FLLE2 - PV, 600 VDC and 1,200 VDC, 25 - 2,500 A



Overview

These filters are adapted to attenuate high-frequency noise that may degrade performance or a lifetime of photovoltaic panels. They also reduce EMI noise radiation that may emerge from the panels and connection cables. The filters are geometrically optimized and are designed for the lowest power loss. Two versions are available, with or without Y capacitors, to support various inverter topologies. X and Y capacitors are selected from KEMET's wide range for highest performance and reliability.

Applications

This filter is intended to be used in photovoltaic applications between the solar panel and the inverter system. It can be used within the specifications in any other DC application, such as battery chargers, energy storage systems, and UPS machines.





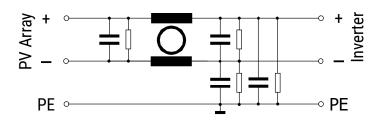




Technical Specifications

| ltem | Parameters/Characteristics | | | | | | | |
|-------------------|------------------------------------|--|--|--|--|--|--|--|
| Rated Voltage | 600 VDC | 1,200 VDC | | | | | | |
| Rated Current | 25 - 150 A | 250 - 2,500 A | | | | | | |
| Rated Temperature | 55°C | 55°C | | | | | | |
| Temperature Range | -40°C to 100°C | -40°C to 100°C | | | | | | |
| Climate Category | 40/100/21 | 40/100/21 | | | | | | |
| Voltage Test | P → P 1,300 VDC P → E 1,300 VDC | $P \rightarrow P 3,000 VDC$ $P \rightarrow E 3,600 VDC$ | | | | | | |

Typical Electrical Schematic



| Part Number | Rated Current at 55°C (A) | Power Loss at 25°C/DC (W) | Weight (kg) |
|-----------------|------------------------------|------------------------------|----------------|
| FLLE2025AP(*)T3 | 25 | 4 | 1.3 |
| FLLE2050AP(*)T5 | 50 | 6 | 1.8 |
| FLLE2075AP(*)T5 | 75 | 10 | 2.0 |
| FLLE2100AP(*)T6 | 100 | 15 | 2.5 |
| FLLE2150AP(*)T7 | 150 | 20 | 3.0 |
| FLLE2250AP(*)I1 | 250 | 10 | 10 |
| FLLE2400AP(*)I1 | 400 | 15 | 15 |
| FLLE2600AP(*)I1 | 600 | 25 | 25 |
| FLLE2800AP(*)I1 | 800 | 30 | 30 |
| FLLE21K0AP(*)I1 | 1,000 | 45 | 45 |
| FLLE21K6AP(*)I1 | 1,600 | 70 | 70 |
| FLLE22K5AP(*)I1 | 2,500 | 150 | 150 |

^(*) To complete KEMET part number, insert V = Standard, X = Without Y capacitors



Approvals

The FLLE2 – PV is designed according to IEC/EN/UL 60939 and UL 1283.

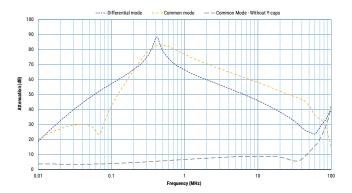
Environmental Compliance

KEMET EMI filters are RoHS Compliant.

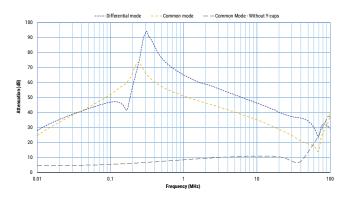


Typical Insertion Loss

25 to 150 A

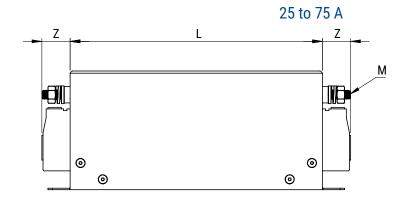


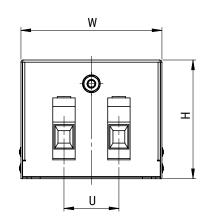
250 to 2,500 A

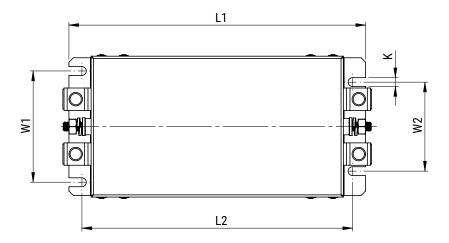




Mechanical Dimensions - Millimeters





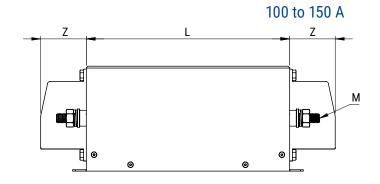


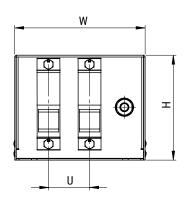
| Part Number | Dimensions in mm | | | | | | | | | | | | Terminal block | | |
|-----------------|------------------|-----|-----|-----|-----|-----|-----|----|----|-----|-----|---------|----------------|--|--|
| | L | L1 | L2 | W | W1 | W2 | Н | U | Z | K | M | Wire | Torque (Nm) | | |
| | | | | | | | | | | | | (mm²) | | | |
| FLLE2025AP(*)T3 | 140 | 170 | 153 | 80 | 50 | 60 | 65 | 25 | 15 | 5.5 | M5 | 1 - 10 | 1.2 - 1.5 | | |
| FLLE2050AP(*)T5 | 170 | 200 | 183 | 95 | 60 | 75 | 80 | 37 | 19 | 6.5 | M6 | 10 - 25 | 3 – 4 | | |
| FLLE2075AP(*)T5 | 170 | 200 | 183 | 95 | 60 | 75 | 80 | 37 | 19 | 6.5 | M6 | 10 - 25 | 3 - 4 | | |
| FLLE2100AP(*)T6 | 190 | 220 | 203 | 125 | 90 | 100 | 95 | 40 | 43 | 6.5 | M8 | 16 - 50 | 6 – 8 | | |
| FLLE2150AP(*)T7 | 220 | 250 | 233 | 140 | 100 | 120 | 115 | 45 | 50 | 6.5 | M10 | 35 - 95 | 15 – 20 | | |

