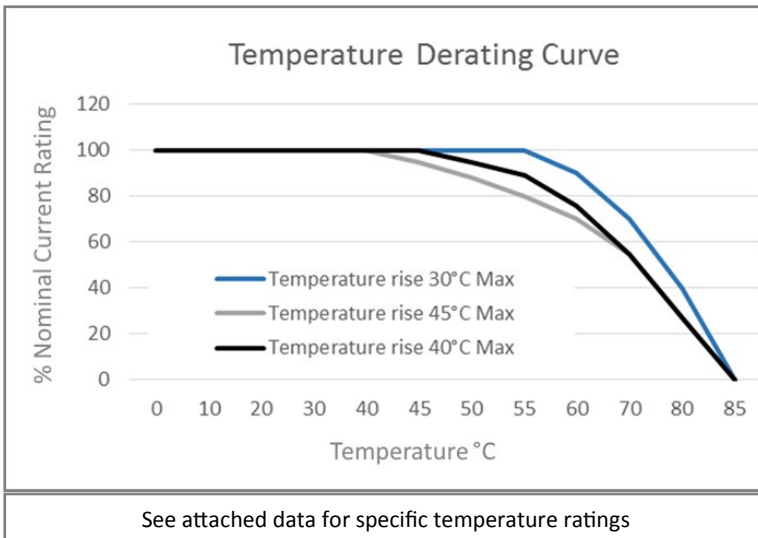


# IEC Inlet Filters Switched and Fused - Snap In

The RIQ series of general purpose IEC inlet filters offers good performance for both common mode and differential mode interface, in a standard compact size.

A standard IEC inlet filter available from Roxburgh EMC with quick and easy mounting.

- Current ratings, 2A, 4A and 6A.
- Rated at 250V.
- Also available with increased x and y caps for optimum performance.
- Customisation services available
- Available from UK stock



Meets overvoltage category II of IEC60664  
Complies with BS EN 60950

UL Standard: UL1283  
IEC Standard: IEC 60939-2:2005  
CSA Standard: C22.2

**Features:**

- UL Approved
- General Purpose
- 2 to 6 Amp Current Ratings
- IEC Inlet with fast-on termination

**Application Examples:**

- Digital Equipment
- Point-of-sale equipment
- Printers
- Inverters
- Vending and Gaming machines

**Benefits:**

- Quick and easy mounting
- Safety approvals held
- UK stock

**Contact us on:**

**Tel: +44 (0) 1724 273228**

**Email: [roxburghemc@dem-uk.com](mailto:roxburghemc@dem-uk.com)**

**DEM Manufacturing**  
Deltron Emcon House  
Hargreaves Way  
Sawcliffe Industrial Park  
Scunthorpe  
DN15 8RF



Tel: 44 (0) 1724 273200  
Fax: 44 (0) 1724 280353  
Email: [sales@dem-uk.com](mailto:sales@dem-uk.com)  
Web: [www.dem-uk.com/roxburgh](http://www.dem-uk.com/roxburgh)

**A. General Specifications**

| Model       | Rated Voltage<br>AC,DC[V] | Rated Current<br>[A] | Leakage Current<br>Max. [mA] | Temperature Rise<br>Max. [°C] |
|-------------|---------------------------|----------------------|------------------------------|-------------------------------|
| RIQ-02*2-H* | 250                       | 2                    | 0.35                         | 40                            |
| RIQ-04*2-H* | 250                       | 4                    | 0.35                         | 45                            |
| RIQ-04*D-H* | 250                       | 4                    | 0.10                         | 45                            |
| RIQ-06*2-H* | 250                       | 6                    | 0.35                         | 45                            |

\*Leakage current measuring method  
UL 1283(3rd Edition): -26 and Fig 26.1  
\*Temperature rise measuring method  
VDE 0565-3 : - 2.3.3 and - 4.5

**B. Operating Temperature Range**

-25°C to +85°C including temperature rise.

**C. Withstand Voltage**

1500V AC for 1 minute between line and ground.  
1800V DC for 1 minute between line and line. (Without bleeder resistor)

**D. Insulation Resistance**

300MΩ minimum at 500V DC between line and ground.

**E. Voltage Drop**

1 volt maximum at rated current.

