PFU Series

1000 W & 800 W

High Power Resistors / High Voltage Resistors

- **High Power Density**
- **0.5 Ohm to 1 Mohm**
- **Very Low Inductance**
- **Vibraton Proof**
- **Applications:**
  Power Supplies, Motor Controls, Snubber Resistors, Load Banks, Robotics

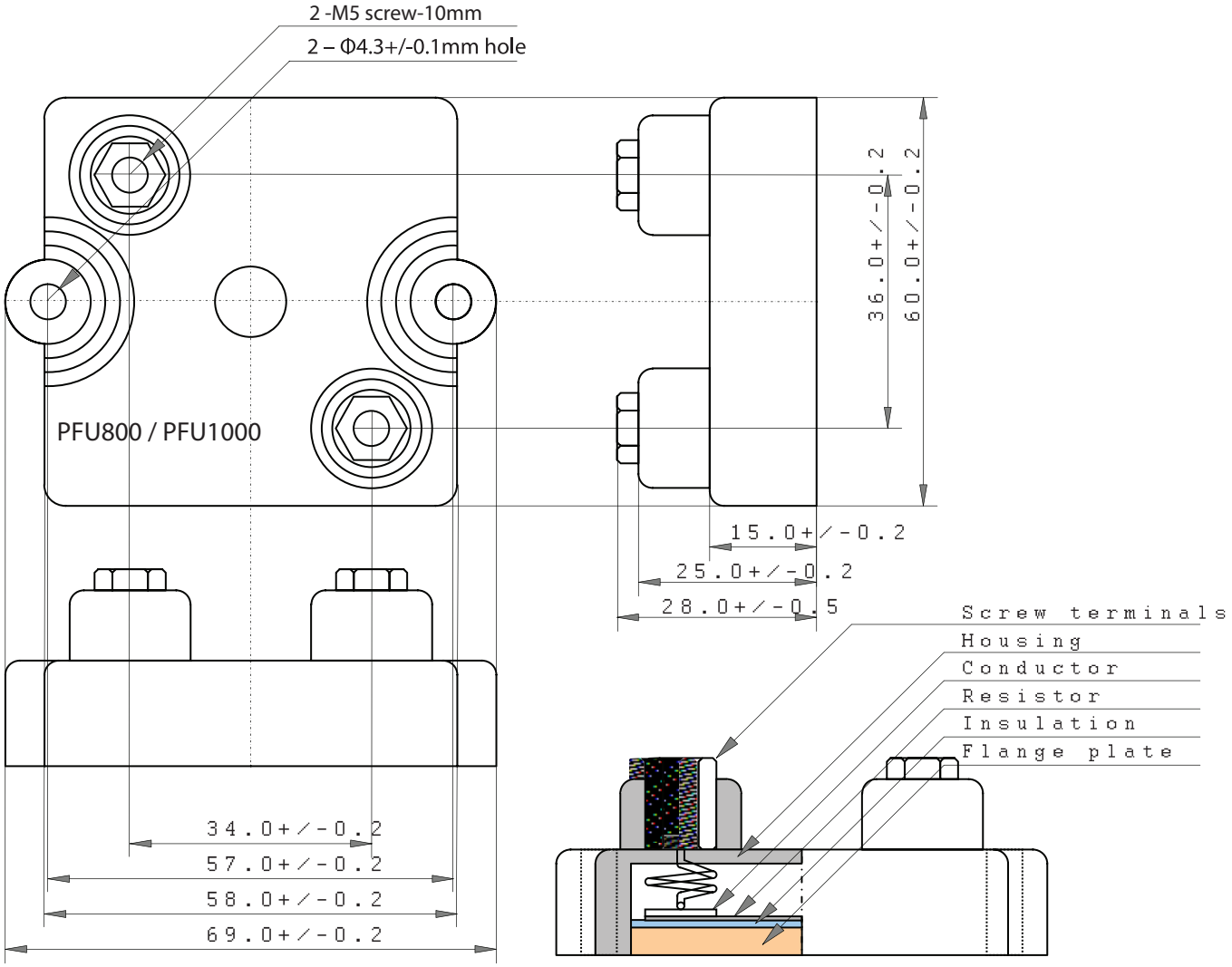
RoHS compliant

SPECIFICATIONS

Type	PFU 800	PFU 1000	Conditions
Rated Power	800	1000	At Flange Temperature -55 to +75 °C
Short Time Overload	1000	1200	5 Seconds
Thermal Resistance	0.10 °C / W		From Resistor to Flange
Resistance Range	0.5 ohm TO 1 Mohm		
Nominal Resistance	E24+		Additionally , 2.0 and 5.0
TCR	+/- 100 PPM/K (A)		1 ohm to 1 Mohm, +/- 200PPM/°C < 1 ohm , for -55 to +155 °C
Tolerance	+/- 5% (J)		
Operation Temperature	-55 to +175 °C		At Resistor Element Surface
Max Applied Voltage	V = √ (P • R) (5000V Max)		P Rated Power (W), R - resistance value (ohm), V - voltage (V)
Insulation Voltage	8000 V-30Hz	8000 V-50Hz	60 seconds between Terminals and Flange. Leak current below 0.5 mA
Capacitance	73 pF		Terminal to Flange
Inductance	108 nH		Terminal to Terminal
Capacitance	25 pF		Terminal to Terminal
Creep Distance	42 mm		
Air Distance	14 mm		
Load Life	Δ R +/- 0.40%		Continuous Power 1000 hours
Humidity	Δ R +/- 0.25%		60 °C, 90 to 95% RH, DC 0.1W, 1000 hours
Temperature Cycle	Δ R +/- 0.20%		-55 °C, 30 min, +155 °C 30 min, 5 cycles
Insulation Resistance	Over 1G ohm		
Vibration	Δ R +/- 0.25%		See Note below
Flammability	UL94V-0		For Resistor Body
Weight	120 grams		