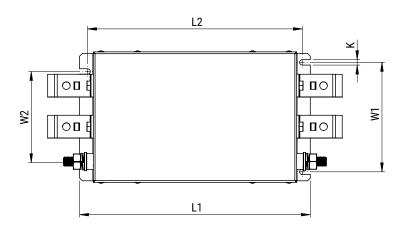
^(*) To complete KEMET part number, insert V = Standard, X = Without Y capacitors Tolerances, if not stated, according to ISO 2768-c.



Mechanical Dimensions - Millimeters cont.





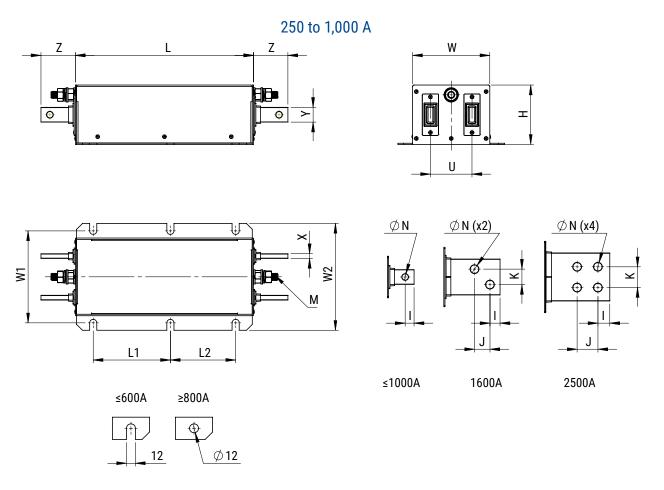


| Part Number | Dimensions in mm | | | | | | | | | | | | Terminal block | | |
|-----------------|------------------|-----|-----|-----|-----|-----|-----|----|----|-----|-----|---------|----------------|--|--|
| | F | L1 | L2 | W | W1 | W2 | H | C | Z | K | M | Wire | Torque | | |
| | | | | | | | | | | | | (mm²) | (Nm) | | |
| FLLE2025AP(*)T3 | 140 | 170 | 153 | 80 | 50 | 60 | 65 | 25 | 15 | 5.5 | M5 | 1 - 10 | 1.2 - 1.5 | | |
| FLLE2050AP(*)T5 | 170 | 200 | 183 | 95 | 60 | 75 | 80 | 37 | 19 | 6.5 | M6 | 10 - 25 | 3 – 4 | | |
| FLLE2075AP(*)T5 | 170 | 200 | 183 | 95 | 60 | 75 | 80 | 37 | 19 | 6.5 | M6 | 10 - 25 | 3 - 4 | | |
| FLLE2100AP(*)T6 | 190 | 220 | 203 | 125 | 90 | 100 | 95 | 40 | 43 | 6.5 | M8 | 16 - 50 | 6 - 8 | | |
| FLLE2150AP(*)T7 | 220 | 250 | 233 | 140 | 100 | 120 | 115 | 45 | 50 | 6.5 | M10 | 35 - 95 | 15 - 20 | | |

^(*) To complete KEMET part number, insert V = Standard, X = Without Y capacitors Tolerances, if not stated, according to ISO 2768-c.



Mechanical Dimensions - Millimeters cont.



| Part Number | | Dimensions in mm | | | | | | | | | | | | | | |
|-----------------|-----|------------------|-----|-----|-----|-----|-----|-----|----|----|-----|----|----|----|------|-----|
| | L | L1 | L2 | W | W1 | W2 | Н | U | X | Υ | Z | -1 | J | K | ØN | M |
| FLLE2250AP(*)I1 | 300 | 130 | 110 | 130 | 155 | 180 | 100 | 70 | 5 | 20 | 58 | 15 | - | - | 9 | M10 |
| FLLE2400AP(*)I1 | 300 | 130 | 110 | 130 | 165 | 190 | 100 | 70 | 6 | 25 | 58 | 15 | - | - | 10.5 | M10 |
| FLLE2600AP(*)I1 | 300 | 130 | 110 | 130 | 165 | 190 | 100 | 70 | 8 | 25 | 58 | 15 | - | - | 10.5 | M10 |
| FLLE2800AP(*)I1 | 300 | 130 | 110 | 150 | 175 | 200 | 130 | 70 | 8 | 40 | 65 | 20 | - | - | 14 | M12 |
| FLLE21K0AP(*)I1 | 300 | 130 | 110 | 150 | 175 | 200 | 130 | 70 | 8 | 40 | 65 | 20 | - | - | 14 | M12 |
| FLLE21K6AP(*)I1 | 300 | 130 | 110 | 150 | 175 | 200 | 130 | 70 | 10 | 60 | 110 | 17 | 43 | 26 | 14 | M12 |
| FLLE22K5AP(*)I1 | 400 | 190 | 150 | 190 | 225 | 250 | 180 | 100 | 15 | 80 | 100 | 20 | 35 | 35 | 14 | M16 |

^(*) To complete KEMET part number, insert V = Standard, X = Without Y capacitors Tolerances, if not stated, according to ISO 2768-c.



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