5.0	10	30
03KEEG3EA/03KEEW3EA	15	20	25	40	40	45
08KEEG3EA/08KEEW3EA	10	15	20	35	40	50
10KEEG3EA/10KEEW3EA	7	12	18	30	30	50
03KEEG3SA/03KEEW3SA	15	20	25	40	40	40
06KEEG3SA/06KEEW3SA	7	15	20	35	40	40
10KEEG3SA/10KEEW3SA	4	12	18	30	30	45
DIFFERENTIAL MODE (L-L) IN 50 OHM SYSTEM						
03KEEG3EA/03KEEW3EA	5	12	15	40	50	45
08KEEG3EA/08KEEW3EA	5	10	15	45	40	50
10KEEG3EA/10KEEW3EA	4	12	18	30	30	50
03KEEG3SA/03KEEW3SA	10	20	35	40	45	40
06KEEG3SA/06KEEW3SA	10	25	40	35	40	40
10KEEG3SA/10KEEW3SA	10	25	35	30	30	45

ELECTRICAL SCHEMATIC



MECHANICAL CONSTRUCTION

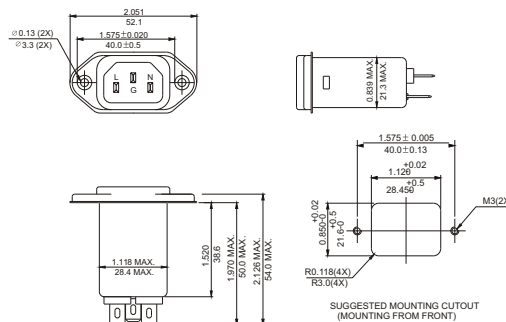


G3EA

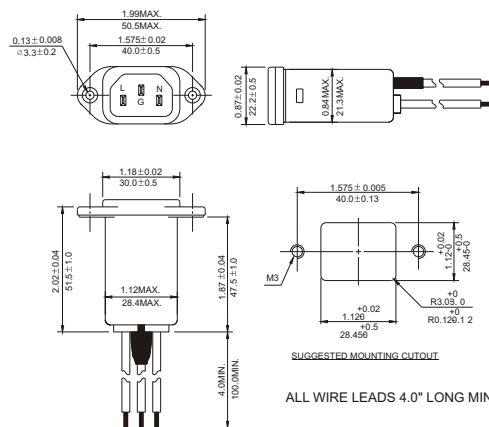
W3EA

SPECIFICATIONS

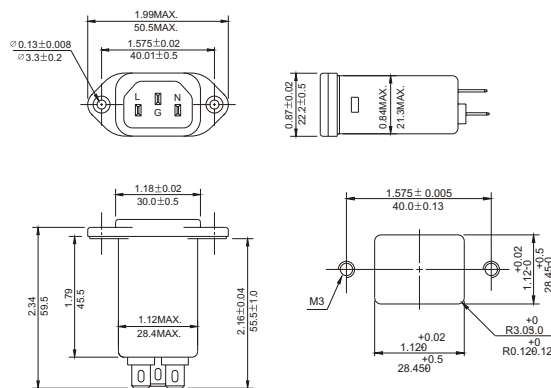
1. Maximum leakage current each line-to-ground @ 115VAC 60Hz: 0.20mA
@ 250VAC 50Hz: 0.40mA
2. Hipot rating (one minute)
line-to-ground: 2250VDC
line-to-line: 1450VDC
3. Operating frequency: 50/60Hz
4. Rated voltage: 115/250VAC



G3SA



W3EA



G3EA

UNIT: $\frac{\text{INCH}}{\text{mm}}$



KEN SERIES

HIGH PERFORMANCE SNAP-IN FILTERS



INTRODUCTIONS

1. Specially designed with ground choke providing most effective EMI suppression for high frequency noise (ranged 5MHz-25MHz).
2. Bleeder resistor can be added with suffix "-R" on part numbers.
3. With optional Y capacitor from 100pF to 3300pF.
4. All part numbers are UL recognized, CSA certified and VDE approved.
5. Optional side snap-in mounting clip type with suffix (H) on part numbers. for 03/06/10KENG3SA series.

COMPONENTS

PART NO.	L (mH)	Cx (uF)	Cy (pF)	Lg (uH)
03KENG3EA/03KENW3EA	3.1	0.1	2200	100
*08KENG3EA/08KENW3EA	0.8			
**10KENG3EA/10KENW3EA	0.4			
***03KENG3SA/03KENG3SA	3.1			
***06KENG3SA/06KENG3SA	0.8			
***10KENG3SA/10KENG3SA	0.4			

* VDE approved to 6A 250V.

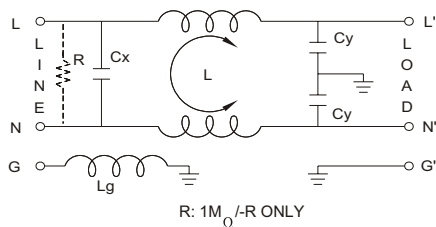
** UL, CSA & VDE approved to 9A 115/250 VAC.

*** SEMKO approved, UL & cUL under approve.

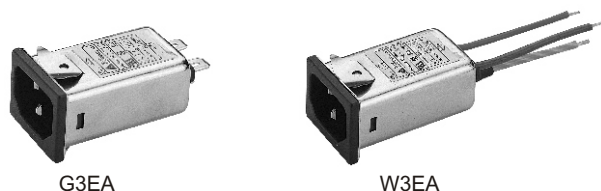
MINIMUM INSERTION LOSS IN dB

COMMON MODE (L-G) IN 50 OHM SYSTEM						
PART NO.	FREQUENCY-MHz					
	.15	.50	1.0	5.0	10	30
03KENG3EA/03KENW3EA	15	20	25	40	40	45
08KENG3EA/08KENW3EA	10	15	20	35	40	50
10KENG3EA/10KENW3EA	7	12	18	30	30	50
03KENG3SA/03KENW3SA	15	20	25	40	40	40
06KENG3SA/06KENW3SA	7	15	20	35	40	40
10KENG3SA/10KENW3SA	4	12	18	30	30	45
DIFFERENTIAL MODE (L-L) IN 50 OHM SYSTEM						
03KENG3EA/03KENW3EA	5	12	15	40	50	45
08KENG3EA/08KENW3EA	5	10	15	45	40	50
10KENG3EA/10KENW3EA	4	12	18	30	30	50
03KENG3SA/03KENW3SA	10	20	35	40	45	40
06KENG3SA/06KENW3SA	10	25	40	35	40	40
10KENG3SA/10KENW3SA	10	25	35	30	30	45

ELECTRICAL SCHEMATIC

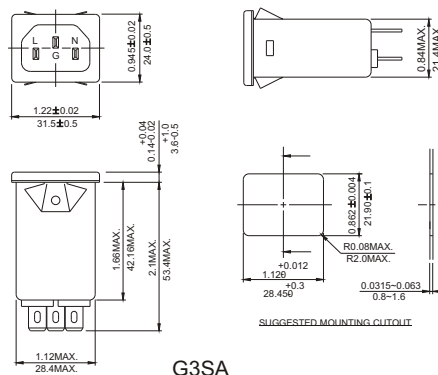


MECHANICAL CONSTRUCTION

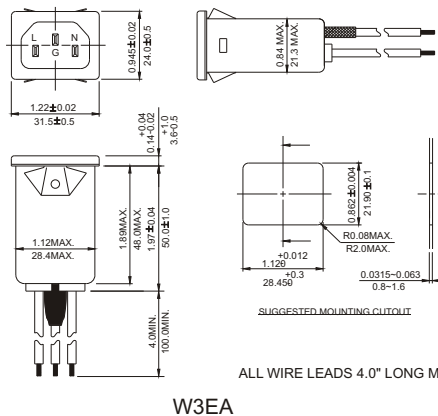


SPECIFICATIONS

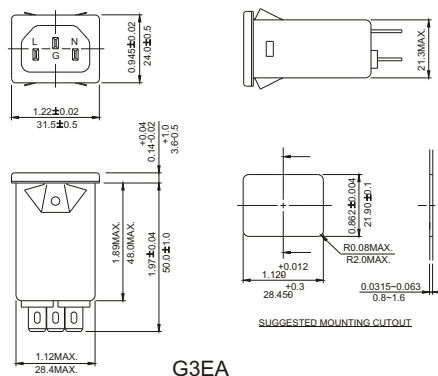
1. Maximum leakage current each line-to-ground @ 115VAC 60Hz: 0.20mA @ 250VAC 50Hz: 0.40mA
2. Hipot rating (one minute) line-to-ground: 2250VDC line-to-line: 1450VDC
3. Operating frequency: 50/60Hz
4. Rated voltage: 115/250VAC



Suggested thickness of mounting panel is from 0.0315 (0.8) to 0.063 (1.6) inch(mm) of mounting cutout



ALL WIRE LEADS 4.0" LONG MIN.



UNIT: INCH
mm

INTRODUCTIONS

1. Direct PC board mounting for easy installation and space saving.
2. ME2: UL,
ME3D/P:
ME3:
ME3G:
ME3B:
ME3DA/GA:
15ME2/ME3:
02ME4E2:
ME4: UL, CSA, TUV

UL, CSA, VDE,

SPECIFICATIONS

1. Maximum leakage current each
line-to-ground @ 115VAC 60Hz: 0.20mA
0.45mA (02ME4E1)
@ 250VAC 50Hz: 0.40mA
0.80mA (02ME4E1)
2. Hipot rating (one minute)
line-to-ground: 2250VDC
line-to-line: 1450VDC
3. Operating frequency: 50/60Hz
4. Rated voltage: 115/250VAC

COMPONENTS

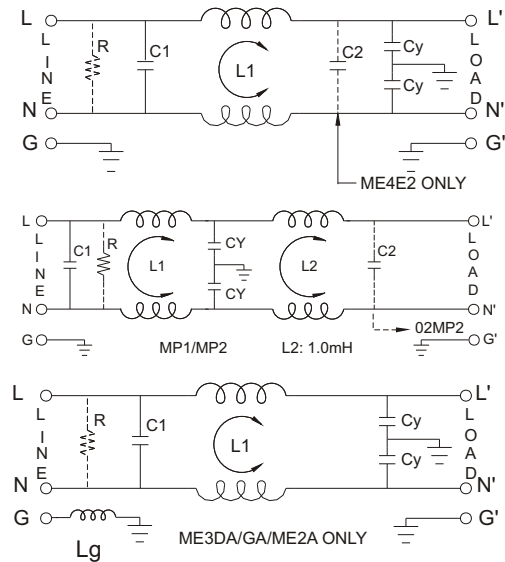
PART NO.	C1 (uF)	L1 (mH)	PART NO.	C1 (uF)	L1 (mH)
01ME2	0.1	3.7	03ME3G-R/(S)	0.1	2.5
01ME3/(S)	0.033	5	03ME4/P	0.47	15
02ME3G/(S)			06ME2	0.1	0.4
02ME3GA/(S)	0.1	7	06ME3/(S)	0.033	0.6
02ME3G-R/(S)			06ME3D/(S)		
02ME4E1	0.47	25	06ME3DA/(S)	0.047	0.53
*02ME4E2		25	06ME3G/(S)		
*02MP1	0.22	20	06ME3GA/(S)	0.1	0.8
*02MP2		25	06ME3G-R/(S)		
03ME2	0.1	1.3	10ME2	0.1	0.1
03ME2A	0.1	2.5	10ME3/(S)	0.033	0.18
03ME3/(S)	0.033	2.3	10ME3G/(S)	0.1	0.2
03ME3G/(S)			10ME3		
•03ME3GA/(S)	0.1	2.5	•• 15ME2	0.1	0.12
•03ME3B		1.2	•• 15ME3/(S)		
03ME3DA/(S)					
03ME3D/(S)	0.047	1.2			

- * UL, CSA approved to 2.5A 115/250VAC
- 03ME3D/(S): 03ME3D, 03ME3D(S)
- VDE, SEV, SEMKO approved to 10A/250VAC

MINIMUM INSERTION LOSS IN dB

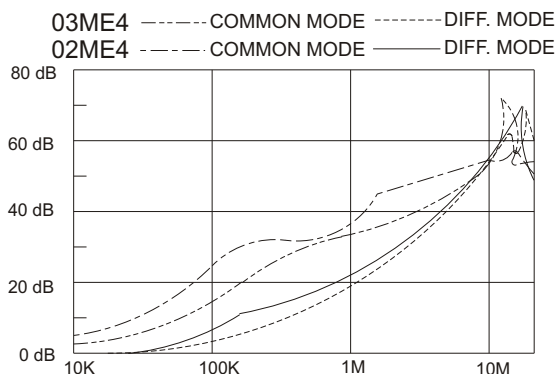
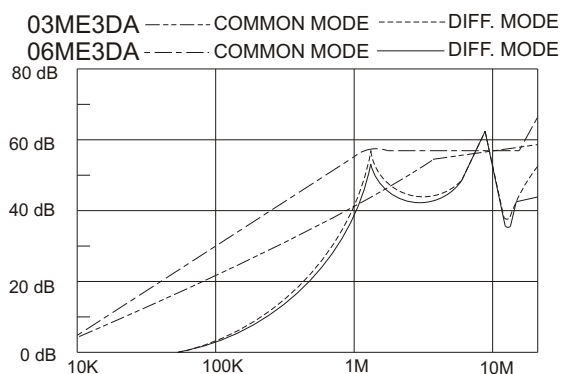
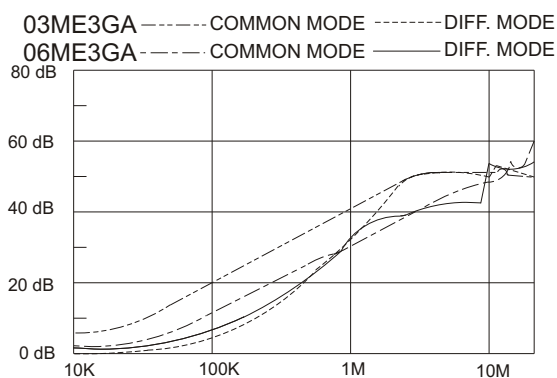
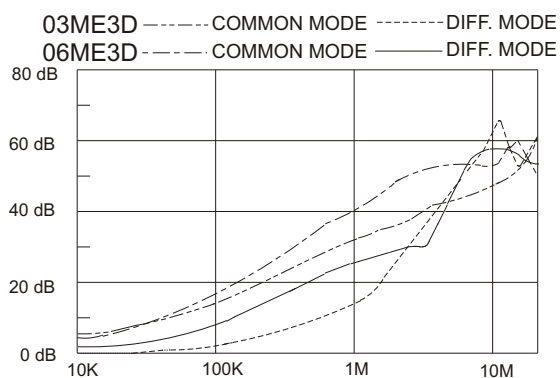
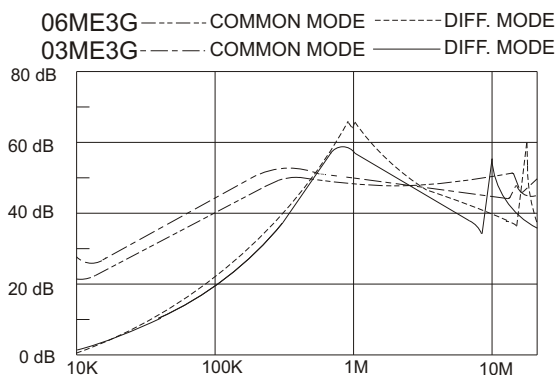
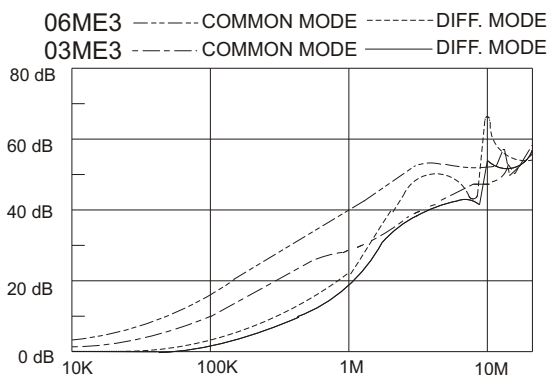
COMMON MODE (L-G) IN 50 OHM SYSTEM															
TYPE	CURRENT RATING	FREQUENCY-MHz						TYPE	CURRENT RATING	FREQUENCY-MHz					
		.15	.50	1.0	5.0	10	30			.15	50	1.0	5.0	10	30
01ME2	1A	27	37	42	44	45	35	03ME3G	3A	20	25	30	38	40	40
01ME3/(S)	1A	25	35	40	40	40	40	03ME3GA	3A	20	23	30	40	40	40
02ME3G/(S)	2A	28	35	28	38	40	40	06ME2	6A	12	18	20	35	40	50
02ME3GA/(S)	2A	20	25	35	40	40	40	06ME3	6A	12	20	25	40	45	45
02ME4E1	2A	35	45	45	35	35	35	06ME3D	6A	10	20	20	30	35	40
02ME4E2	2.5/2A	30	40	40	35	35	40	06ME3DA	6A	8	10	15	30	30	40
02ME4/P	2A	35	45	45	35	35	35	06ME3G	6A	10	15	20	35	40	40
02MP1	2.5/2A	45	60	60	45	40	25	06ME3GA	6A	10	15	20	30	35	40
02MP2	2.5/2A	50	55	55	50	40	25	10ME3/(S)	10A	4	10	15	30	38	45
03ME2	3A	15	28	32	45	45	50	10ME3G/(S)	10A	4	10	13	28	35	40
03ME3	3A	22	30	35	45	45	48	15ME2	15A/10A	2	8	10	20	25	40
03ME3B	3A	12	20	28	40	40	40	15ME3/(S)	15A/10A	2	8	10	20	25	40
03ME3D	3A	18	28	39	48	48	55								
03ME3DA	3A	15	25	30	40	40	45								
03ME4/P	3A	30	40	40	35	35	35								

ELECTRICAL SCHEMATIC



- R: 1MΩ(ME3) C2: 0.1μF(ME4E2/MP2)
R: 560KΩ(ME4) R: 330KΩ(ME4E2)
Cy: 2200pF
Cy: 4700pF(ME4/E1)
Lg: 18.3μH (2A/GA/DA)

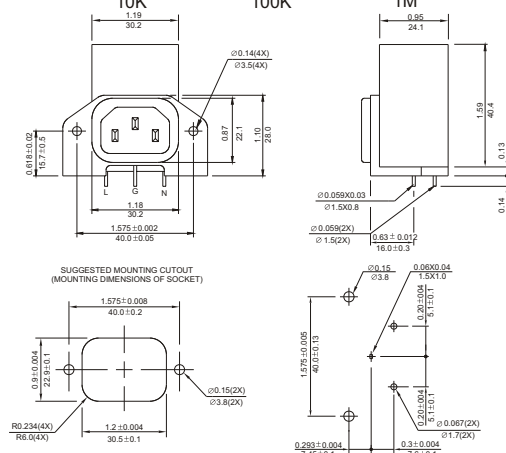
INSERTION LOSS (TYPICAL)



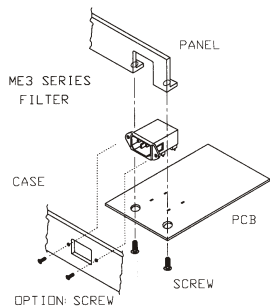
MECHANICAL CONSTRUCTION



ME2/ME2A



UNIT: $\frac{\text{INCH}}{\text{mm}}$



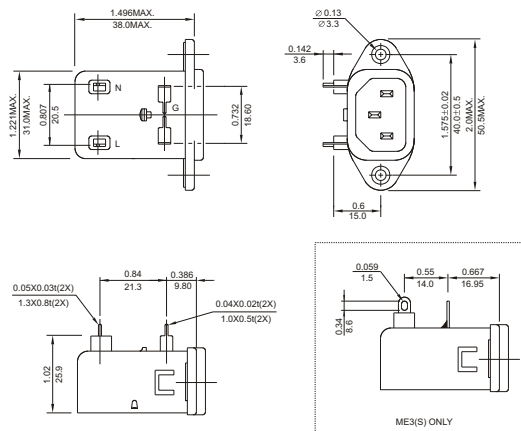
◆ **Proposal of installation for ME3 series**
please follow these steps to install:

1. Insert filter to PCB and soldering.
2. Screw panel and filter on PCB.
3. Assemble case with PCB with panel and filter.

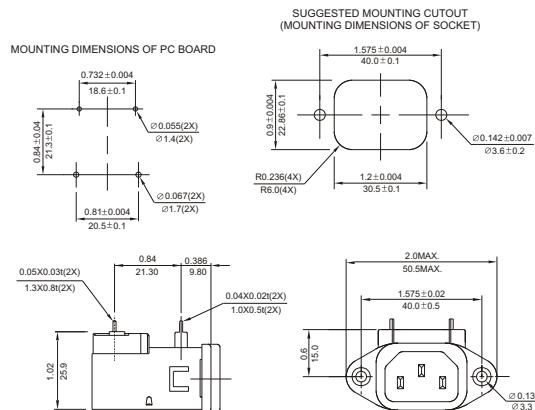
Note: - Socket of filter should be assembled with mounting hole of case tightly for easy insertion of power cord.
- Screw from the outside of case to fix filter for more secured assembly (optional).



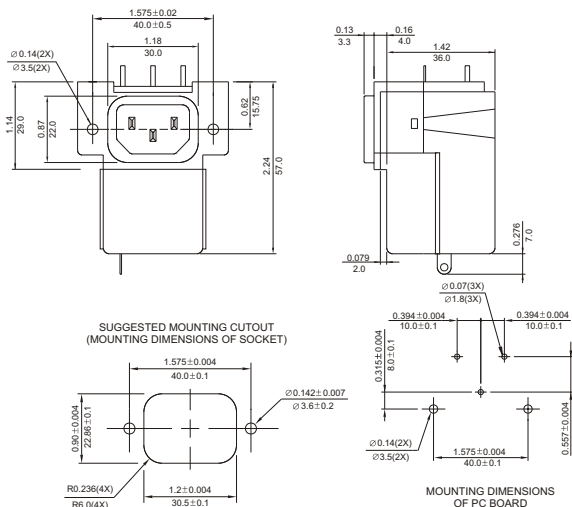
ME3



ME3DA



ME4E/MP



UNIT: INCH
mm

INTRODUCTIONS

1. Power module incorporates an IEC connector, a fuse holder with optional power on/off switch and voltage selector switch, plus an EMI filter all-in-one single, easy-to-install unit.
2. Fuse holder designed for one IEC 5x20mm fuse. Safety interlock prevents fuse removal with line plug inserted (Use only with 250V fuse).
3. All part numbers are UL recognized, CSA certified and VDE approved.

SPECIFICATIONS

1. Maximum leakage current each
line-to-ground @ 115VAC 60Hz: 0.25mA
@ 250VAC 50Hz: 0.45mA
2. Hipot rating (one minute)
line-to-ground: 2250VDC
line-to-line: 1450VDC
3. Operating frequency: 50/60Hz
4. Rated voltage: 115/250VAC

MINIMUM INSERTION LOSS IN dB

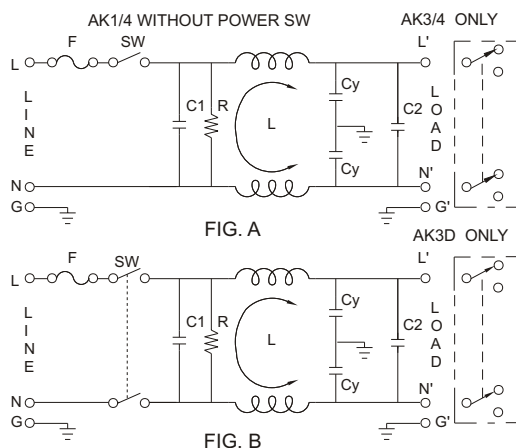
COMMON MODE (L-G) IN 50 OHM SYSTEM						
CURRENT RATING	FREQUENCY-MHz					
	.15	.50	1.0	5.0	10	30
3A	30	35	40	35	35	35
6A	16	25	30	42	45	40
DIFFERENTIAL MODE (L-L) IN 50 OHM SYSTEM						
3A	10	40	45	45	45	35
6A	6	25	30	42	45	40

TYPE & RATED CURRENT

DELTA PART NO.	AK1	AK2	AK2D	AK3	AK3D	AK4	AK5
RATED CURRENT	115VAC	6A	6A	6A	6A	6A	6A
	250VAC	6A	6A	4A	5A	4A	6A
IEC CONNECTOR	△	△	△	△	△	△	△
FUSE HOLDER	△	△	△	△	△	△	△
POWER SWITCH	-	SP ¹	DP ²	SP ¹	DP ²	-	-
VOLTAGE SELECTOR SW	-	-	-	REAR ³	REAR ³	REAR ³	FRONT ⁴
ELECTRICAL SCHEMATIC	FIG. A	FIG. A	FIG. B	FIG. A	FIG. B	FIG. A	FIG. C

1. Single-pole UL, CSA & VDE approved
Current rating: UL & CSA-6A both at 125VAC & 250VAC;
VDE-6A at 250VAC.
Electrical lifetime: 50,000 cycles.
Maximum inrush current: 70A.
2. Double-pole UL CSA & VDE approved
Current rating: UL & CSA-6A at 125VAC, 4A at 250VAC;
VDE-4A at 250VAC.
Electrical lifetime: 10,000 cycles.
Maximum inrush current: 50A.
3. Voltage selector SW -UL, CSA & VDE approved
Current rating: 10A at 125VAC; 5A at 250VAC.
4. Voltage selector SW -UL, CSA & VDE approved
Current rating: UL & CSA-6A both at 125VAC & 250VAC;
VDE-6A at 250VAC.

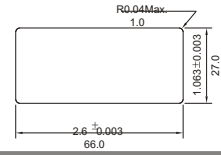
ELECTRICAL SCHEMATIC



For transformers with two separate windings

COMPONENT VALUE:

6A:	3A:
R: 2.2MΩ	R: 1MΩ
C1: 0.1uF	C1: 0.1uF
C2: 0.1uF	C2: 0.1uF
Cy: 3300pF	Cy: 2200pF
L: 1.3mH	L: 14mH

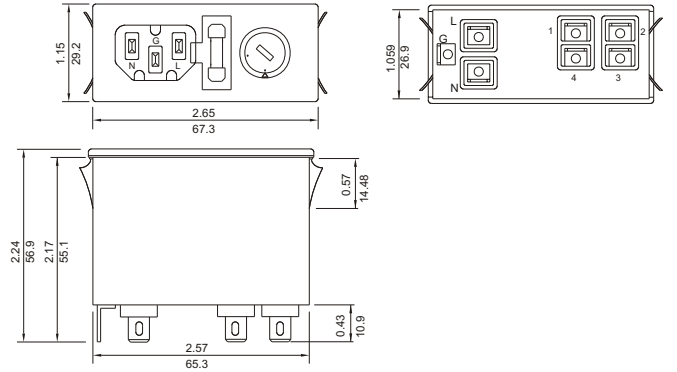


- Suggested thickness of mounting panel is from 0.04 to 0.07 inch
- Suggested mounting cutout

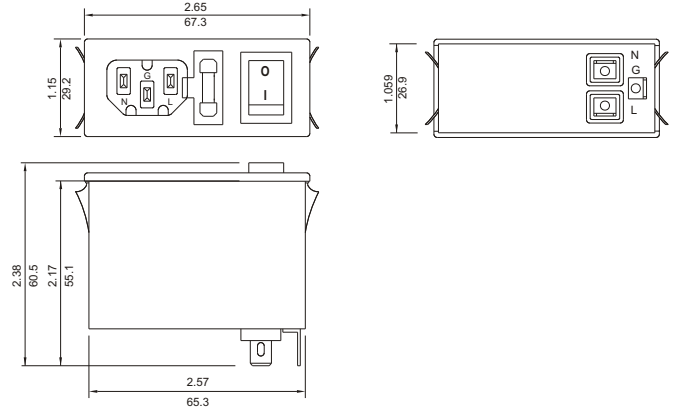
MECHANICAL CONSTRUCTION



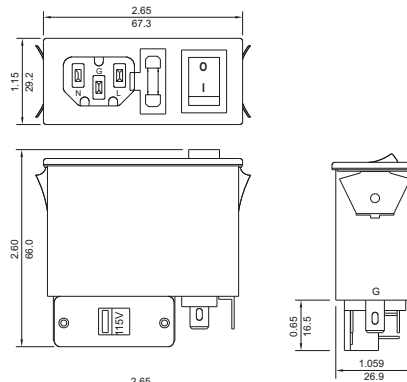
AK5



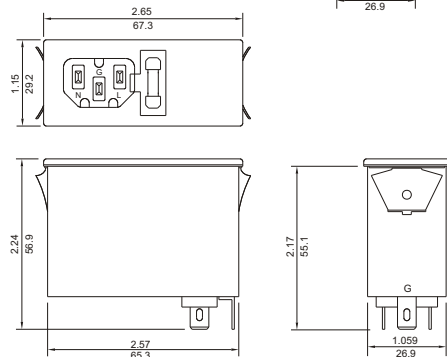
AK2,AK2D



AK3,AK3D
AK4 (without power switch)



AK1



UNIT: INCH
mm

INTRODUCTIONS

1. AR series is designed as a high performance, two-stage filter for low impedance load with better noise attenuation than AK series in low frequency applications such as switching power supplies.
2. Fuse holder designed for one IEC 5x20mm fuse. Safety interlock prevents fuse removal with line plug inserted (Use only with 250V fuse).
3. All part numbers are UL recognized, CSA certified and VDE approved.

SPECIFICATIONS

1. Maximum leakage current each
line-to-ground @ 115VAC 60Hz: 0.25mA
@ 250VAC 50Hz: 0.45mA
2. Hipot rating (one minute)
line-to-ground: 2250VDC
line-to-line: 1450VDC
3. Operating frequency: 50/60Hz
4. Rated voltage: 115/250VAC

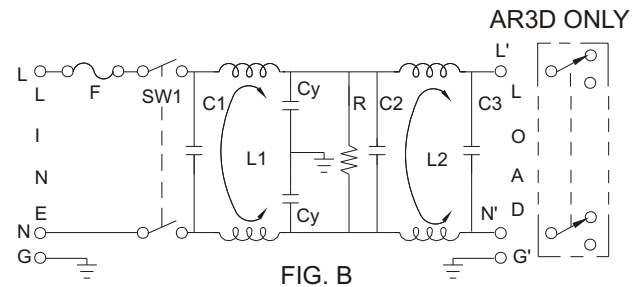
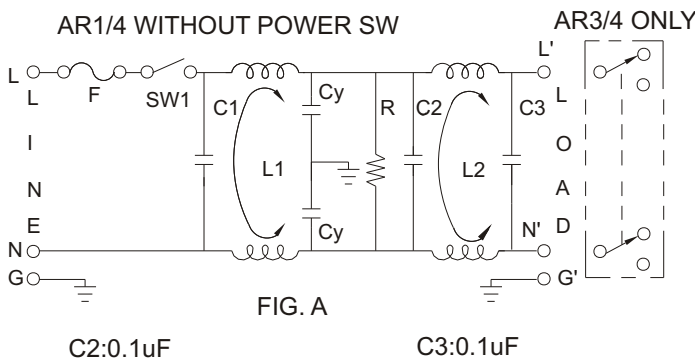
COMPONENTS

PART NO.	C1 (uF)	L1 (mH)	L2 (mH)	Cy (pF)	R (Ω)
03AR1/2/3	0.1	1.5	9	2200	1M
03AR2D/3D	0.033	9	1.5		
06AR1/2/3	0.1	0.7	2.5	3300	2.2M
06AR2D/3D	0.015	2.5	0.7		
06AR4	0.1	0.7	2.5		

MINIMUM INSERTION LOSS IN dB

COMMON MODE (L-G) IN 50 OHM SYSTEM						
CURRENT RATING	FREQUENCY-MHz					
	.15	.50	1.0	5.0	10	30
03AR	40	60	60	45	40	30
06AR	34	55	56	40	35	25
06AR2D,3D	34	60	60	45	40	30
DIFFERENTIAL MODE (L-L) IN 50 OHM SYSTEM						
03AR	6	45	55	50	45	40
06AR	5	25	60	50	45	35
06AR2D,3D	10	10	50	50	45	40

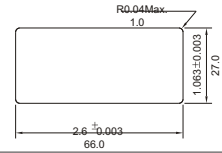
ELECTRICAL SCHEMATIC



TYPE & RATED CURRENT

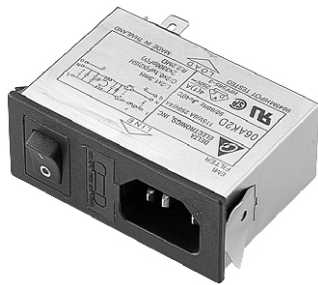
DELTA PART NO.	AR1	AR2	AR2D	AR3	AR3D	AR4
RATED CURRENT	115VAC	6A	6A	6A	6A	6A
	250VAC	6A	6A	4A	5A	4A
IEC CONNECTOR	△	△	△	△	△	△
FUSE HOLDER	△	△	△	△	△	△
POWER SWITCH	-	SP ¹	DP ²	SP ¹	DP ²	-
VOLTAGE SELECTOR SW	-	-	-	REAR ³	REAR ³	REAR ³
ELECTRICAL SCHEMATIC	FIG. A	FIG. A	FIG. B	FIG. A	FIG. B	FIG. A

1. Single-pole UL, CSA & VDE approved, VDE-6A at 250VAC.
Electrical lifetime: 50,000 cycles.
Maximum inrush current: 50A.
2. Double-pole UL, CSA & VDE approved, VDE-4A at 250VAC.
Electrical lifetime: 10,000 cycles.
Maximum inrush current: 50A.
3. Voltage selector SW -UL, CSA & VDE approved
Current rating: 10A at 125VAC; 5A at 250VAC.

