

DATASHEET

Data & signal protection

OVR E Series



Combined Category D, C, B tested protector (to BS EN 61643) suitable for twisted pair signalling applications which require either a lower in-line resistance, an increased current or a higher bandwidth than the OVR D Series. Also suitable for DC power applications less than 1.25 Amps. 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
- Very low (1 Ω) in-line resistance allows resistance critical applications (e.g. alarm loops) to be protected
- High (1.25 A) maximum running current
- High bandwidth enables higher frequency (high traffic or bit rate) data communications
- Screen terminal enables easy connection of cable screen to earth
- Strong, flame retardant, ABS housing
- 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 clean
- Substantial earth stud to enable effective earthing
- Supplied ready for flat mounting on base or side
- Integral earthing plate for enhanced connection to earth via OVR CME kit)

Application

Use these units to protect resistance sensitive, higher frequency or running current systems, e.g. high speed digital communications equipment or systems with long signal lines.

Accessories

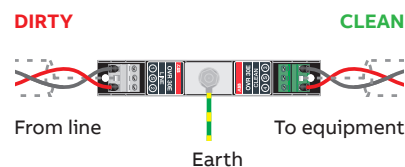
Combined Mounting/Earthing kits:
OVR CME 4 Mount & earth up to 4 protectors
OVR CME 8 Mount & earth up to 8 protectors
OVR CME 16 Mount & earth up to 16 protectors
OVR CME 32 Mount & earth up to 32 protectors

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

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)



NOTE: Slim Line (OVR SL) and ATEX (OVR SLX) are available. For many twisted pair data and signal applications, the lower cost OVR D Series may be suitable. For applications requiring higher current (1.25 A to 4 A) or ultra-low in-line resistance, the OVR H Series protectors may be more suitable.

OVR E Series - Technical specification

Electrical specification	OVR 06E	OVR 15E	OVR 30E	OVR 50E	OVR 110E
ABB order code	7TCA085400R0346	7TCA085400R0350	7TCA085400R0353	7TCA085400R0354	7TCA085400R0348
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	11 V / 16.7 V	25 V / 36.7 V	40 V / 56.7 V	93 V / 132 V
Current rating (signal)	1.25 A				
In-line resistance (per line $\pm 10\%$)	1.0 Ω				
Bandwidth (-3 dB 50 Ω system)	45 MHz				
Transient specification	OVR 06E	OVR 15E	OVR 30E	OVR 50E	OVR 110E
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	36.0 V	39.0 V	60.0 V	86.0 V	180 V
C1 test 1 kV, 1.2/50 μs , 0.5 kA 8/20 μs to BS EN/EN/IEC 61643-21	26.2 V	28.0 V	49.0 V	73.5 V	170 V
B2 test 4 kV 10/700 μs to BS EN/EN/IEC 61643-21	16.0 V	25.5 V	43.5 V	65.0 V	160 V
5 kV, 10/700 μs ⁽⁴⁾	17.0 V	26.2 V	44.3 V	65.8 V	165 V
Maximum surge current					
D1 test 10/350 μs to BS EN/EN/IEC 61643-21: - Per signal wire	2.5 kA				
	5 kA				
8/20 μs to ITU-T K.45:2003, IEEE C62.41.2:2002: - Per signal wire	10 kA				
	20 kA				
Mechanical specification	OVR 06E	OVR 15E	OVR 30E	OVR 50E	OVR 110E
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 < 10 μA (OVR 15E, OVR 30E, OVR 50E, OVR 110E) and < 200 μA (OVR 06E)
- ⁽²⁾ Maximum working voltage (RMS/DC or AC peak) measured at < 5 mA leakage (OVR 15E, OVR 30E, OVR 50E, OVR 110E) and < 10 mA (OVR 06E)
- ⁽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)

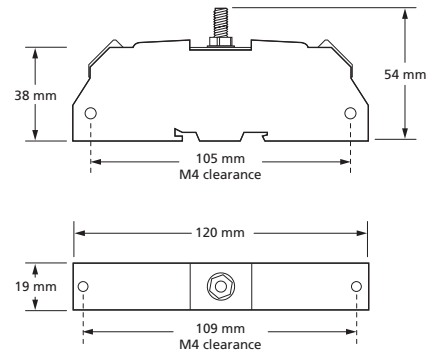


ABB order codes

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