

**VSPC**  
**VSPC 2SL 24VDC R****Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 16

D-32758 Detmold

Germany

Fon: +49 5231 14-0

Fax: +49 5231 14-292083

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 µs) and 2.5 kA (10/350 µs) 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**

|            |                                                                              |
|------------|------------------------------------------------------------------------------|
| Type       | VSPC 2SL 24VDC R                                                             |
| Order No.  | <a href="#">8951630000</a>                                                   |
| Version    | Surge protection for instrumentation and control, 24 V, 300 mA, IEC 61643-21 |
| GTIN (EAN) | 4032248742875                                                                |
| Qty.       | 1 pc(s).                                                                     |

**VSPC**  
**VSPC 2SL 24VDC R**
**Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 16

D-32758 Detmold

Germany

Fon: +49 5231 14-0

Fax: +49 5231 14-292083

www.weidmueller.com

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

|            |         |                 |            |
|------------|---------|-----------------|------------|
| Width      | 17.8 mm | Width (inches)  | 0.701 inch |
| Height     | 98 mm   | Height (inches) | 3.858 inch |
| Depth      | 69 mm   | Depth (inches)  | 2.717 inch |
| Net weight | 45 g    |                 |            |

**Temperatures**

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

**Probability of failure**

|                                   |      |      |             |
|-----------------------------------|------|------|-------------|
| $\lambda_{ges}$                   | 43   | MTTF | 2,665 Years |
| PFH in $1 \cdot 10^{-9}$ per hour | 10.7 | SFF  | 86.02 %     |
| SIL in compliance with IEC 61508  | 2    |      |             |

**CSA protection data**

|                               |      |                                 |           |
|-------------------------------|------|---------------------------------|-----------|
| Gas group C                   | IIB  | Gas group D                     | IIA       |
| Gas groups A, B               | IIC  | Input voltage, max. $U_i$       | 28 V      |
| Internal capacity, max. $C_i$ | 2 nF | Internal inductance, max. $L_i$ | 0 $\mu$ H |

**General data**

|                          |                                                   |                           |                         |
|--------------------------|---------------------------------------------------|---------------------------|-------------------------|
| Colour                   | Orange                                            | Design                    | Terminal, Miscellaneous |
| Optical function display | green = OK; red = arrester is defective - replace | Protection degree         | IP20                    |
| Segment                  | Instrumentation and Control                       | UL 94 flammability rating | V-0                     |
| Version                  | with warning function / function indicator        | protected binary signals  | 2                       |

**Insulation coordination acc. to EN 50178**

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

# **VSPC** **VSPC 2SL 24VDC R**

**Weidmüller Interface GmbH & Co. KG**  
 Klingenbergstraße 16  
 D-32758 Detmold  
 Germany  
 Fon: +49 5231 14-0  
 Fax: +49 5231 14-292083  
 www.weidmueller.com

## **Technical data**

### **Rated data IEC / EN**

|                                                                    |                       |                                                                     |                                                           |
|--------------------------------------------------------------------|-----------------------|---------------------------------------------------------------------|-----------------------------------------------------------|
| 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, $U_c$ (DC)                                | 28 V                  | Overload - failure mode                                             | Modus 2                                                   |
| Protection level $U_p$ (typ.)                                      | < 200 V               | Protection level on output side Wire-PE 1kV/ $\mu$ s, typically     | 40 V                                                      |
| Protection level on output side Wire-wire 1 kV/ $\mu$ s, typically | 80 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                                   | 40 V                                                      |
| Pulse-reset capacity                                               | 30 ms                 | Rated current $I_N$                                                 | 300 mA                                                    |
| Rated voltage (DC)                                                 | 24 V                  | Requirements category acc. to IEC 61643-21                          | C1, C2, C3, D1                                            |
| Signal transmission properties (-3 dB)                             | 2.7 MHz               | Signalling contact                                                  | $U_N$ 250 V AC 0.1 A 1CO at VSPC R with VSPC CONTROL UNIT |
| 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                                                        | DC                                                        |
| Volume resistance                                                  | 4.7 $\Omega$          |                                                                     |                                                           |

### **Further details of approvals**

|                  |                 |
|------------------|-----------------|
| GOST certificate | GOST-Zertifikat |
|------------------|-----------------|

### **Rated data UL**

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

### **Ratings IECEx/ATEX/cUL**

|                 |                 |
|-----------------|-----------------|
| cUL certificate | cUL Certificate |
|-----------------|-----------------|

### **Classifications**

|            |             |            |             |
|------------|-------------|------------|-------------|
| ETIM 3.0   | EC000943    | ETIM 4.0   | EC000381    |
| ETIM 5.0   | EC000943    | ETIM 6.0   | EC000943    |
| UNSPSC     | 30-21-19-21 | eClass 5.1 | 27-13-08-01 |
| eClass 6.2 | 27-13-08-02 | eClass 7.1 | 27-13-08-09 |
| eClass 8.1 | 27-13-08-11 | eClass 9.0 | 27-13-08-11 |
| eClass 9.1 | 27-13-08-07 |            |             |

### **Product information**

|                                 |                                                                                                                                 |
|---------------------------------|---------------------------------------------------------------------------------------------------------------------------------|
| Descriptive text technical data | The associated VSPC base element should be ordered with this. The dimension information provided refers to the complete module. |
| Instructions for accessories    | EMC Set: 1067470000 Marker: DEK 5                                                                                               |

## VSPC VSPC 2SL 24VDC R

**Weidmüller Interface GmbH & Co. KG**  
Klingenbergstraße 16  
D-32758 Detmold  
Germany  
Fon: +49 5231 14-0  
Fax: +49 5231 14-292083  
[www.weidmueller.com](http://www.weidmueller.com)

## Technical data

### Approvals

Approvals



ROHS

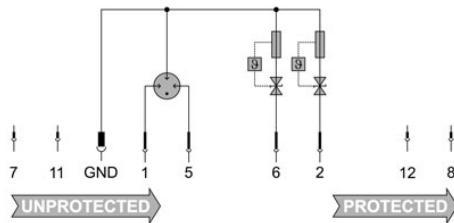
Conform

### Downloads

|                                             |                                                       |
|---------------------------------------------|-------------------------------------------------------|
| Approval/Certificate/Document of Conformity | <a href="#">SIL Paper</a><br><a href="#">CE PAPER</a> |
| Brochure/Catalogue                          | <a href="#">CAT 4.4 ELECTR 16/17 EN</a>               |
| Engineering Data                            | <a href="#">EPLAN, WSCAD</a>                          |
| Engineering Data                            | <a href="#">STEP</a>                                  |
| User Documentation                          | <a href="#">Instruction sheet</a>                     |

**VSPC**  
**VSPC 2SL 24VDC R**

**Weidmüller Interface GmbH & Co. KG**  
 Klingenbergstraße 16  
 D-32758 Detmold  
 Germany  
 Fon: +49 5231 14-0  
 Fax: +49 5231 14-292083  
 www.weidmueller.com

**Drawings**
**Electric symbol**


Circuit diagram

| Cate-<br>gory | Testing<br>pulse         | Surge<br>voltage                | Surge<br>current                 | Pulse | 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   | 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    | 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   | Surge<br>voltage<br>arrester                               |
| D1            | High<br>power            | ≥ 1 kV                          | 0.5 - 2.5 kA<br>mit 10/350<br>µs | 2     | Arrester for<br>lightning<br>current and<br>surge voltages |

Discharge capacity

