

**VSPC 2SL 48VAC****Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com



Binary signal (SL – Symmetrical Load) protection includes the following signals:

- Switching signals with and without a common reference potential e.g. 5 V – 24V – 60 V
- Two-conductor systems usually involve a common reference potential of binary sensors, actuators and indicators such as limit switches, buttons, position sensors, photoelectric barriers, contactors, solenoid valves, indicator lamps, etc.
- Pluggable arrester, for interruption-free and impedance-neutral plug-in and pull-out
- Can be tested with the V-TEST testing device
- Version with floating-earth PE connection used to avoid interference currents resulting from differences in potential
- For use in compliance with the IEC 62305 and IEC 61643-22 installation standards (D1, C1, C2 and C3)
- Integrated PE foot safely discharges up to 20 kA (8/20  $\mu$ s) and 2.5 kA (10/350  $\mu$ s) to the PE
- Colour coding of the voltage levels for fast identification on the panel
- Safety function through coding elements for different voltage levels

**General ordering data**

|            |   |
|------------|---|
| Version    | Surge protection for instrumentation and control, without warning function / function indicator, $U_p(L/N-PE) \leq 300$ V |
| Order No.  | <a href="#">8924370000</a>  |
| Type       | VSPC 2SL 48VAC  |
| GTIN (EAN) | 4032248696017   |
| Qty.       | 1 pc(s).  |

**VSPC 2SL 48VAC****Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com

**Technical data****Dimensions and weights**

|            |         |                 |            |
|------------|---------|-----------------|------------|
| Depth      | 69 mm   | Depth (inches)  | 2.717 inch |
| Height     | 90 mm   | Height (inches) | 3.543 inch |
| Width      | 17.8 mm | Width (inches)  | 0.701 inch |
| Net weight | 42 g    |                 |            |

**Temperatures**

|                     |                |                       |             |
|---------------------|----------------|-----------------------|-------------|
| Storage temperature | -40 °C...80 °C | Operating temperature | -40 °C...70 |
| Humidity            | 5...96 %       |                       |             |

**Probability of failure**

|                                    |        |      |         |
|------------------------------------|--------|------|---------|
| SIL in compliance with IEC 61508   | 2      | MTTF | 2,665 a |
| SFF                                | 79.3 % | λges | 43      |
| PFH in 1*10 <sup>-9</sup> per hour | 8.9    |      |         |

**Rated data UL**

|                      |         |                |                     |
|----------------------|---------|----------------|---------------------|
| Certificate No. (UL) | E311081 | UL certificate | UL 497b Certificate |
|----------------------|---------|----------------|---------------------|

**CSA protection data**

|  |      |  |      |
|--|------|--|------|
| Gas group C                            | IIB  | Gas group D                              | IIA  |
| Gas groups A, B                        | IIC  | Input voltage, max. U <sub>i</sub>       | 86 V |
| Internal capacity, max. C <sub>i</sub> | 2 nF | Internal inductance, max. L <sub>i</sub> | 0 μH |

**General data**

|                          |  |                           |                         |
|--------------------------|--|---------------------------|-------------------------|
| Colour                   | orange   | Design                    | Terminal, miscellaneous |
| Optical function display | No   | Protection degree         | IP20                    |
| Segment                  | Measurement - Monitoring<br>- Setting            | UL 94 flammability rating | V-0                     |
| Version                  | without warning function /<br>function indicator | protected binary signals  | 2                       |

**Insulation coordination acc. to EN 50178**

|                    |   |                        |     |
|--------------------|---|------------------------|-----|
| Pollution severity | 2 | Surge voltage category | III |
|--------------------|---|------------------------|-----|