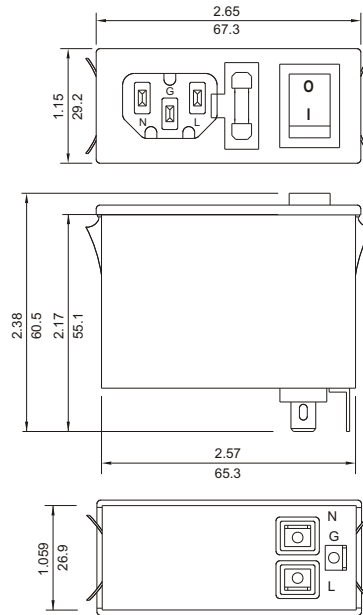


- Suggested thickness of mounting panel is from 0.04 to 0.07 inch
- suggest mounting cutout

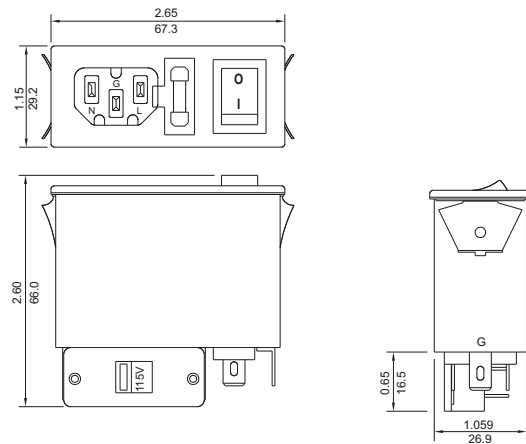
MECHANICAL CONSTRUCTION



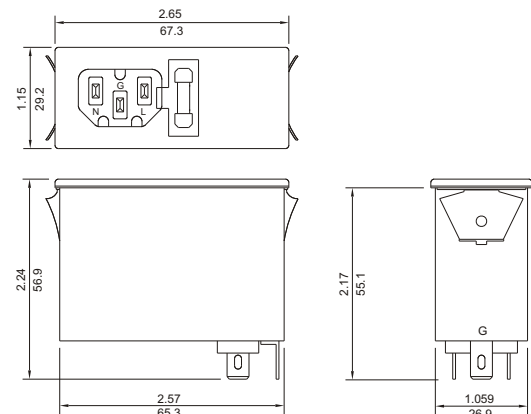
AR2, AR2D



AR3, AR3D
AR4(without power switch)



AR1



UNIT: $\frac{\text{INCH}}{\text{mm}}$

INTRODUCTIONS

1. Designed as a general purpose filter with a fuse holder providing effective EMI suppression for both common and differential mode noise.
2. All part numbers are UL recognized, CSA certified and VDE approved.

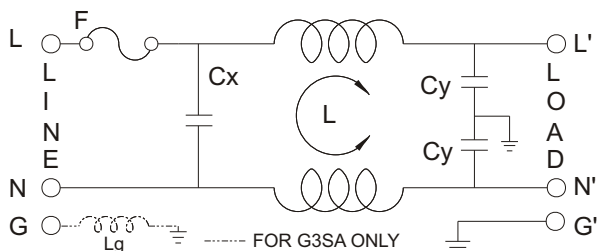
COMPONENTS

PART NO.	Cx (uF)	L (mH)	Cy (pF)	Lg (mH)
02BEEG3H	0.1	2.4	3300	-
04BEEG3H		2.8		
04BEEG3S	0.015			
04BEEG3SA	0.1	0.7	2200	0.4
06BEEG3H		1.3	3300	-

MINIMUM INSERTION LOSS IN dB

COMMON MODE (L-G) IN 50 OHM SYSTEM						
CURRENT RATING	FREQUENCY-MHz					
	.15	.50	1.0	5.0	10	30
2A	25	35	40	55	55	55
4A	26	30	40	50	55	45
4A(S)	26	30	40	50	55	45
6A	20	30	35	50	55	45
DIFFERENTIAL MODE (L-L) IN 50 OHM SYSTEM						
2A	6	15	25	40	45	45
4A	6	15	25	40	45	45
4A(S)	1	5	12	30	40	40
6A	6	15	20	40	45	45

ELECTRICAL SCHEMATIC



MECHANICAL CONSTRUCTION



EG3H, EG3S

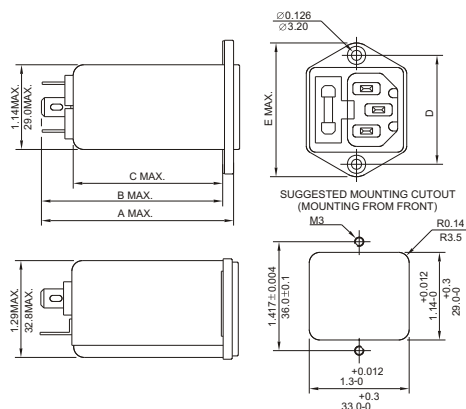
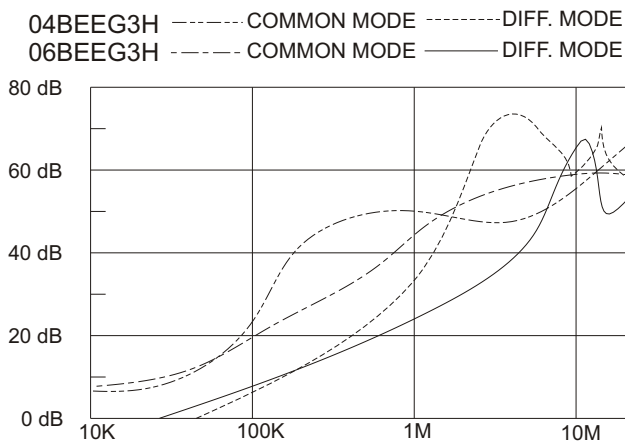
SPECIFICATIONS

1. Maximum leakage current each
line-to-ground @ 115VAC 60Hz: 0.25mA
@ 250VAC 50Hz: 0.45mA
2. Hipot rating (one minute)
line-to-ground: 2250VDC
line-to-line: 1450VDC
3. Operating frequency: 50/60Hz
4. Rated voltage: 115/250VAC

SERIES DIMENSIONS

DELTA PART NO.	STYLE	DIMENSIONS IN INCHES/mm				
		A	B	C	D	E
02BEEG3H	EG3H					
04BEEG3H	EG3H	2.56 65.0	2.42 61.5	2.00 50.8	1.417 35.99	1.75 44.5
06BEEG3H	EG3H					
04BEEG3S/A	EG3S	2.25 57.2	2.1 53.3	1.65 41.91		

INSERTION LOSS (TYPICAL)



UNIT: INCH
mm



BE SERIES

DUAL-FUSE CONNECTOR FILTERS



INTRODUCTIONS

1. Designed as a general purpose filter with a fuse holder providing effective EMI suppression for both common and differential mode noise.
2. All part numbers are UL recognized, CSA certified and VDE approved.
3. Bleeder resistor is added with suffix "-R".
4. With optional Y CAP. from 100pF ~ 4700pF.

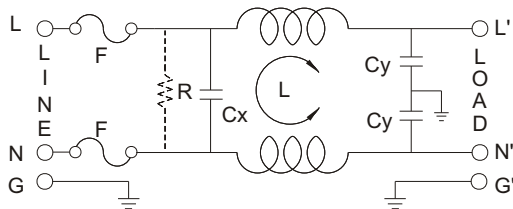
COMPONENTS

PART NO.	Cx (uF)	L (mH)	Cy (pF)	R(Ω)
02BEEG3F/-R	0.1	4.0	3300	1M
04BEEG3F/-R		1.8		
06BEEG3F/-R		0.8		

MINIMUM INSERTION LOSS IN dB

COMMON MODE (L-G) IN 50 OHM SYSTEM						
CURRENT RATING	FREQUENCY-MHz					
	.15	.50	1.0	5.0	10	30
2A	29	38	40	42	43	41
4A	19	30	32	42	42	39
6A	13	22	26	38	42	38
DIFFERENTIAL MODE (L-L) IN 50 OHM SYSTEM						
2A	5	19	28	48	51	50
4A	5	14	21	48	48	42
6A	5	12	15	40	46	38

ELECTRICAL SCHEMATIC



MECHANICAL CONSTRUCTION



BEEG3F

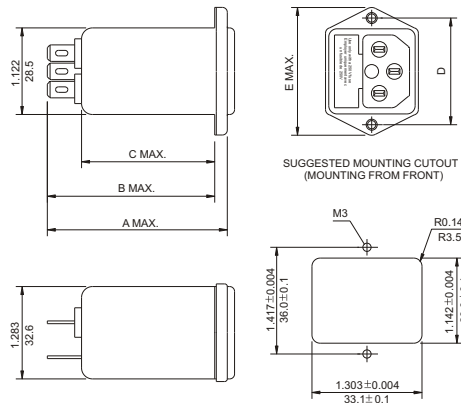
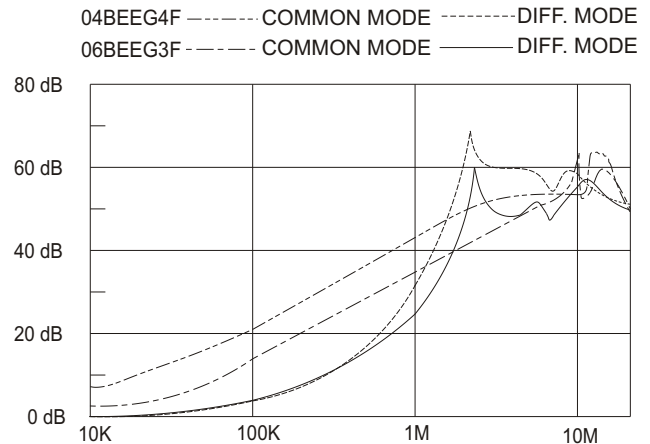
SPECIFICATIONS

1. Maximum leakage current each
line-to-ground @ 115VAC 60Hz: 0.25mA
@ 250VAC 50Hz: 0.45mA
2. Hipot rating (one minute)
line-to-ground: 2250VDC
line-to-line: 1450VDC
3. Operating frequency: 50/60Hz
4. Rated voltage: 115/250VAC

SERIES DIMENSIONS

DELTA PART NO.	STYLE	DIMENSIONS IN INCHES/mm				
		A	B	C	D	E
02BEEG3F	EG3F	2.263	2.106	1.66	1.42	1.74
04BEEG3F	EG3F	57.5	53.5	42.0	36.0	44.0
06BEEG3F	EG3F					

INSERTION LOSS (TYPICAL)



UNIT: INCH/mm

INTRODUCTIONS

1. Designed as a general purpose filter with a switch effective EMI suppression for both common and differential mode noise.
2. With optional resistor and 3300pF/1000pF
3. Bleeder resistor is added with suffix "-R".
4. Switch electrical lifetime : 10,000 cycles.
Maximum inrush current : 50A.

COMPONENTS

PART NO.	Cx (uF)	L (mH)	Cy (pF)	R (Ω)	Lg (mH)
03BEEG3G/NG3G/-R	0.1	2.4	2200	1M	0.12
03BEEG3GA/NG3GA/-R		0.8			
06BEEG3G/NG3G/-R		0.8			
06BEEG3GA/NG3GA/-R		0.8			
10BEEG3G/NG3G/-R		0.3			
10BEEG3GA/NG3GA/-R		0.3			

A: with ground choke

MINIMUM INSERTION LOSS IN dB

COMMON MODE (L-G) IN 50 OHM SYSTEM						
CURRENT RATING	FREQUENCY-MHz					
	.15	.50	1.0	5.0	10	30
3A (G) (A)	20	30	35	35	35	35
6A (G) (A)	10	20	25	35	40	35
10A (G) (A)	5	10	20	30	35	35
DIFFERENTIAL MODE (L-L) IN 50 OHM SYSTEM						
3A (G) (A)	4	10	20	35	35	40
6A (G) (A)	4	10	10	35	35	40
10A (G) (A)	5	10	20	30	35	35

MECHANICAL CONSTRUCTION



BENG3G

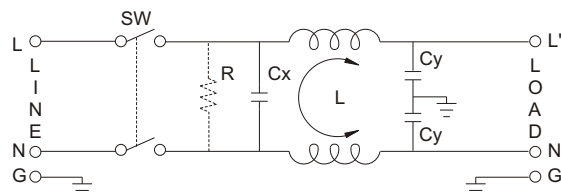


BEEG3G

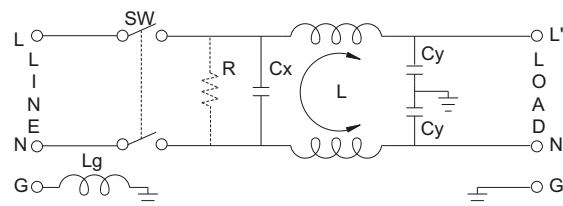
SPECIFICATIONS

1. Maximum leakage current each
line-to-ground @ 115VAC 60Hz: 0.25mA
@ 250VAC 50Hz: 0.45mA
2. Hipot rating (one minute)
line-to-ground: 2250VDC
line-to-line: 1450VDC
3. Operating frequency: 50/60Hz
4. Rated voltage: 115/250VAC

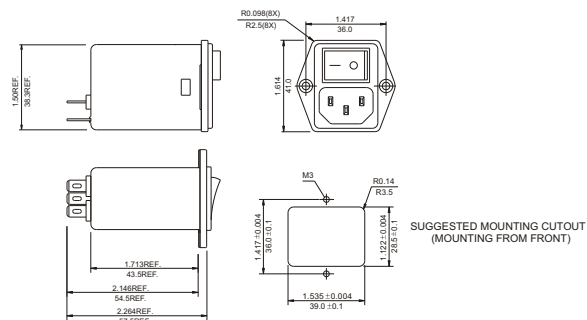
ELECTRICAL SCHEMATIC



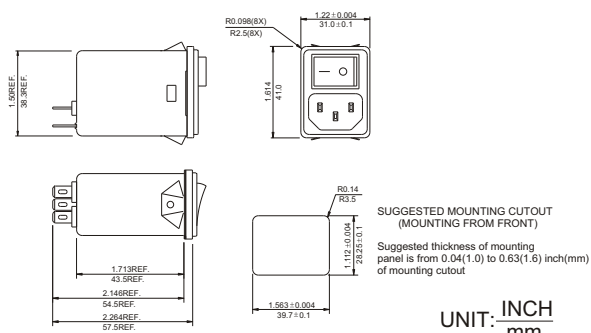
R: OPTION



3GA ONLY



BEEG3G



BENG3G

UNIT: $\frac{\text{INCH}}{\text{mm}}$



EB SERIES

POWER ENTRY MODULE EMI FILTERS

INTRODUCTIONS

1. Power module incorporates an IEC connector, single or double-fuse (IEC 5 x 20mm or 3AG 6.3 x32mm) holder, optional voltage selector switch and double-pole power switch, plus an EMI filter all-in-one easy-to-install unit.
2. Adapts to 110-120V or 220-240V input voltage by simply reversing the fuse cartridge.
3. All part numbers are UL recognized, CSA certified and VDE approved.

COMPONENTS



PART NO.	L (mH)	Cx (uF)	Cy (pF)	R (Ω)						
03EB3	8	0.22	3300	1M						
03EB3A										
03EB3S										
03EB3SA										
06EB3	2.5				0.22	3300	1M			
06EB3A										
06EB3S										
06EB3SA										
10EB3	1.6							0.22	3300	1M
10EB3A										
10EB3S										
10EB3SA										

Lg: 400 uH (EB3A 5B3SA only)

TYPE & FEATURE

DELTA PART NO.	03EB3 05EB3B 06EB3 10EB3	03EB3A 06EB3A 10EB3A	03EB3S 05EB3BS 06EB3S 10EB3S	03EB3SA 06EB3SA 10EB3SA
• FUSE	DOUBLE	DOUBLE	SINGLE	SINGLE
IEC CONNECTOR	△	△	△	△
• DOUBLE POLE POWER SWITCH	△	△	△	△
VOLTAGE SELECTOR SW	△	△	△	△
ELECTRICAL SCHEMATIC	FIG. A	FIG. B	FIG. A	FIG. B

- UL, CSA & VDE approved current rating: UL—10A both at 125VAC & 250VAC;
CSA & VDE-6A at 250VAC.
- UL, CSA & VDE approved current rating: UL & CSA—10A both at 125VAC & 250VAC;
VDE—10A at 250VAC.
Electrical lifetime: 10,000 cycles.
Maximum inrush current: 70A.

ELECTRICAL SCHEMATIC

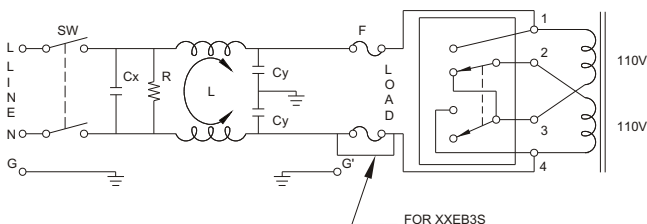
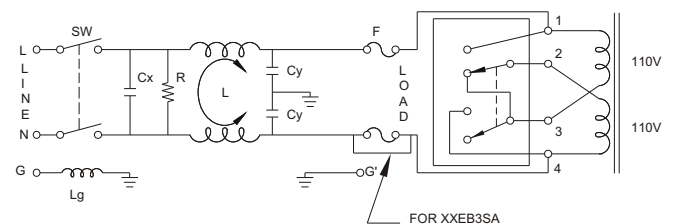
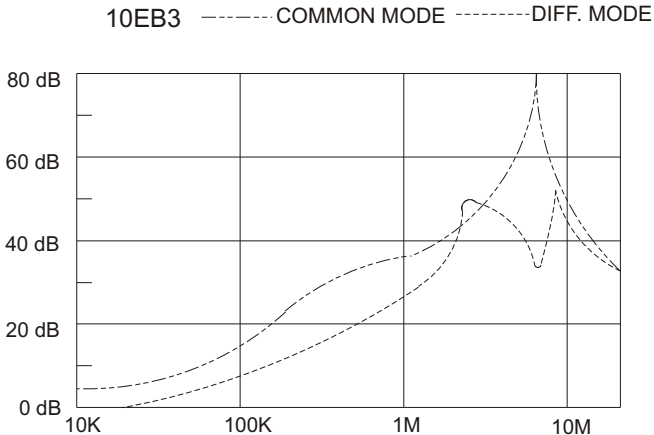
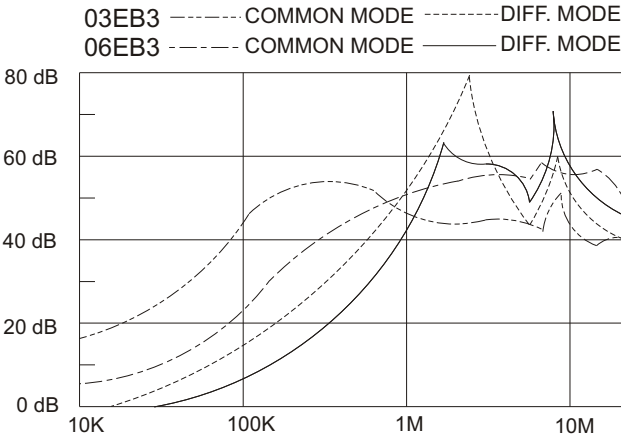


FIG. A



EB3A, EB3SA
FIG. B

INSERTION LOSS (TYPICAL)

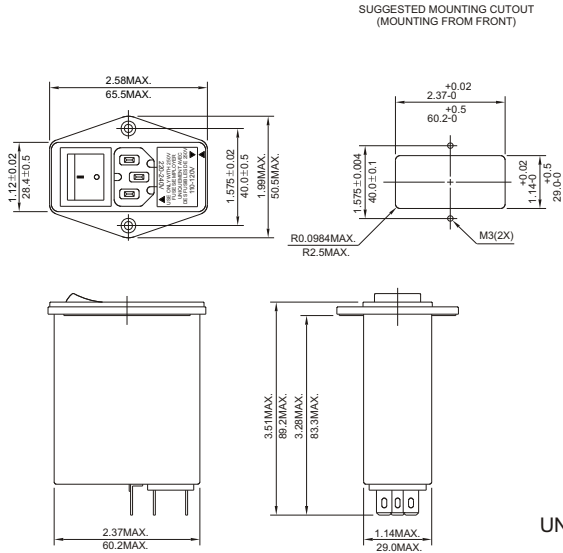


MINIMUM INSERTION LOSS IN dB

COMMON MODE (L-G) IN 50 OHM SYSTEM								
CURRENT RATING	0.05	0.10	0.15	0.50	1.0	5.0	10	30
3A (S)	20	25	30	38	38	38	38	25
6A (S)	10	15	20	30	35	40	40	30
•10A (S)	10	15	20	20	30	40	40	30
3A (A,SA)	20	25	30	40	40	40	45	30
6A (A,SA)	10	15	20	25	30	40	45	30
•10A (A,SA)	10	15	20	25	30	45	50	30
DIFFERENTIAL MODE (L-L) IN 50 OHM SYSTEM								
3A (S)	2	9	12	30	40	30	40	30
6A (S)	2	5	8	20	30	30	45	40
•10A (S)	2	5	8	15	30	40	45	35
3A (A,SA)	2	8	12	30	40	35	40	30
6A (A,SA)	2	5	10	15	30	45	50	40
•10A (A,SA)	2	5	8	20	30	50	50	40

• CSA approved 6A at 125/250 VAC; VDE-6A/250VAC

MECHANICAL CONSTRUCTION



UNIT: INCH
mm



EK SERIES

HIGH PERFORMANCE POWER ENTRY MODULE EMI FILTERS



INTRODUCTIONS

1. Power module incorporates an IEC connector, single or double-fuse (IEC 5x20mm or 3AG 6.3x32mm) holder, optional voltage selector switch and double-pole power switch, plus an EMI filter all-in-one easy-to-install unit.
2. Adapts to 100-120V or 200-240V input voltage by simply reversing the fuse cartridge.
3. All part numbers are UL recognized, CSA certified and VDE approved.

COMPONENTS

PART NO.	L (mH)	C1 (uF)	C2 (uF)	Cy (pF)	UL	SP	VDE
03EK3/A	8	0.22	0.1	3300	✓	✓	✓
03EK3B/S	2.3	0.22	0.1	4700	✓		✓
03EK3L/S	13.77	0.47	0.22	4700			✓
03EK3S/A	8	0.22	0.1	3300	✓	✓	✓
06EK3/A	2.5						
06EK3S/A							
10EK3/A	1.6						
10EK3S/A							

R: 1MΩ

Lg: 400uH (EK3A, EK3SA only)

TYPE & FEATURE

DELTA PART NO.	03EK3 03EK3B 03EK3L 06EK3 10EK3	03EK3A 06EK3A 10EK3A	03EK3S 03EK3BS 03EK3LS 06EK3S 10EK3S	03EK3SA 06EK3SA 10EK3SA
• FUSE	DOUBLE	DOUBLE	SINGLE	SINGLE
IEC CONNECTOR	△	△	△	△
• • DOUBLE-POLE POWER SWITCH	△	△	△	△
VOLTAGE SELECTOR SW	△	△	△	△
ELECTRICAL SCHEMATIC	FIG. A	FIG. B	FIG. A	FIG. B

- UL, CSA & VDE approved current rating:
UL-10A both at 125VAC & 250VAC; CSA & VDE-6A at 250VAC.
- • UL, CSA & VDE approved current rating:
UL & CSA-10A both at 125VAC & 250VAC; VDE-10A at 250VAC.
Electrical lifetime: 10,000 cycles.
Maximum inrush current: 70A.

ELECTRICAL SCHEMATIC

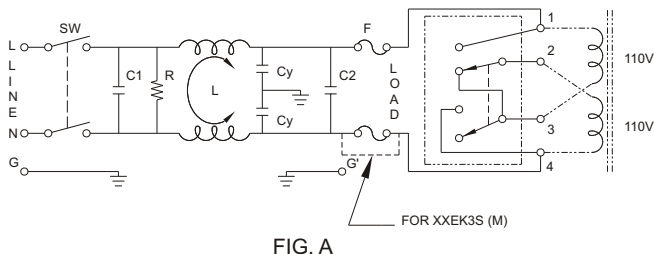
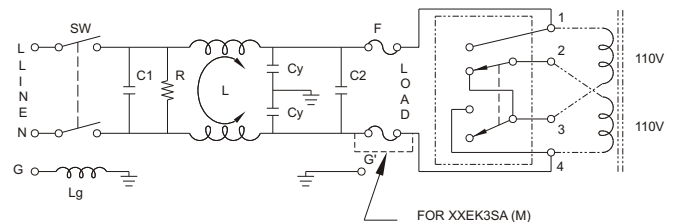
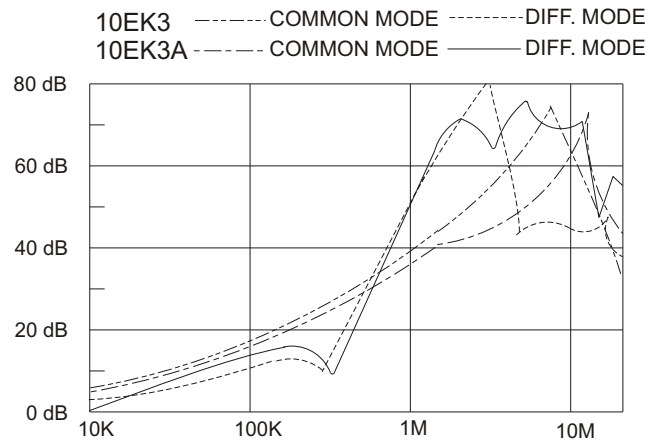
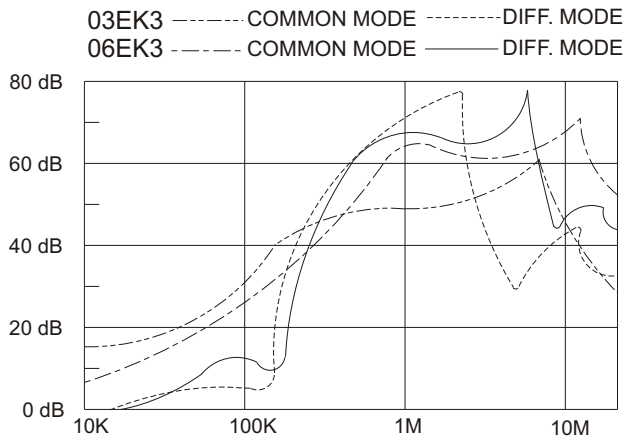


FIG. A



EK3A, EK3SA
FIG. B

INSERTION LOSS (TYPICAL)

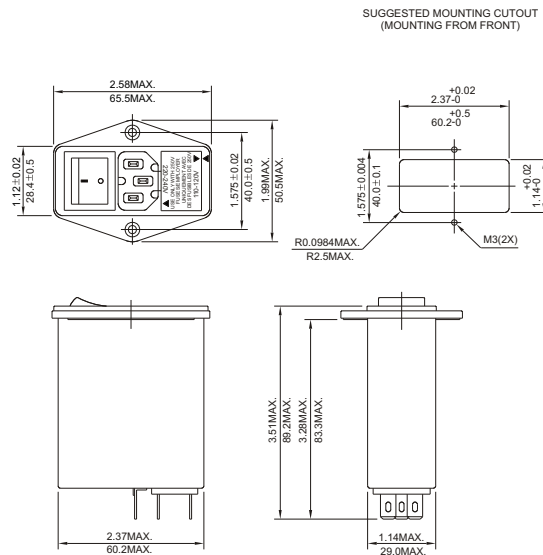


MINIMUM INSERTION LOSS IN dB

COMMON MODE (L-G) IN 50 OHM SYSTEM						
CURRENT RATING	FREQUENCY-MHz					
	.15	.50	1.0	5.0	10	30
3A	32	38	38	38	38	25
6A	20	30	35	40	40	30
•10A	15	25	30	40	40	30
3A(A,SA)	30	40	40	40	45	25
6A(A,SA)	20	30	35	40	40	30
•10A(A,SA)	20	25	30	45	45	30
DIFFERENTIAL MODE (L-L) IN 50 OHM SYSTEM						
3A	20	50	55	40	40	30
6A	5	40	50	40	40	40
•10A	3	35	45	40	40	30
3A(A,SA)	20	50	50	50	45	30
6A(A,SA)	5	40	50	40	40	40
•10A(A,SA)	3	35	45	45	40	30

• CSA approved 6A at 125/250VAC; VDE-6A/250VAC

MECHANICAL CONSTRUCTION



UNIT: INCH
mm

INTRODUCTIONS

1. Power module incorporates an IEC connector, single or double-fuse (IEC 5x20mm) holder, and double-pole power switch, plus an EMI filter all-in-one easy-to-install unit.
2. All part numbers are UL, CSA and VDE approved.
3. With optional Y CAP. from 1000/3300pF.