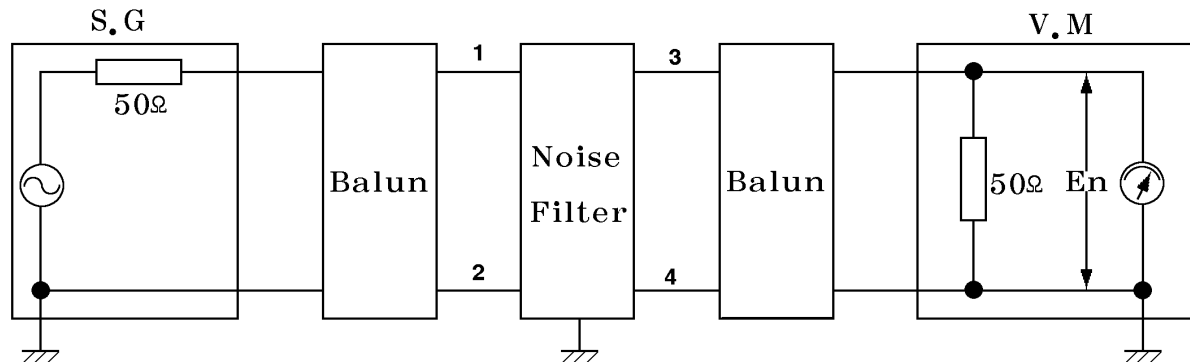
**F. Circuit Diagram and Component Value**

-Refer to attached Appendix page A1

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## G. Attenuation Measuring Method



OSC Level : 0dB

Insertion loss =  $-20\log(E1/E2)$ [dB]

E1 : Level with the Noise Filter in the circuit.

E2 : Level without the Noise Filter in the circuit

## H. Guaranteed Minimum Attenuation In [dB]

-Refer to attached Appendix page A2

## I. Mechanical Dimension

-Refer to attached Appendix page A3

## J. Marking

1. Trademark.
2. Model No.
3. Rated voltage and current.
4. Operating temperature range.
5. Circuit diagram and component value.
6. Lot No.
7. UL, CSA, marks

## K. Material List

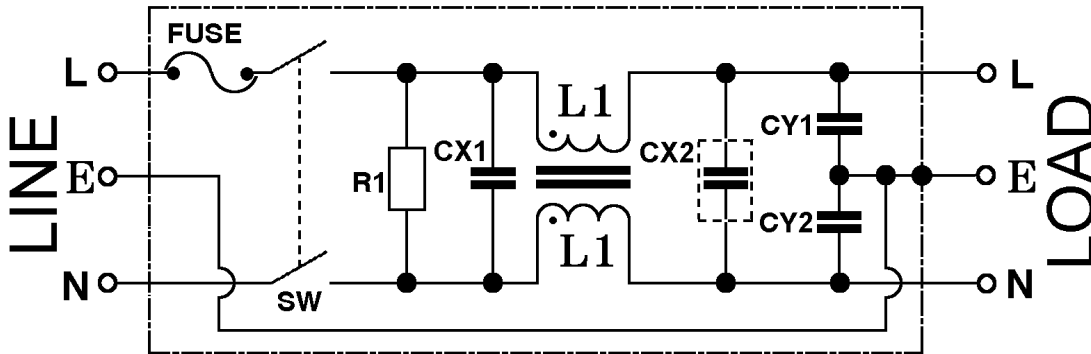
-Refer to attached Appendix page A4

## L. Packing

-Refer to attached Appendix page A5

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※ . Circuit Diagram and Component Value



