

Data and signal protection

OVR SL series



The ABB OVR SL series OVR data and signal surge protective devices are designed to protect sensitive equipment connected to data and telephone lines. These devices complement the OVR power SPD units for a complete and effective system protection solution against surges for data and power lines.

01

01 OVR SL series

Application

OVR SL series UL 497B listed surge protective devices (SPDs) are specifically designed for applications where installation space is at a premium and a large number of lines require protection (e.g., process control, high-speed digital communication equipment or systems with long signal lines).

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

Technical specifications and standards

Key features

Protection mode	Normal and common
Technology	Multi-stage hybrid
Installation	DIN rail

Electrical specification	OVR SLO6 series	OVR SL30 series	OVR SL180 series
Nominal voltage ⁽¹⁾	6 V	30 V	180 V
Maximum working voltage U _c (DC) ⁽²⁾	7.79 V	36.7 V	190 V
Maximum working voltage U _c (AC RMS)	5 V	25 V	130 V
Current rating (signal)	750 mA	-	250 mA
In-line resistance (per line ±10%)	1 Ω	-	6.8 Ω
Bandwidth (-3 dB 50 Ω system)	45 MHz	-	-

Transient specification	OVR SL06 series	OVR SL30 series	OVR SL180 series
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	36.0 V	63.0 V	215 V
C1 test 1 kV, 1.2/50 μ s, 0.5 kA 8/20 μ s to BS EN/EN/IEC 61643-21	26.2 V	51.3 V	205 V
B2 test 4 kV 10/700 μ s to BS EN/EN/IEC 61643-21	16.0 V	45.4 V	203 V
5 kV, 10/700 μ s ⁽⁴⁾	17.0 V	46.3 V	200 V
Maximum surge current			
D1 test 10/350 μ s to EN/EN/IEC 61643-21	- per signal wire BS - per pair	1.25 kA 2.5 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	-

- (1) Nominal voltage (RMS/DC or AC peak) measured at $< 5 \mu$ A
- (2) Maximum working voltage (RMS/DC or AC peak) measured at < 5 mA leakage
- (3) The maximum transient voltage let-through of the protector throughout the test ($\pm 10\%$), line to line and line to ground, 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)

Mechanical specification

Temperature range	-40 to +80 °C
Installation location	Connect in series with the data communication or signal line either 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 ground star point. Install SPDs either within an existing cabinet/cubicle or in a separate enclosure.
Connection type	Screw terminal - maximum torque 0.8 Nm
Conductor size (stranded)	4 mm ²
Ground connection	Via DIN rail or 4 mm ² ground terminal — max. torque 0.8 Nm
Case material	FR polymer UL 94 V-0
Weight	- unit 0.08 kg
Dimensions	See diagram below

Available configurations

Catalog number	Description	Global ID
OVRSL06UL	6 V slim data SPD for 2-wire signal	7TCA085400R0527
OVRSL06IUL	6 V slim data SPD for 2-wire signal and isolated shield	7TCA085400R0528
OVRSL30UL	30 V slim data SPD for 2-wire signal	7TCA085400R0535
OVRSL30IUL	30 V slim data SPD for 2-wire signal and isolated shield	7TCA085400R0536
OVRSL180UL	180 V slim data SPD for 2-wire signal	7TCA085400R0547



OVR SL series have UL 497B approval under UL file QVGO:E240341

OVR SL series

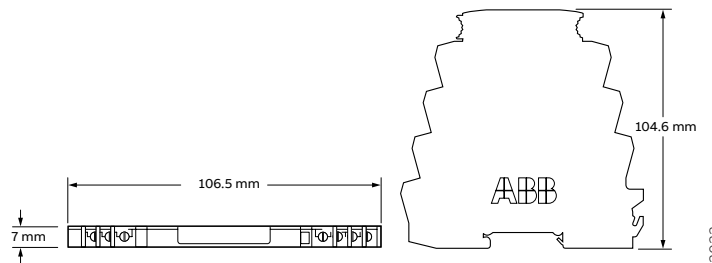
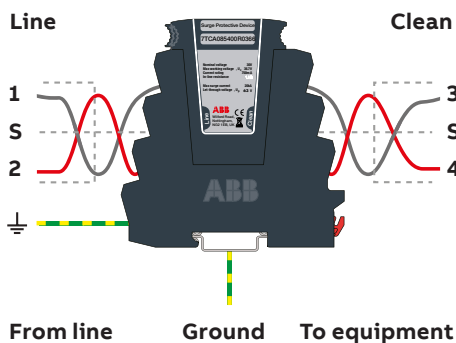


ABB Inc.
305 Gregson Drive
Cary, NC 27511

electrification.us.abb.com

ABB has made every attempt to ensure the accuracy and reliability of the contents of this document. However, all content is provided for general informational purposes only, and ABB makes no guaranty or warranty, express or implied, as to the accuracy of any technical content, or that the information contained in this publication will be error free and all such guarantees or warranties are expressly

disclaimed. ABB may change or modify the contents at any time, without prior notice. We reserve all rights in this document and in the subject matter and illustrations contained therein. Any reproduction or utilization of its contents — in whole or in parts — is forbidden without prior written consent of ABB.
© 2022 ABB Inc. All rights reserved.