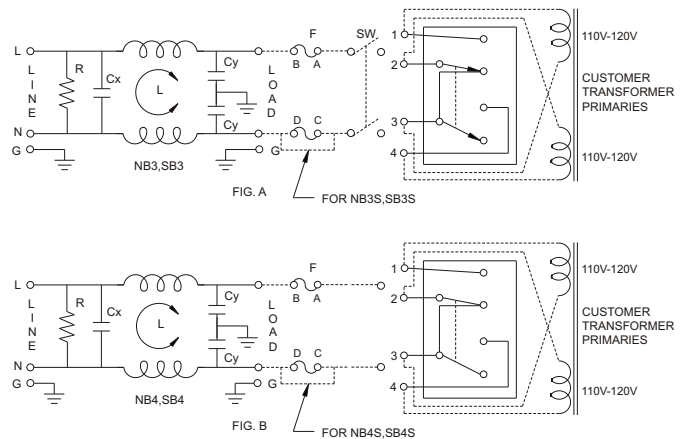
COMPONENTS

PART NO.	C1 (uF)	L (mH)	Cy (pF)	R (Ω)
03NB3	0.1	2.5	2200	1M
03NB4				
03NB3S				
04NB3				
04NB4		2.0		
04NB3S				
06NB3				
06NB4				
06NB3S		1.05		
10NB3				
10NB4				
10NB3S				
03SB3		0.2		
03SB4				
03SB3S				
04SB3				
04SB4		2.0		
04SB3S				
06SB3				
06SB4				
06SB3S		1.05		
10SB3				
10SB4				
10SB3S				

SPECIFICATIONS

1. Maximum leakage current each line-to-ground@115VAC 60Hz: 0.2mA
@250VAC 50Hz: 0.4mA
2. Hipot rating (one minute)
line-to-ground: 2250VDC
line-to-line: 1450VDC
3. Operating frequency: 50/60Hz
4. Rated voltage: 115/250VAC

ELECTRICAL SCHEMATIC

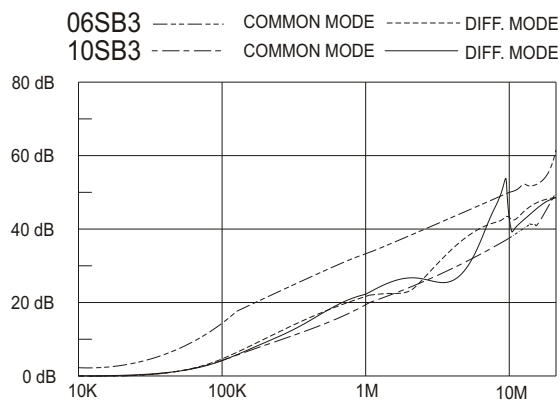
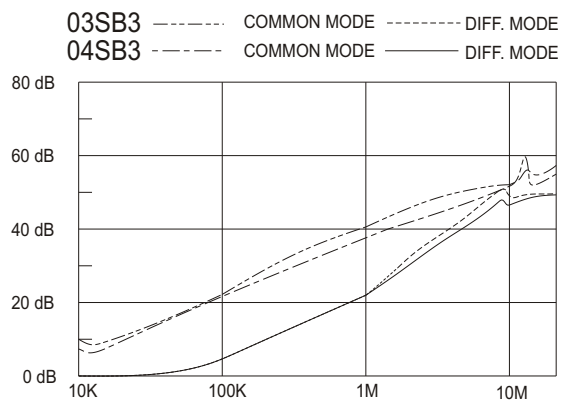


TYPE & RATED CURRENT

DELTA PART NO.		03NB3/SB3	04NB3/SB3	06NB3/SB3	10NB3/SB3	03NB4/SB4	04NB4/SB4	06NB4/SB4	10NB4/SB4
RATED CURRENT	115VAC	3A	4A	6A	10A	3A	4A	6A	10A
	250VAC	3A	4A	6A	10A	3A	4A	6A	10A
IEC CONNECTOR		▲	▲	▲	▲	▲	▲	▲	▲
FUSE		DOUBLE	DOUBLE	DOUBLE	DOUBLE	DOUBLE	DOUBLE	DOUBLE	DOUBLE
*DOUBLE POLE POWER SWITCH		▲	▲	▲	▲	-	-	-	-
ELECTRICAL SCHEMATIC		FIG. A	FIG. A	FIG. A	FIG. A	FIG. B	FIG. B	FIG. B	FIG. B

3S,4S Fuse single
NB4,SB4 W/O switch
Electrical lifetime: 10,000 cycles.
Maximum inrush current: 50A

INSERTION LOSS (TYPICAL)



MINIMUM INSERTION LOSS IN dB

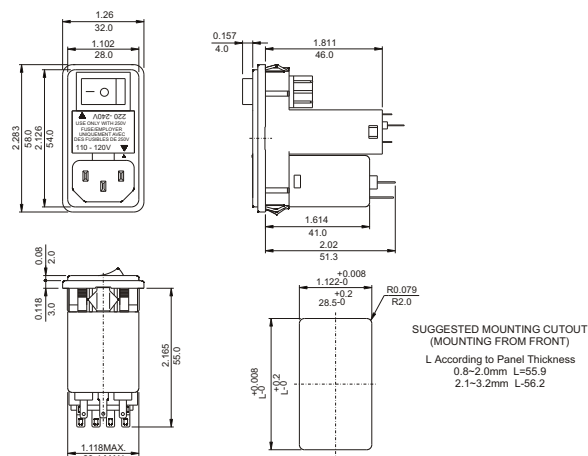
COMMON MODE (L-G) IN 50 OHM SYSTEM						
CURRENT RATING	FREQUENCY-MHz					
	.15	.50	1.0	5.0	10	30
03NB3/SB3	20	25	30	38	40	40
03NB4/SB4	20	25	30	38	40	40
03NB3S/SB3S	20	25	30	38	40	40
04NB3/SB3	20	25	25	40	40	40
04NB4/SB4	20	25	25	40	40	40
04NB3S/SB3S	20	25	25	40	40	40
06NB3/SB3	12	18	24	35	40	40
06NB4/SB4	12	18	24	35	40	40
06NB3S/SB3S	12	18	24	35	40	40
10NB3/SB3	3	8	10	20	30	45
10NB4/SB4	3	8	10	20	30	45
10NB3S/SB3S	3	8	10	20	30	45

COMMON MODE (L- L) IN 50 OHM SYSTEM						
CURRENT RATING	FREQUENCY-MHz					
	.15	.50	1.0	5.0	10	30
03NB3/SB3	4	12	18	38	40	40
03NB4/SB4	4	12	18	38	40	40
03NB3S/SB3S	4	12	18	38	40	40
04NB3/SB3	3	10	15	30	35	35
04NB4/SB4	3	10	15	30	35	35
04NB3S/SB3S	3	10	15	30	35	35
06NB3/SB3	4	10	15	35	40	40
06NB4/SB4	4	10	15	35	40	40
06NB3S/SB3S	4	10	15	35	40	40
10NB3/SB3	5	12	15	30	30	40
10NB4/SB4	5	12	15	30	30	40
10NB3S/SB3S	5	12	15	30	30	40

MECHANICAL CONSTRUCTION



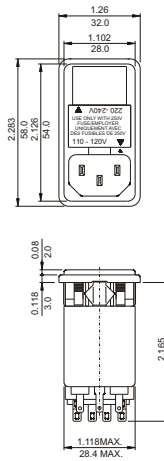
NB3



NB3,3S



NB4

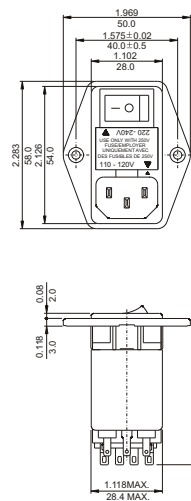


NB4

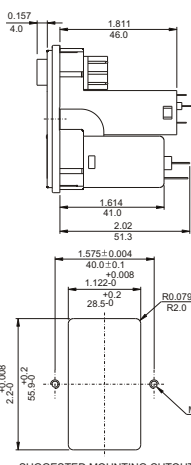
SUGGESTED MOUNTING CUTOUT
(MOUNTING FROM FRONT)
L According to Panel Thickness
0.8-2.0mm L=55.9
2.1-3.2mm L=56.2



SB3,3S



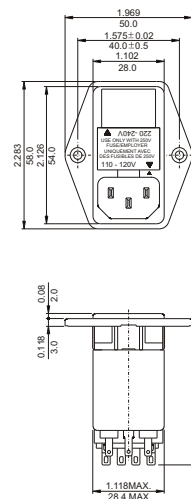
SB3,3S



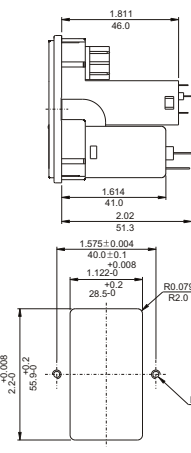
SUGGESTED MOUNTING CUTOUT
(MOUNTING FROM FRONT)



SB4



SB4



SUGGESTED MOUNTING CUTOUT
(MOUNTING FROM FRONT)



IB SERIES

POWER ENTRY MODULE EMI FILTERS



INTRODUCTIONS

1. Power module incorporates an IEC connector, single or double-fuse (IEC 5 x 20mm) holder, and double-pole power switch, plus an EMI filter all-in-one easy-to-install unit.
2. All part numbers are UL recognized, CSA certified and VDE approved.

COMPONENTS

PART NO.	Cx (uF)	L (mH)	Cy (pF)	R (Ω)
01IB2D	0.22	7.5	2200	1M
01IB2S				
03IB2D		2.0		
03IB2S				
06IB2D		0.45		
06IB2S				

MINIMUM INSERTION LOSS IN dB

COMMON MODE (L-G) IN 50 OHM SYSTEM						
CURRENT RATING	FREQUENCY-MHz					
	0.15	0.50	1.0	5.0	10	30
1A	28	40	40	35	35	25
3A	15	30	35	35	40	25
6A	8	15	20	32	40	25
DIFFERENTIAL MODE (L-G) IN 50 OHM SYSTEM						
1A	10	20	28	35	38	35
3A	8	15	20	30	35	35
6A	8	15	15	30	35	35

TYPE & RATED CURRENT

DELTA PART NO.	01IB2D	03IB2D	06IB2D	01IB2S	03IB2S	06IB2S	
RATED CURRENT	115VAC	1A	3A	6A	1A	3A	6A
	250VAC	1A	3A	6A	1A	3A	6A
IEC CONNECTOR							
FUSE	DOUBLE			SINGLE			
•DOUBLE-POLE POWER SWITCH	DOUBLE			DOUBLE			
ELECTRICAL SCHEMATIC	FIG. A			FIG. B			

- UL, CSA, VDE approved current rating: UL/CSA-10A both at 125VAC and 250VAC: VDE-4A/250VAC.
- Electrical lifetime: 10,000 cycles.
- Maximum inrush current: 50A.

MECHANICAL CONSTRUCTION

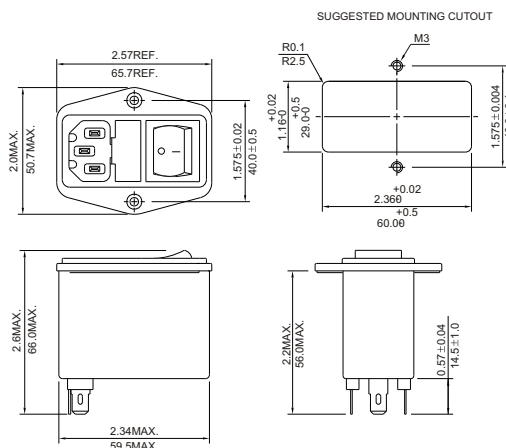
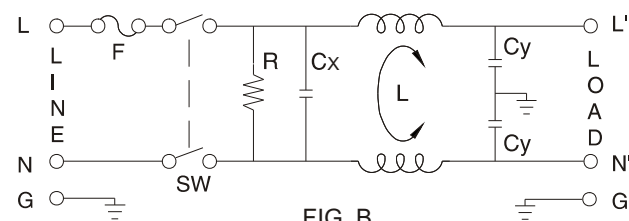
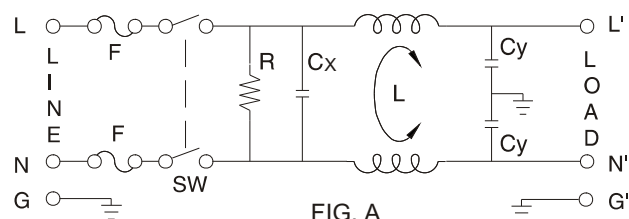


IB2D

SPECIFICATIONS

1. Maximum leakage current each line-to-ground @ 115VAC 60Hz: 0.2mA @ 250VAC 50Hz: 0.4mA
2. Hipot rating (one minute) line-to-ground: 2250VDC line-to-line: 1450VDC
3. Operating frequency: 50/60Hz
4. Rated voltage: 115/250VAC

ELECTRICAL SCHEMATIC



UNIT: INCH/mm

INTRODUCTIONS

1. Designed as a general purpose filter providing effective EMI suppression.
2. All part numbers are UL recognized, CSA certified and VDE approved.

COMPONENTS

PART NO.	Cx (uF)	L (mH)	Cy (pF)	R (Ω)
02DBAG5	0.1	1.1	3300	-
02DBAW5				
03DBAG5		2.8		
03DBAW5				
05DBAG5		2.9		
05DBAW5	0.22	2.1	3300	-
• 05DBDG3				
• 05DBDW3	0.47	3.7	330K	-
06DBDW3S				
10DBAG5	0.1	1.5	3300	-
10DBAW5				
10DBAS5				
10DBDW3S	0.47	1.45	330K	-
10DBDG3S				
* 16DBDG3	1.0	3.6	10000	200K
* 16DBC5	2.2			
20DBAG5	0.33	0.7	3300	-
20DBAS5				
12DBBG5B	0.1	0.7	4700	1.0M
12DBBW5B				
16DBC5B		0.65		
16DBCW5B				
20DBC5B		0.60		
20DBCS5B	0.47	0.67	10000	-
30DBCS5B				

- UL & CSA approved only.
- * No safety approval yet

MINIMUM INSERTION LOSS IN dB

COMMON MODE (L-G) IN 50 OHM SYSTEM						
CURRENT RATING	FREQUENCY-MHz					
	.15	.50	1.0	5.0	10	30
2,3,5A	15	30	38	45	45	40
6A	20	25	35	40	45	35
10A	20	30	35	50	50	45
* 10A	15	22	30	40	40	45
16A(DG3)	20	30	35	45	50	35
* 16A(CG5)	20	30	35	50	50	40
20A	13	20	25	40	45	45
12A(BG5B)(BW5B)	10	20	22	35	40	40
16A(CG5B)(CW5B)	10	18	20	35	50	30
20A(CG5B)(CS5B)	10	20	22	30	35	35
30A(CS5B)	10	28	30	45	50	35
DIFFERENTIAL MODE (L-L) IN 50 OHM SYSTEM						
2,3,5A	6	15	20	40	45	45
6A	10	18	20	30	35	40
10A	6	15	20	44	45	45
* 10A	12	18	20	35	35	40
16A(DG3)	10	30	50	50	50	50
* 16A(CG5)	20	30	40	45	40	30
20A	15	24	28	45	45	45
12A(BG5B)(BW5B)	5	12	15	35	45	35
16A(CG5B)(CW5B)	5	10	15	45	45	40
20A(CG5B)(CS5B)	4	10	15	45	45	40
30A(CS5B)	12	20	25	45	50	45

* 10DBDG3S, DW3S

SPECIFICATIONS

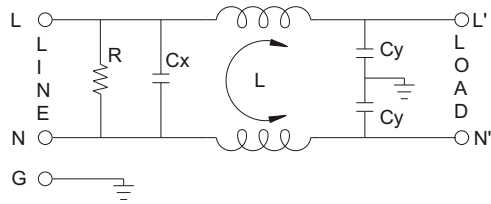
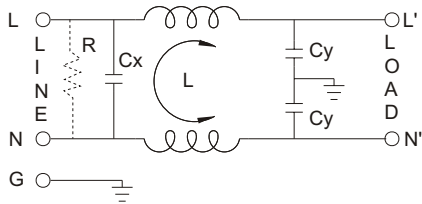
1. Maximum leakage current each
line-to-ground @ 115VAC 60Hz: 0.25mA
1.0mA (10000pF)
@ 250VAC 50Hz: 0.45mA
2.0mA (10000pF)
2. Hipot rating (one minute)
line-to-ground: 2250VDC
line-to-line: 1450VDC
3. Operating frequency: 50/60Hz
4. Rated voltage: 115/250VAC

SERIES DIMENSIONS

CURRENT RATING	STYLE	DIMENSIONS IN INCHES/mm					
		A	B	C	D	E	
2A	AG5	2.15		0.65		2.54	
		54.6					16.5
	AW5	0.96					
		24.4					
3A	AG5	2.54	1.77	0.77	2.13	2.50	
		64.5					
	AW5	1.33					
		33.8					
5A	AG5	2.54	45.0	19.5	54.1	63.5	
		64.5					
	AW5	1.33					
		33.8					
6A	DW3S	2.55	2.08	1.29	1.575	0.61	
		64.77	52.83	32.77	40.01	15.49	
10A	AG5	2.54	1.77	1.18	2.13	2.50	
		64.5					
		1.33					45.0
		33.8					
	AS5	3.10	2.02	1.18	2.38	2.77	
		78.7	51.3	30.0	60.5	70.3	
	DW3S	2.55	2.08	1.29	1.575	0.61	
		64.80	52.80	32.80	40.00	15.50	
	DG3S	3.14	2.10	1.28	1.575	0.61	
		79.80	53.30	32.50	40.00	15.50	
	16A	DG3	4.35	1.34	1.65	2.24	0.63
			110.50	34.0	42.0	57.0	16.0
CG5		3.75	2.06	1.54	2.94	3.34	
		95.25	52.30	39.10	74.70	84.80	
20A	AG5	3.25	2.02	1.16	2.38	2.75	
		82.5	51.3	29.5	60.5	69.9	
		3.37	2.02	1.15	2.38	2.77	
	AS5						

CURRENT RATING	STYLE	DIMENSIONS IN INCHES/mm					
		A	B	C	D	E	F
12A	BG5B	2.13	2.54	1.34	1.77	45.0	-
	BW5B	54.00	64.5	34.0	45.0		3.94 100.0
16A	CG5B	2.40	2.81	1.79	2.02	51.3	-
	CW5B	61.00	71.5	45.5	51.3		3.94 100.0
20A	CG5B	2.95	3.34	2.04	2.52	64.0	-
	CS5B	75.00	84.8	51.8	64.0		-
30A	CS5B	4.06	4.49	2.22	3.74	1.83	-
		103.0	114.0	56.5	95.0	46.4	-

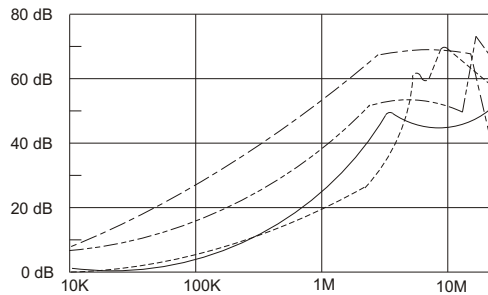
ELECTRICAL SCHEMATIC



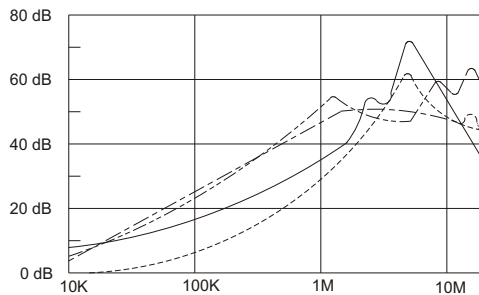
XXDBXX5B

INSERTION LOSS (TYPICAL)

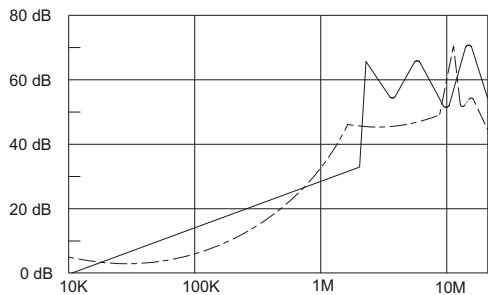
02DBAG5-----COMMON MODE -----DIFF. MODE
03DBAG5-----COMMON MODE -----DIFF. MODE



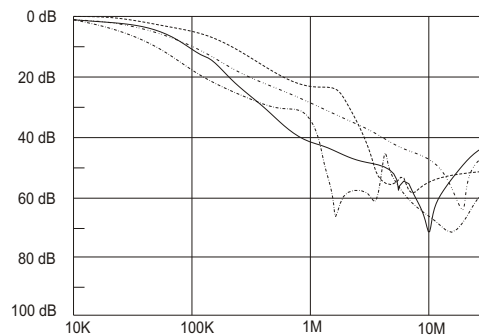
05DBAG5-----COMMON MODE -----DIFF. MODE
10DBAG5-----COMMON MODE -----DIFF. MODE



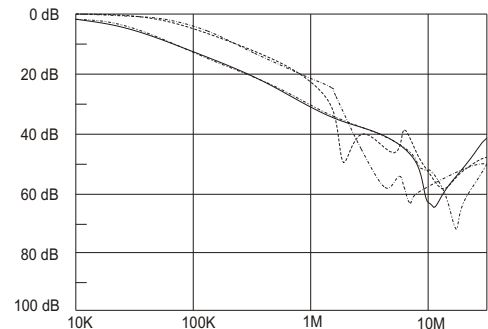
20DBAG5-----COMMON MODE -----DIFF. MODE



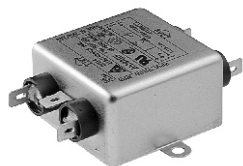
20DBC5B -----COMMON MODE -----DIFF. MODE
20BCS5B -----COMMON MODE -----DIFF. MODE
30BCS5B -----COMMON MODE -----DIFF. MODE



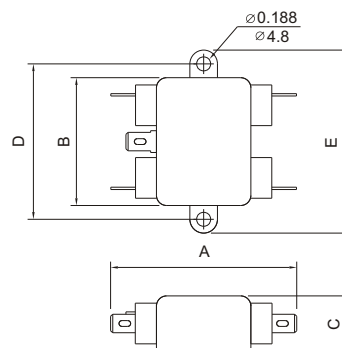
12DBBG5B -----COMMON MODE -----DIFF. MODE
12DBBW5B -----COMMON MODE -----DIFF. MODE
16DBC5B -----COMMON MODE -----DIFF. MODE
16BCW5B -----COMMON MODE -----DIFF. MODE



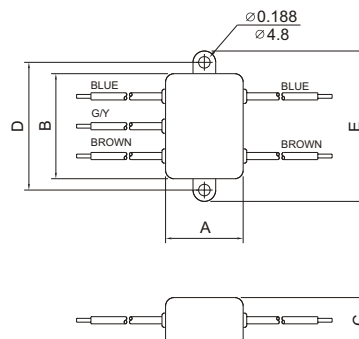
MECHANICAL CONSTRUCTION



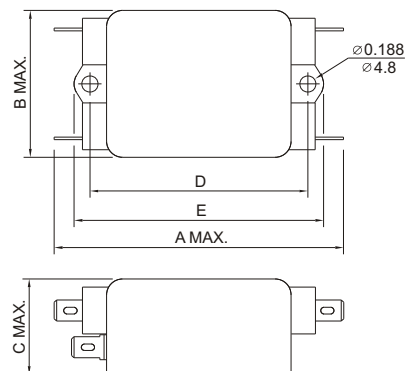
AG5



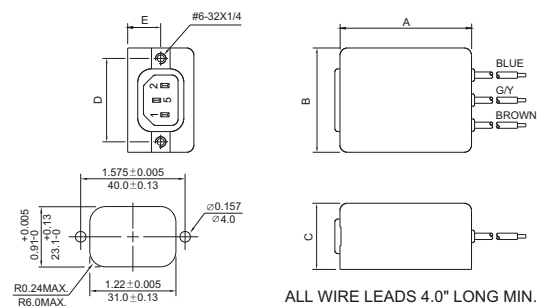
AW5



CG5



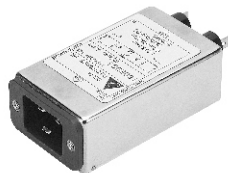
DW3S



SUGGESTED MOUNTING CUTOUT

UNIT: INCH
mm

MECHANICAL CONSTRUCTION



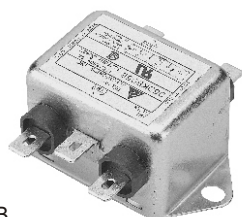
DG3



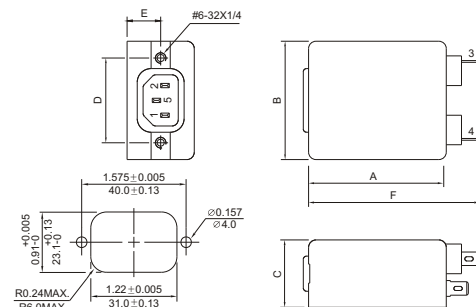
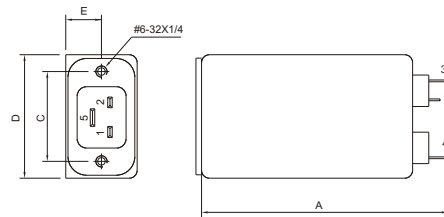
DG3S



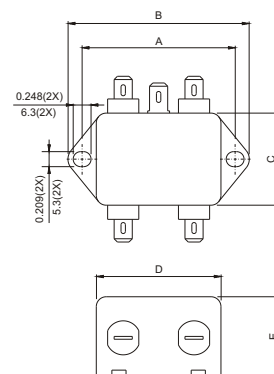
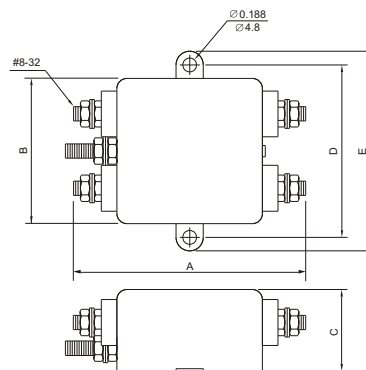
AS5



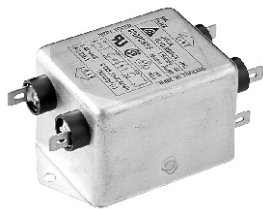
BG5B, BW5B
(option wire style)



SUGGESTED MOUNTING CUTOUT



MECHANICAL CONSTRUCTION



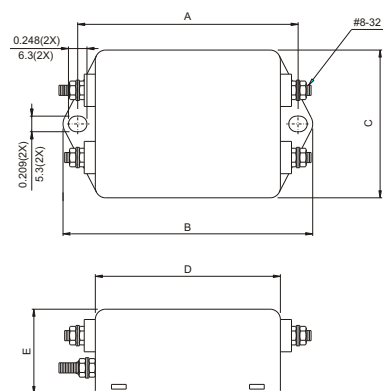
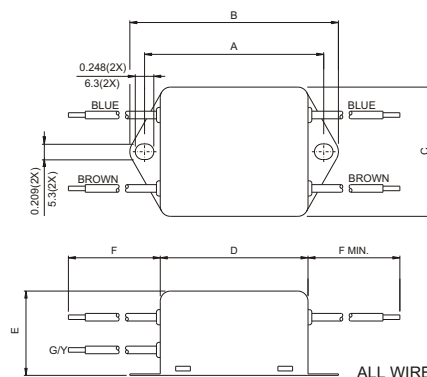
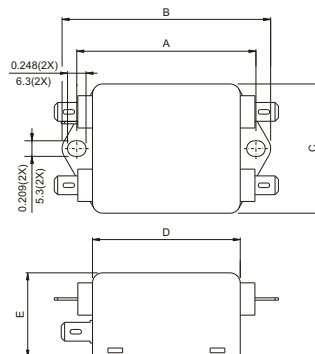
CG5B



CW5B



CS5B



UNIT: $\frac{\text{INCH}}{\text{mm}}$

INTRODUCTIONS

- Effectively control EMI suppression of both line-to-line and line-to-ground noise.
- All part numbers are UL recognized, CSA certified and VDE approved.

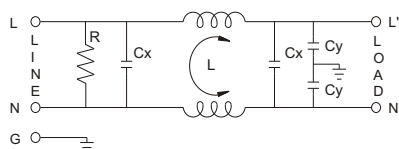
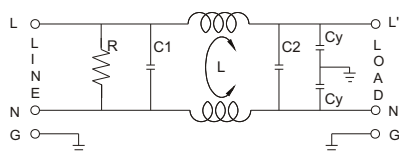
COMPONENTS

PART NO.	C1 (uF)	C2 (uF)	L (mH)	Cy (pF)	R (Ω)
02DKAG5	0.22	0.22	2.1	3300	2.2M
02DKAW5			3.2		
03DKAG5			4.5		
03DKDG3S			2.7		
03DKDW3S			2.5		
05DKAG5			1.7		
05DKAS5					
05DKAW5					
05DKDG3S					
05DKDW3S					
10DKAG5					
10DKAS5					
10DKAW5					
10DKDG3S					
10DKDW3S					
15DKDG3	0.68X3	—	3.6	10000	200K
* 16DKCG5	0.47	0.47	6.0	10000	330K
20DKBG5	0.22	0.22	1.4	3300	2.2M
20DKBS5	0.22	0.22	1.4	3300	2.2M
30DKCS5	0.22	0.47	0.59	10000	470K

* DEMKO approved only

PART NO.	Cx (uF)	L (mH)	Cy (pF)	R (Ω)
03DKBG5B	0.15	2.5	4700	1.0M
03DKBW5B		1.0		
06DKBG5B		0.7		470K
06DKBW5B		0.65	1.0M	
12DKBG5B		0.60		
12DKBW5B				
16DKCG5B				
16DKCW5B				
20DKCG5B				
20DKCS5B	0.47	0.67	10000	470K

ELECTRICAL SCHEMATIC



XXDKXX5B

SPECIFICATIONS

- Maximum leakage current each
line-to-ground @ 115VAC 60Hz: 0.25mA
1.0mA (10000pF)
@ 250VAC 50Hz: 0.45mA
2.0mA (10000pF)
- Hipot rating (one minute)
line-to-ground: 2250VDC
line-to-line: 1450VDC
- Operating frequency: 50/60Hz
- Rated voltage: 115/250VAC

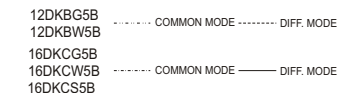
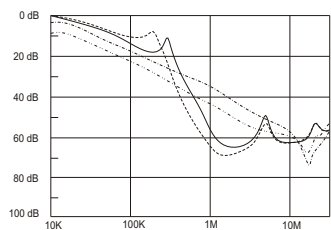
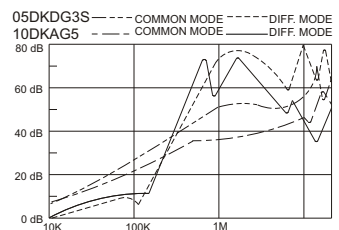
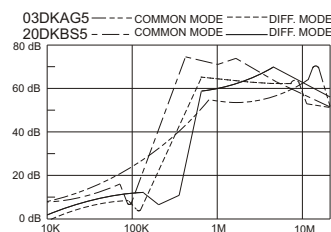
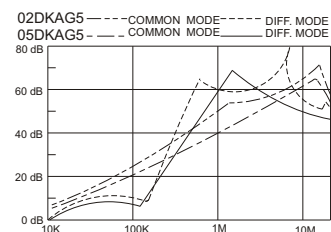
MINIMUM INSERTION LOSS IN dB

COMMON MODE (L-G) IN 50 OHM SYSTEM						
CURRENT RATING	STYLE	FREQUENCY-MHz				
		.15	.50	1.0	5.0	10 30
2, 3, 5A		22	30	38	47	50 40
3A (S), 5A (S)		22	30	38	50	55 45
10A, 10A (S)		15	20	28	45	45 45
15A		20	30	35	45	50 35
16A		25	35	40	45	45 20
20A		14	19	28	40	42 35
30A		10	20	30	40	45 30
DIFFERENTIAL MODE (L-L) IN 50 OHM SYSTEM						
2, 3, 5A		10	46	48	50	50 45
3A (S), 5A (S)		12	46	48	55	50 45
10A, 10A (S)		8	38	55	45	45 45
15A		10	40	50	50	50 50
16A		20	50	50	50	40 30
20A		10	35	50	50	45 40
30A		10	30	50	45	35 40

COMMON MODE (L-G) IN 50 OHM SYSTEM						
CURRENT RATING	STYLE	FREQUENCY-MHz				
		.15	.50	1.0	5.0	10 30
3A	BG5B, BW5B	20	30	35	45	50 45
6A	BG5B, BW5B	15	20	25	40	45 45
12A	BG5B, BW5B	10	20	22	35	45 40
16A	CG5B, CW5B	10	18	20	35	45 30
20A	CG5B, CS5B	10	18	20	30	35 35
30A	CS5B	10	25	30	45	50 35
DIFFERENTIAL MODE (L-L) IN 50 OHM SYSTEM						
3A	BG5B, BW5B	7	35	50	45	45 45
6A	BG5B, BW5B	10	20	45	45	50 45
12A	BG5B, BW5B	10	20	40	45	45 45
16A	CG5B, CW5B	10	18	40	40	40 35
20A	CG5B, CS5B	10	12	35	35	40 40
30A	CS5B	12	40	50	50	50 45

SERIES DIMENSIONS

CURRENT RATING	STYLE	DIMENSIONS IN INCHES/mm							
		A	B	C	D	E			
2A	AG5	2.99	2.04 51.8	0.90	2.38 60.5	2.79 70.9			
		75.9		22.9					
	AW5	1.83		1.16 29.5					
		46.5							
AG5	2.99								
	75.9								
AW5	1.83								
	46.5								
DG3S	3.14								
	79.8	1.29		1.575	0.61				
3A	DW3S	2.55		32.8	40.00	15.5			
		64.8							
	AG5	2.99		1.16 29.5	2.38 60.5	2.79 70.9			
		75.9							
	AW5	1.83							
		46.5							
	AS5	3.37							
85.6									
DG3S	3.14								
	79.8	1.29					1.575	0.61	
5A	DW3S	2.55					32.8	40.00	15.5
		64.8							
	AG5	3.25		1.16 29.5	2.38 60.5	2.79 70.9			
		82.5							
	AW5	2.08							
		52.8							
	AS5	3.37							
85.6									
DG3S	3.22								
	81.5	2.30	1.29				1.575	0.61	
10A	DW3S	2.63	58.4				32.8	40.00	15.5
		66.8							
	15A	DG3	4.35	2.22	1.29	1.575	0.63		
			110.5	56.4	32.8	40.00	16.0		
	16A	CG5	3.75	2.06	1.54	2.94	3.34		
			95.3	52.3	39.1	74.7	84.8		
	20A	BG5	3.25	2.52 64.0	1.54 39.1	2.94 74.7	3.36		
82.5			85.3						
BS5		3.37	3.37						
		85.6	85.6						
30A	CS5	3.87	2.04						3.36
		98.3	51.8						85.3

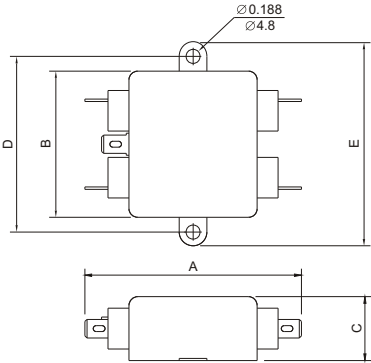
INSERTION LOSS (TYPICAL)

SERIES DIMENSIONS

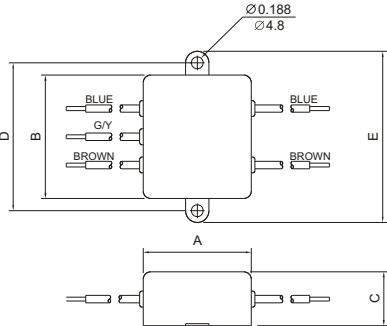
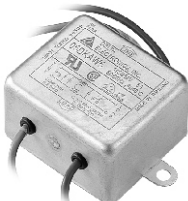
CURRENT RATING	STYLE	DIMENSIONS IN INCHES/mm					
		A	B	C	D	E	F
3A	BG5B	2.13 54.00	2.54 64.5	1.34 34.0	1.77 45.0	1.18 30.0	—
	BW5B						3.94 100.0
6A	BG5B						—
	BW5B						3.94 100.0
12A	BG5B						—
	BW5B						3.94 100.0
16A	CG5B						—
	CW5B						3.94 100.0
20A	CG5B	—					
	CS5B						
30A	CS5B	4.06 103.00	4.49 114.0	2.22 56.5	3.74 95.0	1.83 46.4	—

MECHANICAL CONSTRUCTION

AG5



AW5



ALL WIRE LEADS 4.0" LONG MIN.

