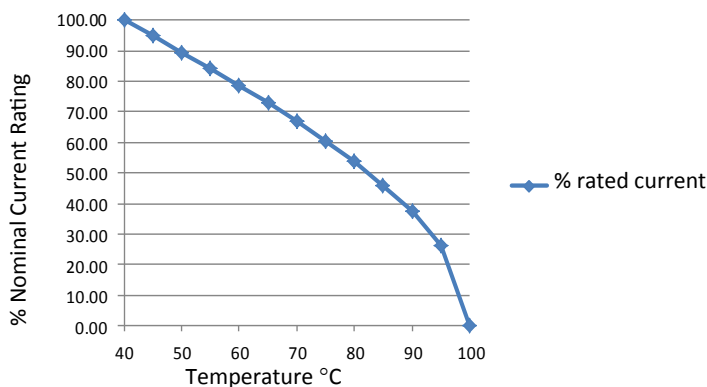


# RES30-M High Performance EMI Filter

## Medical Applications

Roxburgh EMC's RES30-M range are single phase filters, designed specifically for the medical industry. They offer a high attenuation performance and are well suited for particularly noisy applications. There are ten variations to select from with an operating frequency from dc to 400Hz.

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



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### Features:

- Single Phase
- High Attenuation Performance
- 1 Amp to 30 Amp Options
- UL Approved E191581

### 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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Hargreaves Way  
Sawcliffe Industrial Park  
Scunthorpe, North Lincolnshire.  
DN15 8RF

**ROXBURGH** *EMC*

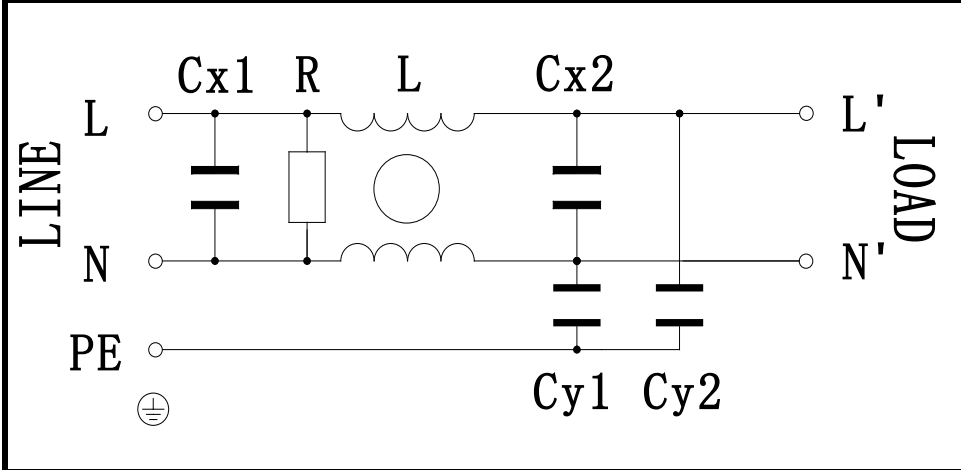


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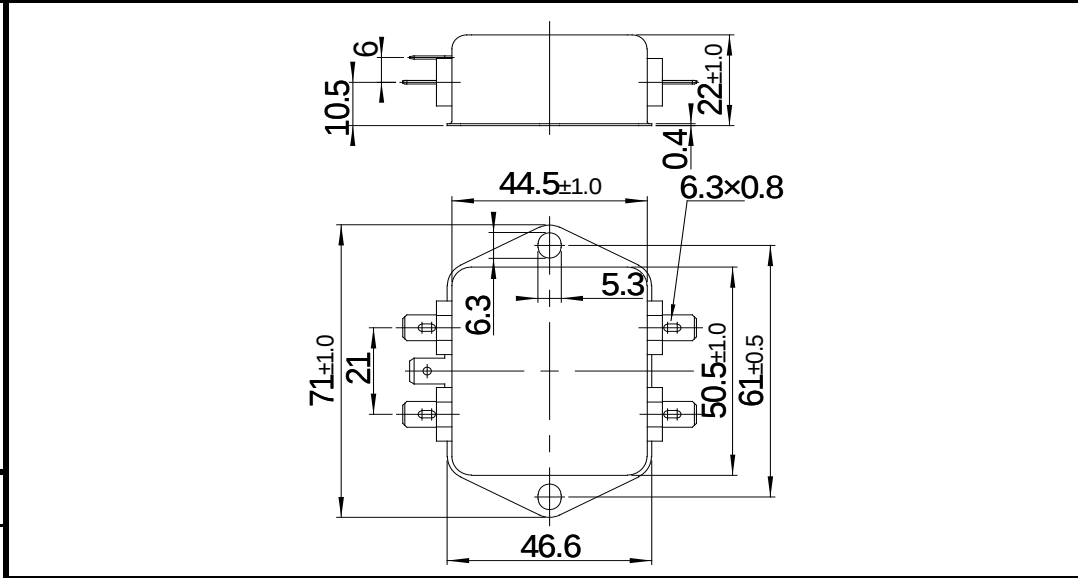
Email: [sales@dem-uk.com](mailto:sales@dem-uk.com)