Note: IEC60068 2-6 displacement 0.75 mm or acceleration 100m/J^2 10Hz to 54Hz sweep, 10 cycles X,Y,Z direction

SPECIFICATIONS (continued)



Recommended: Mounting Torque: 1.8Nm (M4)
Contact Torque: 2.0 Nm (M5)

Power Rating Notes -

The PFU Series Power Film Resistors must be attached to a suitable heatsink. The maximum internal resistor temperature is 175°C. **Liquid Cooling highly recommended**.

To specify an appropriate heatsink use the following formula :

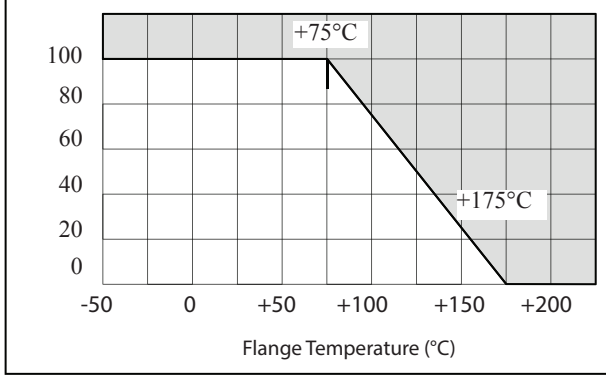
$$R_{\Theta H} = \frac{T_{MAX} - (P * R_{\Theta R}) - T_A}{P}$$

Where: $R_{\theta H}$ = Thermal Resistance of Heatsink (K/W)
$R_{\theta R}$ = Thermal Resistance of Resistor (K/W)
T_{MAX} = Maximum Temperature of Resistor
T_A = Ambient Temperature of Heatsink (°C)
P = Power Through Resistor (W)

SPECIFICATIONS (continued)

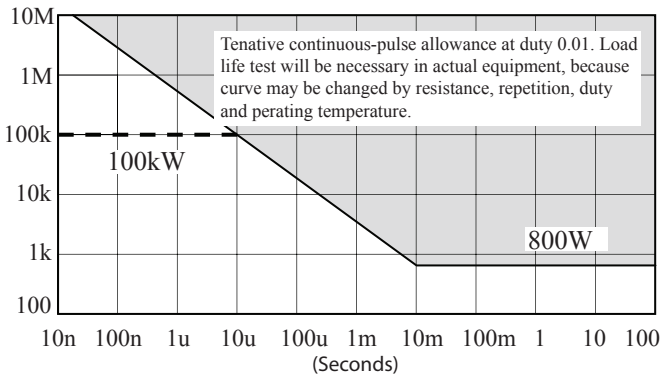
Derating Curve

PFU800



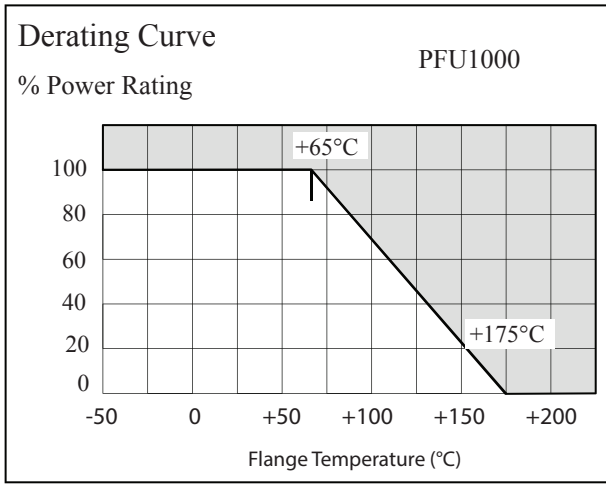
Pulse Energy Durability

PFU800-100 J



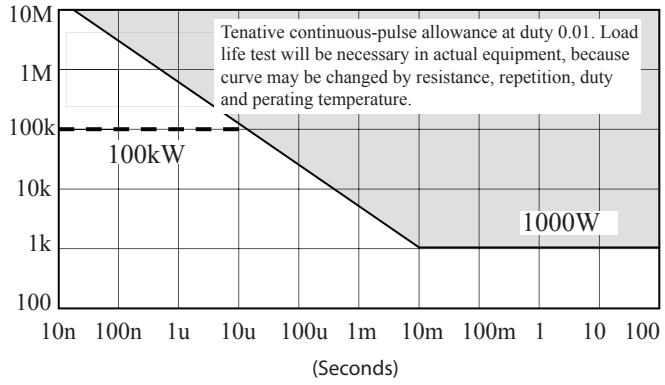
Derating Curve

PFU1000



Pulse Energy Durability

PFU1000-100 J



Ordering Information

Part Description: Part Type - Terminal Style - Resistance - Tolerance

PFU800 10 Ohms 5%