UNIT: INCH/mm

MECHANICAL CONSTRUCTION

AS5



BG5



BS5



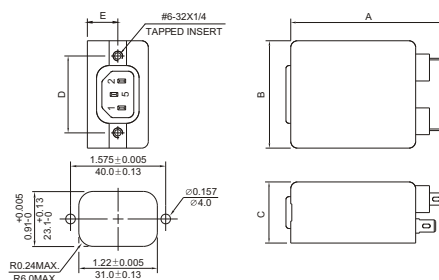
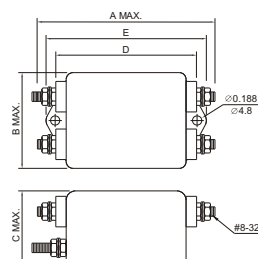
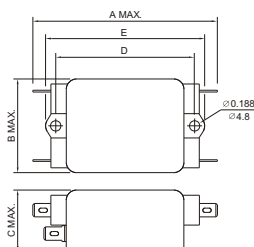
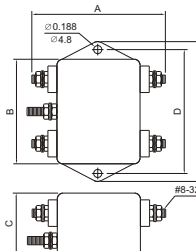
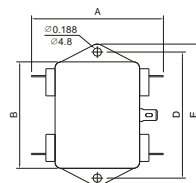
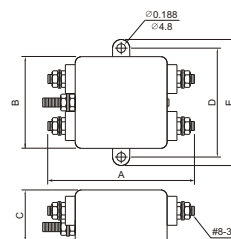
CG5



CS5



DG3S



SUGGESTED MOUNTING CUTOUT

UNIT: INCH
mm

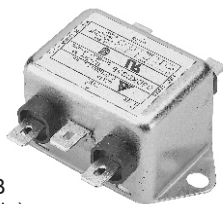
MECHANICAL CONSTRUCTION



DG3



DW3S



BG5B, BW5B
(option wire style)



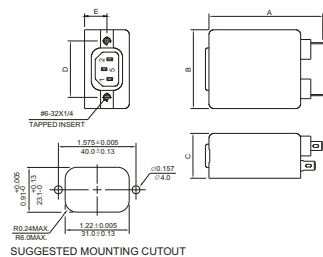
CG5B



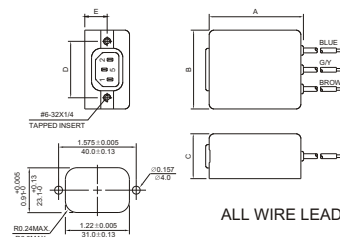
CW5B



CS5B

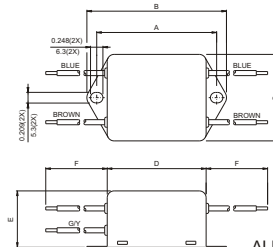
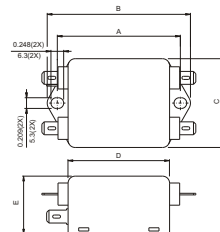
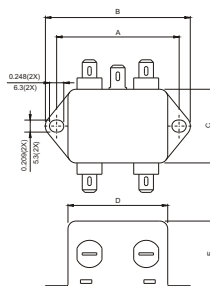


SUGGESTED MOUNTING CUTOUT

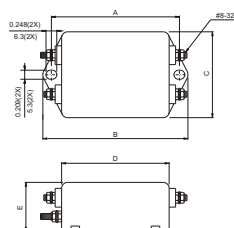


SUGGESTED MOUNTING CUTOUT

ALL WIRE LEADS 4.0" LONG MIN.



ALL WIRE LEADS 4.0" LONG MIN.



UNIT: $\frac{\text{INCH}}{\text{mm}}$



MKSERIES

HIGH PERFORMANCE PC BOARD MOUNTING FILTERS



INTRODUCTIONS

1. Direct PC board mounting for easy installation.
2. All part numbers are UL recognized, CSA certified and VDE approved.
3. Optional medical version.

COMPONENTS

PART NO.	Cx (uF)	L (mH)	Cy (pF)	R
01MK4E	0.1	10	2200	1MΩ
03MK4E		2.5		
06MK4E		1		
10MK4E				

MINIMUM INSERTION LOSS IN dB

COMMON MODE (L-G) IN 50 OHM SYSTEM								
TYPE	CURRENT RATING	FREQUENCY-MHz						
		.15	.50	1.0	5.0	10	30	
01MK4E	1A	30	50	40	40	35	20	
03MK4E	3A	20	30	45	48	45	30	
06MK4E	6A	15	25	30	45	40	30	
10MK4E	10A	12	20	30	30	35	25	
DIFFERENTIAL MODE (L-L) IN 50 OHM SYSTEM								
01MK4E	1A	5	25	40	40	40	20	
03MK4E	3A	5	15	25	35	35	28	
06MK4E	6A	5	12	20	20	30	25	
10MK4E	10A	5	15	20	30	35	35	

MECHANICAL CONSTRUCTION

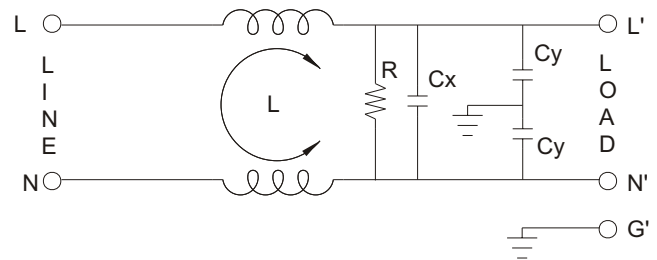


MK4E

SPECIFICATIONS

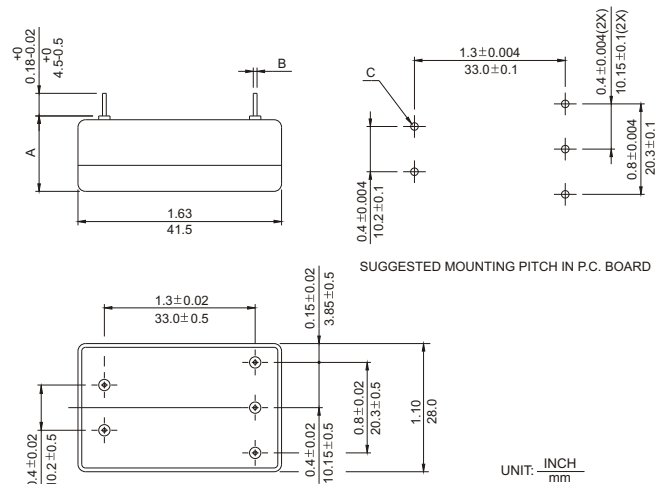
1. Maximum leakage current each
line-to-ground @115VAC 60Hz: 0.2mA
@250VAC 50Hz: 0.4mA
2. Hipot rating (one minute)
line-to-ground: 2250VDC
line-to-line: 1450VDC
3. Operating frequency: 50/60 Hz
4. Rated voltage: 115/250VAC

ELECTRICAL SCHEMATIC



SERIES DIMENSIONS

PART NO.	DIMENSIONS IN INCHES/mm		
	A	B	C
01MK4E	0.65	0.03	0.04
03MK4E	16.5	0.8	1.1
06MK4E			
10MK4E	0.79	0.047	0.06
	20.0	1.2	1.5



INTRODUCTION

Two-stage filters provide high insertion loss for both line-to-line and line-to-ground emissions throughout the frequency range.

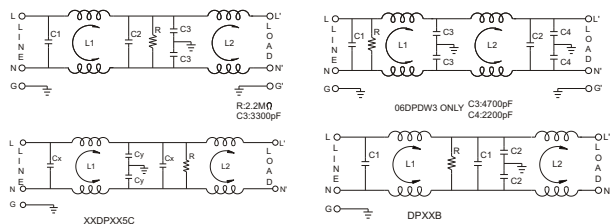
COMPONENTS

PART NO.	C1 (uF)	C2 (uF)	L1 (mH)	L2 (mH)
03DPCG5S	0.33	0.33	10	10
03DPCW5S				
03DPDG3S				
03DPDW3S			6.5	4.5
06DPCG5	0.47	0.47	2.7	14
06DPCW5			2.7	14
06DPDW3			8.0	2.83
10DPCG5	0.47		5	5

PART NO.	C1 (uF)	C2 (pF)	L1 (mH)	L2 (mH)	R (K)
03DPCG5B/W5B	0.47	4700	9.8	9.8	470
06DPCG5B/W5B			7.8	7.8	
12DPCG5B/W5B	1.0		3.25	3.25	220
16DPCG5B/W5B/S5B			2.8	2.8	

PART NO.	Cx (uF)	L1 (mH)	L2 (mH)	Cy (pF)	R (Ω)
03DPCG5C	0.22	2.5	2.5	4700	1.0M
03DPCW5C					
06DPCG5C		0.97	0.97		
06DPCW5C					
12DPCG5C	0.47	0.58	0.58		470K
12DPCW5C					
16DPCG5C	0.33	0.65	0.65		1.0M
16DPCW5C					
16DPCS5C					
20DPCG5C	1.0	0.60	0.60	10000	220K
20DPCS5C					
30DPCS5C					

ELECTRICAL SCHEMATIC



SPECIFICATIONS

- Maximum leakage current each
line-to-ground @ 115VAC 60Hz: 0.4mA (4700pF)
@ 250VAC 50Hz: 0.8mA (4700pF)
@ 115VAC 60Hz: 1.0mA (10000pF)
@ 250VAC 50Hz: 2.0mA (10000pF)
- Hipot rating (one minute)
line-to-ground: 2250VDC
line-to-line: 1450VDC
- Operating frequency: 50/60Hz
- Rated voltage: 115/250VAC

MINIMUM INSERTION LOSS IN dB

COMMON MODE (L-G) IN 50 OHM SYSTEM						
CURRENT RATING	FREQUENCY-MHz					
	.15	.50	1.0	5.0	10	30
3A(S)	50	70	70	60	50	40
3A	60	70	70	65	55	40
6A	58	70	65	65	60	50
10A	48	65	60	45	35	20
•06DPDW3	55	60	60	60	60	60
03DPCG5B/W5B	60	70	65	50	45	25
06DPCG5B/W5B	50	60	60	60	60	35
12DPCG5B/W5B	45	60	65	65	65	45
16DPGG5B/W5B/S5B	20	35	40	50	40	30
DIFFERENTIAL MODE (L-L) IN 50 OHM SYSTEM						
3A(S)	35	48	55	55	55	45
3A	36	55	60	55	55	45
6A	40	65	65	70	70	50
10A	30	40	45	55	60	25
03DPCG5B/W5B	30	45	45	45	45	25
•06DPDW3	40	60	60	60	60	60
06DPCG5B/W5B	45	50	50	55	55	45
12DPCG5B/W5B	45	45	50	50	50	50
16DPGG5B/W5B/S5B	7	55	50	50	50	40

- Maximum leakage current
 - 115VAC 60Hz: 0.5mH
 - 250VAC 50Hz: 1.0mH

COMMON MODE (L-G) IN 50 OHM SYSTEM							
CURRENT RATING	STYLE	FREQUENCY-MHz					
		.15	.50	1.0	5.0	10	30
3A	CG5C, CW5C	45	60	60	55	45	35
6A	CG5C, CW5C	30	50	60	55	50	35
12A	CG5C, CW5C	15	25	35	55	55	35
16A	CG5C, CW5C, CS5C	20	35	45	60	50	35
20A	CG5C, CS5C	15	40	45	50	50	40
30A	GS5C	10	30	35	55	45	30
DIFFERENTIAL MODE (L-L) IN 50 OHM SYSTEM							
3A	CG5C, CW5C	12	45	45	45	45	45
6A	CG5C, CW5C	8	45	45	45	45	45
12A	CG5C, CW5C	12	40	40	35	35	40
16A	CG5C, CW5C, CS5C	12	40	40	45	45	50
20A	CG5C, CS5C	12	45	45	40	35	50
30A	GS5C	18	45	50	40	40	40

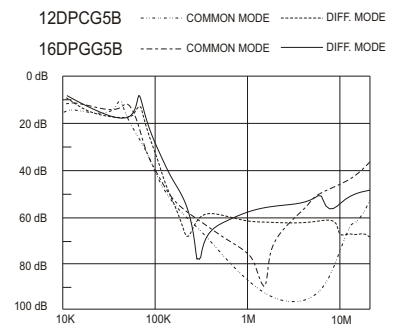
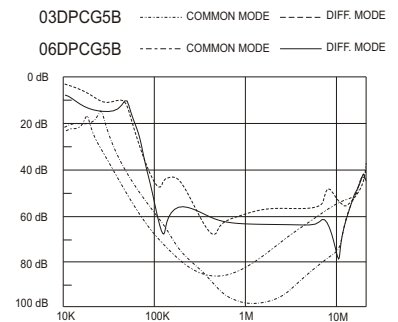
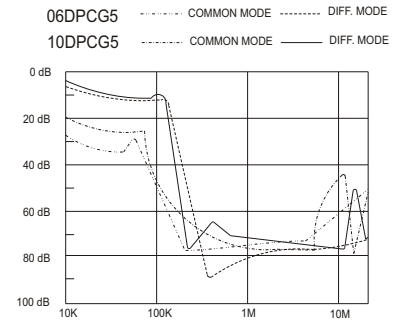
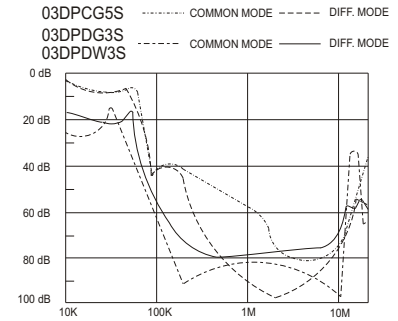
SERIES DIMENSIONS

CURRENT RATING	DIMENSIONS IN INCHES/mm					
	STYLE	A	B	C	D	E
3A	CG5S	2.94 74.7	3.36 85.3	2.04 51.8	2.52 64.0	1.77 45.0
3A	CW5S					
3A	DG3S	2.55 64.8	2.04 51.8	1.77 45.0	1.575 40.0	0.63 16.0
3A	DW3S					
6A	CG5					
6A	CW5	5.63 143.0	6.02 152.9	2.02 51.3	5.27 133.86	2.77 70.4
10A	CG5					
6A	DW3	3.10 78.7	2.08 52.8	1.79 45.5	1.575 40.0	0.63 16.0

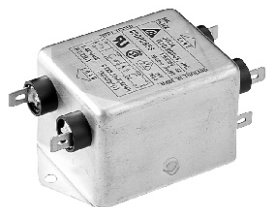
CURRENT RATING	DIMENSIONS IN INCHES/mm							
	STYLE	A	B	C	D	E	F	G
3A	CG5B, CW5B	2.95 75.0	3.34 84.8	2.05 52.0	2.58 65.6	1.54 39.2	4min 101.6	
6A	CG5B, CW5B	4.06 103.0	4.49 114.0	2.22 56.5	3.76 95.5	1.83 46.4		
12A	CG5B, CW5B	5.63 143.0	6.02 152.9	2.05 52.0	5.30 134.7	1.78 45.3		
16A	GS5B	3.89 99.0	4.31 109.5	4.72 120.0	2.0 51.0	2.62 66.5	3.38 86.0	2.28 58.0

CURRENT RATING	DIMENSIONS IN INCHES/mm							
	STYLE	A	B	C	D	E	F	G
3A	CG5C, CW5C	3.0 75.0	3.34 84.8	2.05 52.0	2.58 65.6	1.54 39.2	4min 101.6	
6A	CG5C, CW5C	5.63 143.0	6.02 152.91	2.02 51.31	5.27 133.86	2.27 57.66		
12A	CG5C, CW5C	3.0 75.0	3.34 84.8	2.05 52.0	2.58 65.6	1.15 29.2		
20A	CG5C, CW5C	4.05 103	4.49 114	2.22 56.5	3.76 95.5	1.86 46.4		
30A	GS5C	3.90 99.0	4.31 109.5	4.72 120.0	2.01 51.0	2.62 66.5	3.39 86.0	2.28 58.0

INSERTION LOSS (TYPICAL)



MECHANICAL CONSTRUCTION



CG5S



CG5



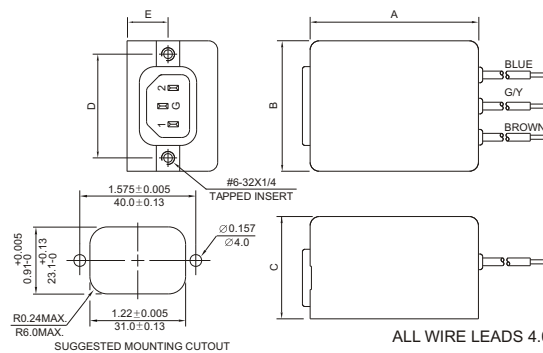
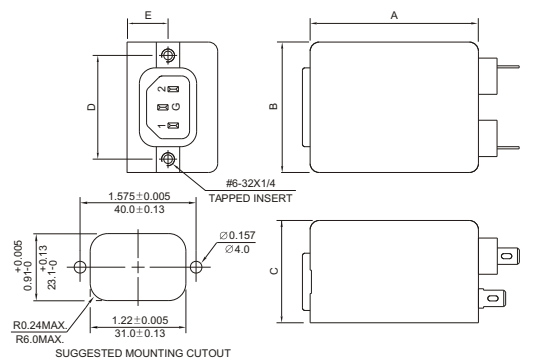
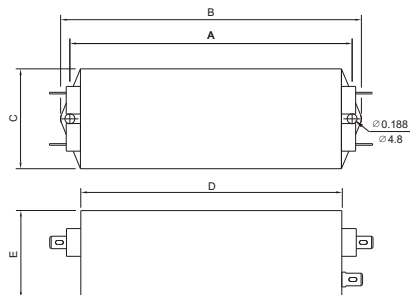
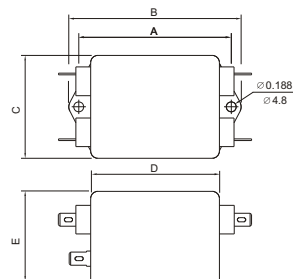
DG3S



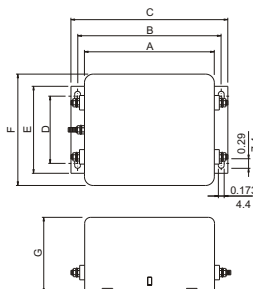
DW3/DW3S



GS5B/GS5C

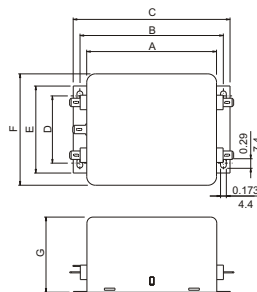


ALL WIRE LEADS 4.0" LONG MIN.

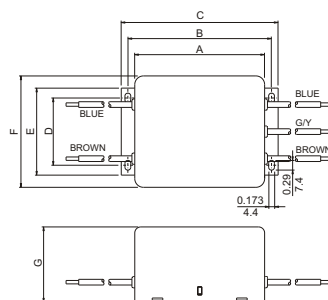
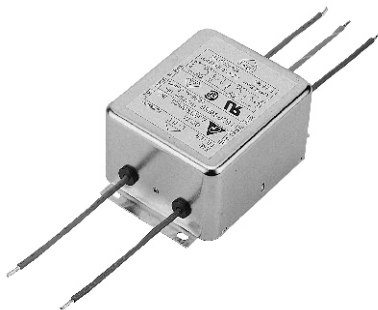


MECHANICAL CONSTRUCTION

GG5B

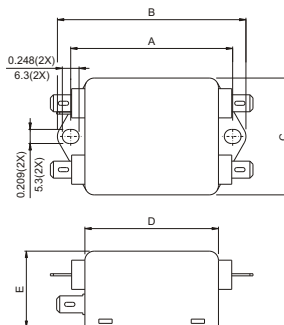
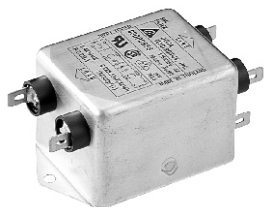


GW5B



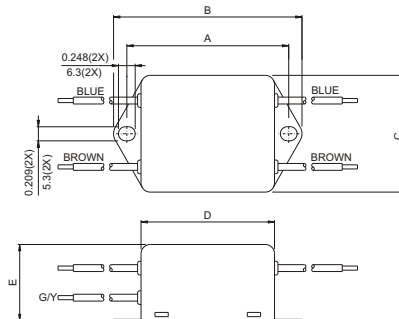
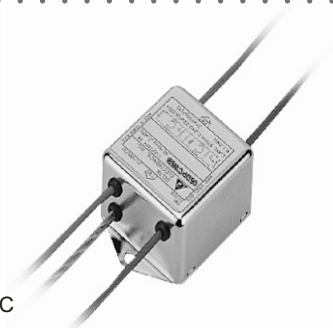
ALL WIRE LEADS 4.0" LONG MIN.

CG5B/CG5C



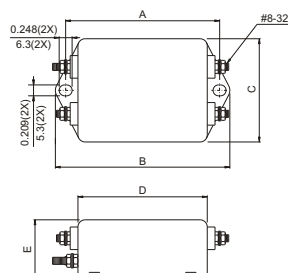
ALL WIRE LEADS 4.0" LONG MIN.

CW5/CW5B/CW5S/CW5C



ALL WIRE LEADS 4.0" LONG MIN.

CS5C



UNIT: $\frac{\text{INCH}}{\text{mm}}$



DC SERIES

SWITCHING TRANSIENT FILTERS



INTRODUCTIONS

1. Two-stage filters provide high insertion loss for both line-to-line and line-to-ground emissions throughout the frequency range.

COMPONENTS

PART NO.	C1 (uF)	C2 (pF)	L1 (mH)	L2 (uH)	R (K Ω)
03DCCG5B/W5B	0.47	4700	9.8	160	470
06DCCG5B/W5B	1.0		7.8	110	220
12DCCG5B/W5B			3.25	50	
16DCGG5B/W5B/S5B			2.8	43	

SERIES DIMENSIONS

PART NO.	DIMENSIONS IN INCHES/mm						
	A	B	C	D	E	F	G
03DCCG5B/W5B	2.95 75.0	3.34 84.8	2.05 52.0	2.58 65.6	1.54 39.2	—	—
06DCCG5B/W5B	4.06 103.0	4.49 114.0	2.22 56.5	3.76 95.5	1.83 46.4	—	—
12DCCG5B/W5B	5.63 143.0	6.02 152.9	2.05 52.0	5.30 134.7	1.78 45.3	—	—
16DCCG5B/S5B/W5B	3.90 99.0	4.31 109.5	4.72 120.0	2.01 51.0	2.62 66.5	3.39 86.0	2.28 58.0

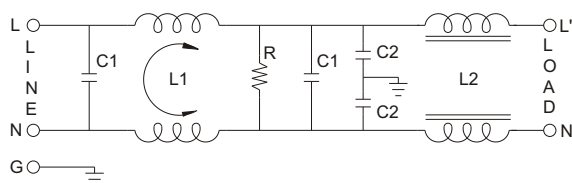
MINIMUM INSERTION LOSS IN dB

COMMON MODE (L-G) IN 50 OHM SYSTEM							
CURRENT RATING	FREQUENCY-MHz						
	.15	.50	1.0	5.0	10	30	
3A	25	45	55	55	55	35	
6A	25	45	50	60	60	40	
12A	20	30	40	55	60	25	
16A	15	20	30	60	50	30	
DIFFERENTIAL MODE (L-L) IN 50 OHM SYSTEM							
3A	45	60	60	70	70	50	
6A	50	60	60	60	60	50	
12A	35	55	60	60	60	45	
16A	40	55	55	60	60	50	

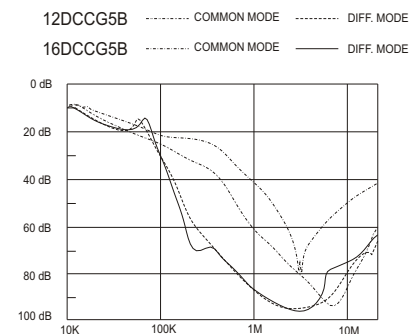
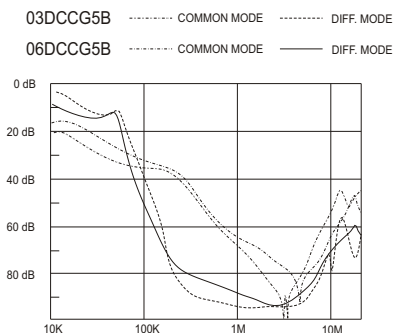
SPECIFICATIONS

- Maximum leakage current each
line-to-ground @ 115VAC 60Hz: 0.40mA
@ 250VAC 50Hz: 0.80mA
- Hipot rating (one minute)
line-to-ground: 2250VDC
line-to-line: 1450VDC
- Operating frequency: 50/60Hz
- Rated voltage: 115/250VAC

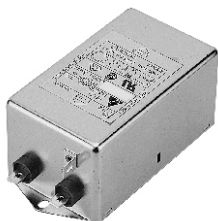
ELECTRICAL SCHEMATIC



INSERTION LOSS (TYPICAL)



MECHANICAL CONSTRUCTION



CG5B



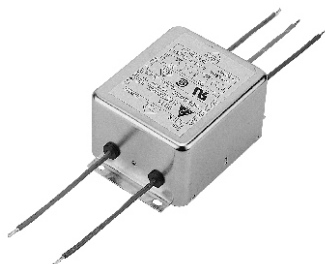
CW5B



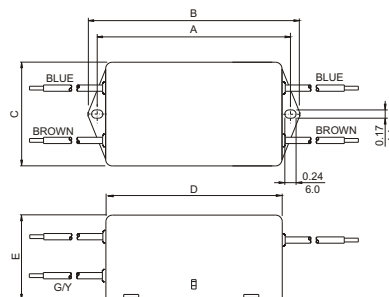
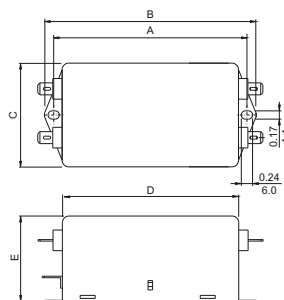
GG5B



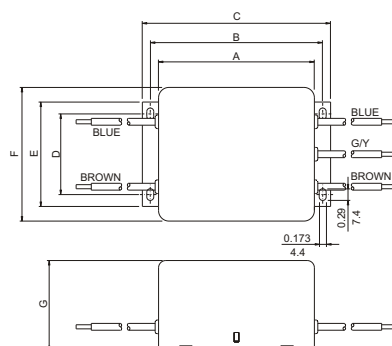
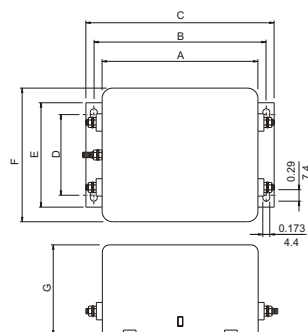
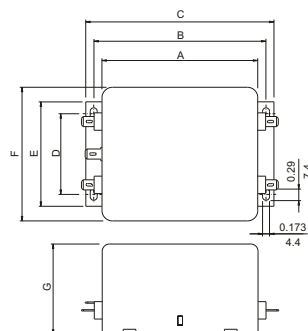
GS5B



GW5B



ALL WIRE LEADS 4.0" LONG MIN.



ALL WIRE LEADS 4.0" LONG MIN.

UNIT: $\frac{\text{INCH}}{\text{mm}}$

INTRODUCTIONS

1. Two-stage filters provide high performance in suppressing both line-to-line and line-to-ground noise.
2. All part numbers are UL recognized, CSA certified and VDE approved.

