Data & signal protection
OVR RTD, RTDQ & SL RTD Series

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 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)

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

OVR RTD, RTDQ & SL RTD Series

**Electrical specification**

<table>
<thead>
<tr>
<th></th>
<th>OVR RTD</th>
<th>OVR SL RTD</th>
<th>OVR RTDQ</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Nominal voltage</strong></td>
<td>8 V</td>
<td>8.5/8.79 V</td>
<td>8V</td>
</tr>
<tr>
<td><strong>Maximum working voltage Uc (RMS/DC)</strong></td>
<td>5 V / 7.79 V</td>
<td>5 V / 7.79 V</td>
<td>5 V / 7.79 V</td>
</tr>
<tr>
<td><strong>Current rating (signal)</strong></td>
<td>200 mA</td>
<td>500 mA</td>
<td>700 mA</td>
</tr>
<tr>
<td><strong>In-line resistance</strong></td>
<td>10 Ω</td>
<td>1.0 Ω</td>
<td>1.0 Ω</td>
</tr>
<tr>
<td><strong>Bandwidth</strong> (-3 dB 50 Ω system)</td>
<td>800 kHz</td>
<td>1.5 MHz</td>
<td>800 kHz</td>
</tr>
</tbody>
</table>

**Bandwidth (±10%)**

- **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**

**Maximum surge current**

- **D1 test** 10/350 μs to BS EN/EN/IEC 61643-21: 2.5 kA
  - **Per signal wire**
  - **5 kA**
  - **10 kA**
- **8/20 μs to ITU-T K.45:2003, IEEE C62.41.2:2002:**
  - **20 kA**
  - **Per pair**

**Mechanical specification**

<table>
<thead>
<tr>
<th></th>
<th>OVR RTD</th>
<th>OVR SL RTD</th>
<th>OVR RTDQ</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Temperature range</strong></td>
<td>-40 to +80 ºC</td>
<td>-40 to +80 ºC</td>
<td>-40 to +80 ºC</td>
</tr>
<tr>
<td><strong>Connection type</strong></td>
<td>Screw terminal - max. torque 0.5 Nm</td>
<td>Screw terminal - max. torque 0.8 Nm</td>
<td>Pluggable 12 way screw terminal</td>
</tr>
<tr>
<td><strong>Conductor size (stranded)</strong></td>
<td>2.5 mm²</td>
<td>4 mm²</td>
<td>2.5 mm²</td>
</tr>
<tr>
<td><strong>Earth connection</strong></td>
<td>M6 stud - max. torque 0.5 Nm</td>
<td>Via DIN rail or 4 mm² earth terminal - max. torque 0.8 Nm</td>
<td>Via DIN rail or M5 threaded hole in base of unit - max. torque 0.6 Nm</td>
</tr>
<tr>
<td><strong>Case Material</strong></td>
<td>FR Polymer UL-94 V-0</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Weight:</strong></td>
<td>0.08 kg</td>
<td>0.08 kg</td>
<td>0.1 kg</td>
</tr>
<tr>
<td>- <strong>Unit</strong></td>
<td>0.08 kg</td>
<td>0.08 kg</td>
<td>0.1 kg</td>
</tr>
<tr>
<td>- <strong>Packaged (per 10)</strong></td>
<td>0.85 kg</td>
<td>0.85 kg</td>
<td>1.3 kg</td>
</tr>
<tr>
<td><strong>Dimensions</strong></td>
<td>See diagram below</td>
<td></td>
<td></td>
</tr>
</tbody>
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(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