

# 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.

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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 <sup>(1)</sup>                             | 6 V             | 30 V            | 180 V            |
| Maximum working voltage U <sub>c</sub> (DC) <sup>(2)</sup> | 7.79 V          | 36.7 V          | 190 V            |
| Maximum working voltage U <sub>c</sub> (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 |
|--|------------------------------------|-------------------|------------------|
| <b>Let-through voltage (all conductors)<sup>(3)</sup> Up</b>               |                                    |                   |                  |
| C2 test 4 kV 1.2/50 $\mu$ s, 2 kA 8/20 $\mu$ s to BS EN/EN/IEC 61643-21    | 36.0 V                             | 63.0 V            | 215 V            |
| C1 test 1 kV, 1.2/50 $\mu$ s, 0.5 kA 8/20 $\mu$ s to BS EN/EN/IEC 61643-21 | 26.2 V                             | 51.3 V            | 205 V            |
| B2 test 4 kV 10/700 $\mu$ s to BS EN/EN/IEC 61643-21                       | 16.0 V                             | 45.4 V            | 203 V            |
| 5 kV, 10/700 $\mu$ s <sup>(4)</sup>  | 17.0 V                             | 46.3 V            | 200 V            |
| <b>Maximum surge current</b>   |                                    |                   |                  |
| D1 test 10/350 $\mu$ s to EN/EN/IEC 61643-21                               | - per signal wire BS<br>- per pair | 1.25 kA<br>2.5 kA | -<br>-           |
| 8/20 $\mu$ 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 <sup>2</sup>  |
| Ground connection         | Via DIN rail or 4 mm <sup>2</sup> ground terminal — max. torque 0.8 Nm   |
| Case material             | FR polymer UL 94 V-0   |
| Weight                    | - unit<br>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

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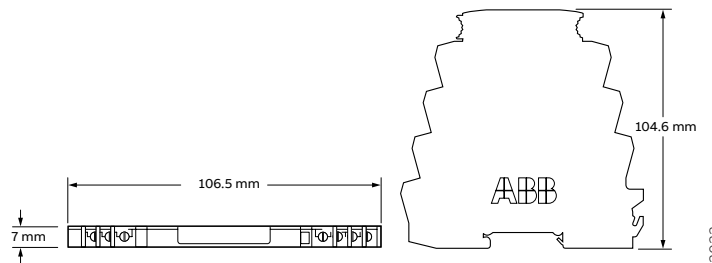
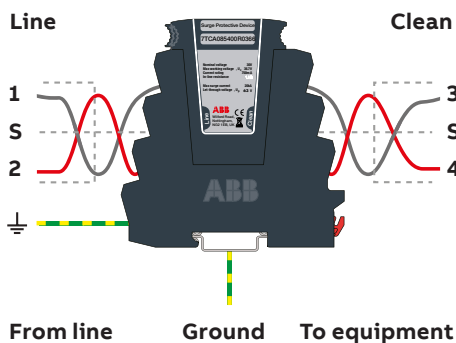


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