

## Type PWR-F



### Features

- high adiabatic impulses
- robust construction
- high level of protection

### Applications

- Brake resistor
- Capacity discharge
- Heating resistor
- Snubber resistor

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# Power resistor

Type: PWR-F



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## Electrical Characteristics

|                                      | F150                  | F 200     | F 300     |     |
|--------------------------------------|-----------------------|-----------|-----------|-----|
| Nominal load @25°C                   | 150W                  | 200W      | 300W      |     |
| Nominal load (ED 30%without cooling) | 75 W                  | 100W      | 150 W     | (1) |
| Nominal load(without cooling)        | 225W                  | 300 W     | 450 W     |     |
| Resistance Range                     | 2,2Ω-220Ω             | 3,6Ω-390Ω | 5,6Ω-560Ω | (2) |
| Resistance tolerance                 | ± 5%                  |           |           | (2) |
| Max. working voltage                 | 1000V                 | 1000V     | 1500V     |     |
| Operating voltage                    | √PR                   |           |           |     |
| Absorbed energy in 5s                | 0,75 KW               | 1,0 KW    | 1,5 KW    |     |
| Inductance                           | < 0,2 mH at 1 KHz     |           |           |     |
| Thermal time constant                | 12 to 16 min.         |           |           | (3) |
| Stability                            | 5%                    |           |           |     |
| Isolation resistance                 | 10GΩ bei 500 VDC      |           |           |     |
| Dielectric withstanding voltage      | 4000 VAC, 50 Hz, 60 s |           |           |     |
| Temperature coefficient              | ± 150 ppm/°C          |           |           |     |

## Mechanical Characteristics

|                  |       |      |      |
|------------------|-------|------|------|
| Weight           | 250g  | 350g | 500g |
| Protection class | IP 55 |      |      |

## Environmental Characteristics

|                       |                 |
|-----------------------|-----------------|
| Storage temperature   | -10°C ÷ + 50°C  |
| Operating temperature | -50°C ÷ + 200°C |
| Climatic class        | 50/200/56       |

## Material

|                       |  |
|-----------------------|--|
| Housing               | Aluminium  |
| Cable standard        | <b>UL SIFGL single core AWG16 style 1199, 200°C 600V</b> (2) |
| Cable optional        | UL PTFE single core AWG16 style 3071, 200°C 600V             |
| Cable optional        | UL FEP single core AWG16 style 10203, 200°C 1000V            |
| Cable length standard | 300 mm (4)   |
| Temperature switch    | T11A-180-10-L340-300-U116-P110                               |
| Connections           | www.microtherm.de  |