## VSPC 2SL 48VAC

Weidmüller Interface GmbH &amp; Co. KG

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com

## Technical data

## Rated data IEC / EN

|   |                       |  |                       |
|---|-----------------------|--|-----------------------|
| Capacitance   | 2.0 nF                | Discharge current $I_{\max}$ (8/20 $\mu$ s) GND-PE                 | 10 kA                 |
| Discharge current $I_{\max}$ (8/20 $\mu$ s) wire-PE                 | 10 kA                 | Discharge current $I_{\max}$ (8/20 $\mu$ s) wire-wire              | 10 kA                 |
| Discharge current $I_n$ (8/20 $\mu$ s) GND-PE                       | 2.5 kA                | Discharge current $I_n$ (8/20 $\mu$ s) wire-PE                     | 2.5 kA                |
| Discharge current $I_n$ (8/20 $\mu$ s) wire-wire                    | 2.5 kA                | Fuse   | 0.5 A                 |
| Lightning test current, $I_{\text{imp}}$ (10/350 $\mu$ s) GND-PE    | 2.5 kA                | Lightning test current, $I_{\text{imp}}$ (10/350 $\mu$ s) Wire-PE  | 2.5 kA                |
| Lightning test current, $I_{\text{imp}}$ (10/350 $\mu$ s) wire-wire | 2.5 kA                | Max. continuous voltage, $U_c$ (AC)                                | 60 V                  |
| Max. continuous voltage, $U_c$ (DC)                                 | 85 V                  | Number of poles  | 1                     |
| Overload - failure mode   | Modus 2               | Protection level $U_p$ (typ.)                                      | $\leq 300$ V          |
| Protection level on output side Wire-PE 1kV/ $\mu$ s, typically     | 85 V                  | Protection level on output side Wire-wire 1 kV/ $\mu$ s, typically | 210 V                 |
| Protection level on output side Wire-wire 8/20 $\mu$ s, typically   | 80 V                  | Protection level, $U_p$ GND - PE                                   | 450 V                 |
| Protection level, $U_p$ wire - PE                                   | 80 V                  | Pulse-reset capacity   | $\leq 60$ ms          |
| Rated current $I_N$   | 250 mA                | Rated voltage (AC)   | 48 V                  |
| Rated voltage (DC)  | 68 V                  | Requirements category acc. to IEC 61643-21                         | C1, C2, C3, D1        |
| Signal transmission properties (-3 dB)                              | 8.7 MHz               | Signalling contact   | No                    |
| Standards   | IEC 61643-21          | Surge current-carrying capacity C1                                 | < 1 kA 8/20 $\mu$ s   |
| Surge current-carrying capacity C2                                  | 5 kA 8/20 $\mu$ s     | Surge current-carrying capacity C3                                 | 100 A 10/1000 $\mu$ s |
| Surge current-carrying capacity D1                                  | 2.5 kA 10/350 $\mu$ s | Voltage type   | AC                    |
| Volume resistance   | 4.7 $\Omega$          |  |                       |

## Further details of approvals

GOST certificate GOST-Zertifikat

## Connection data

Type of connection Pluggable in VSPC BASE

## Ratings IECEx/ATEX/cUL

cUL certificate cUL Certificate

## Classifications

|             |             |             |             |
|-------------|-------------|-------------|-------------|
| ETIM 6.0    | EC000943    | ETIM 7.0    | EC000943    |
| ETIM 8.0    | EC000943    | ETIM 9.0    | EC000943    |
| ECLASS 9.0  | 27-13-08-07 | ECLASS 9.1  | 27-13-08-07 |
| ECLASS 10.0 | 27-13-08-07 | ECLASS 11.0 | 27-13-08-07 |
| ECLASS 12.0 | 27-17-90-90 | ECLASS 13.0 | 27-17-90-90 |

## VSPC 2SL 48VAC

Weidmüller Interface GmbH &amp; Co. KG

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com

## Technical data

## Tender specification sheets

| Long specification  | Short specification   |
|---|---|
| Surge protection plug for use in connection with the base element VSPC BASE 2SL for two wires with a common ground. Two-stage protection circuit in the plug consisting of coarse protection, decoupling resistors and fine protection between the signal wires and the signal ground/ground/earth. Mechanical identification of the plug to the base element according to the switching type and rated voltage. Protected plug with coding pin and counter-profile for the base element. Optical identification of the protected plug based on the type of protected switching and the voltage level. It is possible to mark the plug. | Surge protection plug for base element VSPC BASE 2SL, coarse and fine common mode voltage protection for two wires with a common ground. Version: 48 V AC |