※ CX2 capacitor - Provided on RIQ-\*\*\*\*H2 suffixed models only

| Model No.   | Fuse-Rated Current [A] | Inductance L1[mH], +50, -30% | X-Capacitor CX1[ $\mu$ F] $\pm$ 20% | X-Capacitor CX2[ $\mu$ F] $\pm$ 20% | Resistor R1[ $\Omega$ ] $\pm$ 10% | Y-Capacitor CY1,2[pF] $\pm$ 20% |     |
|-------------|------------------------|------------------------------|-------------------------------------|-------------------------------------|-----------------------------------|---------------------------------|-----|
| RIQ-0212-H0 | 2                      | 10.5                         | 0.1                                 | NONE                                | 1M, 1/2W                          | 2200                            |     |
| RIQ-0212-H2 | 2                      | 10.5                         | 0.1                                 | 0.22                                | 510K, 1/2W                        |                                 |     |
| RIQ-0222-H0 | 2                      | 10.5                         | 0.22                                | NONE                                | 1M, 1/2W                          |                                 |     |
| RIQ-0222-H2 | 2                      | 10.5                         | 0.22                                | 0.22                                | 510K, 1/2W                        |                                 |     |
| RIQ-0242-H0 | 2                      | 10.5                         | 0.47                                | NONE                                | 510K, 1/2W                        |                                 |     |
| RIQ-0242-H2 | 2                      | 10.5                         | 0.47                                | 0.22                                | 510K, 1/2W                        |                                 |     |
| RIQ-0412-H0 | 4                      | 4.2                          | 0.1                                 | NONE                                | 1M, 1/2W                          |                                 |     |
| RIQ-0412-H2 | 4                      | 4.2                          | 0.1                                 | 0.22                                | 510K, 1/2W                        |                                 |     |
| RIQ-0422-H0 | 4                      | 4.2                          | 0.22                                | NONE                                | 1M, 1/2W                          |                                 |     |
| RIQ-0422-H2 | 4                      | 4.2                          | 0.22                                | 0.22                                | 510K, 1/2W                        |                                 |     |
| RIQ-0442-H0 | 4                      | 4.2                          | 0.47                                | NONE                                | 510K, 1/2W                        |                                 |     |
| RIQ-0442-H2 | 4                      | 4.2                          | 0.47                                | 0.22                                | 510K, 1/2W                        |                                 |     |
| RIQ-0612-H0 | 6.3                    | 1.6                          | 0.1                                 | NONE                                | 1M, 1/2W                          |                                 |     |
| RIQ-0612-H2 | 6.3                    | 1.6                          | 0.1                                 | 0.22                                | 510K, 1/2W                        |                                 |     |
| RIQ-0622-H0 | 6.3                    | 1.6                          | 0.22                                | NONE                                | 1M, 1/2W                          |                                 |     |
| RIQ-0622-H2 | 6.3                    | 1.6                          | 0.22                                | 0.22                                | 510K, 1/2W                        |                                 |     |
| RIQ-0642-H0 | 6.3                    | 1.6                          | 0.47                                | NONE                                | 510K, 1/2W                        |                                 |     |
| RIQ-0642-H2 | 6.3                    | 1.6                          | 0.47                                | 0.22                                | 510K, 1/2W                        |                                 |     |
| RIQ-041D-H0 | 4                      | 4.2                          | 0.1                                 | NONE                                | 1M, 1/2W                          |                                 | 470 |

※ Construction of Model No.

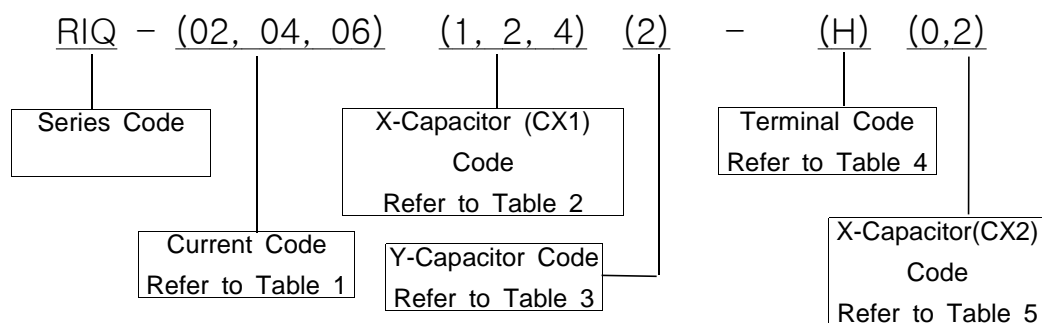


Table 1 ; Current Code

|         |    |    |    |
|---------|----|----|----|
| Suffix  | 02 | 04 | 06 |
| Current | 2A | 4A | 6A |

Table 2 ; X-Capacitor (CX1) Code

|             |             |              |              |
|-------------|-------------|--------------|--------------|
| Suffix      | 1           | 2            | 4            |
| X-Capacitor | 0.1 $\mu$ F | 0.22 $\mu$ F | 0.47 $\mu$ F |

Table 3 ; Y-Capacitor (CY1,2) Code

|             |        |
|-------------|--------|
| Suffix      | 2      |
| Y-Capacitor | 2200pF |

Table 4 ; Terminal Code

|          |                 |
|----------|-----------------|
| Suffix   | H               |
| Terminal | Faston tab #250 |

Table 5 ; X-Capacitor (CX2) Code

|             |      |              |
|-------------|------|--------------|
| Suffix      | 0    | 2            |
| X-Capacitor | None | 0.22 $\mu$ F |