COMPONENTS

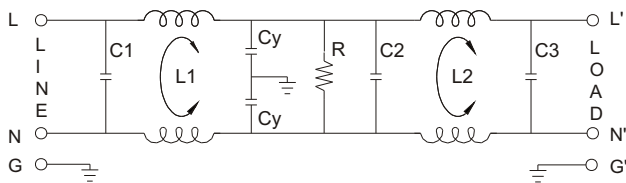
PART NO.	C1,C2,C3(uF)	L1,L2(mH)
02DRCG5	0.1	2.4
02DRCW5		
03DRCG5	0.22	1.7
03DRCW5		
03DRDG3S		2.8
03DRDW3S		
05DRCG5		1.6
05DRCW5		
05DRDG3		2.7
05DRDG3S		
05DRDW3S		1.3
10DRCG5		
10DRCS5	1.0	1.0
10DRCW5		
10DRDG3		
*15DRCG5	0.1	0.9
•20DRGG5	0.22	1.0
•20DRGS5		

R: 2.2M Ω , Cy: 3300pF.

* No safety approval yet, R: 1.0M Ω .

• VDE approved to 16A/250VAC, C2: 0.33 uF

ELECTRICAL SCHEMATIC



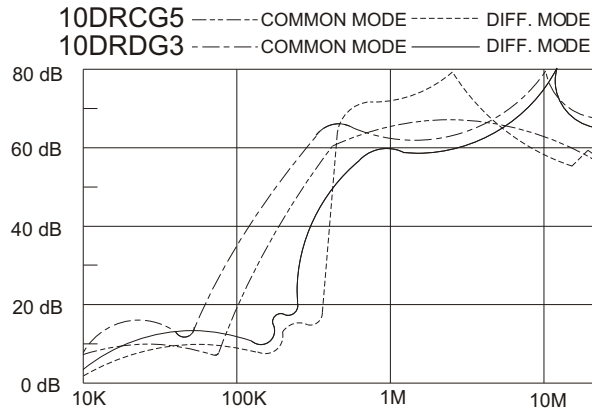
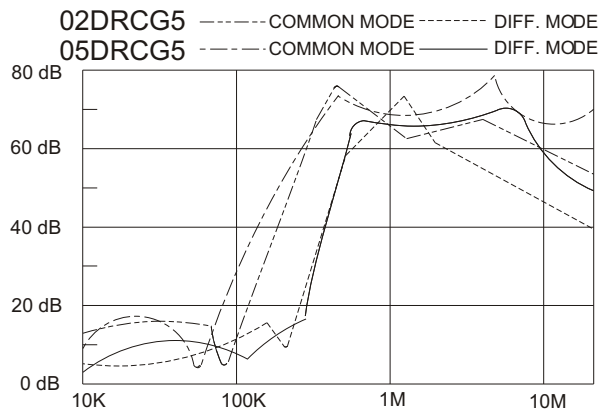
SPECIFICATIONS

1. Maximum leakage current each
line-to-ground @ 115VAC 60Hz: 0.25mA
@ 250VAC 50Hz: 0.45mA
2. Hipot rating (one minute)
line-to-ground: 2250VDC
line-to-line: 1450VDC
3. Operating frequency: 50/60Hz
4. Rated voltage: 115/250VAC

SERIES DIMENSIONS

PART NO.	DIMENSIONS IN INCHES/mm					
	A	B	C	D	E	
02DRCG5	3.25	1.82	1.15 29.2	2.38	2.77	
	82.5				70.4	
02DRCW5	2.08	46.2		60.5	2.77	
	52.8				70.4	
03DRCG5	3.75	2.02		2.94	3.34	
	95.2	51.3				
03DRCW5	2.58	2.04		74.7	84.8	
	65.5	51.8				
03DRDG3S	3.14	2.02	1.28	1.575	0.61	
	79.8				15.5	
03DRDW3S	2.55		32.5	40.00	0.63	
	64.8					15.5
05DRCG5	3.75		1.15	2.94	3.34	
	95.2					84.8
05DRCW5	2.58		29.2	74.7	16.0	
	65.5					15.5
05DRDG3	4.33	2.02	1.27	1.575	0.63	
	110.0				16.0	
05DRDG3S	3.14		32.3	40.00	0.61	
	79.8				15.5	
05DRDW3S	2.55		38.6	74.4	3.34	
	64.8					84.5
10DRCG5	3.75		2.02	1.52	2.94	3.34
	95.2					
10DRCS5	3.87	32.3		40.01	0.63	
	98.3					16.0
10DRCW5	2.50	45.5		74.7	3.36	
	63.5					85.3
10DRDG3	4.35	2.22		1.27	1.575	0.63
	110.5					32.3
15DRCG5	3.75	2.08	1.79	2.94	3.36	
	95.2	52.8	45.5	74.7	85.3	
20DRGG5	5.14	3.33	1.52	3.75	4.14	
20DRGS5	130.5	84.6	38.6	95.3	105.1	

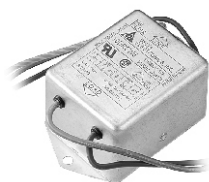
INSERTION LOSS (TYPICAL)



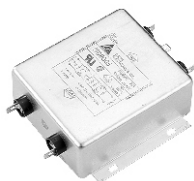
MINIMUM INSERTION LOSS IN dB

COMMON MODE (L-G) IN 50 OHM SYSTEM						
CURRENT RATING	.15	.50	1.0	5.0	10	30
2	40	60	65	55	50	40
3, 5A	40	60	65	65	60	45
3, 5A(S)	38	60	65	55	45	40
10A	30	60	65	50	45	40
15A	23	45	50	45	40	30
20A	20	35	40	50	55	40
DIFFERENTIAL MODE (L-L) IN 50 OHM SYSTEM						
2	5	50	65	60	54	46
3, 5A	12	60	65	60	54	46
3, 5A(S)	10	65	70	70	60	50
10A	7	53	60	55	45	40
15A	8	30	40	45	40	40
20A	7	55	50	50	55	40

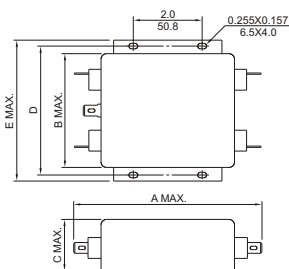
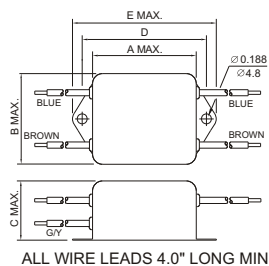
MECHANICAL CONSTRUCTION



CW5

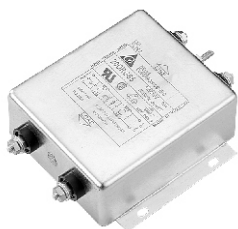


GG5

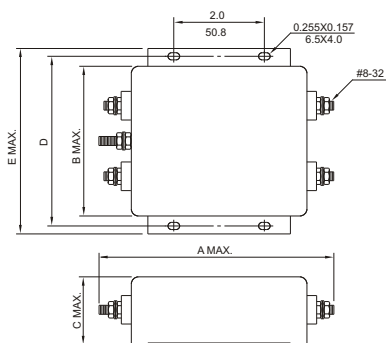


UNIT: $\frac{\text{INCH}}{\text{mm}}$

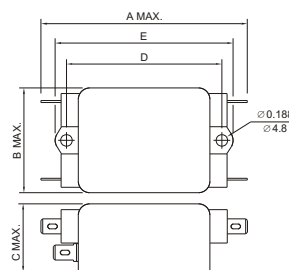
MECHANICAL CONSTRUCTION



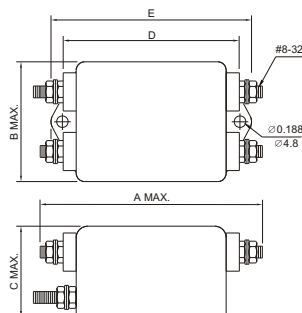
GS5



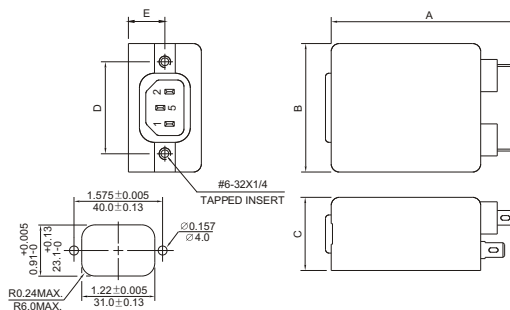
CG5



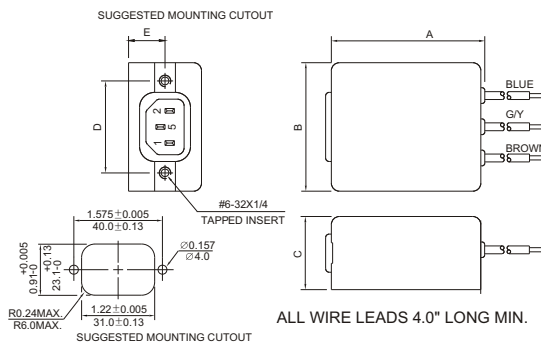
CS5



DG3/DG3S



DW3S



ALL WIRE LEADS 4.0" LONG MIN. UNIT: $\frac{\text{INCH}}{\text{mm}}$



DS SERIES

MULTI-PURPOSE POWER LINE FILTERS



INTRODUCTION

Two-stage filters are for susceptibility use when equipment impedance at radiation frequency is low.

COMPONENTS

PART NO.	C1 (uF)	C2 (uF)	L1 (uH)	L2 (mH)	Cy (pF)	R (Ω)
03DSCG5	0.22	0.22	30	1.0	5500	330K
06DSCG5			70	1.7		
10DSCG5			40	1.2		
20DSGG5	0.55		30	0.93		

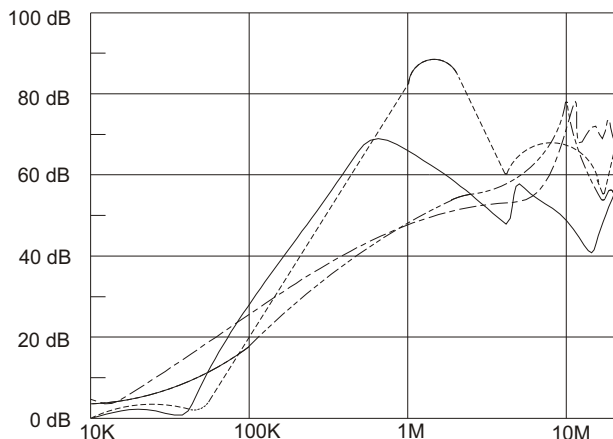
MINIMUM INSERTION LOSS IN dB

COMMON MODE (L-G) IN 50 OHM SYSTEM							
CURRENT RATING	FREQUENCY-MHz						
	.15	.50	1.0	5.0	10	30	
3A	12	25	30	45	60	35	
6A	25	30	30	35	50	45	
• 10A	15	20	25	40	45	40	
** 20A	12	20	30	35	40	40	
DIFFERENTIAL MODE (L-L) IN 50 OHM SYSTEM							
3A	20	50	60	45	45	45	
6A	30	25	40	40	40	40	
• 10A	25	50	50	45	45	45	
** 20A	25	60	60	50	50	45	

• VDE approved in 8A
** VDE approved in 16A

INSERTION LOSS (TYPICAL)

03DSCG5 ----- COMMON MODE ----- DIFF. MODE
06DSCG5 ----- COMMON MODE ----- DIFF. MODE



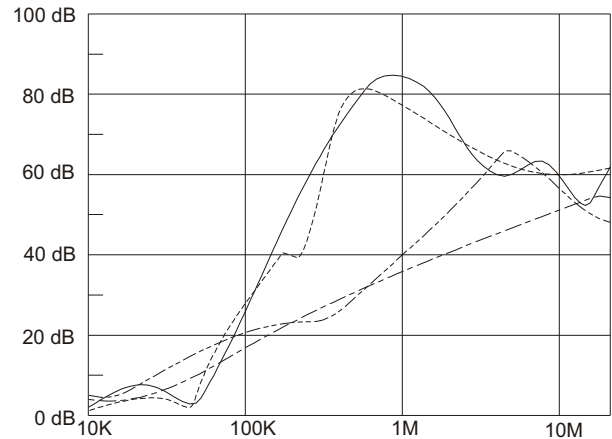
SPECIFICATIONS

- Maximum leakage current each
line-to-ground: @ 115VAC 60Hz: 0.45mA
@ 250VAC 50Hz: 0.90mA
- Hipot rating (one minute)
line-to-ground: 2250VDC
line-to-line: 1450VDC
- Operating frequency: 50/60Hz
- Rated voltage: 115/250VAC

SERIES DIMENSIONS

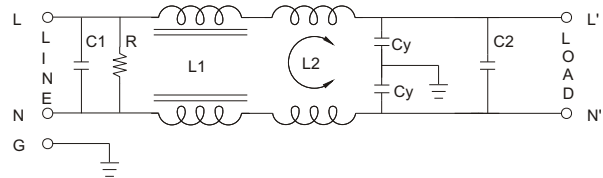
PART NO.	DIMENSIONS IN INCHES/mm				
	A	B	C	D	E
03DSCG5	3.25 82.5	1.90 48.3	1.15 29.2	2.38 60.5	2.77 70.4
06DSCG5	3.75	2.06	1.54	2.94	3.34
10DSCG5	95.2	52.3		74.7	84.8
20DSGG5	5.25 130.5	3.40 86.4		3.75 95.3	4.14 105.1

10DSCG5 ----- COMMON MODE ----- DIFF. MODE
20DSGG5 ----- COMMON MODE ----- DIFF. MODE

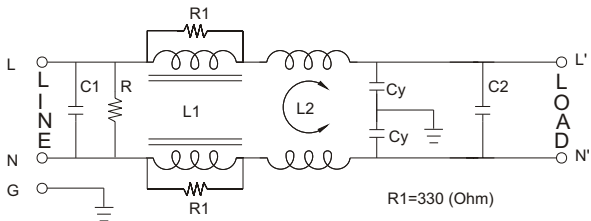


ELECTRICAL SCHEMATIC

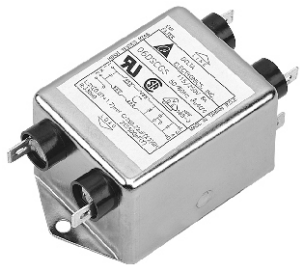
3A. 6A. 10A.



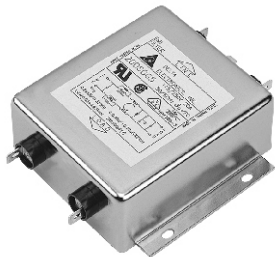
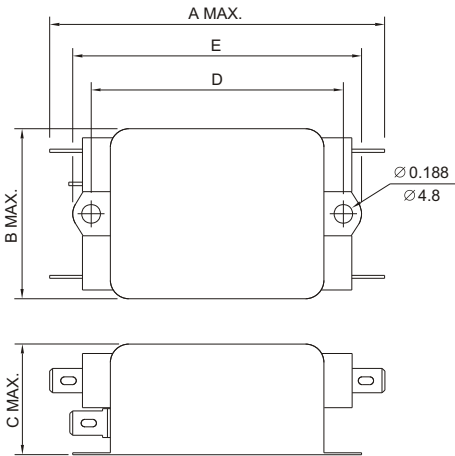
20A.



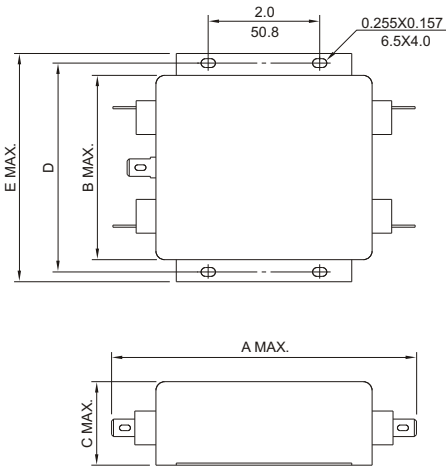
MECHANICAL CONSTRUCTION



CG5



GG5



UNIT: INCH
mm

**DV**SERIES**MULTI-PURPOSE POWER LINE FILTERS****INTRODUCTIONS**

Two-stage filters are for susceptibility use when equipment impedance at radiation frequency is low.

COMPONENTS

PART NO.	C1 (uF)	C2 (uF)	L1 (mH)	L2 (uH)	Cy (pF)	R (Ω)
03DVCG5	0.22	0.22	1.0	30	5500	330K
06DVCG5			1.7	70		
10DVCG5			1.2	40		
20DVGG5		0.47	1.73	30		

MINIMUM INSERTION LOSS IN dB

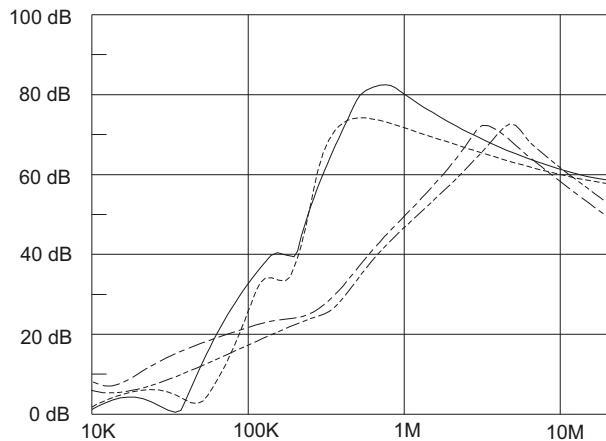
COMMON MODE (L-G) IN 50 OHM SYSTEM						
CURRENT RATING	FREQUENCY-MHz					
	.15	.50	1.0	5.0	10	30
3A	12	25	35	50	45	40
6A	23	40	50	55	55	40
* 10A	10	20	30	50	45	35
** 20A	20	20	35	45	45	30
DIFFERENTIAL MODE (L-L) IN 50 OHM SYSTEM						
3A	30	50	60	60	70	50
6A	25	35	50	55	55	50
* 10A	25	55	60	60	55	55
** 20A	25	50	50	50	45	45

• VDE approved in 8A

** VDE approved in 16A

INSERTION LOSS (TYPICAL)

03DVCG5 ----- COMMON MODE ----- DIFF. MODE
06DVCG5 ----- COMMON MODE ----- DIFF. MODE

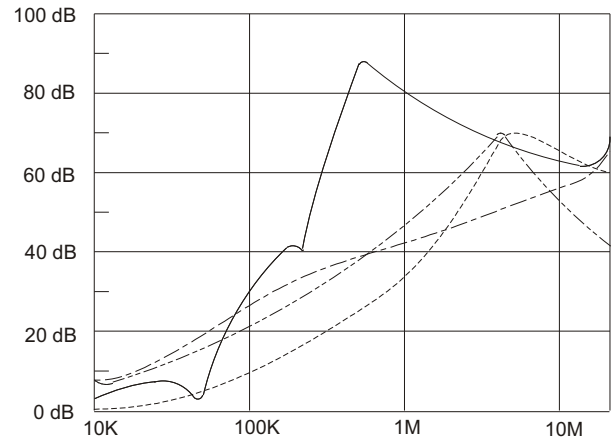
**SPECIFICATIONS**

- Maximum leakage current each
line-to-ground: @115VAC 60Hz: 0.45mA
@250VAC 50Hz: 0.90mA
- Hipot rating (one minute)
line-to-ground: 2250VDC
line-to-line: 1450VDC
- Operating frequency: 50/60Hz
- Rated voltage: 115/250VAC

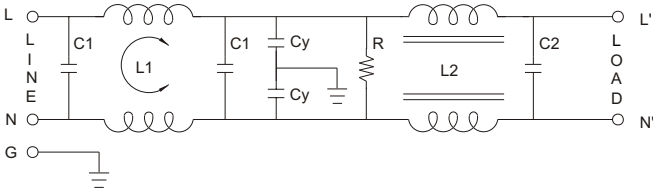
SERIES DIMENSIONS

PART NO.	DIMENSIONS IN INCHES/mm				
	A	B	C	D	E
03DVCG5	3.25 82.5	1.90 48.3	1.15 29.2	2.38 60.5	2.77 70.4
06DVCG5	3.75 95.2	2.06 52.3	1.54 39.1	2.94 74.7	3.34 84.8
10DVCG5					
20DVGG5	5.25 130.5	3.40 86.4		3.75 95.3	4.14 105.1

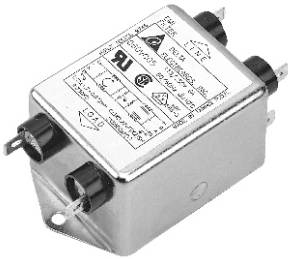
10DVCG5 ----- COMMON MODE ----- DIFF. MODE
20DVGG5 ----- COMMON MODE ----- DIFF. MODE



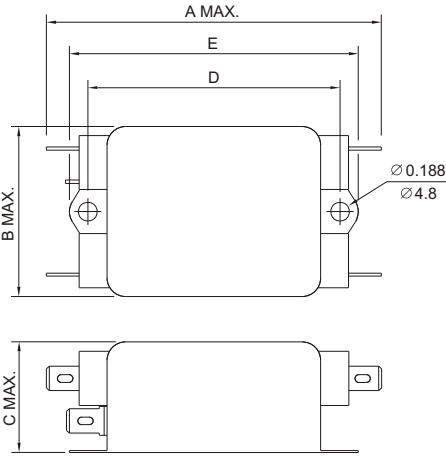
ELECTRICAL SCHEMATIC



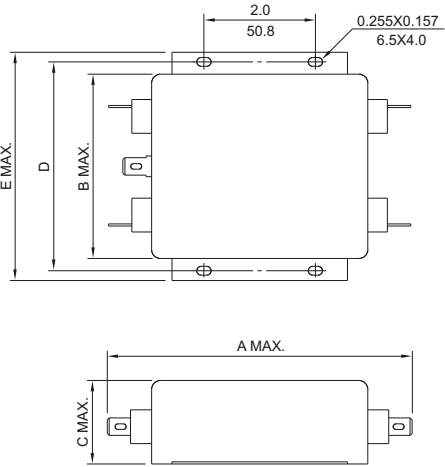
MECHANICAL CONSTRUCTION



CG5



GG5



UNIT: $\frac{\text{INCH}}{\text{mm}}$

**DW** SERIES**MULTI-PURPOSE POWER LINE FILTERS****INTRODUCTION**

Two-stage filters providing excellent suppression at high frequency.

COMPONENTS

PART NO.	C1 (uF)	C2 (uF)	L1 (mH)	L2 (uH)	Cy (pF)	R (Ω)
03DWCG5	0.22	0.22	1.0	30	3300	330K
06DWCG5			1.7	70		
10DWCG5			1.2	40		
20DWGG5		0.47	1.73	30		

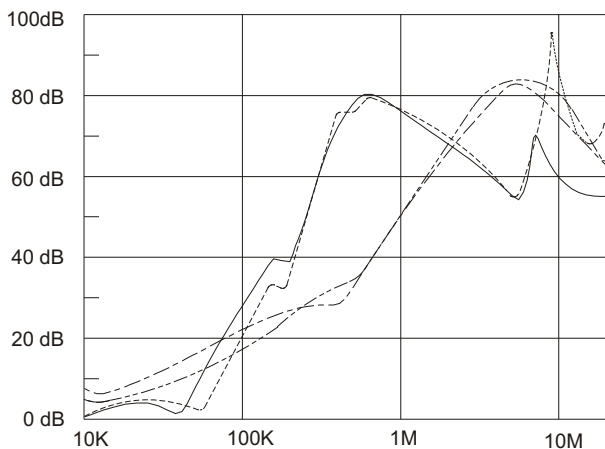
MINIMUM INSERTION LOSS IN dB

COMMON MODE (L-G) IN 50 OHM SYSTEM						
CURRENT RATING	FREQUENCY-MHz					
	.15	.50	1.0	5.0	10	30
3A	12	20	30	60	60	45
6A	25	30	45	55	55	45
• 10A	15	20	30	60	55	45
• 20A	20	25	30	55	55	45
DIFFERENTIAL MODE (L-L) IN 50 OHM SYSTEM						
3A	25	50	60	45	50	50
6A	25	35	50	50	50	45
• 10A	25	50	50	45	45	45
• 20A	25	55	55	55	50	45

- VDE approved in 8A
- VDE approved in 16A

INSERTION LOSS (TYPICAL)

03DWCG5 ----- COMMON MODE ----- DIFF. MODE
 06DWCG5 ----- COMMON MODE ----- DIFF. MODE

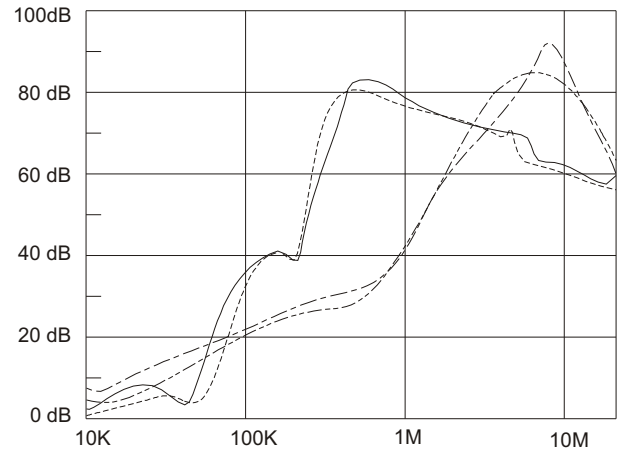
**SPECIFICATIONS**

- Maximum leakage current each
 line-to-ground: @ 115VAC 60Hz: 0.50mA
 @ 250VAC 50Hz: 1.00mA
- Hipot rating (one minute)
 line-to-ground: 2250VDC
 line-to-line: 1450VDC
- Operating frequency: 50/60Hz
- Rated voltage: 115/250VAC

SERIES DIMENSIONS

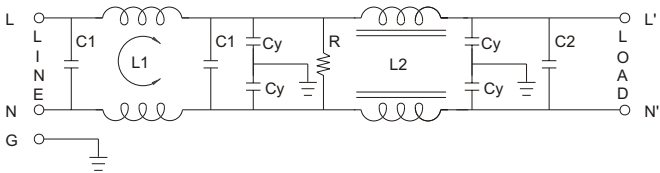
PART NO.	DIMENSIONS IN INCHES/mm				
	A	B	C	D	E
03DWCG5	3.25 82.5	1.90 48.3	1.15 29.2	2.38 60.5	2.77 70.4
06DWCG5	3.75	2.06	1.54 39.1	2.94	3.34
10DWCG5	95.2	52.3		74.7	84.8
20DWGG5	5.25 130.5	3.40 86.4		3.75 95.3	4.14 105.1

10DWCG5 ----- COMMON MODE ----- DIFF. MODE
 20DWGG5 ----- COMMON MODE ----- DIFF. MODE

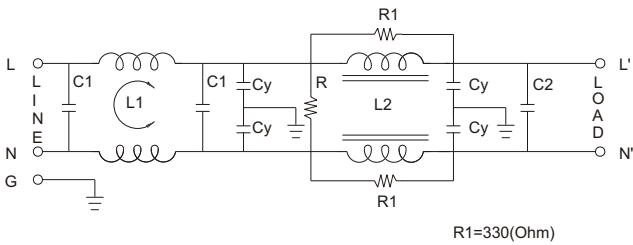


ELECTRICAL SCHEMATIC

3A. 6A. 10A.



20A.

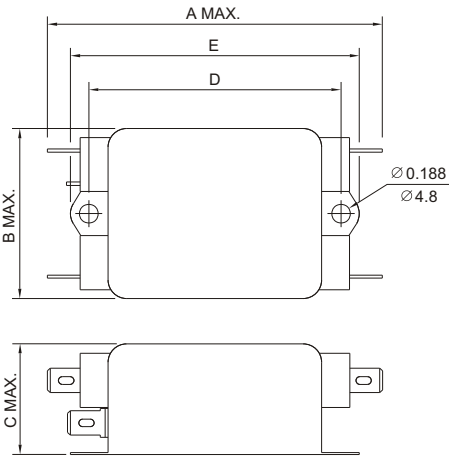


R1=330(Ohm)

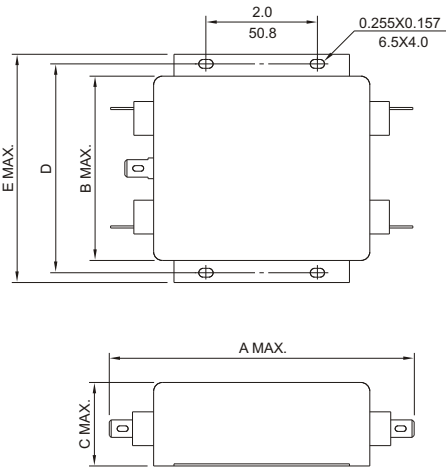
MECHANICAL CONSTRUCTION



CG5



GG5



UNIT: INCH
mm

Medical Filter

DE & GE Series IEC INLET FILTERS

PRODUCT TYPE	EG3BM/EG3QM	NG3QM	NG3QM(H)	20GEEG3EM	20GENG3EM
PICTURE					
CURRENT RATING	1/3/6/10A	3/6/10A	3/6/10A	20A	20A

KE / KEN Series HIGH PERFORMANCE IEC INLET / SNAP-IN FILTERS

PRODUCT TYPE	G3EAM/G3SAM	W3EAM/W3SAM	G3EAM/G3SAM	W3EAM/W3SAM
PICTURE				
CURRENT RATING	3/8(6)/10A	3/8(6)/10A	3/8(6)/10A	3/8(6)/10A

BE Series SWITCH / DUAL-FUSE IEC INLET FILTERS

PRODUCT TYPE	BENG3GM	BEEG3GM	BEEG3FM
PICTURE			
CURRENT RATING	3/6/10A	3/6/10A	2/4/6A

NB Series POWER ENTRY MODULE FILTERS

PRODUCT TYPE	NB3M	NB4M
PICTURE		
CURRENT RATING	3/4/6A	3/4/6A

DC Series 2-STAGE HIGH PERFORMANCE FILTERS

PRODUCT TYPE	CG5BM	CW5BM	GG5BM	GW5BM	GS5BM
PICTURE					
CURRENT RATING	3/6/12A	3/6/12A	16A	16A	16A

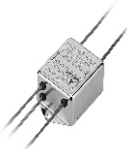
Medical Filter

EK Series POWER ENTRY MODULE FILTERS

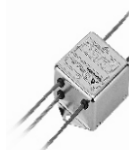
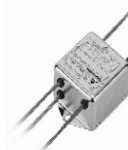
PRODUCT TYPE	EK3M/AM/SM/SAM	EK4M/AM/SM/SAM
PICTURE		
CURRENT RATING	3/6/10A	3/6/10A

DP Series 2-STAGE PERFORMANCE FILTERS

PRODUCT TYPE	CG5CM	CS5CM
PICTURE		
CURRENT RATING	3/6/12/16/20A	16/20A

GS5CM	CG5BM	CW5CM, CW5BM	GG5BM	GW5BM	GS5BM
					
30A	3/6/12A	3/6/12A	16A	16A	16A

DK Series GENERAL PURPOSE FILTERS

PRODUCT TYPE	BG5BM	CG5BM	CW5BM	CS5BM	BW5BM
PICTURE					
CURRENT RATING	3/6/12A	16/20A	16A	20/30A	3/6/12A

DB Series GENERAL PURPOSE FILTERS

PRODUCT TYPE	BG5BM	BW5BM	CG5BM	CW5BM	CS5BM
PICTURE					
CURRENT RATING	12A	12A	16A	16A	20/30A

MK Series HIGH PERFORMANCE PC BOARD MOUNTING FILTERS

PRODUCT TYPE	MK4EM
PICTURE	
CURRENT RATING	1/3/6/10A

Please feel free to contact us for more detailed specifications or refer to our web site at www.deltaww.com



IEC CONNECTORS SCREW MOUNTING

INTRODUCTIONS

1. Designed to meet globally accepted IEC publication 320 Class 1, that allows users to comply with industry standard in power entry requirement.
2. Connector for cold condition, with pin temperature 70°C max.
3. Nickel-plated brass pins and soldering terminals.
4. Screw-on mount from front or rear (with screw type-M3).
5. Fuse holder designed for one fuse and one spare fuse (both 5x20mm fuses). Safety interlock prevents fuse removal with line plug inserted.
6. Adapts to 110V or 240V input voltage simply by reversing the voltage selector.
7. All part numbers are UL recognized, CSA certified except for SK-015A which is UL listed.
SK-1000 are DEMKO, approved.
SK-1017 is UL, CSA approved.
SK-1008 UL, CSA, VDE, CCC approved.
SK-1007A UL, CSA approved.
SK-1007A is patented for new construction (R.O.C. patent no. 54606).
SK-015A is UL, CSA, VDE, Somko, CCC. Approved