## Environmental Product Compliance

|            |                                      |
|------------|--------------------------------------|
| REACH SVHC | Lead 7439-92-1                       |
| SCIP       | 71e97bb7-979f-4330-94c0-20c629bb05e3 |

## Important note

|                     |  |
|---------------------|--|
| Product information | Mode 2: State where the voltage-limiting part of the SPD was short-circuited due to a very low impedance within the SPD. The line is inoperable, but the measuring equipment is still protected by means of a short-circuit. |
|---------------------|--|

## Approvals

Approvals



|                       |            |
|-----------------------|------------|
| ROHS                  | Conform    |
| UL File Number Search | UL Website |
| Certificate No. (UL)  | E311081    |

## Downloads

|   |  |
|---|--|
| Approval/Certificate/Document of Conformity | <a href="#">SIL Paper</a><br><a href="#">EU Konformitätserklärung / EU Declaration of Conformity</a> |
| Engineering Data                            | <a href="#">CAD data – STEP</a>  |
| User Documentation                          | <a href="#">Beipackzettel / Instruction sheet</a>  |
| Catalogues                                  | <a href="#">Catalogues in PDF-format</a>   |
| Brochures                                   |  |

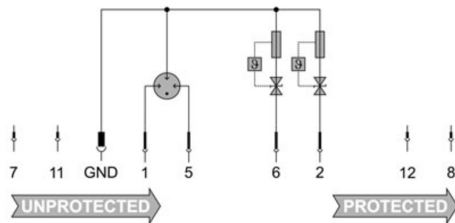
## VSPC 2SL 48VAC

**Weidmüller Interface GmbH & Co. KG**  
 Klingenbergstraße 26  
 D-32758 Detmold  
 Germany

www.weidmueller.com

## Drawings

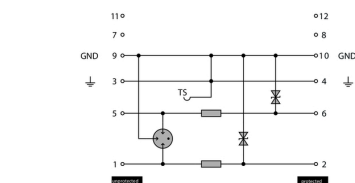
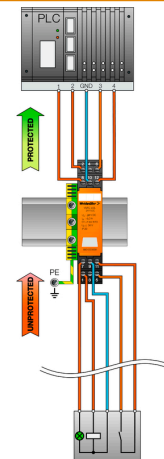
## Electric symbol



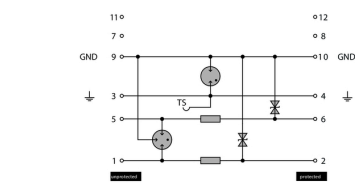
Circuit diagram

| Cate-<br>gory | Testing<br>pulse         | Surge<br>voltage                | Surge<br>current                 | Pulse<br>Type   |
|---------------|--------------------------|---------------------------------|----------------------------------|---|
| C1            | Quick-<br>rising<br>edge | 0.5 - 2 kV<br>with<br>1.2/50 µs | 0.25 - 1 kA<br>mit<br>8/20 µs    | 300<br>Surge<br>voltage<br>arrester                             |
| C2            | Quick-<br>rising<br>edge | 2 - 10 kV<br>with<br>1.2/50 µs  | 1 - 5 kA<br>mit<br>8/20 µs       | 10<br>Surge<br>voltage<br>arrester                              |
| C3            | Quick-<br>rising<br>edge | ≥ 1 kV<br>with<br>1 kV/µs       | 10 - 100 A<br>mit<br>10/10000 µs | 300<br>Surge<br>voltage<br>arrester                             |
| D1            | High<br>power            | ≥ 1 kV                          | 0.5 - 2.5 kA<br>mit 10/350<br>µs | 2<br>Arrester for<br>lightning<br>current and<br>surge voltages |