Item : EMI Filter

Rev 3

Model : RIQ-Series(Appendix)

A 2

※ . Guaranteed Minimum Attenuation In [dB]

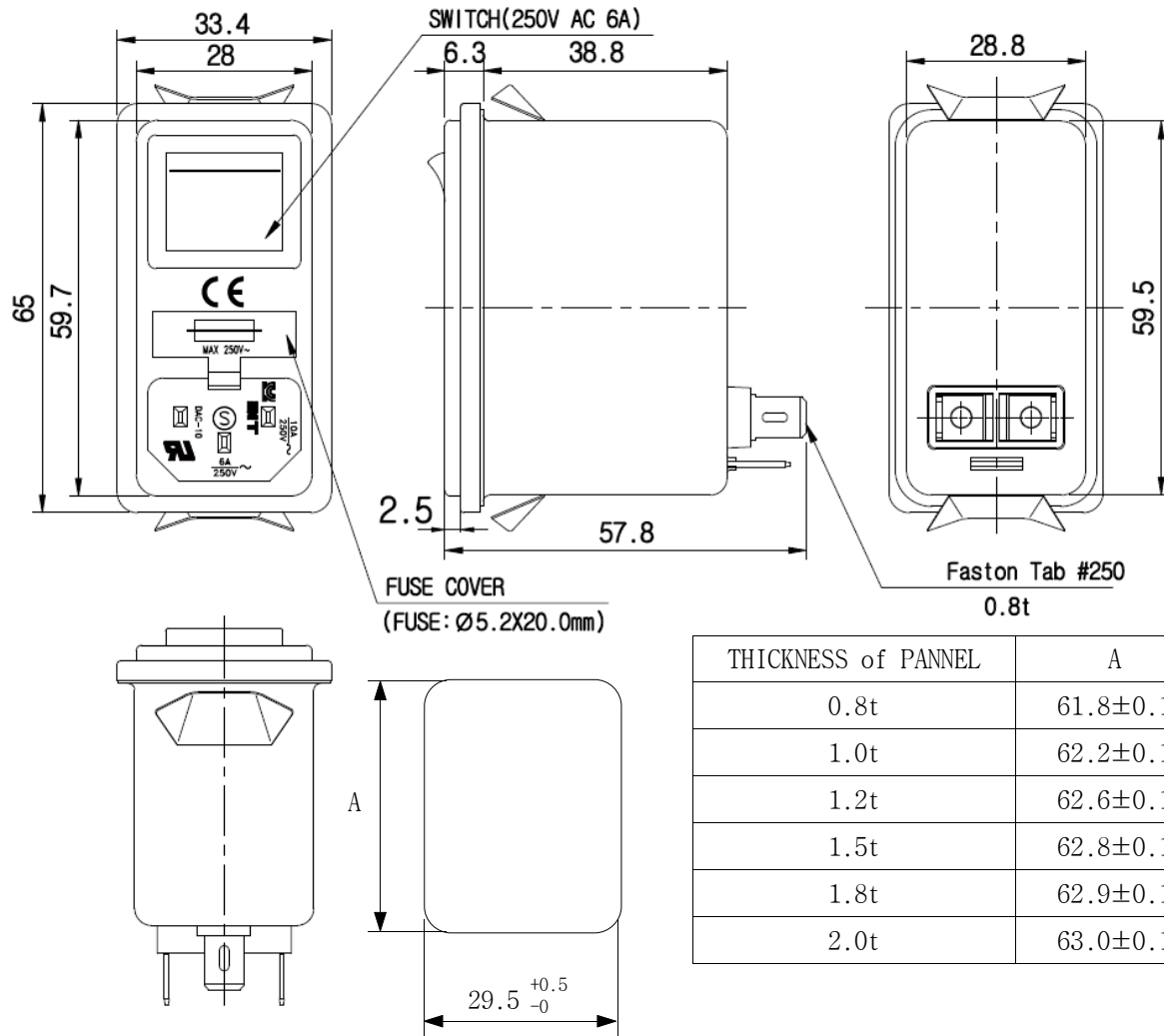
| Model       | Common mode [MHz] |      |    |    |    |    |    | Normal mode [MHz] |      |    |    |    |    |    |
|-------------|-------------------|------|----|----|----|----|----|-------------------|------|----|----|----|----|----|
|             | 0.15              | 0.45 | 1  | 2  | 5  | 10 | 30 | 0.15              | 0.45 | 1  | 2  | 5  | 10 | 30 |
| RIQ-0212-H0 | 39                | 50   | 45 | 40 | 40 | 40 | 43 | 13                | 22   | 36 | 50 | 65 | 65 | 58 |
| RIQ-0212-H2 | 37                | 48   | 46 | 41 | 40 | 41 | 45 | 26                | 60   | 70 | 72 | 72 | 69 | 51 |
| RIQ-0222-H0 | 37                | 50   | 45 | 41 | 41 | 41 | 45 | 20                | 30   | 40 | 55 | 64 | 65 | 60 |
| RIQ-0222-H2 | 38                | 50   | 48 | 45 | 44 | 44 | 40 | 37                | 65   | 71 | 73 | 70 | 70 | 52 |
| RIQ-0242-H0 | 39                | 48   | 44 | 42 | 41 | 41 | 45 | 28                | 38   | 48 | 60 | 65 | 65 | 60 |
| RIQ-0242-H2 | 36                | 50   | 47 | 42 | 41 | 41 | 45 | 44                | 70   | 75 | 75 | 70 | 70 | 55 |
| RIQ-0412-H0 | 27                | 40   | 49 | 47 | 46 | 47 | 51 | 15                | 25   | 30 | 42 | 60 | 65 | 60 |
| RIQ-0412-H2 | 28                | 41   | 50 | 49 | 47 | 48 | 51 | 13                | 55   | 75 | 77 | 72 | 70 | 52 |
| RIQ-041D-H0 |                   |      |    |    |    |    |    |                   |      |    |    |    |    |    |
| RIQ-0422-H0 | 28                | 42   | 49 | 50 | 49 | 50 | 51 | 22                | 32   | 38 | 50 | 63 | 63 | 60 |
| RIQ-0422-H2 | 29                | 42   | 51 | 47 | 47 | 47 | 50 | 26                | 58   | 72 | 74 | 74 | 72 | 50 |