Web: [www.dem-uk.com/roxburgh](http://www.dem-uk.com/roxburgh)

Circuit diagram:



Dimensions(mm):



|                        |
|------------------------|
| Electrical parameters: |
|------------------------|

|                                                                     |                                |
|---------------------------------------------------------------------|--------------------------------|
| Rated Voltage:                                                      | 120/250VAC                     |
| Rated Current at an ambient temp:                                   | 3A@40°C                        |
| Operating Frequency:                                                | 50/60Hz                        |
| Climatic Class(IEC60068-1):                                         | 25/100/21                      |
| Operational Leakage current:<br>(at 250VAC/50Hz and Total C +/-20%) | 0.56mA max<br>(RES30F03-M 0mA) |
| Operational Leakage current:<br>(at 120VAC/60Hz and Total C +/-20%) | 0.33mA max<br>(RES30F03-M 0mA) |
| Test Voltage(100%)for 2 sec:<br><br>L-N:<br><br>L/N-PE:             |                                |
|                                                                     | 1100VDC/20mA                   |
|                                                                     | 2250VDC/20mA                   |

Filter parameters:

|                                         |                    |
|-----------------------------------------|--------------------|
| Total Inductance(L-L'/N-N'):            | 14mH +50%,-35%     |
| Total Capacitance(L-N/L'-N'):           | 0.66uF +/-20%      |
| Total Capacitance(L/N-PE) (RES30F03-M): | 6.6nF +/-20% (0nF) |
| Total Resistance(L-N/L'-N'):            | 1M $\Omega$ +/-10% |
| Weight(Approximate):                    | 100g               |

## Safety certification

|      |                                     |     |                                     |
|------|-------------------------------------|-----|-------------------------------------|
| UL   | <input checked="" type="checkbox"/> | CSA | <input checked="" type="checkbox"/> |
| ENEC | <input checked="" type="checkbox"/> | CQC | <input type="checkbox"/>            |
| CE   | <input checked="" type="checkbox"/> | VDE | <input type="checkbox"/>            |

## Technical Specification

|             |             |          |
|-------------|-------------|----------|
| compiled by | Jay Zhang   | 2020-8-5 |
| reviewed by | Pallas Wang | 2020-8-5 |
| approved by | Henry Huang | 2020-8-5 |



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Part **RES30F03**

Number (Alternate RES30F03-M - no Y caps)

single-phase emc filter

|              |       |
|--------------|-------|
| stage marker | V1.03 |
|--------------|-------|

# RES30-M High Performance EMI 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                                                                     |                                                                                     |                                                                                     |
|-------------|-----------------------------|--------------------------------------|--------------------------------|----------------------------------|----------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|             |                             |                                      |                                |                                  |                                        |  |  |  |
| RES30F01-M  | 1                           | 0.002                                | 20                             | 0.44                             | 1000                                   | F                                                                                   | W                                                                                   |                                                                                     |
| RES30F03-M  | 3                           | 0.002                                | 14                             | 0.66                             | 1000                                   | F                                                                                   | W                                                                                   |                                                                                     |
| RES30F04-M  | 4                           | 0.002                                | 14                             | 0.66                             | 1000                                   | F                                                                                   | W                                                                                   |                                                                                     |
| RES30F06-M  | 6                           | 0.002                                | 8                              | 0.94                             | 680                                    | F                                                                                   | W                                                                                   |                                                                                     |
| RES30F08-M  | 8                           | 0.002                                | 8                              | 0.94                             | 680                                    | F                                                                                   | W                                                                                   |                                                                                     |
| RES30F10-M  | 10                          | 0.002                                | 8                              | 0.94                             | 680                                    | F                                                                                   | W                                                                                   |                                                                                     |
| RES30F12-M  | 12                          | 0.002                                | 4                              | 2.00                             | 330                                    | F                                                                                   | W                                                                                   |                                                                                     |
| RES30F16-M  | 16                          | 0.002                                | 4                              | 2.00                             | 330                                    | F                                                                                   | W                                                                                   |                                                                                     |
| RES30F20-M  | 20                          | 0.002                                | 4                              | 2.00                             | 330                                    | F                                                                                   |                                                                                     | S                                                                                   |
| RES30S30-M  | 30                          | 0.002                                | 2                              | 2.00                             | 330                                    |                                                                                     |                                                                                     | S                                                                                   |

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