SPECIFICATIONS

1. Rated voltage: 250VAC
2. Minimum insulation resistance at 500VDC: 10M OHM
3. Dielectric strength (one minute): 2000VAC between pins
4. Flammability class: UL 94V-0

ELECTRICAL SCHEMATIC

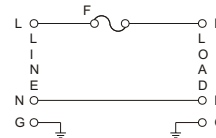


FIG. A

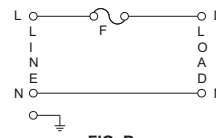
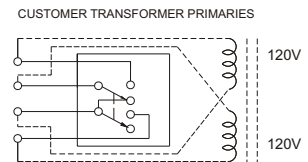


FIG. B



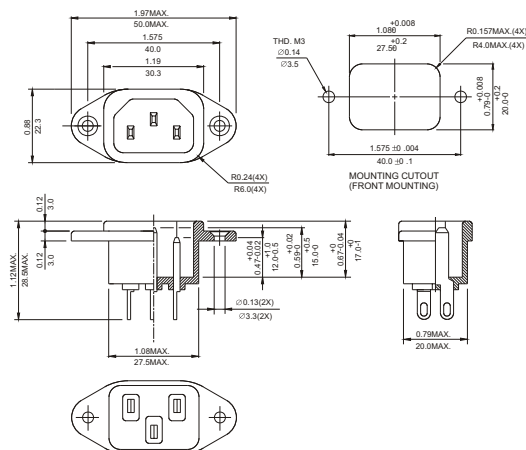
TYPE & RATED CURRENT

DELTA PART NUMBER		SK-015A	SK-1000	SK-1017	SK-1007A	REMARKS: 1. SK-015A RATING SEV/SEMKO/NEMKO/DEMKO-10A/250VAC SK-1017/SK-1000 SEMKO/NEMKO/SETI/DEMKO-10A/250VAC 2. SK-1017 FUSE HOLDER SINGLE FUSE HOLDER ON SK-1017 IS A RETAINED DESIGN 3. VOLTAGE SELECTOR CARD RATING UL/CSA/VDE-10A/250VAC 4. "S" FOR SINGLE FUSE HOLDER
RATED CURRENT (AT 250VAC)	UL/CSA	15A	15A	15A	10A	
	VDE	10A	10A	10A	10A	
CONNECTOR TYPE	MALE	△	△	△	△	
	FEMALE					
FUSE HOLDER		-	S *4	S *2	S *4	
VOLTAGE SELECTOR		-	-	-	FRONT *3	
ELECTRICAL SCHEMATIC		-	FIG. A	FIG. A	FIG. B	
UL		✓	✓	✓	✓	
CSA		✓	✓	✓	✓	
VDE		✓				
SEMKO		✓		✓		
CCC		✓		✓	✓	

MECHANICAL CONSTRUCTION



SK-015A

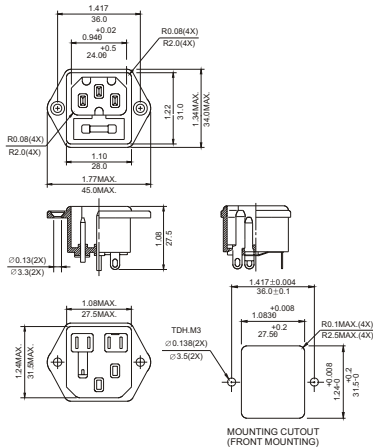


UNIT: INCH
mm

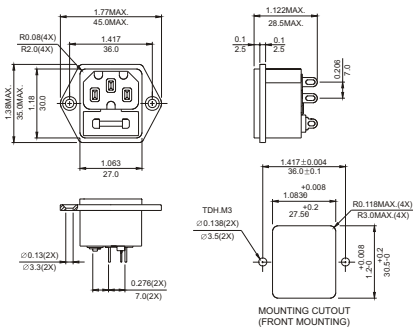
MECHANICAL CONSTRUCTION



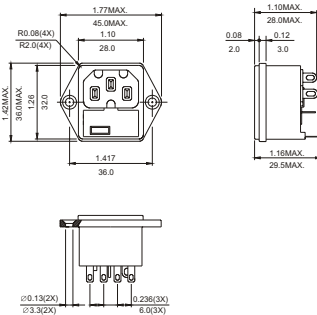
SK-1000



SK-1017



SK-1007A



UNIT: INCH
mm



IEC CONNECTORS SNAP-IN MOUNTING

INTRODUCTIONS

1. Designed to meet globally accepted IEC publication 320 Class 1, that allows users to comply with industry standard in power entry requirement.
2. Connector for cold condition, with pin temperature 70°C max.
3. Nickel-plated brass pins and soldering terminals.
4. SK-1015-STD solder lug mount panel thickness: 1.0mm / 0.04 inch.
SK-1015 (F1.0) fast-on lug mount panel thickness: 1.0mm / 0.04 inch.
SK-1015 (F1.3) fast-on lug mount panel thickness: 1.3mm / 0.05 inch.
SK-1015 (F1.5) fast-on lug mount panel thickness: 1.5mm / 0.06 inch.
SK-1016 panel thickness: 1.0mm / 0.04 inch.
5. Adapts to 115V or 250V input voltage with voltage selector switch.
SK-1015 is UL recognized, CSA certified, VDE approved, SEMKO & CCC approved.
SK-1016: UL recognized, CSA certified, VDE approved, CCC approved.

SPECIFICATIONS

1. Rated voltage: 250VAC
2. Minimum insulation resistance at 500VDC: 10M OHM
3. Dielectric strength (one minute): 2000VAC between pins
4. Flammability class: UL 94V-0

TYPE & RATED CURRENT

DELTA PART NUMBER		SK-1015	SK-1016	REMARKS: 1. SK-1015 RATING SEMKO/NEMKO/DEMKO/SETI-10A/250VAC 2. VOLTAGE SELECTOR SWITCH RATING UL/CSA/VDE/SEMKO/NEMKO/DEMKO/SETI-10A/250VAC
RATED CURRENT (AT 250VAC)	UL/CSA	15A	15A	
	VDE	10A	10A	
CONNECTOR TYPE	MALE	△		
	FEMALE		△	
UL		✓	✓	
CSA		✓	✓	
VDE		✓	✓	
SEMKO		✓		
CCC		✓	✓	

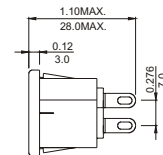
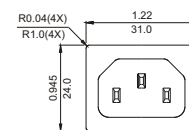
MECHANICAL CONSTRUCTION



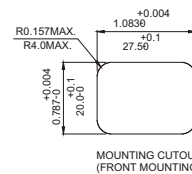
SK-1015



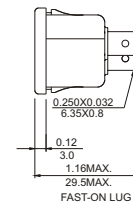
SK-1016



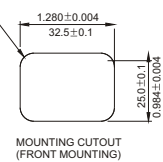
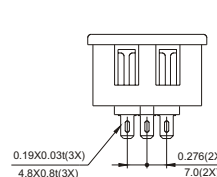
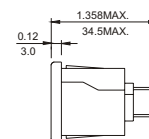
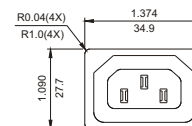
SOLDER LUG



MOUNTING CUTOUT
(FRONT MOUNTING)



FAST-ON LUG



UNIT: INCH
mm



IEC CONNECTORS PC BOARD AND SCREW MOUNTING

INTRODUCTIONS

1. Designed to meet globally accepted IEC publication 320 Class 1, that allows users to comply with industry standard in power entry requirement.
2. Connector for cold condition, with pin temperature 70°C max.
3. Nickel-plated brass pins for soldering on PC board.
4. SK-1010: UL, CSA, VDE, CCC approved.
SK-1019: UL, CSA, VDE, CCC approved.
SK-1013: UL, CSA approved.

MECHANICAL CONSTRUCTION

SPECIFICATIONS

1. Rated voltage: 250VAC
2. Minimum insulation resistance at 500VDC: 10M OHM
3. Dielectric strength (one minute): 2000VAC between pins
4. Flammability class: UL 94V-0

DELTA PART NUMBER		SK-1010, SK-1019	SK-1013
RATED CURRENT (AT 250VAC)	UL/CSA	15A	*10A/15A
	VDE	10A	-
	NORDIC	10A	-
CONNECTOR TYPE	MALE	△	△
	FEMALE		△



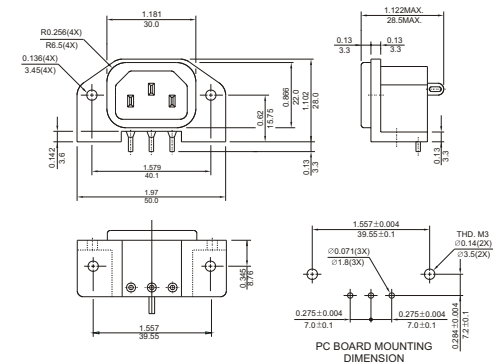
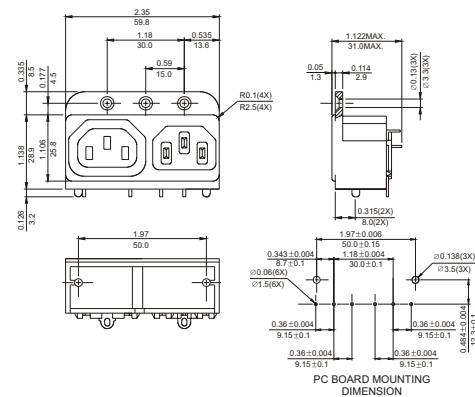
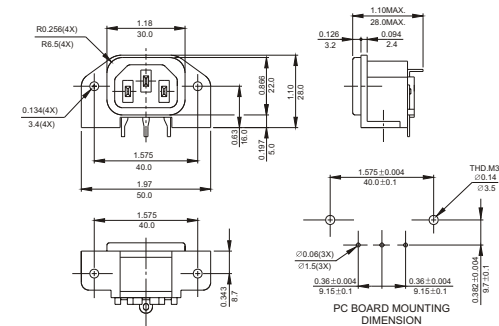
SK-1010



SK-1013



SK-1019



UNIT: INCH
mm

POWER ENTRY MODULES **SNAP-IN MOUNTING**

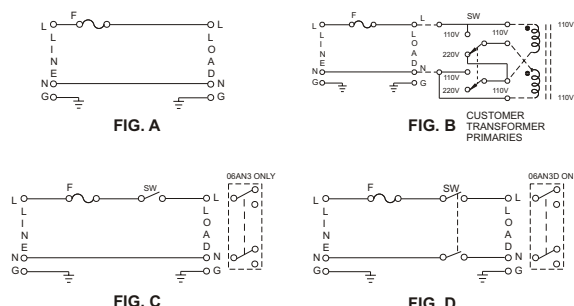
INTRODUCTIONS

1. Designed to meet globally accepted IEC publication 320 Class 1, that allows users to comply with industry standard in power entry requirement.
2. Connector for cold condition, with pin temperature 70°C max.
3. Nickel-plated brass pins and soldering terminals.
4. Snap-in mount (panel thickness: 0.04 inch to 0.07 inch).
5. Power module in plastic or metal case that incorporates an IEC connector, fuse holder, power switch and voltage selector switch, all-in-one easy-to-install unit.
Part numbers 06A1, 06A2, 06A2D and 06A5 are power modules in plastic case; part numbers 06AN2, 06AN2D, 06AN3, 06AN3D and 06AN5 are power modules in metal case.
6. Fuse holder designed for one fuse. Safety interlock prevents fuse removal with line plug inserted.
7. Adapts to 110V or 220V input voltage with voltage selector switch.
8. Compact design and high volume production provide maximum flexibility and significant savings in space and cost over assembly of individual components.
9. All part numbers are UL recognized, CSA certified and SEMKO approved.

SPECIFICATIONS

1. Rated voltage: 115VAC/250VAC
2. Maximum leakage current each line-to-ground
2uA AT 115VAC/60Hz
5uA AT 250VAC/50Hz
3. Dielectric strength (one minute)
line-to-ground: 2250VDC
line-to-line: 1450VDC
4. Flammability class: UL 94V-0

ELECTRICAL SCHEMATIC

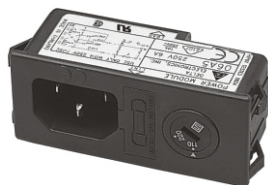


TYPE & RATED CURRENT

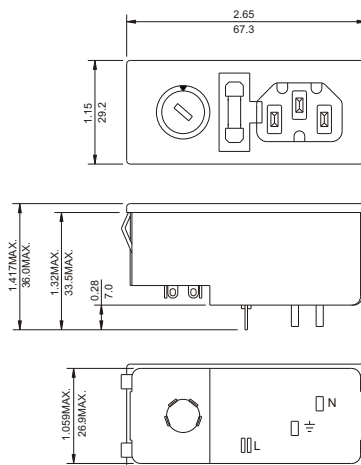
DELTA PART NUMBER		06A1	06A2	06A2D	06A5	REMARKS: * 1. SINGLE-POLE POWER SWITCH UL/CSA APPROVED AT 6A, 125VAC/250VAC VDE APPROVED AT 6A/250VAC ELECTRICAL LIFETIME: 50,000 CYCLES MAXIMUM IN-RUSH CURRENT: 70A * 2. DOUBLE-POLE POWER SWITCH ELECTRICAL LIFETIME: 10,000 CYCLES MAXIMUM IN-RUSH CURRENT: 50A * 3. VOLTAGE SELECTOR SWITCH UL/CSA APPROVED AT 6A/125VAC & 250VAC VDE APPROVED AT 6A/250VAC
RATED CURRENT	UL/CSA (115VAC/250VAC)	6A	6A	4A	6A	
	SEMKO					
CONNECTOR TYPE	MALE	△	△	△	△	
	FEMALE					
FUSE HOLDER		S	S	S	S	
POWER SWITCH		-	SP *1	DP *2	-	
VOLTAGE SELECTOR		-	-	-	FRONT *3	
ELECTRICAL SCHEMATIC		FIG. A	FIG. C	FIG. D	FIG. B	

DELTA PART NUMBER		06AN2	06AN2D	06AN3	06AN3D	06AN5	REMARKS: * 1. SINGLE-POLE POWER SWITCH UL/CSA APPROVED AT 6A, 125VAC/250VAC VDE APPROVED AT 6A/250VAC ELECTRICAL LIFETIME: 50,000 CYCLES MAXIMUM IN-RUSH CURRENT: 70A * 2. DOUBLE-POLE POWER SWITCH ELECTRICAL LIFETIME: 10,000 CYCLES MAXIMUM IN-RUSH CURRENT: 50A * 3. VOLTAGE SELECTOR SWITCH (FRONT) UL/CSA APPROVED AT 6A, 125VAC/250VAC VDE APPROVED AT 6A/250VAC * 4. VOLTAGE SELECTOR SWITCH (REAR) UL/CSA/VDE APPROVED AT 10A/125VAC & 5A/250VAC
RATED CURRENT	UL/CSA (115VAC/250VAC)	6A	6A			6A	
	SEMKO		4A				
CONNECTOR TYPE	MALE	△	△	△	△	△	
	FEMALE						
FUSE HOLDER		S	S	S	S	S	
POWER SWITCH		SP*1	DP *2	SP *1	DP *2	-	
VOLTAGE SELECTOR		-	-	REAR*4	REAR*4	FRONT *3	
ELECTRICAL SCHEMATIC		FIG. C	FIG. D	FIG. C	FIG. D	FIG. B	

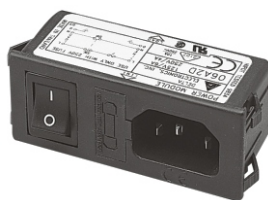
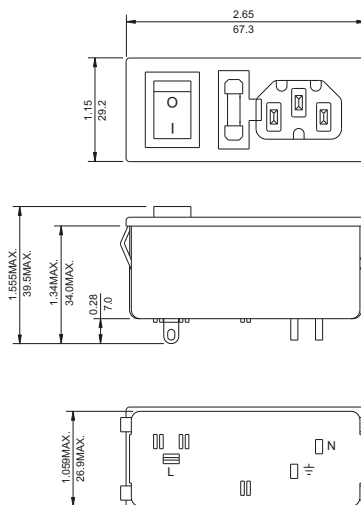
MECHANICAL CONSTRUCTION



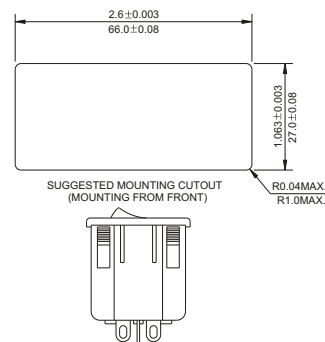
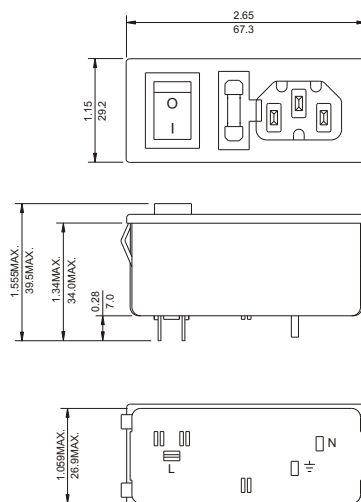
06A5
06A1 (Without voltage selector switch)



06A2

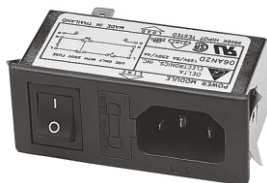


06A2D

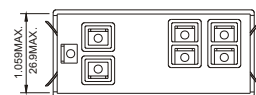
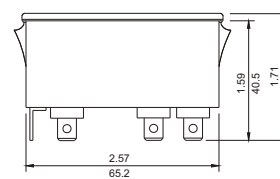
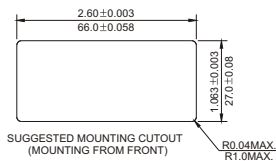
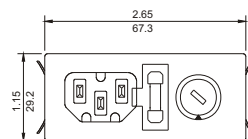
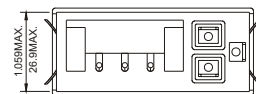
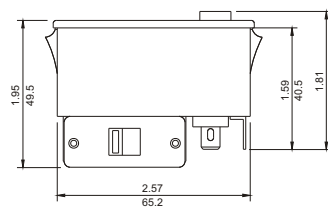
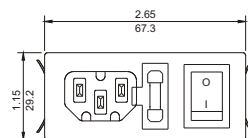
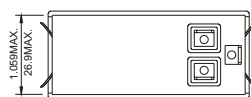
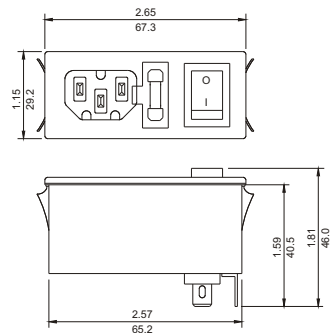


UNIT: $\frac{\text{INCH}}{\text{mm}}$

MECHANICAL CONSTRUCTION



06AN2
06AN2D



The "0" "1" marking of Single and double-pole power on/off switches are reversed in position.

UNIT: INCH
mm



06AN5

POWER ENTRY MODULES

SCREW & SNAP-IN MOUNTING

INTRODUCTIONS

1. Designed to meet globally accepted IEC publication 320 Class 1, that allows users to comply with industry standards in power entry requirement.
2. Connector for cold condition, with pin temperature 70°C max.
3. Nickel-plated brass pins and soldering terminals.
4. Screw-on mount from front or rear (with screw type-M3).
5. Power module incorporates an IEC connector, double fuse holder, voltage selector, double-pole power switch, all-in-one easy-to-install unit.
6. Double-fuse holder designed for two fuses, single fuse & dual fuse capability are both available (all 5x20mm fuses).
7. Adapts to 110-120V or 220-240V input voltage simply by reversing the voltage selector card.
8. Compact design and high volume production provide maximum flexibility and significant savings in space and cost over assembly of individual components.
9. All part numbers are UL, CSA and SEMKO approved.
10. SK-1027/SK-1028 with a variety of built-in filter are also available, see Delta EMI filter catalog for SB/NB series.

SPECIFICATIONS

1. Rated voltage: 250VAC
2. Minimum insulation resistance at 500VDC: 10M OHM
3. Dielectric strength (one minute): 2000VAC between pins
4. Flammability class: UL 94V-0

ELECTRICAL SCHEMATIC

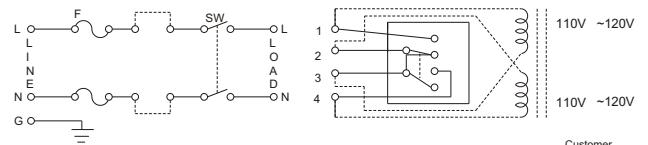


FIG. A

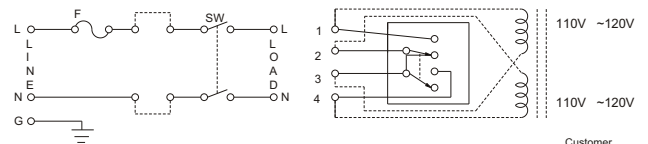
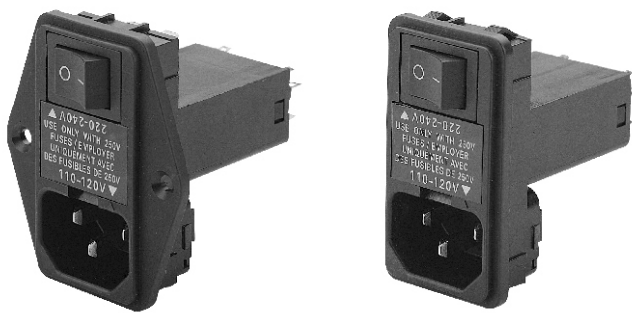


FIG. B

TYPE & RATED CURRENT

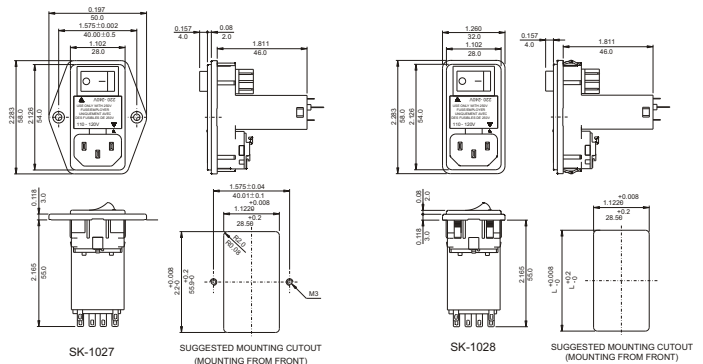
DELTA PARTNUMBER		SK-1027		SK-1028		REMARKS: *1. DOUBLE-POLE POWER SWITCH UL, CSA AND VDE APPROVED AT 10A/250VAC ELECTRICAL LIFETIME: 10,000 CYCLE MAXIMUM IN-RUSH CURRENT: 51A *2. VOLTAGE SELECTOR CARD RATING UL/CSA-10A/250VAC VDE-6A/250VAC
RATED CURRENT (AT 250VAC)	UL/CSA	10A	10A	10A	10A	
	SEMKO	6A	6A	6A	6A	
CONNECTOR TYPE	MALE	△	△	△	△	
	FEMALE					
FUSE HOLDER		S	D	S	D	
POWER SWITCH		* DP*1	DP*1	DP*1	DP*1	
VOLTAGE SELECTOR		* FRONT*2	FRONT*2	FRONT*2	FRONT*2	
ELECTRICAL SCHEMATIC		FIG. B	FIG. A	FIG. A	FIG. B	
MOUNTING TYPE		SCREW		SNAP-IN		

MECHANICAL CONSTRUCTION



SK1027

SK1028



SK-1027

SUGGESTED MOUNTING CUTOUT
(MOUNTING FROM FRONT)

SK-1028

SUGGESTED MOUNTING CUTOUT
(MOUNTING FROM FRONT)

L according to panel thickness:
0.032~0.071INCH L=2.0000~2.20mm L=55.9
0.08~0.125INCH L=2.2132~3.2mm L=56.2

UNIT: $\frac{\text{INCH}}{\text{mm}}$



TDSERIES

3-PHASE, 3-WIRE FILTERS

COMPONENTS

PART NO.	Cx (uF)	Cy (pF)	L1 (uH)	L2 (mH)	R (KΩ)
10TDS6D	0.22	2200	122	2.8	500
20TDS6D			78	1.6	
30TDS6D			40	0.9	
40TDS6D			32	1.1	
50TDS6D			14	0.6	

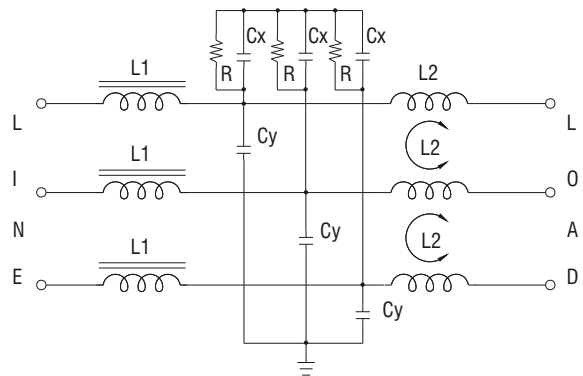
INTRODUCTIONS

1. Applications: Electric equipment, UPS, machine tool, copy machine, automation equipment, robot, AC motor drive
2. Voltage rating: 440VAC
3. Operating frequency: 50/60Hz

MINIMUM INSERTION LOSS IN dB

COMMON MODE (L-G) IN 50 OHM SYSTEM							
TYPE	CURRENT RATING	FREQUENCY - MHz					
		.15	.50	1.0	5.0	10	30
10TDS6D	10A	25	35	40	40	40	25
20TDS6D	20A	15	30	30	35	25	20
30TDS6D	30A	15	20	30	40	40	25
40TDS6D	40A	20	30	30	35	40	30
50TDS6D	50A	10	20	20	35	35	35
DIFFERENTIAL MODE (L-L) IN 50 OHM SYSTEM							
10TDS6D	10A	15	35	45	45	45	30
20TDS6D	20A	10	30	40	40	30	20
30TDS6D	30A	10	20	30	40	30	20
40TDS6D	40A	10	20	30	35	40	35
50TDS6D	50A	8	20	30	35	35	35

ELECTRICAL SCHEMATIC

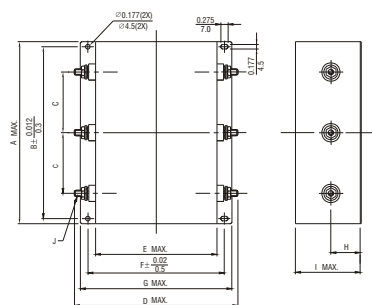
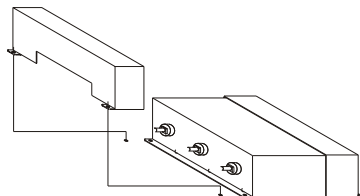
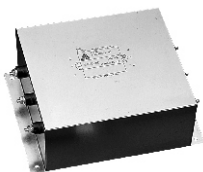


SERIES DIMENSIONS

DIM. TYPE	A	B	C	D	E	F	G	H	I	J
10TDS6D	7.16	6.692	2.36	6.69	4.80	5.314	5.98	1.37	2.63	M6X1.0
20TDS6D	182.0	170.0	60.0	170.0	122.0	135.0	152.0	35.0	67.0	
30TDS6D	7.16	6.692	2.36	6.69	4.80	5.314	5.98	1.37	2.63	
40TDS6D	182.0	170.0	60.0	175.0	122.0	135.0	152.0	35.0	67.0	
50TDS6D	7.16	6.299	1.96	10.23	7.95	8.661	9.52	1.57	3.22	
50TDS6D	182.0	160.0	50.0	260.0	202.0	220.0	242.0	40.0	82.0	

MECHANICAL CONSTRUCTION

Terminal cover: (Optional)



UNIT: INCH
mm



TDH SERIES

LOW VOLTAGE 3-PHASE, 3-WIRE FILTERS

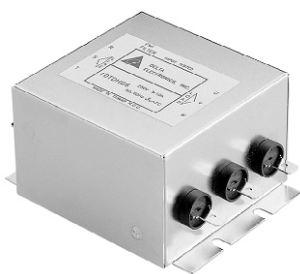
COMPONENT

PART NO.	L (mH)	Cx (uF)	Cy (pF)	R (KΩ)
10TDHG6	2.3	0.22	4700	680
20TDHG6	0.5			
30TDHS6	0.5			
40TDHS6	1.1	0.47		
50TDHS6	0.7	0.68		

MINIMUM INSERTION LOSS IN dB

COMMON MODE (L-G) IN 50 OHM SYSTEM								
TYPE	CURRENT RATING	FREQUENCY - MHz						
		.15	.50	1.0	5.0	10	30	
10TDHG6	10A	25	40	40	40	40	35	
20TDHG6	20A	15	25	28	38	45	35	
30TDHS6	30A	10	25	25	35	30	20	
40TDHS6	40A	18	30	30	35	40	25	
50TDHS6	50A	15	28	28	35	40	35	
DIFFERENTIAL MODE (L-L) IN 50 OHM SYSTEM								
10TDHG6	10A	15	28	40	40	45	40	
20TDHG6	20A	15	25	28	50	55	40	
30TDHS6	30A	15	25	35	35	35	40	
40TDHS6	40A	18	28	35	45	50	35	
50TDHS6	50A	20	30	35	40	45	45	

MECHANICAL CONSTRUCTION

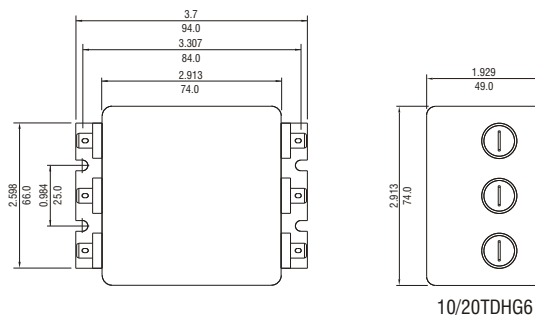
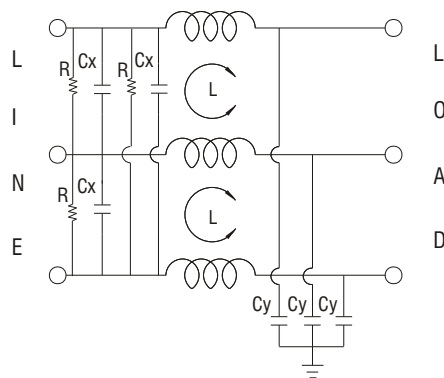


10/20TDHG6

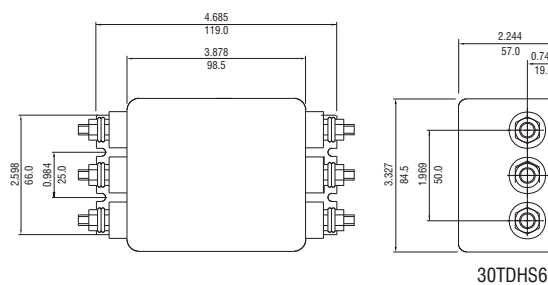
INTRODUCTIONS

1. Applications: Electric equipment, UPS, machine tool, copy machine, automation equipment, robot, AC motor drive
2. Voltage rating: 250VAC
3. Operating frequency: 50/60Hz