Specifications subject to change without notice

(1) surface temperature at 250°C heatsink surface 250 cm²

(2) Other values on request

(3) Terminal time constant to reach operating temperature at nominal load

(4) Other lengths on request

# Power resistor

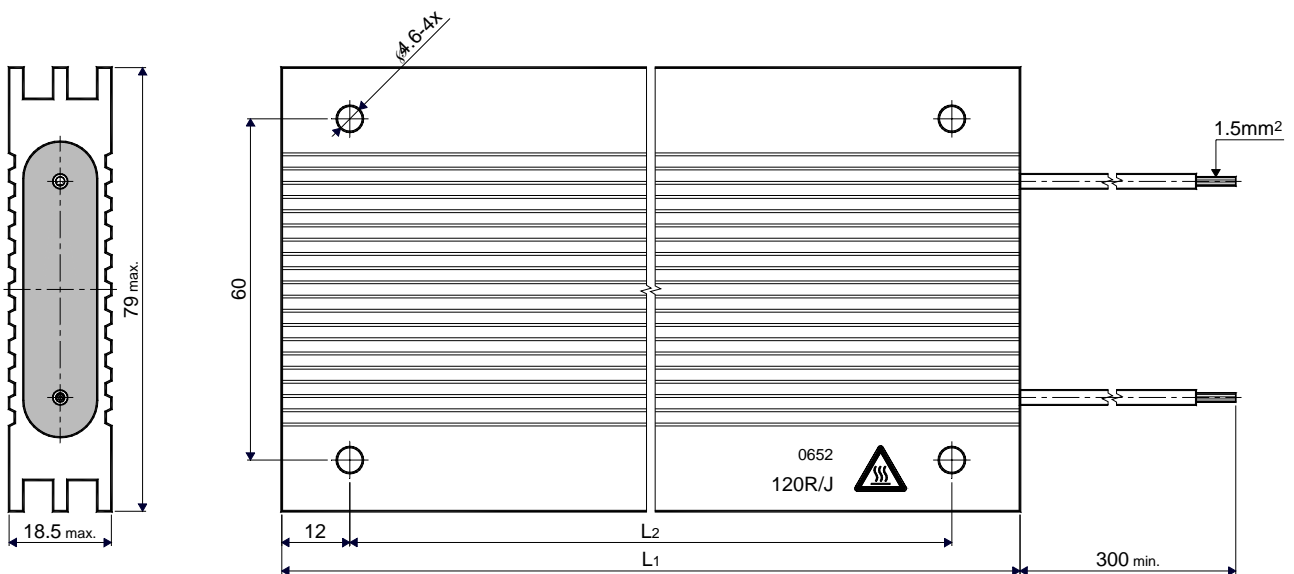
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| Drawing (mm)                   | F 150 | F 200  | F 300  |
|--------------------------------|-------|--------|--------|
| Length L <sub>1</sub>          | 80 mm | 110 mm | 163 mm |
| Centre distance L <sub>2</sub> | 56 mm | 86 mm  | 139 mm |



## How to order

PWR F T 200 100 Ω 10% 300mm cable

Design  
 Temperature switch (optional)  
 Power  
 Resistance value  
 Resistance tolerance  
 Cable type and length, if it's different to the standard

Specifications are subject to change without notice

# Power resistor

Type: PWR-F



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| <b>Eigenschaften</b>                 | F 400   | F 500     | F 600     |     |
|--------------------------------------|---|-----------|-----------|-----|
| Nominal load @ 25°C                  | 400 W   | 500 W     | 600 W     | (1) |
| Nominal load (without cooling)       | 200 W   | 250W      | 300W      |     |
| Nominal load(30% ED without cooling) | 600W  | 750W      | 900W      |     |
| Resistance Range                     | 7,5Ω-820Ω   | 10Ω-1000Ω | 11Ω-1100Ω | (2) |
| Resistance tolerance                 | ± 5%  |           |           | (2) |
| Max. working voltage                 | 1500V   | 2000V     | 2000V     |     |
| Operating voltage                    | √PR   |           |           |     |
| Absorbed energy in 5s                | 2 KW  | 2,5 KW    | 3 KW      |     |
| Inductance                           | < 0,2 mH at 1 KHz                                 |           |           |     |
| Thermal time constant                | 12 to 16 min.                                     |           |           | (3) |
| Stability                            | 5%  |           |           |     |
| Isolation resistance                 | 10GΩ at 500 VDC                                   |           |           |     |
| Dielectric withstanding voltage      | 4000 VAC, 50 Hz, 60 s                             |           |           |     |
| Temperature coefficient              | ± 150 ppm/°C                                      |           |           |     |
| <b>Mechanical Characteristics</b>    |   |           |           |     |
| Weight                               | 650g  | 800g      | 900g      |     |
| Protection class                     | IP 55   |           |           |     |
| <b>Environmental Characteristics</b> |   |           |           |     |
| Storage temperature                  | -10°C ÷ + 50°C                                    |           |           |     |
| Operating temperature                | -50°C ÷ + 200°C                                   |           |           |     |
| Climatic class                       | 50/200/56   |           |           |     |
| <b>Material</b>                      |   |           |           |     |
| Housing                              | Aluminium   |           |           |     |
| Cable standard                       | UL SIFGL single core AWG16 style 1199, 200°C 600V |           |           | (2) |
| Cable optional                       | UL PTFE single core AWG16 style 3071, 200°C 600V  |           |           |     |
| Cable optional                       | UL FEP single core AWG16 style 10203, 200°C 1000V |           |           |     |
| Cable length standard                | 300 mm  |           |           | (4) |
| Temperature switch                   | T11A-180-10-L-340-300-U116-P110                   |           |           |     |
| Connections                          | www.microtherm.de                                 |           |           |     |

