

# RES60 Chassis Mounted Filter

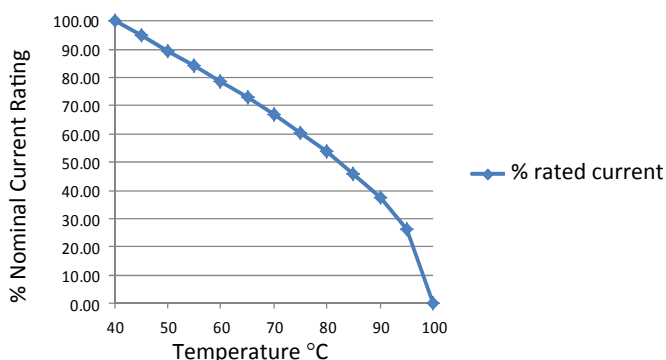
## Multi-Stage High Differential and High Common Mode

The RES60 series is a multi-stage EMC filter offering high differential and high common mode attenuation, and designed for quick and easy chassis mounting.

These general purpose filters are suitable for a broad range of applications including noisy environments where increased filter performance is required.



Temperature Derating Curve for EMC Filters  
Rated at 40°C Ambient and 100°C Maximum



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### Features:

- Multi-stage
- High differential and high common mode attenuation
- UL approved E191581
- For use from DC to 400Hz
- 1 Amp to 30 Amp

### Benefits:

- Compact size for rated current
- Fast-on, screw or wire terminations
- Quick and easy mounting
- Available from UK stock

### Application Examples:

- Lighting
- Electrical and electronic equipment
- Consumer goods
- Household equipment
- Building automation
- Machinery
- Electronic data/communication processing equipment
- Office automation

**Full technical specification on page 2**

**Performance curves on page 3**

**Other options in this range on page 4**

### DEM Manufacturing

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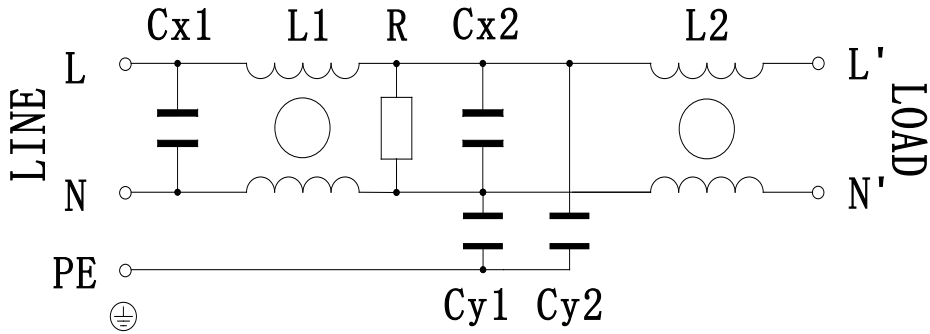
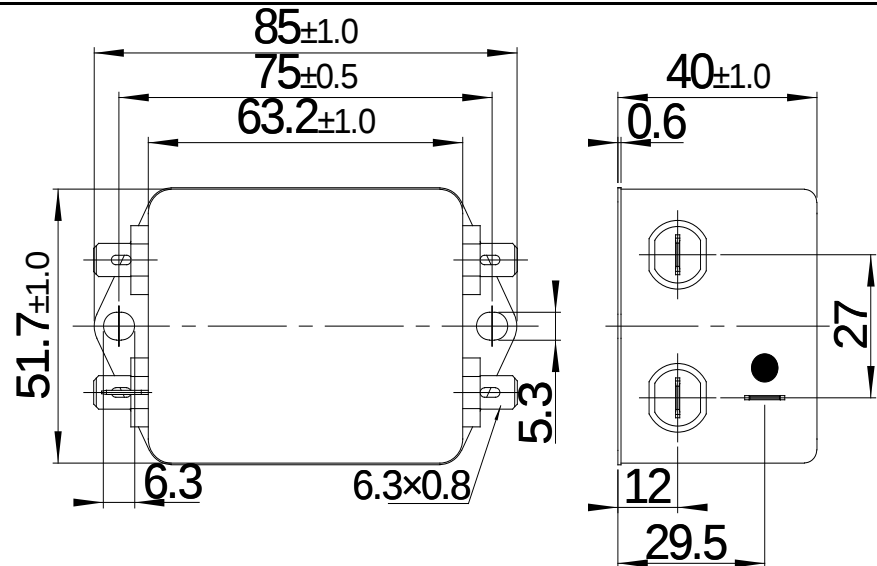
**ROXBURGH** *EMC*