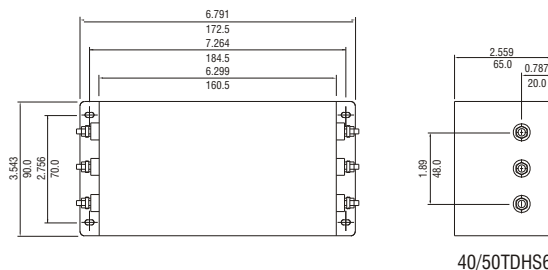
ELECTRICAL SCHEMATIC



10/20TDHG6



30TDHS6



40/50TDHS6

UNIT: INCH
mm



TDR SERIES

VERTICAL 3-PHASE, 3-WIRE FILTERS

COMPONENTS

PART NO.	ΣC_x (uF)	ΣC_y (uF)	ΣL (mH)	R1 (M Ω)	R2 (M Ω)
07TDRT1W4	4	1.5	4.5	1.5	0.68
16TDRT1W4	5.9		3.0		
30TDRT1W4	6.6	2.2	2.0		
42TDRT1W4		2.3	1.5		
55TDRT1W4			1.1		

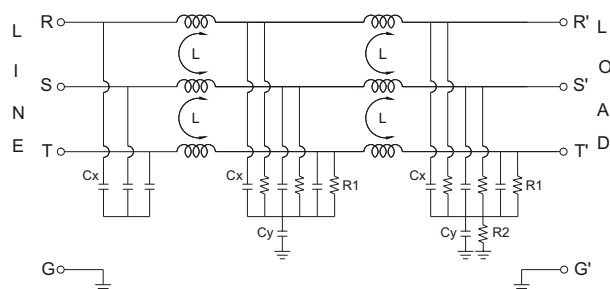
INTRODUCTIONS

1. Applications: Electric equipment, UPS, machine tool, copy machine, automation equipment, robot, AC motor drive
2. Voltage rating: 480VAC
3. Operating frequency: 50/60Hz

MINIMUM INSERTION LOSS IN dB

COMMON MODE (L-G) IN 50 OHM SYSTEM							
PART NO.	FREQUENCY-MHz						
	.15	.50	1.0	5.0	10	30	
07TDRT1W4	25	60	60	60	55	35	
16TDRT1W4	20	60	60	60	55	35	
30TDRT1W4	20	55	55	55	50	35	
42TDRT1W4	20	55	55	55	50	35	
55TDRT1W4	20	55	55	55	50	35	
DIFFERENTIAL MODE (L-L) IN 50 OHM SYSTEM							
07TDRT1W4	35	65	65	65	60	40	
16TDRT1W4	35	65	65	65	60	40	
30TDRT1W4	35	65	65	65	60	40	
42TDRT1W4	30	60	60	60	50	40	
55TDRT1W4	30	60	60	60	50	40	

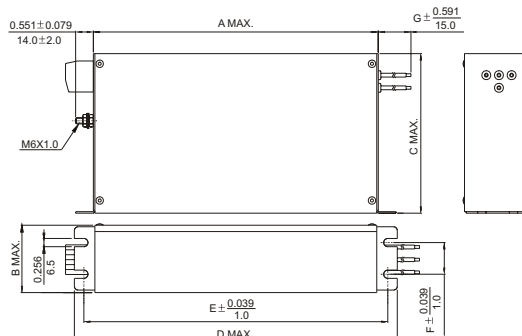
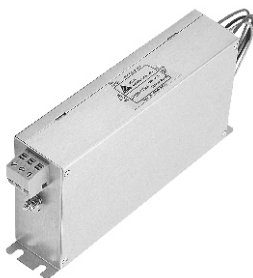
ELECTRICAL SCHEMATIC



SERIES DIMENSIONS

PART NO.	DIMENSIONS IN INCHES/mm							
	A	B	C	D	E	F	G	
07TDRT1W4	8.937 227.0	2.047 52.0	5.039 128.0	10.118 257.0	9.449 240.0	0.984 25.0	11.811	AWG18
16TDRT1W4	10.906 277.0	2.244 57.0	5.669 144.0	12.087 307.0	11.417 290.0	1.181 30.0	300.0	AWG14
30TDRT1W4	12.087 307.0	2.440 62.0	5.984 152.0	13.268 337.0	12.598 320.0	1.378 35.0	15.748 400.0	AWG12
42TDRT1W4	11.890 302.0	2.835 72.0	7.362 187.0	13.031 331.0	12.362 314.0	1.772 45.0	19.685 500.0	AWG10
55TDRT1W4		3.228 82.0				2.165 55.0		

MECHANICAL CONSTRUCTION



UNIT: INCH
mm



TDR SERIES

VERTICAL 3-PHASE, 3-WIRE FILTERS

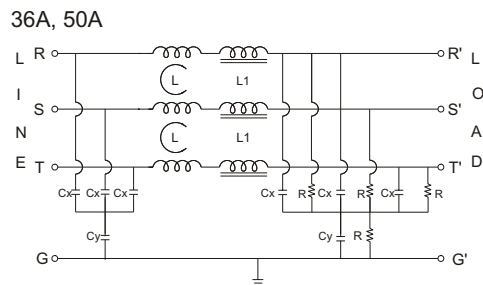
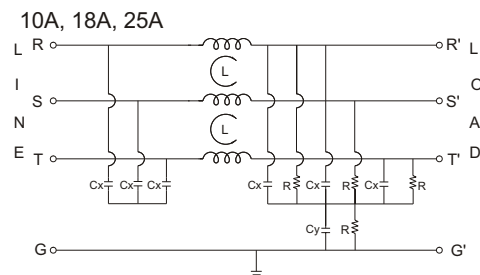
COMPONENTS

PART Number	Cx(uF)	Cy(uF)	L(mH)	L1(uH)	R(MΩ)
10TDRT2	1.0	0.47	2.8	-	1.0
18TDRT2		0.68	2.9		
25TDRT2	2.2	1.0	1.9	7.0	
36TDRT2	1.0	0.47	0.396		
50TDRT2	2.2	1.0	0.275		
				5.1	

INTRODUCTIONS

1. Applications: Electric equipment, UPS, machine tool, copy machine, automation equipment, robot, AC motor drive
2. Voltage rating: 500VAC
3. Operating frequency: 50/60Hz

ELECTRICAL SCHEMATIC



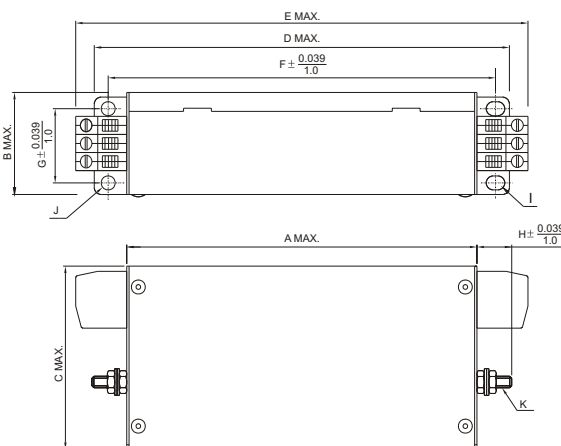
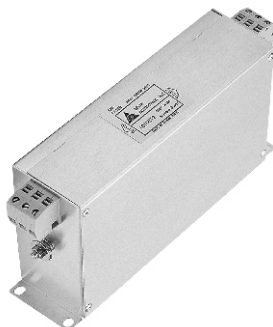
MINIMUM INSERTION LOSS IN dB

COMMON MODE (L-G) IN 50 OHM SYSTEM									
PART NO.	FREQUENCY-MHz								
	.01	.05	.10	.15	.50	1.0	5.0	10	30
10TDRT2	5	25	40	45	55	50	40	30	30
18TDRT2	10	30	40	50	50	50	40	35	20
25TDRT2	10	30	45	55	45	45	40	30	20
36TDRT2	5	25	45	55	50	45	40	35	35
50TDRT2	5	35	55	55	50	45	40	40	30
DIFFERENTIAL MODE (L-L) IN 50 OHM SYSTEM									
10TDRT2	5	15	10	30	55	50	40	30	30
18TDRT2	5	12	25	35	50	50	50	40	25
25TDRT2	10	10	40	45	45	45	40	35	25
36TDRT2	5	10	20	30	50	45	40	40	40
50TDRT2	5	10	35	45	50	45	40	40	30

SERIES DIMENSIONS

PART NO.	DIMENSIONS IN INCHES/mm											
	A	B	C	D	E	F	G	H	I	J	K	
10TDRT2	6.024	1.772	3.189	7.087	7.756	6.575	1.260	0.591	0.236 x 0.315	0.236	M5x0.8	
	153.0	45.0	81.0	180.0	197.0	167.0	32.0					
18TDRT2	7.992	2.205	4.567	9.016	9.724	8.622	1.655	15.0	6.0 x 8.0	Ø6.0		
25TDRT2	203.0	56.0	116.0	229.0	247.0	219.0	42.0	0.276 x 0.394				M6x1.0
36TDRT2	9.528	2.953	6.417	10.709	11.496	10.236	2.362					
50TDRT2	242.0	75.0	163.0	272.0	292.0	260.0	60.0	20.0	7.0 x 10.0	Ø7.0		

MECHANICAL CONSTRUCTION



UNIT: INCH
mm



TDS_{SERIES}

GENERAL 3-PHASE, 3-WIRE FILTERS

COMPONENTS

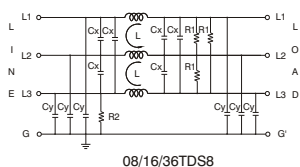
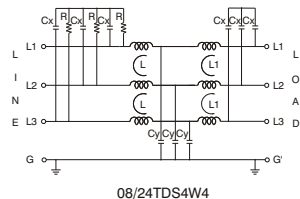
PART NO.	Leakage current max mA	L (mH)	L1 (mH)	Cx (uF)	Cy (nF)	R (KΩ)
• 08TDS4W4	6.5	4.2	1.5	1	15	470
• 24TDS4W4		1	0.5			
PART NO.	Leakage current max mA	L (mH)	Σ Cx (uF)	Σ Cy (uF)	R1 (MΩ)	R2 (MΩ)
08TDS8	14.5	7.6	1.6	0.17	2	-
16TDS8		5.2	3.4		1.5	1.1
36TDS8	160	1.3	4.4	1.8		

• UL, VDE approved

INTRODUCTIONS

1. Applications: Electric equipment, UPS, machine tool, copy machine, automation equipment, robot, AC motor drive
2. Voltage rating: 480VAC
3. Operating frequency: 50/60Hz

ELECTRICAL SCHEMATIC



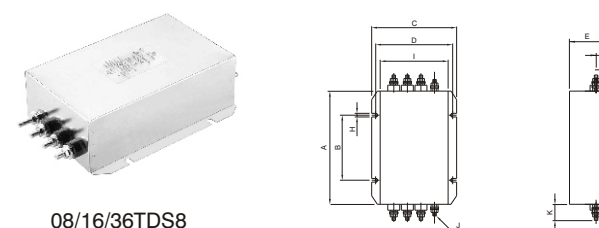
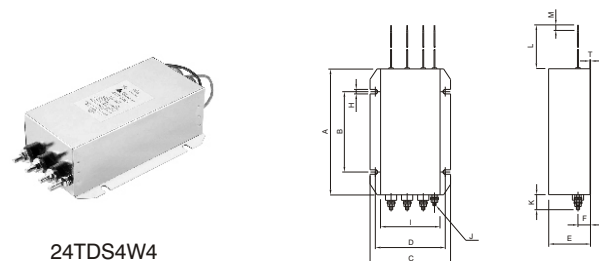
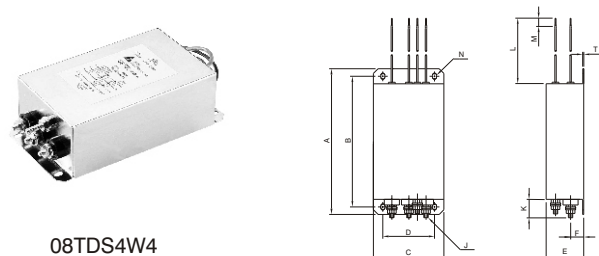
MINIMUM INSERTION LOSS IN dB

COMMON MODE (L-G) IN 50 OHM SYSTEM							
TYPE	CURRENT RATING	FREQUENCY – MHz					
		.15	.50	1.0	5.0	10	30
08TDS4W4	8A	70	65	60	50	40	30
24TDS4W4	24A	40	65	70	70	60	35
08TDS8	8A	50	65	65	55	50	50
16TDS8	16A	45	70	65	55	50	50
36TDS8	36A	60	70	65	55	50	55
DIFFERENTIAL MODE (L-L) IN 50 OHM SYSTEM							
08TDS4W4	8A	35	65	70	55	50	35
24TDS4W4	24A	15	60	65	65	60	40
08TDS8	8A	50	65	60	55	50	50
16TDS8	16A	50	70	65	55	55	50
36TDS8	36A	50	70	65	55	50	45

SERIES DIMENSIONS

	08TDS4W4	24TDS4W4	08TDS8	16TDS8	36TDS8
A	145	180			200
B	135		115		
C	75	115			150
D	55	100			136
E	45	60			65
F	16		18		
H			6.4		
I		85		120	
J	M4 X 0.7		M6 X 1.0		
K	15		20		
L	300				
M	6				
N	7 X 5.3				
T			0.8		
W	AWG18	AWG16			

MECHANICAL CONSTRUCTION



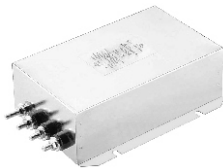
MECHANICAL CONSTRUCTION



08TDS4W4



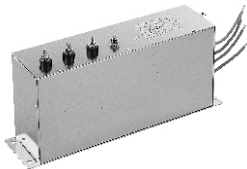
24TDS4W4



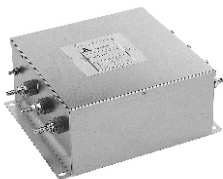
08/16/36TDS8



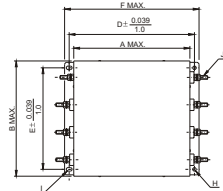
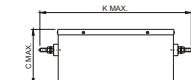
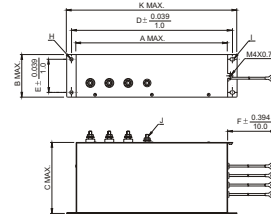
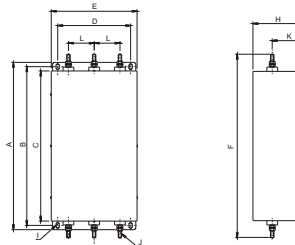
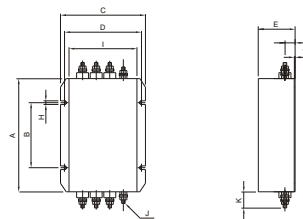
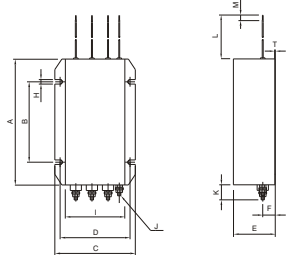
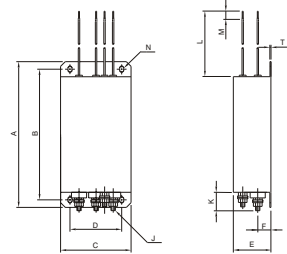
100TDS6



50TDS4W4



100TDS8A



UNIT: INCH
mm



TDS_{SERIES}

HIGH CURRENT 3-PHASE, 3-WIRE FILTERS

COMPONENTS

PART NO.	Cx(μF)	Cy(μF)	L(μH)	R1(μH)	R2(KΩ)
200TDSS84	4.7	2.2	90	470	1.0
300TDSS84	10.0		3.0		
400TDSS84	12.2				
500TDSS84	14.7	4.7	3.0		
600TDSS84	20.0				

MINIMUM INSERTION LOSS IN dB

COMMON MODE (L-G) IN 50 OHM SYSTEM									
PART NO.	FREQUENCY-MHz								
	.01	.05	.10	.15	.50	1.0	5.0	10	30
200TDSS84	5	20	30	35	50	45	25	20	10
300TDSS84	5	20	25	30	30	23	10	8	5
400TDSS84	5	20	28	30	30	20	10	5	2
500TDSS84	10	25	35	45	25	20	10	5	2
600TDSS84	5	10	25	25	25	20	10	5	2
DIFFERENTIAL MODE (L-L) IN 50 OHM SYSTEM									
200TDSS84	20	30	40	40	50	45	25	20	15
300TDSS84	25	35	35	35	30	25	14	10	5
400TDSS84	20	35	30	30	30	20	10	8	2
500TDSS84	15	35	40	40	30	25	10	10	5
600TDSS84	15	20	40	40	30	25	10	10	5

SERIES DIMENSIONS

PART NO.	DIMENSIONS IN INCHES/mm												
	A	B	C	D	E	F	G	H	I	J	K	L	M
200TDSS84	17.008	14.960	13.071	8.346	4.528	13.976	7.087	0.315x0.551	0.118	0.315	Ø0.472	1.024	-
	432.0	380.0	332.0	212.0	115.0	355.0	180.0	8.0X14.0	3.0	8.0	Ø12.0	26.0	-
300TDSS84	20.669	18.800	15.827	9.528	5.591	17.717	2.362	2.765	0.256x0.315	0.118	Ø0.236	0.591	1.772
400TDSS84	525.0	477.0	402.0	242.0	142.0	450.0	60.0	70.0	6.5X8.0	3.0	Ø6.0	15.0	45.0
500TDSS84	26.772	22.520	19.764	10.709	7.165	21.457	2.953	2.953	0.295x0.374	0.236	Ø0.295	0.591	2.165
600TDSS84	680.0	572.0	502.0	272.0	182.0	545.0	75.0	75.0	7.5X9.5	6.0	Ø7.5	15.0	55.0

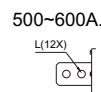
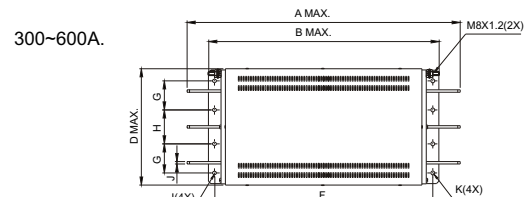
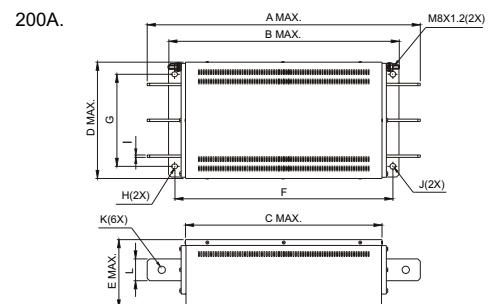
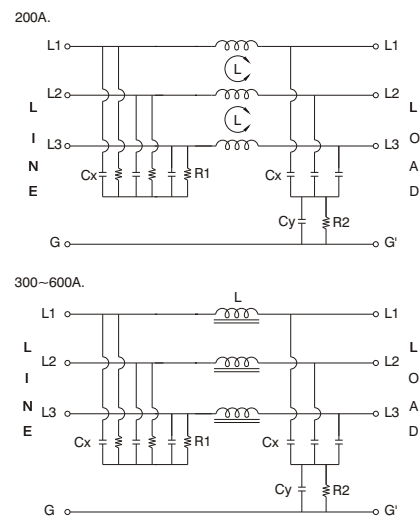
MECHANICAL CONSTRUCTION



INTRODUCTIONS

1. Applications: Electric equipment, UPS, machine tool, copy machine, automation equipment, robot, AC motor drive
2. Voltage rating: 480VAC
3. Operating frequency: 50/60Hz

ELECTRICAL SCHEMATIC



UNIT: INCH
mm



TDT SERIES

HIGH PERFORMANCE 3-PHASE, 3-WIRE FILTERS

COMPONENTS

PART NO.	ΣCx (uF)	ΣCy (uF)	L (mH)	R (MΩ)	R1 (MΩ)
08TDT2	1.6	0.17	7.6	2.0	-
16TDT2	3.4		5.2	1.5	1.1
25TDT2		1.8	2.2		
36TDT2	4.4		1.3		
50TDT2	2.0	0.8			

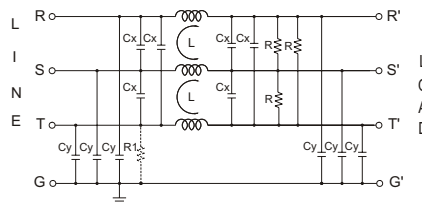
INTRODUCTIONS

1. Applications: Electric equipment, UPS, machine tool, copy machine, automation equipment, robot, AC motor drive
2. Voltage rating: 480VAC
3. Operating frequency: 50/60Hz

MINIMUM INSERTION LOSS IN dB

COMMON MODE (L-G) IN 50 OHM SYSTEM									
PART NO.	FREQUENCY-MHz								
	.01	.05	.10	.15	.50	1.0	5.0	10	30
08TDT2	20	30	40	50	65	65	55	50	50
16TDT2	15	25	35	45	70	65	55	50	50
25TDT2	15	25	35	40	50	50	50	40	30
36TDT2	10	35	50	50	60	60	50	40	55
50TDT2	5	30	50	50	50	50	50	50	50
DIFFERENTIAL MODE (L-L) IN 50 OHM SYSTEM									
08TDT2	10	10	20	50	65	65	55	50	50
16TDT2	10	10	40	50	70	65	55	50	50
25TDT2	10	10	40	45	50	50	50	40	30
36TDT2	10	20	40	50	60	60	50	45	45
50TDT2	5	20	40	45	50	50	50	50	50

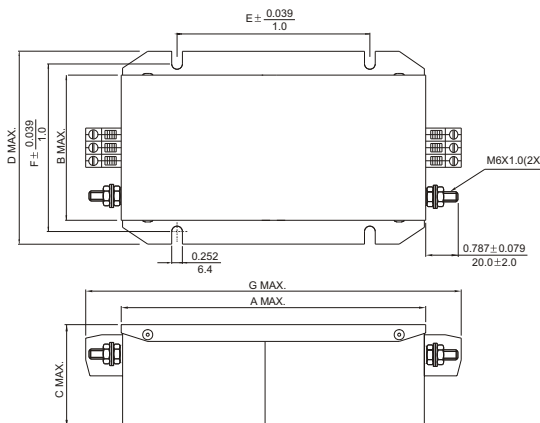
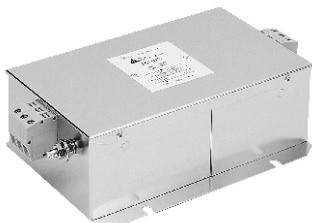
ELECTRICAL SCHEMATIC



SERIES DIMENSIONS

PART NO.	DIMENSIONS IN INCHES/mm							
	A	B	C	D	E	F	G	H
08TDT2	7.165 182.0	3.425 87.0	2.40 61.0	4.606 117.0	4.528 115.0	3.937 100.0	8.898 226.0	—
16TDT2							9.646 245.0	
25TDT2	7.953	4.803	2.598	5.984		5.354	245.0	
36TDT2	202.0	122.0	66.0	152.0		136.0	9.882	
50TDT2							251.0	

MECHANICAL CONSTRUCTION





TDV SERIES

3-PHASE FILTERS



COMPONENTS

PART NO.	Cx1(uF)	Cx2(uF)	Cy(uF)	L(mH)	R1(MΩ)	R2(MΩ)
07TDVST2	4.4	2.2	2.2	2.52	1.0	0.68
16TDVST2				1.70		
30TDVST2		4.4		1.00		
42TDVST2				0.60		
55TDVST2	6.6	6.6		0.60		
75TDVST2				0.45		
100TDVST2			0.30	1.5		

MINIMUM INSERTION LOSS IN dB

COMMON MODE(L-G)IN 50 OHM SYSTEM						
PART NO.	FREQUENCY-MHz					
	.15	.50	1.0	5.0	10	30
07TDVST2	50	70	65	50	40	20
16TDVST2	50	50	50	45	30	20
30TDVST2	50	55	50	45	30	15
42TDVST2	45	50	50	30	25	10
55TDVST2	45	60	55	35	30	10
75TDVST2	40	55	50	25	18	7
100TDVST2	35	50	45	25	15	7
DIFFERENTIAL MODE(L-L)IN 50 OHM SYSTEM						
07TDVST2	45	60	70	50	40	40
16TDVST2	45	45	50	40	35	30
30TDVST2	45	45	45	45	45	25
42TDVST2	35	50	50	40	40	20
55TDVST2	40	55	55	50	50	20
75TDVST2	40	45	45	40	40	5
100TDVST2	30	35	35	35	30	7

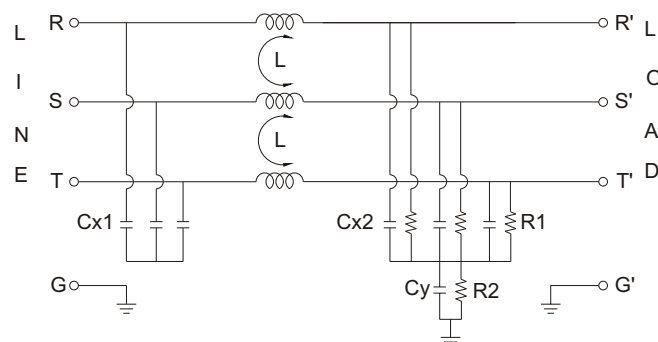
SERIES DIMENSIONS

PART NO.	DIMENSIONS IN INCHES/mm						
	A	B	C	D	E	F	G
07TDVST2	6.378	1.654	2.835	7.559	7.087	0.787	0.213
	162.0	42.0		192.0	180.0	20.0	
16TDVST2	8.740	1.850	72.0	9.921	9.252	0.984	5.4
	222.0	47.0		252.0	235.0	25.0	
30TDVST2	9.528	2.047	3.425	10.709	10.039	1.181	6.5
	242.0			272.0	255.0		
42TDVST2	11.102	52.0	87.0	12.283	11.614	30.0	0.256
	282.0			312.0	295.0		
55TDVST2	8.740	3.425	3.622	9.921	9.252	2.362	6.5
	222.0	87.0	92.0	252.0	235.0		
75TDVST2	9.528	3.622	5.394	10.709	10.039	60.0	0.256
	242.0	92.0	137.0	272.0	255.0		
100TDVST2	9.449	3.543	5.906	10.63	10.039	2.559	6.5
	240.0	90.0	150.0	270.0	255.0		

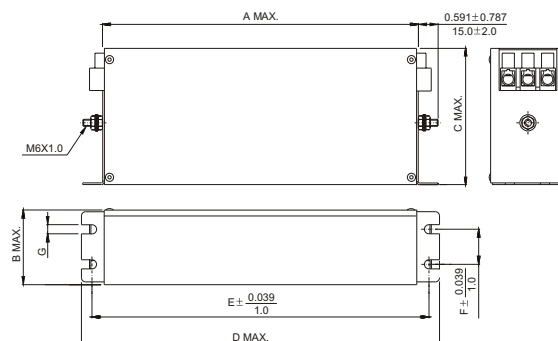
INTRODUCTIONS

1. Applications: Electric equipment, UPS, machine tool, copy machine, automation equipment, robot, AC motor drive
2. Voltage rating: 480VAC
3. Operating frequency: 50/60Hz

ELECTRICAL SCHEMATIC



MECHANICAL CONSTRUCTION



UNIT: $\frac{\text{INCH}}{\text{mm}}$



COMPACT 3-PHASE, 4-WIRE FILTERS

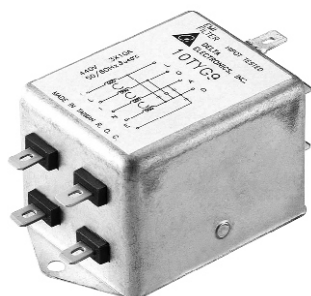
**COMPONENT**

PART NO.	L (mH)	Cx (uF)	Cy (pF)
10TYG9	0.3	0.1	4700
20TYS9	0.15		22000

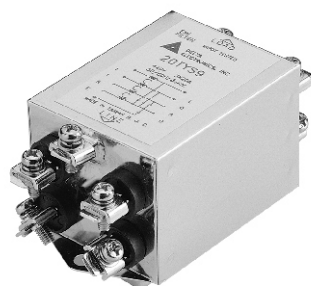
MINIMUM INSERTION LOSS IN dB

COMMON MODE (L-G) IN 50 OHM SYSTEM							
TYPE	CURRENT RATING	FREQUENCY – MHz					
		.15	.50	1.0	5.0	10	30
10TYG9	10A	10	20	20	20	30	25
20TYS9	20A	10	15	20	35	40	25
DIFFERENTIAL MODE (L-L) IN 50 OHM SYSTEM							
10TYG9	10A	10	20	25	25	30	30
20TYS9	20A	10	15	20	20	25	20

MECHANICAL CONSTRUCTION



10TYG9

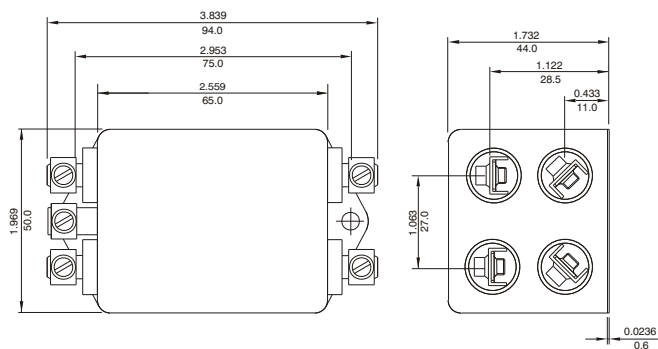
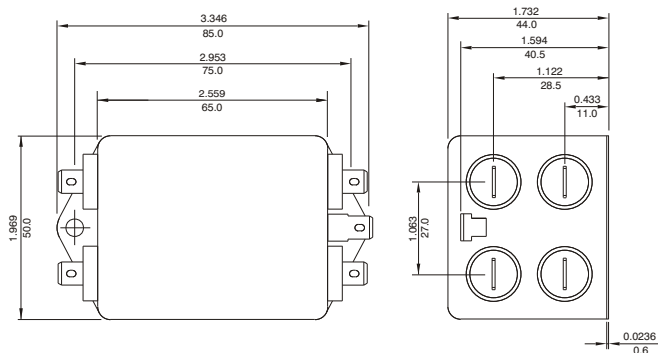
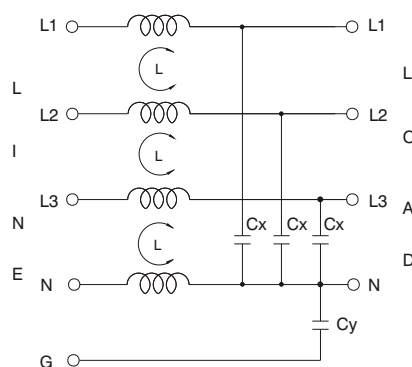


20TYS9

INTRODUCTIONS

1. Applications: Electric equipment, UPS, machine tool, copy machine, automation equipment, robot, AC motor drive
2. Voltage rating: 440VAC
3. Operating frequency: 50/60Hz

ELECTRICAL SCHEMATIC

UNIT: $\frac{\text{INCH}}{\text{mm}}$



TYSERIES

3-PHASE, 4-WIRE FILTERS

COMPONENTS

PART NO.	C1 (uF)	C2 (uF)	Lg (uH)	L (mH)	R (KΩ)
20TYS10	2.0	1.0	78	3.2	110
• 30TYS10			52	1.6	
60TYS10			52	0.32	

• UL, CSA & SEMKO approved C3: 3300pF C4: 14700pF

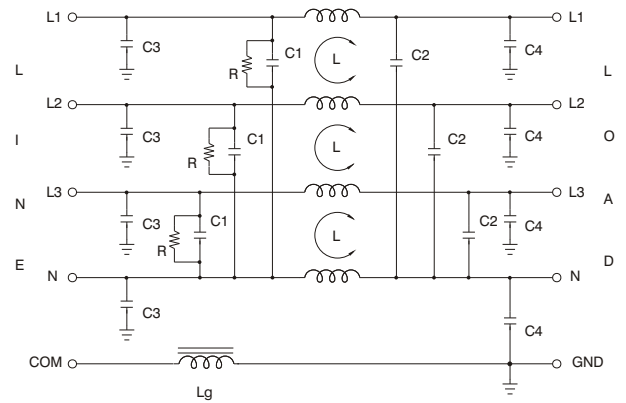
INTRODUCTIONS

1. Applications: Electric equipment, UPS, machine tool, copy machine, automation equipment, robot, AC motor drive
2. Voltage rating: 440VAC
3. Operating frequency: 50/60Hz