Discharge capacity



Complete module direct grounding  
 Komplettnutzen direkte Erdung



Complete module indirect grounding  
 Komplettnutzen indirekte Erdung

Komplettnutzen

**VSPC 2SL 48VAC****Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 26

D-32758 Detmold

Germany

[www.weidmueller.com](http://www.weidmueller.com)**Accessories****V-TEST testing device for VSPC****V-TEST**

- Testing device for checking the protective function of the pluggable overvoltage protection PU I, PU II and VSPC series
- Device for implementing the IEC 62305 standard (regarding periodic testing)
- Easy-to-use device with integrated battery set for on-site measurements
- LCD results display
- Menu in two languages
- Including a protective bag and power supply
- User friendly navigation in German and English

The V-TEST is a compact, portable test instrument for the plug-in surge protectors VARITECTOR (VSPC) and the surge protectors for the power supply line PU I and PU II. Using this instrument Weidmüller overvoltage protectors can be tested for their protective function in line with the testing schedules laid down in IEC 62305-3 (DIN VDE 0185 part 3). In a display with background illumination, the test result is indicated with "OK" or "Not OK".

**General ordering data**

|            |                            |  |
|------------|----------------------------|--|
| Type       | V-TEST                     | Version  |
| Order No.  | <a href="#">8951860000</a> | Lightning and surge protection, Testing device |
| GTIN (EAN) | 4032248743100              |  |
| Qty.       | 1 pc(s).                   |  |

## VSPC 2SL 48VAC

Weidmüller Interface GmbH &amp; Co. KG

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com

## Accessories

## Plus



The Dekafix (DEK) marker is the universal marker for all conductor and plug-in connectors as well as for electronic sub-assemblies. The system is ideal for short number sequences and covers a wide range of ready-printed markers.

Strips for fast installation in only one work step. The printing is easy to read, rich in contrast and available in various widths.

- Large range of ready-to-use markers
- Strips for fast installation
- Terminal markers, suitable for all Weidmüller cable connectors
- Available as blank MultiCard or with standard printing

**For custom printing:** Please send us a file of our labeling software M-Print PRO or M-Print PRO Online (without installation) for your labeling specifications.

## General ordering data

|            |                            |   |
|------------|----------------------------|---|
| Type       | DEK 5/5 PLUS MC NE WS      | Version   |
| Order No.  | <a href="#">1854490000</a> | Dekafix, Terminal marker, 5 x 5 mm, Pitch in mm (P): 5.00 |
| GTIN (EAN) | 4032248393596              | Weidmueller, white  |
| Qty.       | 1,000 pc(s).               |   |

## Retaining clip



The interlock mechanism on the VSPC Series pluggable arrester delivers extra reliability and an improved permanent contact under strong vibrating conditions.

## General ordering data

|            |                            |                            |
|------------|----------------------------|----------------------------|
| Type       | VSPC LOCKING CLIP          | Version                    |
| Order No.  | <a href="#">1317340000</a> | Fastening element, Latches |
| GTIN (EAN) | 4050118121179              |                            |
| Qty.       | 100 pc(s).                 |                            |

**VSPC 2SL 48VAC****Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 26

D-32758 Detmold

Germany

[www.weidmueller.com](http://www.weidmueller.com)**Accessories****Direct earthing**

Base element for the pluggable VSPC arrester, integrated PE foot in impedance-neutral VSPC BASE. Can safely discharge up to 20 kA (8/20 µs) and 2.5 kA (10/350 µs) to the PE.

**General ordering data**

|            |                            |  |
|------------|----------------------------|--|
| Type       | VSPC BASE 2SL              | Version  |
| Order No.  | <a href="#">8924720000</a> | Surge protection, Flange-mounted housing, Flange-mounted housing |
| GTIN (EAN) | 4032248696369              |  |
| Qty.       | 1 pc(s).                   |  |