EMC Filters

FLLE2 – R, Single Phase
General Purpose Chassis Mount Filters

Overview

The FLLE2-R is a general purpose, single phase filter series with high attenuation. They have a chassis mount for fast mounting and a metal case filled with self-extinguishing resin. Fast-on or screw terminals, and options with flexible wire connections are available. In addition, medical versions are available without Y-capacitors for no leakage current.

Applications

Typical applications include industrial power supplies, office and business equipment, tele- and datacom equipment, household and consumer goods, and medical equipment.

Technical Specifications

<table>
<thead>
<tr>
<th>Item</th>
<th>Parameters/Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rated Voltage</td>
<td>300 VAC/VDC</td>
</tr>
<tr>
<td>Rated Frequency</td>
<td>50 – 60 Hz</td>
</tr>
<tr>
<td>Rated Current</td>
<td>1 – 32 A</td>
</tr>
<tr>
<td>Rated Temperature</td>
<td>40°C</td>
</tr>
<tr>
<td>Temperature Range</td>
<td>-25°C to 100°C</td>
</tr>
<tr>
<td>Climate Category</td>
<td>25/100/21</td>
</tr>
<tr>
<td>Voltage Test</td>
<td>P → N 1,300 VDC</td>
</tr>
<tr>
<td></td>
<td>P/N → E 2,250 VDC</td>
</tr>
</tbody>
</table>

Typical Electrical Schematic
### Technical Specifications cont.

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Rated Current at 40°C (A)</th>
<th>Leakage Current* (mA)</th>
<th>$C_x,1$ ($\mu$F)</th>
<th>$R$ (MΩ)</th>
<th>$L_1$ (mH)</th>
<th>$C_x,1$ (nF)</th>
<th>$C_x,2$ ($\mu$F)</th>
<th>$L_2$ (mH)</th>
</tr>
</thead>
<tbody>
<tr>
<td>FLLE2001AR(1)(2)</td>
<td>1</td>
<td>0.37</td>
<td>0.22</td>
<td>1</td>
<td>12</td>
<td>4.7</td>
<td>0.22</td>
<td>12</td>
</tr>
<tr>
<td>FLLE2003AR(1)(2)</td>
<td>3</td>
<td>0.37</td>
<td>0.22</td>
<td>1</td>
<td>2.5</td>
<td>4.7</td>
<td>0.22</td>
<td>2.5</td>
</tr>
<tr>
<td>FLLE2006AR(1)(2)</td>
<td>6</td>
<td>0.37</td>
<td>0.22</td>
<td>1</td>
<td>1</td>
<td>4.7</td>
<td>0.22</td>
<td>1</td>
</tr>
<tr>
<td>FLLE2010AR(1)(2)</td>
<td>10</td>
<td>0.37</td>
<td>0.47</td>
<td>0.47</td>
<td>1</td>
<td>4.7</td>
<td>0.47</td>
<td>1</td>
</tr>
<tr>
<td>FLLE2013AR(1)(2)</td>
<td>13</td>
<td>0.37</td>
<td>0.47</td>
<td>0.47</td>
<td>0.6</td>
<td>4.7</td>
<td>0.47</td>
<td>0.6</td>
</tr>
<tr>
<td>FLLE2016AR(1)(2)</td>
<td>16</td>
<td>0.37</td>
<td>0.47</td>
<td>0.47</td>
<td>0.6</td>
<td>4.7</td>
<td>0.47</td>
<td>0.6</td>
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<tr>
<td>FLLE2020AR(1)(2)</td>
<td>20</td>
<td>0.37</td>
<td>1</td>
<td>0.22</td>
<td>0.8</td>
<td>4.7</td>
<td>1</td>
<td>0.8</td>
</tr>
<tr>
<td>FLLE2025AR(1)(2)</td>
<td>25</td>
<td>0.37</td>
<td>1</td>
<td>0.22</td>
<td>0.8</td>
<td>4.7</td>
<td>1</td>
<td>0.8</td>
</tr>
<tr>
<td>FLLE2032AR(1)(2)</td>
<td>32</td>
<td>0.79</td>
<td>1</td>
<td>0.22</td>
<td>0.8</td>
<td>10</td>
<td>1</td>
<td>0.8</td>
</tr>
</tbody>
</table>

(1) $D = $ Standard, $M = $ Medical  
(2) $B = $ Fast-on (1-16A), $I = $ Threaded (20-32A), $D = $ Wire (1-32A)  
* Leakage current at 250 VAC/50 Hz according to IEC60939-3. Medical version without $C_x$-capacitors, no leakage current.