| RIQ-0442-H0 | 28                | 41   | 51 | 51 | 50 | 51 | 51 | 29                | 39   | 44 | 55 | 65 | 65 | 61 |
| RIQ-0442-H2 | 28                | 41   | 48 | 45 | 45 | 45 | 53 | 35                | 65   | 78 | 78 | 70 | 70 | 55 |
| RIQ-0612-H0 | 21                | 32   | 40 | 47 | 49 | 50 | 50 | 16                | 26   | 30 | 33 | 60 | 60 | 55 |
| RIQ-0612-H2 | 21                | 32   | 40 | 47 | 48 | 50 | 50 | 20                | 42   | 65 | 77 | 73 | 71 | 55 |
| RIQ-0622-H0 | 21                | 32   | 40 | 47 | 49 | 52 | 50 | 21                | 31   | 38 | 42 | 59 | 61 | 60 |
| RIQ-0622-H2 | 19                | 30   | 39 | 45 | 48 | 50 | 50 | 18                | 51   | 70 | 75 | 70 | 70 | 55 |
| RIQ-0642-H0 | 20                | 32   | 39 | 46 | 47 | 48 | 49 | 28                | 39   | 45 | 49 | 55 | 62 | 60 |
| RIQ-0642-H2 | 20                | 30   | 39 | 46 | 48 | 49 | 50 | 20                | 52   | 72 | 73 | 73 | 71 | 55 |

Item : EMI Filter  
 Model No : RIQ-Series(Appendix)

Rev 3

A 3

※ . Mechanical Dimension Unit: mm



General tolerance:±1.0

※ . Packing

1. Quantity & Weight

| Packing Case | Q'ty/ 1 Box | Gross Weight(kg) |
|--------------|-------------|------------------|
| CARTON BOX   | 100         | 17               |
| INNER BOX    | 50          | 7.5              |

2. Packing Case

| Packing Case | Q'ty  | Material       | Dimension(W×L×Hmm) |
|--------------|-------|----------------|--------------------|
| CARTON BOX   | 1/100 | SK3SA          | 346×360×281        |
| INNER BOX    | 1/50  | SKSA B Type    | 328×170×215        |
| PACKING CASE | 1/10  | P.E.T          | 318×163×43.7       |
| TOP PAD      | 1/50  | STYROFOAM (PS) | 310×155×8          |
| POLY BAG     | 1/50  | PE SHEET       | 360×550            |

3. Marking

- 1) Model No.
- 2) Q'ty of products
- 3) Lot No.

