

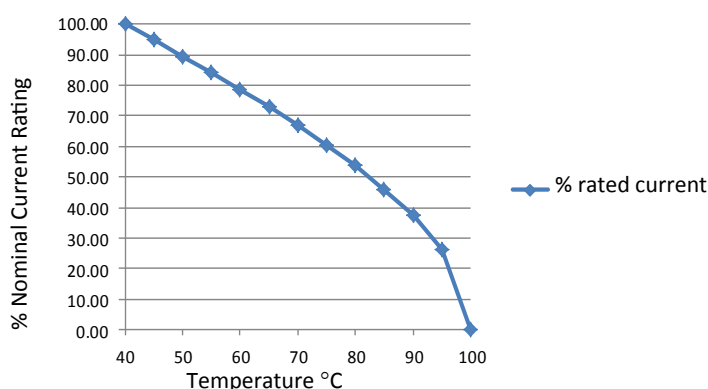
# RES60-M Multi-Stage Filter

## Medical Applications

Roxburgh EMC's RES60-M range are two-phase filters, designed specifically for the medical industry. They offer a high differential mode performance, with an operating frequency from DC to 400Hz. The series includes eight variations to select from with rated current between 1amp and 30amp.



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



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### Features:

- Two-Phase Filter
- High Differential Mode Performance
- UL Approved E191581
- For use from DC to 400Hz

### Benefits:

- Compact size for rated current
- Fast-on, screw or wire terminations
- Quick and Easy Mounting

### Applications:

These filters are designed for applications within the **medical industry**.

**Full technical specification on page 2**

**Other options in this range on page 3**

### DEM Manufacturing

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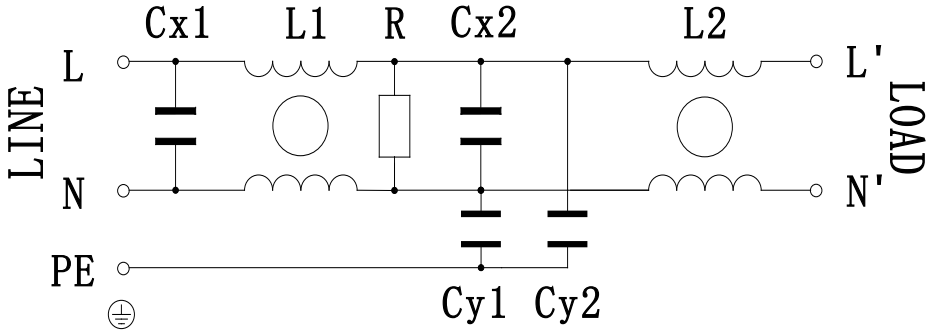
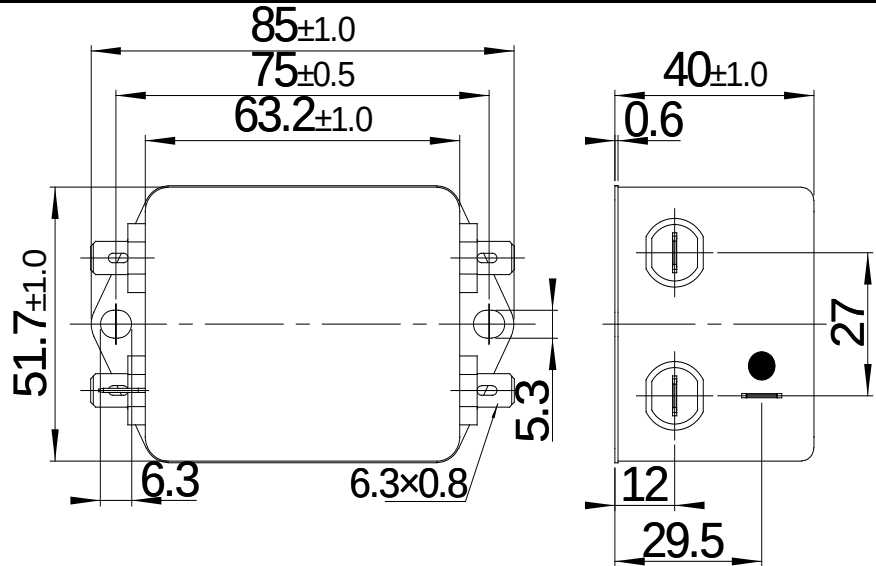
**ROXBURGH** *EMC*



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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:<br><br>L-N:<br><br>L/N-PE:                                                                                                               |                                | UL                                                                                  | <input checked="" type="checkbox"/> | CSA                | <input checked="" type="checkbox"/> | compiled by             | Jay Zhang   | 2020-8-5 |
|                                                                                                                                                                       | 1100VDC/20mA                   | ENEC                                                                                | <input checked="" type="checkbox"/> | CQC                | <input type="checkbox"/>            | reviewed by             | Pallas Wang | 2020-8-5 |
|                                                                                                                                                                       | 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       |          |

# RES60-M Multi-Stage Filter

## Medical Applications

### Options Available:

| Part Number | Rated Current<br>@40°C<br>A | Leakage Current @<br>230V/50Hz<br>mA | Inductance<br>$\Sigma L$<br>mH | Capacitance<br>$\Sigma Cx$<br>uF | Resistance<br>$\Sigma R$<br>K $\Omega$ | Connection Type                                                                     |                                                                                     |                                                                                     |
|-------------|-----------------------------|--------------------------------------|--------------------------------|----------------------------------|----------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|             |                             |                                      |                                |                                  |                                        |  |  |  |
| RES60F01-M  | 1                           | 0.002                                | 12                             | 0.22                             | 1000                                   | F                                                                                   | W                                                                                   |                                                                                     |
| RES60F03-M  | 3                           | 0.002                                | 2.5                            | 0.22                             | 1000                                   | F                                                                                   | W                                                                                   |                                                                                     |
| RES60F06-M  | 6                           | 0.002                                | 0.97                           | 0.22                             | 1000                                   | F                                                                                   | W                                                                                   |                                                                                     |
| RES60F10-M  | 10                          | 0.002                                | 0.8                            | 0.47                             | 470                                    | F                                                                                   | W                                                                                   |                                                                                     |
| RES60F12-M  | 12                          | 0.002                                | 0.58                           | 0.47                             | 470                                    | F                                                                                   | W                                                                                   |                                                                                     |
| RES60F16-M  | 16                          | 0.002                                | 0.65                           | 0.33                             | 1000                                   | F                                                                                   | W                                                                                   | S                                                                                   |
| RES60F20-M  | 20                          | 0.002                                | 0.6                            | 1                                | 220                                    | F                                                                                   |                                                                                     | S                                                                                   |
| RES60S30-M  | 30                          | 0.002                                | 0.6                            | 1                                | 220                                    |                                                                                     |                                                                                     | S                                                                                   |

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