### Approvals

<table>
<thead>
<tr>
<th>Standard</th>
<th>Certification Body</th>
<th>File Number</th>
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</thead>
<tbody>
<tr>
<td>IEC/EN 60939-3</td>
<td>UL-Demko</td>
<td>E490803</td>
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<tr>
<td>ANSI/UL 60939-3-2017</td>
<td>UL</td>
<td>E490803</td>
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<tr>
<td>CAN/CSA C22.2 No. 8-13</td>
<td>UL</td>
<td>E490803</td>
</tr>
</tbody>
</table>

### Environmental Compliance

KEMET EMI filters are RoHS Compliant.
EMC Filters
FLLE2 – R, Single Phase General Purpose Chassis Mount Filters

Typical Insertion Loss

FLLE2013ARDB
Differential mode
Common mode

FLLE2006ARDB
Differential mode
Common mode

FLLE2010ARDB
Differential mode
Common mode

FLLE2001ARDB
Differential mode
Common mode

FLLE2003ARDB
Differential mode
Common mode
Typical Insertion Loss cont.
### Mechanical Dimensions – Millimeters

#### 1A, 3A, and 6A

- **Part Number**: FLLE2001AR(1)(2)
  - L (mm): 51
  - W (mm): 45
  - H (mm): 28
  - Weight (g): 155
  - Fast-on Terminal: 6.3 x 0.8
  - Flexible Wire (mm²): 0.75

- **Part Number**: FLLE2003AR(1)(2)
  - L (mm): 51
  - W (mm): 45
  - H (mm): 28
  - Weight (g): 155
  - Fast-on Terminal: 6.3 x 0.8
  - Flexible Wire (mm²): 0.75

- **Part Number**: FLLE2006AR(1)(2)
  - L (mm): 51
  - W (mm): 45
  - H (mm): 28
  - Weight (g): 155
  - Fast-on Terminal: 6.3 x 0.8
  - Flexible Wire (mm²): 1.5

- **Part Number**: FLLE2010AR(1)(2)
  - L (mm): 65
  - W (mm): 50
  - H (mm): 40
  - Weight (g): 190
  - Fast-on Terminal: 6.3 x 0.8
  - Flexible Wire (mm²): 1.5

- **Part Number**: FLLE2013AR(1)(2)
  - L (mm): 65
  - W (mm): 50
  - H (mm): 40
  - Weight (g): 200
  - Fast-on Terminal: 6.3 x 0.8
  - Flexible Wire (mm²): 1.5

- **Part Number**: FLLE2016AR(1)(2)
  - L (mm): 65
  - W (mm): 50
  - H (mm): 40
  - Weight (g): 200
  - Fast-on Terminal: 6.3 x 0.8
  - Flexible Wire (mm²): 2.5

- **Part Number**: FLLE2020AR(1)(2)
  - L (mm): 91
  - W (mm): 51
  - H (mm): 45
  - Weight (g): 350
  - Fast-on Terminal: M4 x 0.7
  - Flexible Wire (mm²): 2.5

- **Part Number**: FLLE2025AR(1)(2)
  - L (mm): 91
  - W (mm): 51
  - H (mm): 45
  - Weight (g): 350
  - Fast-on Terminal: M4 x 0.7
  - Flexible Wire (mm²): 2.5

- **Part Number**: FLLE2032AR(1)(2)
  - L (mm): 130.5
  - W (mm): 56.5
  - H (mm): 48.5
  - Weight (g): 475
  - Fast-on Terminal: M4 x 0.7
  - Flexible Wire (mm²): 4

(1) D = Standard, M = Medical
(2) B = Fast-on (1-16A), I = Threaded (20-32A), D = Wire (1-32A)
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