

Series UXC 800

AEC-
Q200
ready

The UXC 800 is the most powerful discharge resistor. The easy mounting concept secures an auto-calibrated pressure to the heat sink for the highest performance.

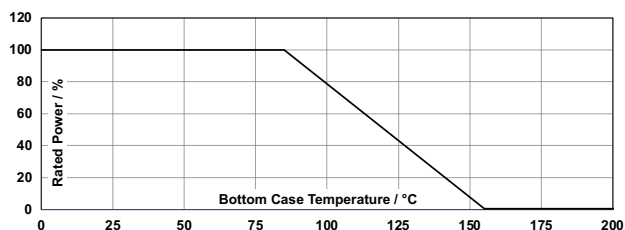
Features

- 800 W operating power
- Non-Inductive design
- ROHS compliant
- High insulation & partial discharge performance
- Materials in accordance with UL 94 V-0
- Thermal interface management available (ask for details)



Technical Specifications

Resistance value	0.03 Ω to 1 M Ω
Resistance tolerance	$\pm 5\%$ to $\pm 10\%$ $\pm 1\%$ to $\pm 2\%$ on special request for limited ohmic values with the reduction of the max. power / pulse rating (ask for details)
Temperature coefficient	± 500 ppm/ $^{\circ}\text{C}$ (0.1 Ω to 0.25 Ω) standard ± 150 ppm/ $^{\circ}\text{C}$ ($> 0.25 \Omega$ to 1 M Ω) standard (referenced to 25 $^{\circ}\text{C}$, ΔR taken at $\sim 105^{\circ}\text{C}$)
Power rating	800 W at 85 $^{\circ}\text{C}$ bottom case temperature
Short time overload	1000 W at 70 $^{\circ}\text{C}$ for 10 s, $\Delta R = 0.4\%$ max.
Operating working voltage	5000 V DC = 3500 V AC RMS (50 Hz) higher voltage on request, not exceeding max. power
Maximum continuous current	150 A (HC or UHC version)
Dielectric strength	7 kVrms / 50 Hz / 500 VA, test time 1 min. between terminal und case (up to 12 kVrms on request) voltages above 10 kVrms are tested at DC equivalent to avoid pre damage of component
Partial discharge	4 kVrms < 10 pC (up to 7 kVrms < 10 pC on request) acc. to IEC 60270
Peak current	up to 1500 A depending on pulse width and frequency (ask for details)
Insulation resistance	$> 10 \text{ G}\Omega$ at 1000 V
Single shot voltage	up to 12 kV norm wave (1.5/50 μs)
Creeping distance	$> 42 \text{ mm}$ (standard, higher on request)
Air distance	$> 14 \text{ mm}$ (standard, higher on request)
Inductance	$\leq 80 \text{ nH}$ (typical), measuring frequency 10 kHz
Capacity/mass	$\leq 140 \text{ pF}$ (typical), measuring frequency 10 kHz
Capacity/parallel	$\leq 40 \text{ pF}$ (typical), measuring frequency 10 kHz
Operating temperature	- 55 $^{\circ}\text{C}$ to + 155 $^{\circ}\text{C}$
Mounting - torque for contacts	1.8 Nm to 2 Nm
Mounting - torque	1.6 Nm to 1.8 Nm M4 screws
Internal temperature sensor available on request	PT-1000 / PT-100 / Type K / Type J (ask for details)
Cable variation available on request	HV-cable / Flying leads (ask for details)
Standard cable type	H&S Radox 9 GWK AX 1.5 mm ² (other cable types on special request)
Weight	$\sim 120 \text{ g}$



Typical Pulse Load (initial resistor temperatur $\leq 85^{\circ}\text{C}$)

450 J for $\tau = 0.1 \text{ s}$
660 J for $\tau = 0.2 \text{ s}$
1100 J for $\tau = 0.5 \text{ s}$

General Specifications

Electric support
Alumina metalized with Miba ALTOX film on the bottom for improved heat transfer and optimum discharge.

Encapsulation
Resin-filled epoxy casing with large creeping distance to mass, large air distance between the terminals and high insulation resistance (CTI 600).

Resistance element
Special design for low inductance and capacitance values. The element employs our special METOXFILM, which demonstrates stability while covering high wattage and pulse loading.

