

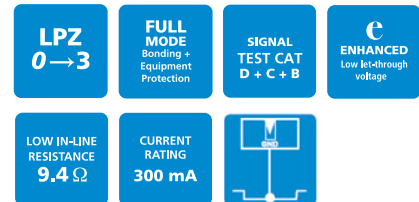
DATASHEET

Data & signal protection

OVR D Series



Combined Category D, C, B tested protector (to BS EN 61643) suitable for most twisted pair signalling applications. Available for working voltages of up to 6, 15, 30, 50 and 110 Volts. For use at boundaries up to LPZ 0 to protect against flashover (typically the service entrance location) through to LPZ 3 to protect sensitive electronic equipment.



Features & benefits

- 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 unnecessary reductions in signal strength
- Strong, flame retardant, ABS housing
- Supplied ready for flat mounting on base or side
- Built-in DIN rail foot for simple clip-on mounting to top hat DIN rails
- Colour coded terminals give a quick and easy installation check - grey for the dirty (line) end and green for the clean end
- Screen terminal enables easy connection of cable screen to earth
- Substantial earth stud to enable effective earthing
- Integral earthing plate for enhanced connection to earth via a OVR CME kit

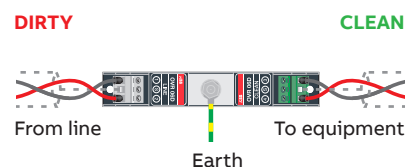
Application

Use on twisted pair lines, e.g. those found in process control equipment, modems and computer communications interfaces.

Installation

Connect in series with the data communication or signal line either near where it enters or leaves the building or close to the equipment being protected (e.g. within its control panel). Either way, it must be very close to the system's earth star point. Install protectors either within an existing cabinet/cubicle or in a separate enclosure.

Install in series (in-line)



Accessories

Combined Mounting/Earthing kits:

OVR CME 4 Mount & earth up to 4 protectors

OVR CME 8 Mount & earth up to 8 protectors

OVR CME 16 Mount & earth up to 16 protectors

OVR CME 32 Mount & earth up to 32 protectors

Weatherproof enclosures:

OVR WBX 4, OVR WBX 4/GS

For use with a OVR CME 4 and up to 4 protectors

OVR WBX 8, OVR WBX 8/GS

For use with a OVR CME 8 and up to 8 protectors

OVR WBX 16/2/G

For use with one or two OVR CME 16 and up to 32 protectors

Slim Line (OVR SL) and ATEX (OVR SLX) versions are also available. If your system requires a protector with a very low resistance or higher current, see the OVR E & H Series. Also use the OVR E Series for systems needing a higher bandwidth. Protectors for 3-wire (OVR SL/3W) and RTD (OVR RTD, OVR SL RTD) are available, as are the space saving protectors (OVR Q, OVR SL Series). The OVR KT and TN Series are additional protectors specifically for telephone lines.

| OVR D Series - Technical specification | | | | | |
|--|--|-----------------|-----------------|-----------------|-----------------|
| Electrical specification | OVR 06D | OVR 15D | OVR 30D | OVR 50D | OVR 110D |
| ABB order code | 7TCA085400R0288 | 7TCA085400R0349 | 7TCA085400R0351 | 7TCA085400R0352 | 7TCA085400R0347 |
| Nominal voltage ⁽¹⁾ | 6 V | 15 V | 30 V | 50 V | 110 V |
| Maximum working voltage U_c (RMS/DC) ⁽²⁾ | 5 V / 7.79 V | 13 V / 19 V | 26 V / 37.1 V | 41 V / 58 V | 93 V / 132 V |
| Current rating (signal) | 300 mA | | | | |
| In-line resistance (per line $\pm 10\%$) | 9.4 Ω | 9.4 Ω | 9.4 Ω | 9.4 Ω | 9.4 Ω |
| Bandwidth (-3 dB 50 Ω system) | 800 kHz | 2.5 MHz | 4 MHz | 6 MHz | 9 MHz |
| Transient specification | OVR 06D | OVR 15D | OVR 30D | OVR 50D | OVR 110D |
| Let-through voltage (all conductors)⁽³⁾ Up | | | | | |
| C2 test 4 kV 1.2/50 μ s, 2 kA 8/20 μ s to BS EN/EN/IEC 61643-21 | 12.0 V | 25.0 V | 44.0 V | 78.0 V | 155 V |
| C1 test 1 kV, 1.2/50 μ s, 0.5 kA 8/20 μ s to BS EN/EN/IEC 61643-21 | 11.5 V | 24.5 V | 43.5 V | 76.0 V | 150 V |
| B2 test 4 kV 10/700 μ s to BS EN/EN/IEC 61643-21 | 10.0 V | 23.0 V | 42.5 V | 73.0 V | 145 V |
| 5 kV, 10/700 μ s ⁽⁴⁾ | 10.5 V | 23.8 V | 43.4 V | 74.9 V | 150 V |
| Maximum surge current | | | | | |
| D1 test 10/350 μ s to BS EN/EN/IEC 61643-21: – Per signal wire | 2.5 kA | | | | |
| – Per pair | 5 kA | | | | |
| 8/20 μ s to ITU-T K.45:2003, – Per signal wire | 10 kA | | | | |
| IEEE C62.41.2:2002: – Per pair | 20 kA | | | | |
| Mechanical specification | OVR 06D | OVR 15D | OVR 30D | OVR 50D | OVR 110D |
| Temperature range | -40 to +80 °C | | | | |
| Connection type | Screw terminal - maximum torque 0.5 Nm | | | | |
| Conductor size (stranded) | 2.5 mm ² | | | | |
| Earth connection | M6 stud | | | | |
| Case material | FR Polymer UL-94 V-0 | | | | |
| Weight | 0.08 kg | | | | |
| Dimensions | See diagram below | | | | |

⁽¹⁾ Nominal voltage (RMS/DC or AC peak) measured at < 5 μ A (OVR 15D, OVR 30D, OVR 50D, OVR 110D) and <200 μ A (OVR 06D)

⁽²⁾ Maximum working voltage (RMS/DC or AC peak) measured at < 1 mA leakage (OVR 15D, OVR 30D, OVR 50D, OVR 110D), < 10 mA (OVR 06D)

⁽³⁾ The maximum transient voltage let-through of the protector throughout the test ($\pm 10\%$), 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)

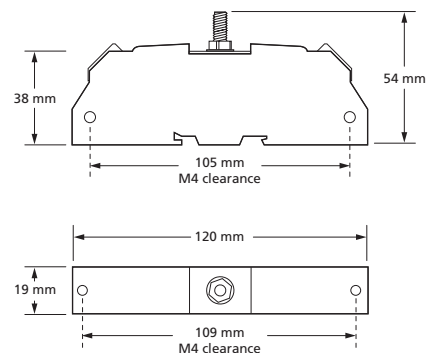


ABB order codes

| Part | ABB order code | Part | ABB order code | Part | ABB order code |
|-----------|-----------------|-----------|-----------------|---------------|-----------------|
| OVR CME4 | 7TCA085400R0414 | OVR WBX4 | 7TCA085410R0048 | OVR WBX4/GS | 7TCA085410R0049 |
| OVR CME8 | 7TCA085400R0415 | OVR WBX8 | 7TCA085410R0050 | OVR WBX8/GS | 7TCA085410R0051 |
| OVR CME16 | 7TCA085410R0415 | OVR CME32 | 7TCA085410R0046 | OVR WBX16/2/G | 7TCA085410R0047 |