MINIMUM INSERTION LOSS IN dB

COMMON MODE (L-G) IN 50 OHM SYSTEM							
TYPE	CURRENT RATING	FREQUENCY - MHz					
		.15	.50	1.0	5.0	10	30
20TYS10	20A	25	40	35	30	30	30
30TYS10	30A	25	40	40	45	45	35
60TYS10	60A	15	30	30	30	30	30
DIFFERENTIAL MODE (L-L) IN 50 OHM SYSTEM							
20TYS10	20A	35	35	35	30	30	30
30TYS10	30A	40	55	55	45	45	40
60TYS10	60A	18	45	45	35	35	30

ELECTRICAL SCHEMATIC

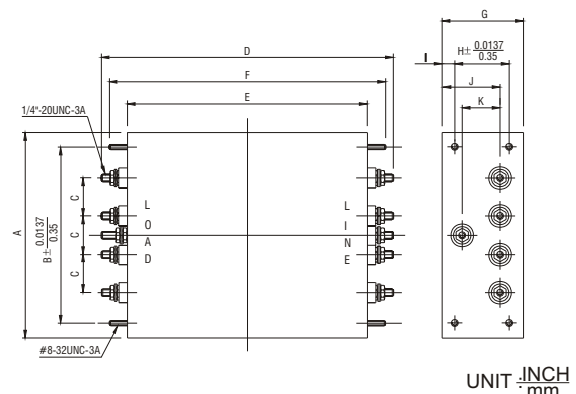
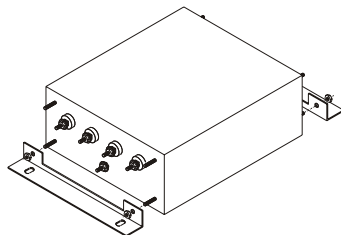
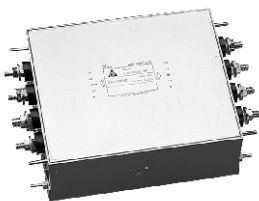


SERIES

DIM. TYPE	A	B	C	D	E	F	G	H	I	J	K
20TYS10	5.59 142.0	4.606 117.0	0.98 25.0	8.85 225.0	6.57 167.0	7.75 197.0	2.55 65.0	1.496 38.0	0.51 13.0	1.81 46.0	0.88 22.4
30TYS10											
60TYS10											

MECHANICAL CONSTRUCTION

Optional mounting Flange:



UNIT: INCH
mm



TYSERIES

HIGH CURRENT 3-PHASE, 4-WIRE FILTERS

COMPONENTS

PART NO.	Cx(uF)	Cy(uF)	L(uH)	R1(KΩ)	R1(MΩ)
200TYSS104	4.7	2.2	3.0	470	1M
300TYSS104	10.0				
400TYSS104	12.2				
500TYSS104	14.7	4.7			
600TYSS104	20.0				

MINIMUM INSERTION LOSS IN dB

COMMON MODE (L-G) IN 50 OHM SYSTEM									
PART Number	FREQUENCY-MHz								
	.01	.05	.10	.15	.50	1.0	5.0	10	30
200TYSS104	5	15	20	20	30	30	15	10	5
300TYSS104	10	25	30	30	35	30	20	15	10
400TYSS104	10	25	30	30	30	20	10	10	5
500TYSS104	5	10	25	25	30	25	15	10	5
600TYSS104	5	10	25	25	35	30	15	10	5
DIFFERENTIAL MODE (L-L) IN 50 OHM SYSTEM									
200TYSS104	10	20	40	40	35	25	15	10	5
300TYSS104	25	35	35	35	35	30	20	15	10
400TYSS104	25	35	35	30	30	25	10	10	5
500TYSS104	20	20	40	40	30	25	15	10	5
600TYSS104	20	20	40	40	35	30	15	10	5

SERIES DIMENSIONS

PART number	DIMENSIONS IN INCHES/mm													
	A	B	C	D	E	F	G	H	I	J	K	L	M	N
200TYSS104	20.669	18.800	15.827	9.528	5.591	17.717	2.362	2.765	0.256x0.315	0.118	Ø0.236	0.591	1.772	M8x1.2
300TYSS104	525.0	477.0	402.0	242.0	142.0	450.0	60.0	70.0	6.5x8.0	3.0	Ø6.0	15.0	45.0	
400TYSS104														
500TYSS104	26.772	22.520	19.764	10.709	7.165	21.457	2.953	2.953	0.295x0.374	0.236	Ø0.295	0.591	2.165	M12x11.7
600TYSS104	680.0	572.0	502.0	272.0	182.0	545.0	75.0	75.0	7.5x9.5	6.0	Ø7.5	15.0	55.0	

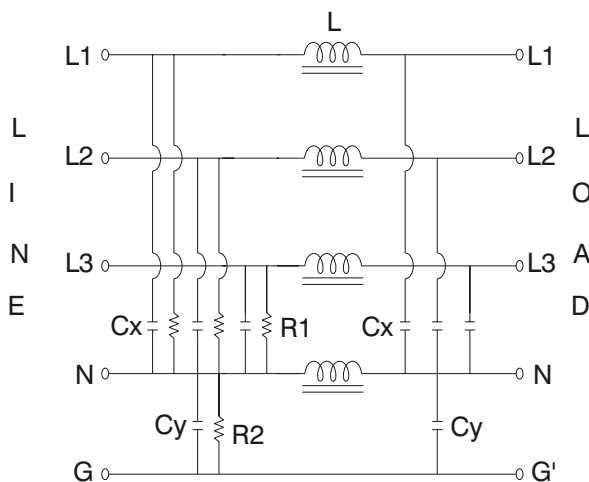
MECHANICAL CONSTRUCTION



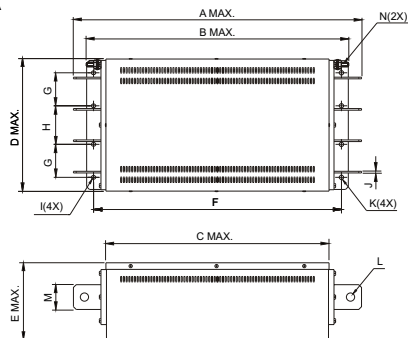
INTRODUCTIONS

1. Applications: Electric equipment, UPS, machine tool, copy machine, automation equipment, robot, AC motor drive
2. Voltage rating: 480VAC
3. Operating frequency: 50/60Hz

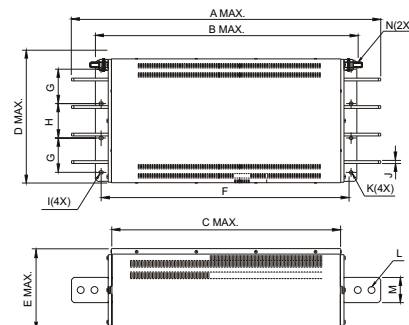
ELECTRICAL SCHEMATIC



200~400A



500~600A



UNIT: INCH
mm



TYT SERIES

HIGH PERFORMANCE 3-PHASE, 4-WIRE FILTERS

COMPONENTS

PART NO.	Cx (uF)	Cx1 (uF)	Cy (nF)	L (mH)	R (KΩ)
16TYT2	0.68	1	15	1.2	100
25TYT2	2	2		1.3	
36TYT2				0.95	
50TYT2				0.55	
100TYSS104	2.2	2.2	47	0.32	100
150TYSS104	4.4	4.4	200	0.11	

INTRODUCTIONS

1. Applications: Electric equipment, UPS, machine tool, copy machine, automation equipment, robot, AC motor drive
2. Voltage rating: 480VAC
3. Operating frequency: 50/60Hz

MINIMUM INSERTION LOSS IN dB

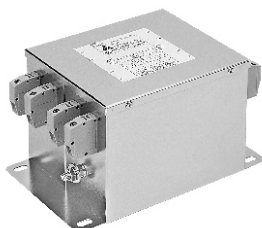
COMMON MODE (L-G) IN 50 OHM SYSTEM						
PART NO.	FREQUENCY-MHz					
	.15	.50	1.0	5.0	10	30
16TYT2	25	50	50	50	45	30
25TYT2	25	50	50	50	45	30
36TYT2	25	50	50	50	40	25
50TYT2	25	45	45	40	40	25
100TYSS104	10	20	25	30	30	20
150TYSS104	10	20	25	30	30	20
DIFFERENTIAL MODE (L-L) IN 50 OHM SYSTEM						
16TYT2	35	55	60	60	40	30
25TYT2	35	55	60	60	40	30
36TYT2	30	50	55	50	40	30
50TYT2	30	50	50	40	40	30
100TYSS104	30	40	40	35	35	25
150TYSS104	30	40	40	35	35	25

SERIES DIMENSIONS

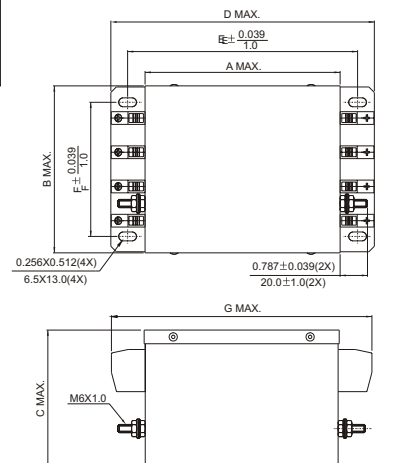
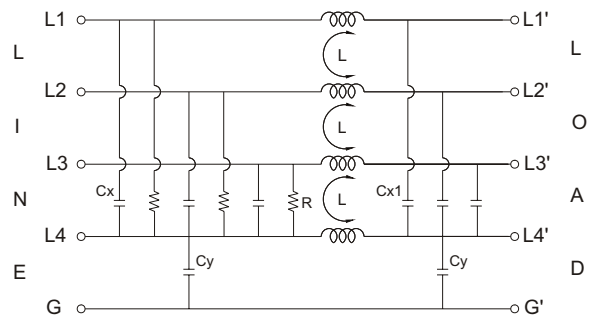
PART NO.	DIMENSIONS IN INCHES/mm						
	A	B	C	D	E	F	G
16TYT2	5.591 142.0	4.213 107.0	3.228 82.0	7.539 191.5	6.516 165.5	196.9 50.0	7.559 192.0
25TYT2							
36TYT2							
50TYT2	5.689 144.5	4.882 124.0	4.094 104.0	7.638 194.0	6.614 168.0	3.858 98.0	7.638 194.0
*100TYSS104	8.346 212.0	6.378 162.0	5.197 132.0	9.921 252.0	9.134 232.0	4.724 120.0	11.496 292.0
*150TYSS104							

* Screw type

MECHANICAL CONSTRUCTION



ELECTRICAL SCHEMATIC





TDT & DRT SERIES

EMI FILTER FOR INVERTERS

COMPONENTS

PART NO.	Cx1 (uF)	Cx2 (uF)	Cy (nF)	L (mH)	Lg (uH)	R (KΩ)
16DRT1W3A	1.0	0.68	4.7	1.7	32	200
*30DRT1W3	2.2	1.0	10	2.2	-	

*UL APPROVED

INTRODUCTIONS

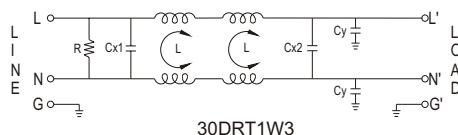
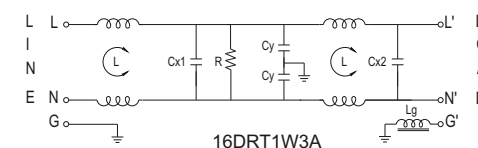
1. Applications: Electric equipment, UPS, machine tool, copy machine, automation equipment, robot, AC motor drive
2. Voltage rating: 250VAC
3. Operating frequency: 50/60Hz

MINIMUM INSERTION LOSS IN dB

PART NO.	COMMON MODE (L-G) IN 50 OHM SYSTEM								
	FREQUENCY-MHz								
	.01	.05	.10	.15	.50	1.0	5.0	10	30
16DRT1W3A	5	5	20	30	60	65	65	65	55
30DRT1W3	5	10	20	25	40	45	50	50	35

PART NO.	DIFFERENTIAL MODE (L-L) IN 50 OHM SYSTEM								
	FREQUENCY-MHz								
	.01	.05	.10	.15	.50	1.0	5.0	10	30
16DRT1W3A	2	10	10	25	55	60	60	60	60
30DRT1W3	5	10	35	40	60	60	50	50	35

ELECTRICAL SCHEMATIC

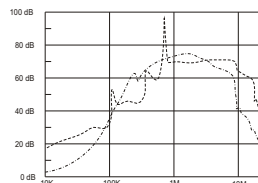


SERIES DIMENSIONS

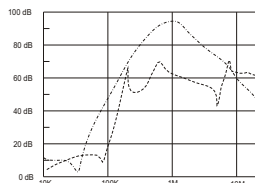
PART NO.	DIMENSIONS IN INCHES/mm							
	A	B	C	D	E	F	G	H
16DRT1W3A	8.740	5.197	1.654	7.795	3.937	9.843	7.795	0.787
	222.0	132.0	42.0	198.0	100.0	250.0	198.0	20.0
30DRT1W3	10.906	7.956	2.047	9.961	6.693	7.874	9.961	0.984
	277.0	202.0	52.0	253.0	170.0	200.0	253.0	25.0

INSERTION LOSS (TYPICAL)

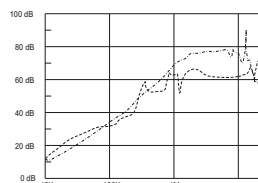
50TDS4W4 ----- COMMON MODE ----- DIFF. MODE



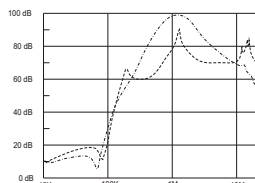
10TDT1W4 ----- COMMON MODE ----- DIFF. MODE



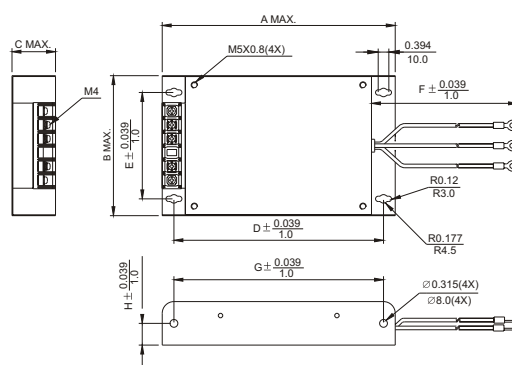
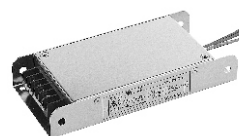
20TDT1W4 ----- COMMON MODE ----- DIFF. MODE



16DRT1W3A ----- COMMON MODE ----- DIFF. MODE



MECHANICAL CONSTRUCTION



UNIT: INCH
mm



TDT & DRT SERIES

EMI FILTER FOR INVERTEERS



COMPONENTS

PART NO.	Cx1(uF)	Cx2(uF)	Cy(nF)	L(mH)	Lg(uH)	R(KΩ)
10TDT1W4	0.68	-	10	23	5.2	560
10TDT1W4B	4.4	0.68	200	1.5	-	100
20TDT1W4		0.08	20		-	
21TDT1W4		1.0	47		800	
PART NO.	L (mH)	L1 (mH)	Cx (uF)	Cy (nF)	R (KΩ)	
50TDS4W4	0.5	0.2	6.6	100	100	

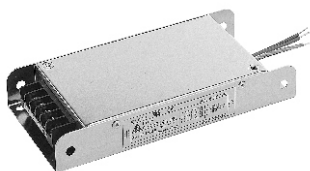
MINIMUM INSERTION LOSS IN dB

COMMON MODE (L-G) IN 50 OHM SYSTEM							
PART NO.	FREQUENCY-MHz						
	.15	.50	1.0	5.0	10	30	
10TDT1W4	40	65	65	65	50	45	
10TDT1W4B	60	60	60	60	40	35	
20TDT1W4	25	35	40	50	40	25	
21TDT1W4	45	65	65	60	30	15	
50TDS4W4	40	65	65	45	35	5	
DIFFERENTIAL MODE (L-L) IN 50 OHM SYSTEM							
10TDT1W4	10	40	50	45	45	50	
10TDT1W4B	35	40	40	40	40	35	
20TDT1W4	30	60	60	50	40	40	
21TDT1W4	35	45	45	40	40	30	
50TDS4W4	30	40	30	25	25	5	

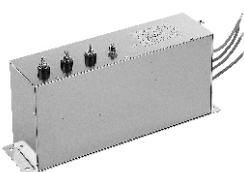
SERIES DIMENSIONS

PART NO.	DIMENSIONS IN INCHES/mm										
	A	B	C	D	E	F	G	H	I	J	K
10TDT1W4	8.740 222.0	5.197 132.0	1.654 42.0	7.795 198.0	3.397 100.0	9.843 250.0	7.795 198.0	0.787 20.0	—	—	—
10TDT1W4B	10.906 277.0	7.956 202.0	2.047 52.0	9.961 253.0	6.693 170.0	7.874 200.0	9.961 253.0	0.984 25.0	—	—	—
20TDT1W4											
21TDT1W4											
50TDS1W1	322 12.68	92 3.62	152 5.98	340 13.39	60 2.362	300 11.81	—	Ø7.0 Ø0.28	7.0x10.0 028x0.39	M6x1.0	363

MECHANICAL CONSTRUCTION



10TDT1W4/10TDT1W4S
20/21TDT1W4

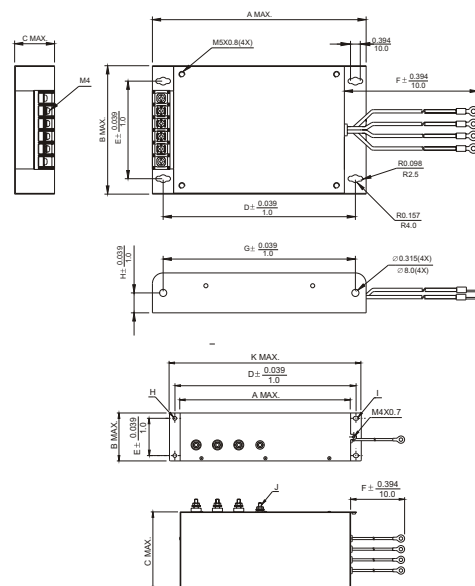
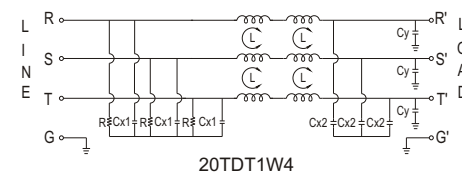
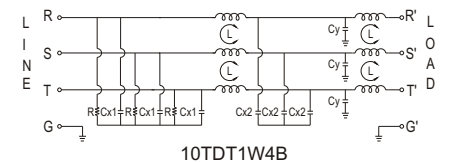
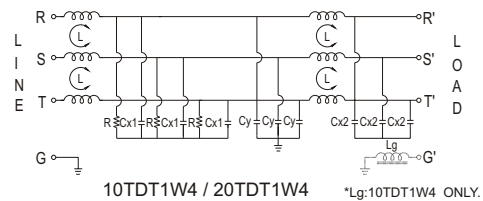


50TDS4W4

INTRODUCTIONS

1. Applications: Electric equipment, UPS, machine tool, copy machine, automation equipment, robot, AC motor drive
2. Voltage rating: 480VAC
3. Operating frequency: 50/60Hz

ELECTRICAL SCHEMATIC



UNIT: INCH
mm



PT&PY SERIES 3-PHASE P.C.B. FILTERS

COMPONENT

PART NO.	Cx1(uF)	Cx2(uF)	Cy(uF)	L(mH)	Z(VDC)	SA(VDC)
30PTW6	0.68	0.22	0.0033	1.0	—	—
30PYT8	0.33		0.0047	0.45	470	3600

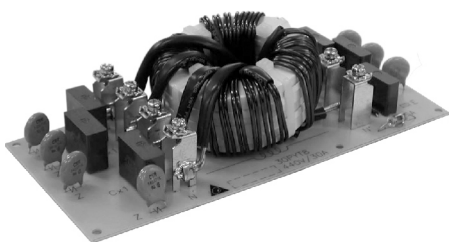
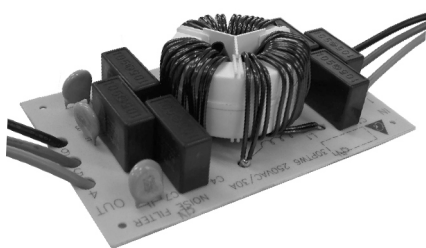
MINIMUM INSERTION LOSS IN dB

PART NO.	COMMON MODE(L-G)IN 50 OHM SYSTEM							
	FREQUENCY-MHz							
	.05	.10	.15	.20	.50	1.0	5.0	10
30PTW6	/	/	/	20	30	35	35	35
30PYT8	1	5	8	20	25	35	20	8
PART NO.	DIFFERENTIAL MODE(L-L)IN 50 OHM SYSTEM							
	FREQUENCY-MHz							
	.05	.10	.15	.20	.50	1.0	5.0	10
30PTW6	/	/	/	15	35	35	35	35
30PYT8	6	10	10	15	45	55	45	25

SERIES DIMENSIONS

PART NO.	DIMENSIONS IN INCHES/mm					
	A	B	C	D	E	F
30PTW6	5.906 150.0	3.543 90.0	5.315 135.0	2.953 75.0	0.126 3.2	—
30PYT8	7.874 200.0		4.961 126.0	2.559 65.0	3.189 81.0	0.165 4.2

MECHANICAL CONSTRUCTION

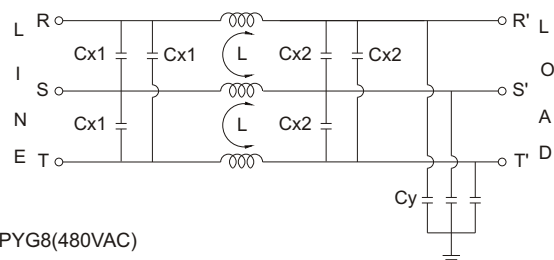


INTRODUCTIONS

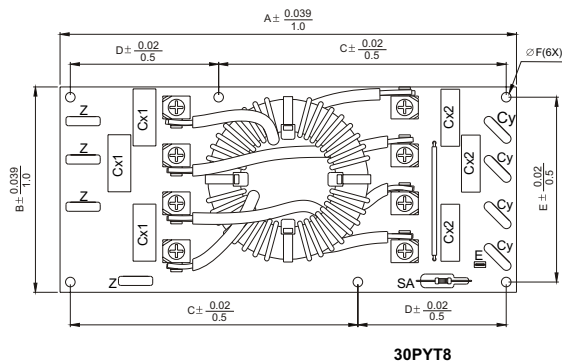
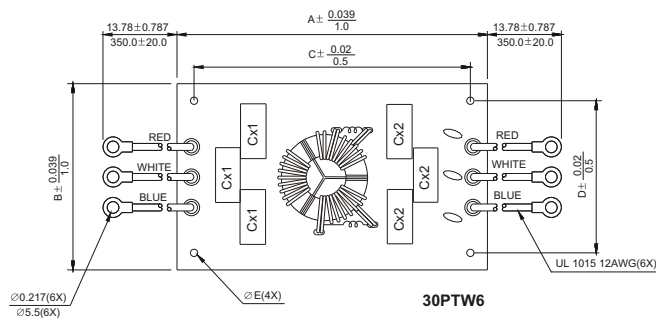
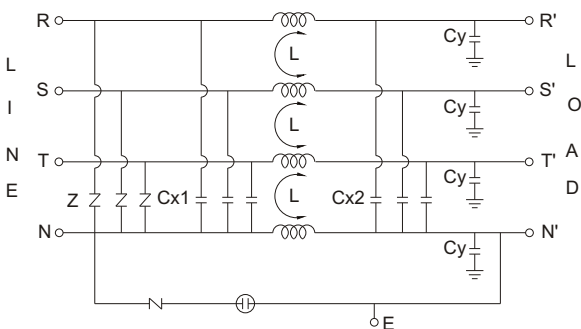
1. Applications: Electric equipment, UPS, machine tool, copy machine, automation equipment, robot, AC motor drive
2. Voltage rating: 250/480VAC
3. Operating frequency: 50/60Hz

ELECTRICAL SCHEMATIC

30PTW6(250VAC)



30PYG8(480VAC)



UNIT: INCH
mm



MB SERIES

HIGH PERFORMANCE CYLINDRICAL FILTERS

INTRODUCTIONS

1. MB series is designed as a compact, easy-to-mount cylindrical filter for switching power supplies, office equipment (copy and facsimile machines) and household appliances (washing machines and dryers).

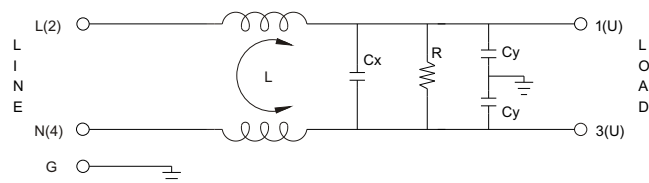
COMPONENTS

PART No.	L (mH)	Cx (uF)	Cy (pF)	R(KΩ)	Safety
10MBFG5	0.5	0.47	10000	680	
16MBFG5	1.0	0.47	10000	680	

MINIMUM INSERTION LOSS IN dB

COMMON MODE (L-G) IN 50 OHM SYSTEM							
TYPE	CURRENT RATING	FREQUENCY-MHz					
		.15	.50	1.0	5.0	10	30
10MBFG5	10A	5	19	27	44	32	21
16MBFG5	16A	11	26	31	30	20	4
DIFFERENTIAL MODE (L-L) IN 50 OHM SYSTEM							
10MBFG5	10A	1	12	20	19	20	22
16MBFG5	16A	11	24	12	14	17	28

ELECTRICAL SCHEMATIC

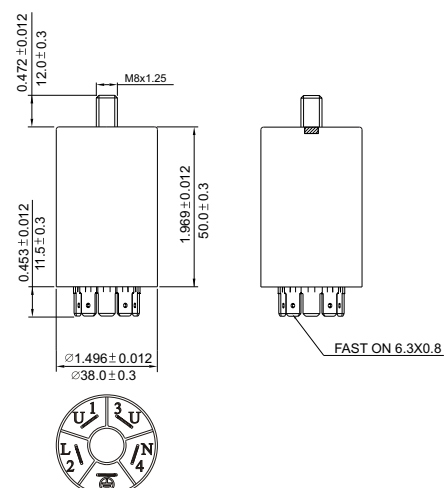
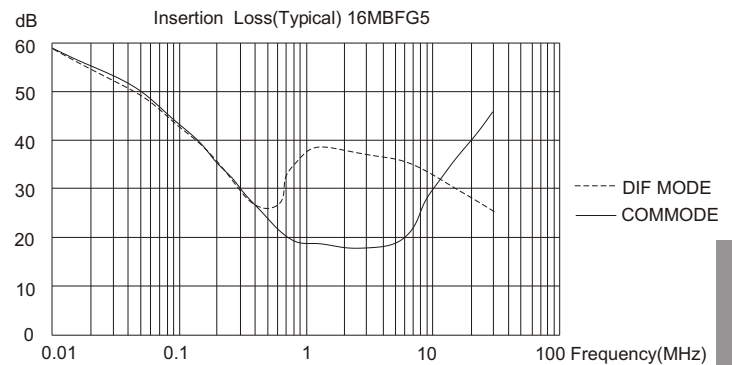
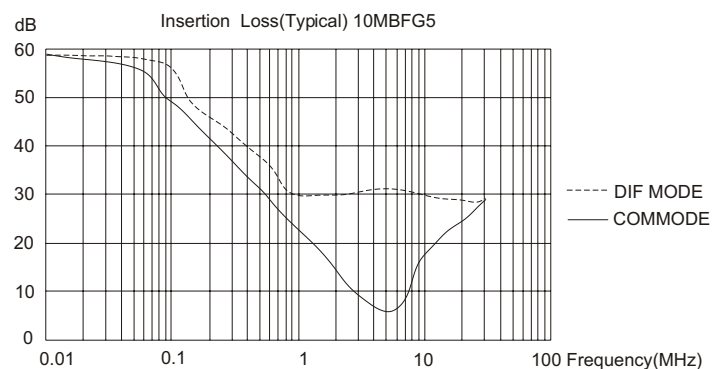


MECHANICAL CONSTRUCTION



SPECIFICATIONS

- Maximum leakage current each
line-to-ground @115VAC 60Hz: 1.0mA
@250VAC 50Hz: 2.0mA
- Hipot rating (one minute)
line-to-ground: 2250VDC
line-to-line: 1450VDC
- Operating frequency: 50/60 Hz
- Rated voltage: 115/250VAC



GENERAL PURPOSE ONE-STAGE FILTERS

UNIT: INCH
mm



www.deltaww.com

DELTA ELECTRONICS, INC.

186 RUEY KUANG ROAD, NEIHU,
TAIPEI 11491, TAIWAN
REPUBLIC OF CHINA
TEL : 886-2-8797-2088
FAX : 886-2-8797-2120

DELTA ELECTRONICS (DONGGUAN) CO., LTD.

DELTA INDUSTRIAL ESTATE, SHIJIE TOWN,
DONGGUAN, GUANGDONG,
PEOPLE'S REPUBLIC OF CHINA
POST CODE : 523308
PLANT1 TEL : 86-769-663-5008 FAX : 86-769-663-4479
PLANT2 TEL : 86-769-663-9008 FAX : 86-769-663-8777
PLANT3 TEL : 86-769-663-1008 FAX : 86-769-663-7012
PLANT4 TEL : 86-769-632-9008 FAX : 86-769-663-1589
PLANT5 TEL : 86-769-663-7008 FAX : 86-769-663-7007

DELTA ELECTRONICS (JIANG SU) LTD.

18 JIANGXING EAST ROAD,
YUN DONG DEVELOPMENT ZONE,
SONG LING TOWN, WUJIANG CITY,
JIANG SU PROVINCE,
PEOPLE'S REPUBLIC OF CHINA
POST CODE: 215200
PLANT1 TEL : 86-512-6340-1008 FAX : 86-512-6340-1564
PLANT2 TEL : 86-512-6340-3008 FAX : 86-512-6340-7190
PLANT3 TEL : 86-512-6340-3008 FAX : 86-512-6340-7190

DELTA GREEN TIANJIN INDUSTRIES CO., LTD.

168 NO.15 COASTAL WAY,
TIANJIN PORT FREE TRADE ZONE,
PEOPLE'S REPUBLIC OF CHINA
TEL : 86-22-2576-0371
FAX : 86-22-2576-0380

DELTA ELECTRONICS (JAPAN) INC.

DELTA SHIBADAIMON BUILDING,
2-1-14 SHIBADAIMON, MINATO-KU,
TOKYO, 105-0012
JAPAN
TEL : 81-3-5733-1111
FAX : 81-3-5733-1211

DELTA ELECTRONICS (SINGAPORE) PTE. LTD.

NO. 8 KAKI BUKIT ROAD 2,
#04-18 RUBY WAREHOUSE COMPLEX,
SINGAPORE 417841
TEL : 65-747-5155
FAX : 65-744-9228

**DELTA ELECTRONICS (THAILAND)
PUBLIC COMPANY, LIMITED**

111 MOO 9 WELLGROW INDUSTRIAL ESTATE
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FAX : 1-712-274-8816