Specifications subject to change without notice

(1) surface temperature 250°C at heatsink surface 250 cm²

(2) Other values on request

(3) Terminal time to reach operating temperature at nominal load

(4) Other lengths on request

# Power resistor

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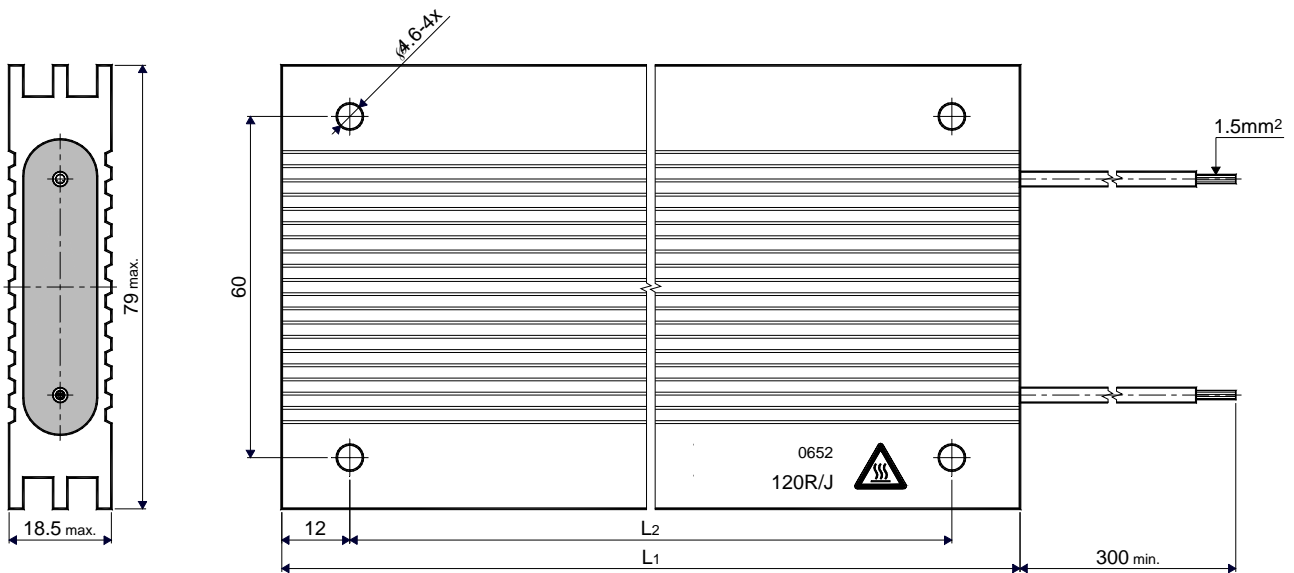


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## Drawing (mm)

|                                | F 400  | F 500  | F 600  |
|--------------------------------|--------|--------|--------|
| Length L <sub>1</sub>          | 216 mm | 270 mm | 300 mm |
| Centre distance L <sub>2</sub> | 192 mm | 246 mm | 276 mm |



## How to order

PWR F T 400 100 Ω 10% 300mm cable

Cable type and length, if it's different to the standard  
Resistance tolerance

Resistance value

Power

Temperature switch (optional)

Design

Specifications are subject to change without notice