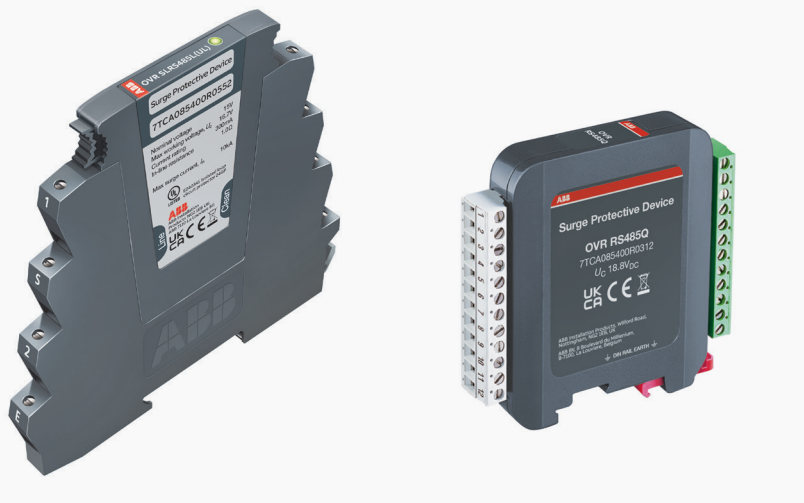


Data and signal protection

OVR RS485Q and SL RS485 series



The ABB range of 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 power and data surges.

01

01 OVR RS485Q (on right) and SL RS485 (on left)

Application

OVR RS485Q and SL RS485 series UL 497B listed surge protective devices (SPDs) are specifically designed for RS485 and Fieldbus applications, such as Profibus DP. For installations at service entrances or within the building infrastructure to protect against lightning flashover (typically the service entrance location) and internal transient voltage activity.

Available as compact OVR RS485Q (4-pair) or Slim Line OVR SL RS485 (1-pair) versions for installations where a high number of lines require protection.

Technical specifications and standards

Key features

Protection mode	Normal and common
Status indicator	LED status indication option
Technology	Multi-stage hybrid
Installation	DIN rail

Electrical specification	OVR SL RS485 series	OVR RS485Q series
Nominal voltage ⁽¹⁾		15 V
Maximum working voltage U_c (RMS/DC) ⁽²⁾		11 V / 16.7 V
Current rating (signal)		300 mA
In-line resistance (per line $\pm 10\%$)		1 Ω
Bandwidth (-3 dB, 50 Ω system)		45 MHz
Transient specification		
Let-through voltage (all conductors) ⁽³⁾ Up		
C2 test 4 kV 1.2/50 μ s, 2 kA 8/20 μ s to EN/IEC 61643-21		55.0 V
C1 test 1 kV, 1.2/50 μ s, 0.5 kA 8/20 μ s to EN/IEC 61643-21		42.0 V
B2 test 4 kV 10/700 μ s to EN/IEC 61643-21		27.2 V
5 kV, 10/700 μ s ⁽⁴⁾		28.2 V

Maximum discharge surge current (Imax)	OVR SL RS485 series	OVR RS485Q series
D1 test 10/350 μs to BS EN/EN/IEC 61643-21:	- Per signal wire 2.5 kA - Per pair 2.5 kA	1.25 kA 2.5 kA
8/20 μs to ITU-T K.45:2003, IEEE C62.41.2:2002:	- Per signal wire - Per pair	10 kA 20 kA

- (1) Nominal voltage (RMS/DC or AC peak) measured at < 10 μA
- (2) Maximum working voltage (RMS/DC or AC peak) measured at < 5 mA
- (3) The maximum transient voltage let-through of the protector throughout the test (±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	OVR SL RS485 series	OVR RS485Q series
Temperature range	-40 to +80 °C	
Connection type	Screw terminal — max. torque 0.8 N	Pluggable 12-way screw terminal/PT version: Pluggable 12-way screwless push terminal
Max. Conductor size (stranded)	12 AWG/ 4 mm ²	14 AWG/ 2.5 mm ²
Ground connection	Via DIN rail or 4 mm ² ground terminal — max. torque 0.8 Nm	Via DIN rail or M5 threaded hole in base of unit
Case material	FR Polymer UL 94 V-0	
Weight	- Unit 0.08 kg/ 0.18 lb	0.1 kg/ 0.22 lb
Dimensions	See diagram below	

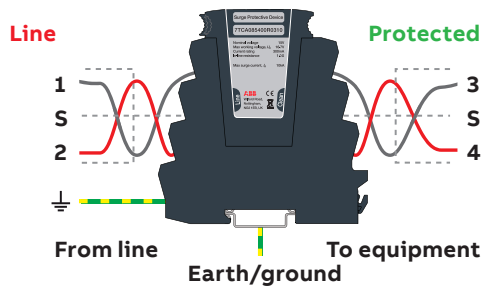
Available configurations

Catalog number	Global ID	# Pairs	Description
OVRSLRS485UL	7TCA085400R0551	1	Slim Line, RS485, 1 pair + shield/screen
OVRSLRS485LUL	7TCA085400R0552	1	Slim Line, RS485, 1 pair + shield/screen, with LED status indication
OVRSLRS485LMUL	7TCA085400R0600	1	Replacement module for Slim Line, RS485, 1 pair + shield/screen, with LED status indication
OVRRS485QUL	7TCA085400R0572	4	Pluggable screw terminals, RS485, 4 pair + shield/screen for each pair
OVRRS485QPTUL	7TCA085400R0579	4	Pluggable push-in terminals, RS485, 4 pair + shield/screen for each pair

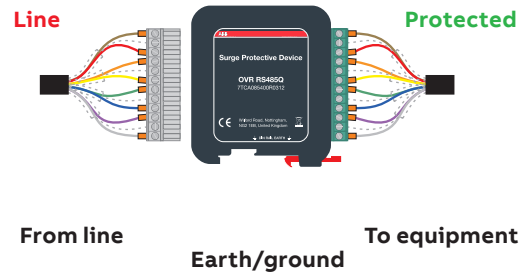


OVR SL RS485 and OVR RS485Q/PT have UL 497B approval under UL file QVGO:E240341

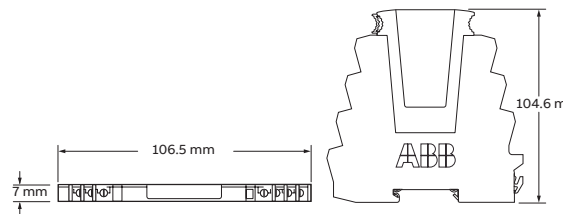
OVR SL RS485 installed in series (in-line)



OVR RS485Q installed in series (in-line)



OVR SL RS485



OVR RS485Q

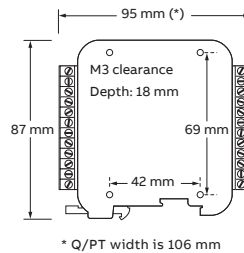


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