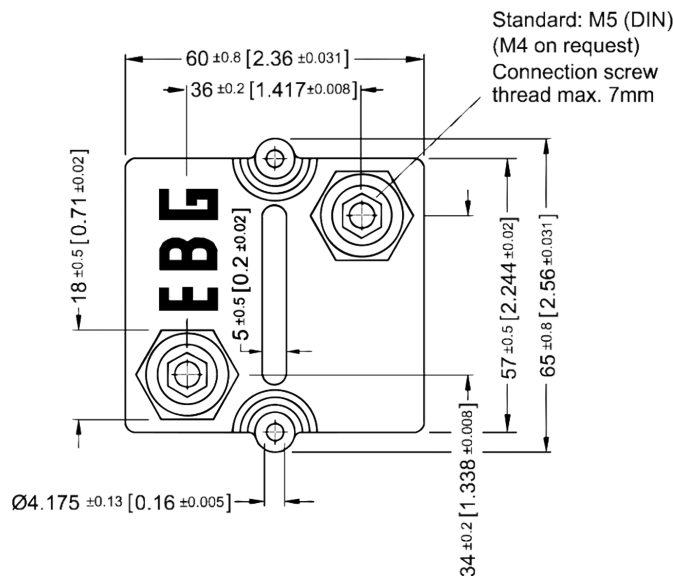
Housing
Housings are made without color additives. The color definition is natural and can vary in different pigmentation.

Contacts
Easy load connection with M4 and M5 screws (inch thread terminals on request)
Connector height available from 25 mm to 42 mm.

Various sleeves for increasing creeping distance up to 85 mm or potted cable connections are available on request
Contacts standard M5 (M4 on special request - connection screw thread max. 7 mm.)

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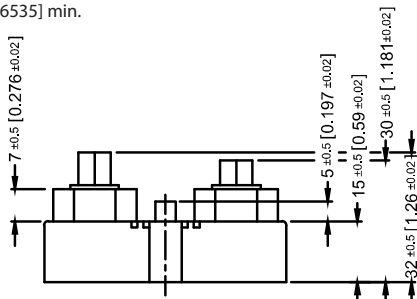
Dimensions in mm [inches]



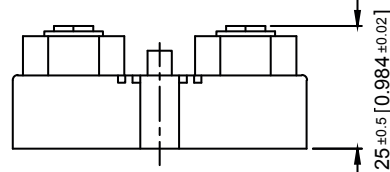
Standard Terminals

Air distance: 14 mm [0.5512] min.
Creeping distance: 42 mm [1.6535] min.

Terminal height 30/32
Standard



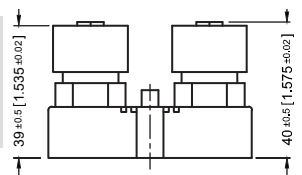
Terminal height 25/25
Optional



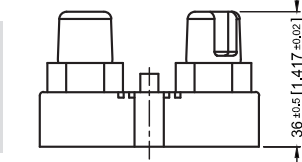
Terminal Options (for increased air & creeping distances)

Other terminal dimensions available, contact for more information

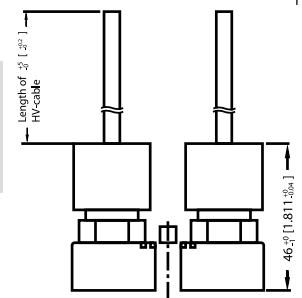
UXC 800-9
Air distance: 25 mm [0.984] min.
Creeping distance: 83 mm [3.267] min.



UXC 800-7
Air distance: 26.7 mm [1.0512] min.
Creeping distance: 50 mm [1.968] min.



UXC 800-16
Air and creeping distance
depends on length of HV-cable



Test Specifications*

Test	Method	Resistance Drift**
Short time overload	1000 W / 10 s	0.40 %
Humidity steady state	56 days / 40 °C / 95 %	0.25 %
Temp. Cycling	- 55 °C / + 125 °C / 5 cycles	0.20 %
Shock	40 g / 4000 times	0.25 %
Vibrations	2 Hz to 500 Hz / 10 g	0.25 %
Load life 3000 cycles	PN 30 min. on / 30 min off	0.40 %
Terminal strengths	200 N for hexa. thread contacts	0.05 %

* The test methods are according to IEC 60068-2.

** The resistance drift is the possible change of the resistance value because of the certain test.



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