

Data & signal protection

OVR RTD, RTDQ & SL RTD Series



LPZ 0 → 3	FULL MODE Bonding + Equipment Protection	OVR SL RTD ULTRA SLIM 7 mm WIDTH	SIGNAL/ TELECOM TEST CAT D + C + B	ENHANCED Low let-through voltage	OVR RTDQ ULTRA COMPACT 18 mm WIDTH	LOW IN-LINE RESISTANCE	OVR SL RTD HIGH BANDWIDTH
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Combined Category D, C, B tested protector (to BS EN 61643) suitable for 3-wire RTD systems to protect monitoring equipment. For use at boundaries up to LPZ 0 to protect against flashover (typically the service entrance location) through to LPZ 3. Available as standard OVR RTD format, or compact OVR RTDQ and Slim Line OVR SL RTD versions for installations where a high number of lines require protection.

Features & benefits

- Protects all three wires on a 3-wire RTD system with a single protector
- Very low let-through voltage (enhanced protection to IEC/BS EN 62305) between all lines - Full Mode protection
- Full Mode design capable of handling partial lightning currents as well as allowing continual operation of protected equipment
- Repeated protection in lightning intense environments
- Low in-line resistance minimizes reductions in signal strength
- Built-in DIN rail foot for simple mounting to top hat DIN rails
- Convenient earthing through DIN foot and/or earth terminal
- OVR RTD can be flat mounted on base or side
- OVR RTD and OVR RTDQ have colour coded terminals for quick and easy installation check
- OVR SL RTD has ultra slim 7 mm width ideal for compact protection of large numbers of lines (e.g. process control installations)
- OVR SL RTD includes two stage removable protection module with simple quick release mechanism allowing partial removal for easy line commissioning and maintenance as well as full removal for protection replacement

For further information on RTD applications, see separate Application Note OVR AN001 (contact us for a copy).

Installation

Connect in series with the signal line either near where it enters or leaves the building or close to the equipment being protected ensuring it is very close to the system's earth star

point. Install protectors either within an existing cabinet/cubicle or in a separate enclosure.

Accessories

Replacement module for OVR SL RTD:

OVR SLRTD/M

Standard module replacement

OVR SLRTD/B

Base replacement

Combined Mounting/Earthing kits for OVR RTD:

OVR CME 4 For up to 4 x OVR RTD

OVR CME 8 For up to 8 x OVR RTD

OVR CME 16 For up to 16 x OVR RTD

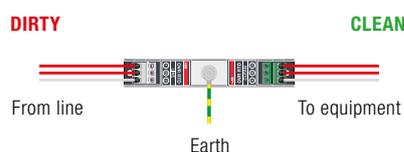
OVR CME 32 For up to 32 x OVR RTD

If protectors cannot be incorporated within an existing panel or enclosure, OVR WBX enclosures are available for up to 4, 8, 16 or 32 protectors and their associated OVR CME kit.

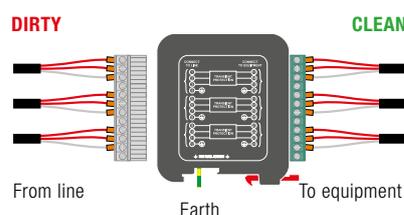
Weatherproof enclosure:

OVR WBX SLQ (OVR SLRTD and OVR RTD Q)

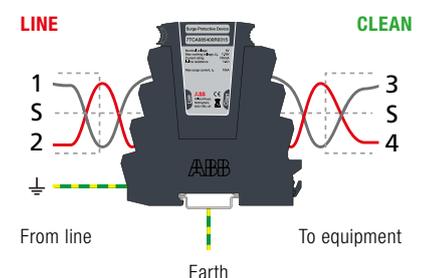
OVR RTD installed in series



OVR RTDQ installed in series (in-line)



OVR SL RTD installed in series



NOTE: For 2-wire or 4-wire RTD applications, use one or two OVR 06D or OVR SL06 protectors respectively.