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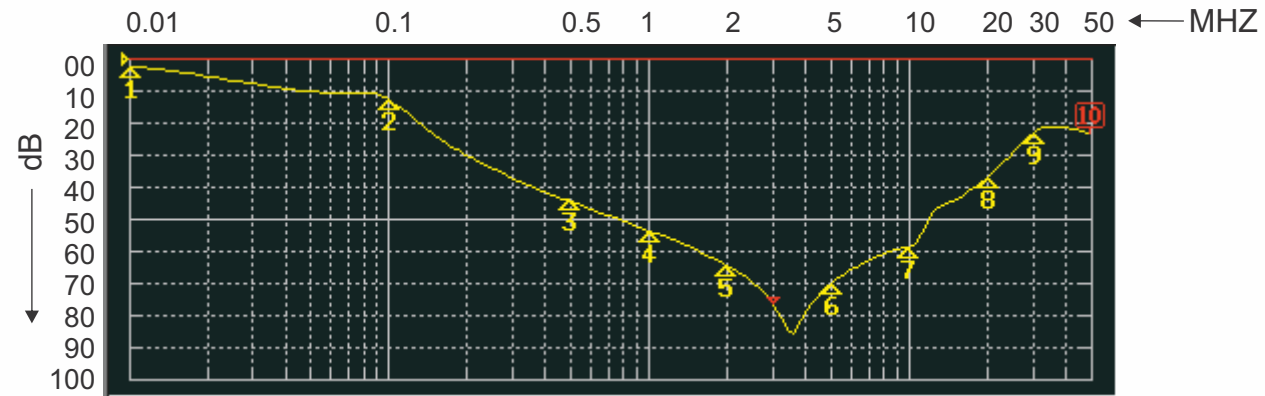
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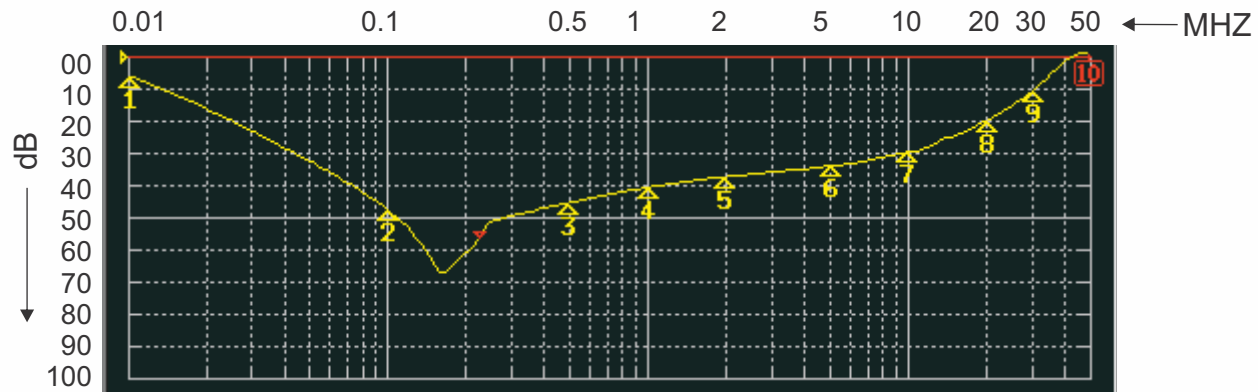
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|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|-------------------------------------------------------------------------------------|--|-------------------------------------------|-------------------------------------|--------------------|-------------------------------------|-------------------------|-------------|----------|
| Circuit diagram:                                                                                                                                                  |  | Dimensions(mm):                                                                     |  |                                           |                                     |                    |                                     |                         |             |          |
|                                                                                   |  |  |  |                                           |                                     |                    |                                     |                         |             |          |
| Electrical parameters:                                                                                                                                            |  | Filter parameters:                                                                  |  |                                           |                                     |                    |                                     |                         |             |          |
| Rated Voltage:                                                                                                                                                    |  | 120/250VAC                                                                          |  | Total Inductance(L-L'/N-N'):              |                                     | 1.3mH +50%,-35%    |                                     |                         |             |          |
| Rated Current at an ambient temp:                                                                                                                                 |  | 16A@40°C                                                                            |  | Total Capacitance(L-N/L'-N'):             |                                     | 0.66uF +/-20%      |                                     |                         |             |          |
| Operating Frequency:                                                                                                                                              |  | 50/60Hz                                                                             |  | Total Capacitance(L/N-PE) (RES60F16-M):   |                                     | 9.4nF +/-20% (0nF) |                                     |                         |             |          |
| Climatic Class(IEC60068-1):                                                                                                                                       |  | 25/100/21                                                                           |  | Total Resistance(L-N/L'-N'):              |                                     | 1MΩ +/-10%         |                                     |                         |             |          |
| Operational Leakage current:<br>(at 250VAC/50Hz and Total C +/-20%)                                                                                               |  | 0.8mA max<br>(RES60F16-M 0mA)                                                       |  | Weight(Approximate):                      |                                     | 235g               |                                     |                         |             |          |
| Operational Leakage current:<br>(at 120VAC/60Hz and Total C +/-20%)                                                                                               |  | 0.46mA max<br>(RES60F16-M 0mA)                                                      |  | Safety certification                      |                                     |                    | Technical Specification             |                         |             |          |
| Test Voltage(100%)for 2 sec:                                                                                                                                      |  |                                                                                     |  | UL                                        | <input checked="" type="checkbox"/> | CSA                | <input checked="" type="checkbox"/> | compiled by             | Jay Zhang   | 2020-8-5 |
| L-N:                                                                                                                                                              |  | 1100VDC/20mA                                                                        |  | ENEC                                      | <input checked="" type="checkbox"/> | CQC                | <input type="checkbox"/>            | reviewed by             | Pallas Wang | 2020-8-5 |
| L/N-PE:                                                                                                                                                           |  | 2250VDC/20mA                                                                        |  | CE                                        | <input checked="" type="checkbox"/> | VDE                | <input type="checkbox"/>            | approved by             | Henry Huang | 2020-8-5 |
|  <div>+44 (0)1724 273200<br/>sales@dem-uk.com<br/>www.dem-uk.com/roxburgh</div> |  |                                                                                     |  | Part <b>RES60F16</b>                      |                                     |                    |                                     | single-phase emc filter |             |          |
|                                                                                                                                                                   |  |                                                                                     |  | Number (Alternate RES60F16-M - no Y caps) |                                     |                    |                                     | stage marker            |             | V1.03    |