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OVR RTD, RTDQ & SL RTD Series - Technical specification

Electrical specification	OVR RTD	OVR SL RTD	OVR RTDQ
ABB order code	7TCA085400R0313	7TCA085400R0315	7TCA085400R0314
Nominal voltage ⁽¹⁾	6 V		
Maximum working voltage U _c (RMS/DC) ⁽²⁾	5 V / 7.79 V		
Current rating (signal)	200 mA	500 mA	700 mA
In-line resistance (per line ±10%)	10 Ω	1.0 Ω	1.0 Ω
Bandwidth (-3 dB 50 Ω system)	800 kHz	1.5 MHz	800 kHz
Transient specification	OVR RTD	OVR SL RTD	OVR RTDQ
Let-through voltage (all conductors)⁽³⁾ Up			
C2 test 4 kV 1.2/50 μs, 2 kA 8/20 μs to BS EN/EN/IEC 61643-21	12.0 V	17.9 V	15.0 V
C1 test 1 kV, 1.2/50 μs, 0.5 kA 8/20 μs to BS EN/EN/IEC 61643-21	11.5 V	12.1 V	12.5 V
B2 test 4 kV 10/700 μs to BS EN/EN/IEC 61643-21	10.0 V	11.0 V	10.0 V
5 kV, 10/700 μs ⁽⁴⁾	10.5 V	11.3 V	10.5 V
Maximum surge current			
D1 test 10/350 μs to BS EN/EN/IEC 61643-21: - Per signal wire	2.5 kA	1.25 kA	2.5 kA
8/20 μs to ITU-T K.45:2003, - Per pair	5 kA	2.5 kA	5 kA
IEEE C62.41.2:2002: - Per signal wire	10 kA		
- Per pair	20 kA		
Mechanical specification	OVR RTD	OVR SL RTD	OVR RTDQ
Temperature range	-40 to +80 °C		
Connection type	Screw terminal - max. torque 0.5 Nm	Screw terminal - max. torque 0.8 Nm	Pluggable 12 way screw terminal
Conductor size (stranded)	2.5 mm ²	4 mm ²	2.5 mm ²
Earth connection	M6 stud - max. torque 0.5 Nm	Via DIN rail or 4 mm ² earth terminal - max. torque 0.8 Nm	Via DIN rail or M5 threaded hole in base of unit - max. torque 0.6 Nm
Case Material	FR Polymer UL-94 V-0		
Weight: - Unit	0.08 kg	0.08 kg	0.1 kg
- Packaged (per 10)	0.85 kg	0.85 kg	1.3 kg
Dimensions	See diagram below		

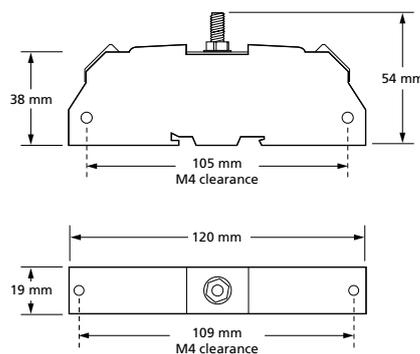
⁽¹⁾ Nominal voltage (RMS/DC or AC peak) measured at < 200 μA

⁽²⁾ Maximum working voltage (RMS/DC or AC peak) measured at < 10 mA

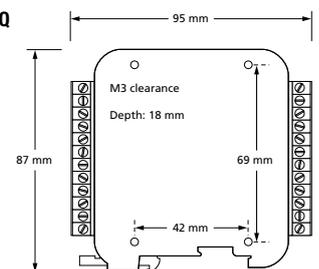
⁽³⁾ The maximum transient voltage let-through of the protector throughout the test (±10%), line to line & line to earth, both polarities. Response time < 10 ns

⁽⁴⁾ Test to IEC 61000-4-5:2006, ITU-T (formerly CCITT) K.20, K.21 and K.45, Telcordia GR-1089-CORE, Issue 2:2002, ANSI TIA/EIA/IS-968-A:2002 (formerly FCC Part 68)

OVR RTD



OVR RTDQ



OVR SL RTD