**ROXBURGH EMC**  
**FILTER INSERTION LOSS CHARACTERISTICS**  
**CISPR 17 - 50 OHM METHOD**

**RES60F16**



**COMMON MODE**



**DIFFERENTIAL MODE**



# RES60 Chassis Mounted Filter

## Multi-Stage High Differential and High Common Mode

### Options available:

| Part Number | Rated Current @40°C | Leakage Current @ 230V/50Hz | Inductance $\Sigma L$ | Capacitance $\Sigma Cx$ | Capacitance $\Sigma Cy$ | Resistance $\Sigma R$ | Connection Type                                                                     |                                                                                     |                                                                                     |
|-------------|---------------------|-----------------------------|-----------------------|-------------------------|-------------------------|-----------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|             |                     |                             |                       |                         |                         |                       |  |  |  |
| RES60F01    | 1                   | 0.74                        | 24                    | 0.44                    | 9.4                     | 1000                  | F                                                                                   | W                                                                                   |                                                                                     |
| RES60F03    | 3                   | 0.74                        | 5                     | 0.44                    | 9.4                     | 1000                  | F                                                                                   | W                                                                                   |                                                                                     |
| RES60F06    | 6                   | 0.74                        | 1.94                  | 0.44                    | 9.4                     | 1000                  | F                                                                                   | W                                                                                   |                                                                                     |
| RES60F10    | 10                  | 0.74                        | 1.6                   | 0.94                    | 9.4                     | 470                   | F                                                                                   | W                                                                                   |                                                                                     |
| RES60F12    | 12                  | 0.74                        | 1.16                  | 0.94                    | 9.4                     | 470                   | F                                                                                   | W                                                                                   |                                                                                     |
| RES60F16    | 16                  | 0.74                        | 1.3                   | 0.66                    | 9.4                     | 1000                  | F                                                                                   | W                                                                                   | S                                                                                   |
| RES60F20    | 20                  | 0.74                        | 1.2                   | 2.0                     | 9.4                     | 220                   | F                                                                                   | W                                                                                   |                                                                                     |
| RES60S20    | 20                  | 0.74                        | 1.2                   | 2.0                     | 9.4                     | 220                   |                                                                                     | W                                                                                   | S                                                                                   |
| RES60S30    | 30                  | 0.87                        | 1.2                   | 2.0                     | 20                      | 220                   |                                                                                     |                                                                                     | S                                                                                   |

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