

VSPC 2SL 12VDC R**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 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

| | |
|------------|--|
| Version | Surge protection for instrumentation and control, with warning function / function indicator, $U_P(L/N-PE) < 200\text{ V}$ |
| Order No. | 8951620000 |
| Type | VSPC 2SL 12VDC R |
| GTIN (EAN) | 4032248742868 |
| Qty. | 1 pc(s). |

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Technical data

Dimensions and weights

| | | | |
|------------|---------|-----------------|------------|
| Depth | 69 mm | Depth (inches) | 2.717 inch |
| Height | 98 mm | Height (inches) | 3.858 inch |
| Width | 17.8 mm | Width (inches) | 0.701 inch |
| Net weight | 44 g | | |

Temperatures

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

Probability of failure

| | | | |
|------------------------------------|---------|------|---------|
| SIL in compliance with IEC 61508 | 2 | MTTF | 2,665 a |
| SFF | 86.02 % | λges | 43 |
| PFH in 1*10 ⁻⁹ per hour | 10.7 | | |

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 _i | 15 V |
| Internal capacity, max. C _i | 2 nF | Internal inductance, max. L _i | 0 μH |

General data

| | | | |
|--------------------------|---|---------------------------|-------------------------|
| Colour | orange | Design | Terminal, miscellaneous |
| Optical function display | green = OK; red = arrester is defective - replace | Protection degree | IP20 |
| Segment | Measurement - Monitoring - Setting | 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 |
|--------------------|---|------------------------|-----|

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Technical data

Rated data IEC / EN

| | |
|---|---|
| Discharge current I_{\max} (8/20 μ s) GND-PE | 10 kA |
| Discharge current I_{\max} (8/20 μ s) wire-wire | 10 kA |
| Discharge current I_n (8/20 μ s) wire-PE | 2.5 kA |
| Fuse | 0.5 A |
| Lightning test current, I_{imp} (10/350 μ s) Wire-PE | 2.5 kA |
| Max. continuous voltage, U_c (DC) | 15 V |
| Overload - failure mode | Modus 2 |
| Protection level on output side Wire-PE 1 kV/ μ s, typically | 25 V |
| Protection level on output side Wire-wire 8/20 μ s, typically | 45 V |
| Protection level, U_p wire - PE | 20 V |
| Rated current I_N | 300 mA |
| Requirements category acc. to IEC 61643-21 | C1, C2, C3, D1 |
| Signalling contact | U_N 250 V AC 0.1 A 1CO at VSPC R with VSPC control unit |
| Surge current-carrying capacity C1 | <1 kA 8/20 μ s |
| Surge current-carrying capacity C3 | 100 A 10/1000 μ s |
| Voltage type | DC |

| | |
|---|-----------------------|
| Discharge current I_{\max} (8/20 μ s) wire-PE | 10 kA |
| Discharge current I_n (8/20 μ s) GND-PE | 2.5 kA |
| Discharge current I_n (8/20 μ s) wire-wire | 2.5 kA |
| Lightning test current, I_{imp} (10/350 μ s) GND-PE | 2.5 kA |
| Lightning test current, I_{imp} (10/350 μ s) wire-wire | 2.5 kA |
| Number of poles | 1 |
| Protection level U_p (typ.) | <200 V |
| Protection level on output side Wire-wire 1 kV/ μ s, typically | 45 V |
| Protection level, U_p GND - PE | 450 V |
| Pulse-reset capacity | ≤ 20 ms |
| Rated voltage (DC) | 12 V |
| Signal transmission properties (-3 dB) | 2.5 MHz |
| Standards | IEC 61643-21 |
| Surge current-carrying capacity C2 | 5 kA 8/20 μ s |
| Surge current-carrying capacity D1 | 2.5 kA 10/350 μ s |
| Volume resistance | 4.7 Ω |

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 |
|-----------------|-----------------|

Guarantee

| | |
|---------------|---------|
| Time interval | 5 years |
|---------------|---------|

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 |
| ECLASS 14.0 | 27-17-90-90 | | |

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Technical data

Tender specification sheets

Long specification

Surge protection plug for use in connection with the base element VSPC BASE 2SL R for two wires with a common ground and with integrated status display and remote monitoring option. 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.

Short specification

Surge protection plug for base element VSPC BASE 2SL R, with integrated status display and remote monitoring option. Coarse and fine common mode voltage protection for two wires with a common ground. Version: 12 V DC

Environmental Product Compliance

| | |
|--------------------------------------|--------------------------------------|
| REACH SVHC | Lead 7439-92-1 |
| SCIP | 71e97bb7-979f-4330-94c0-20c629bb05e3 |
| RoHS Compliance Status | Compliant with exemption |
| RoHS Exemption (if applicable/known) | 7a, 7cl |

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 | SIL Paper EU Konformitätserklärung / EU Declaration of Conformity |
| Engineering Data | CAD data – STEP |
| User Documentation | Beipackzettel / Instruction sheet |
| Catalogues | Catalogues in PDF-format |
| Brochures | |

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Klingenbergstraße 26

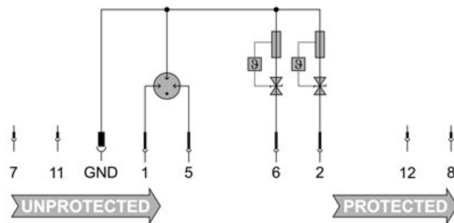
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Drawings

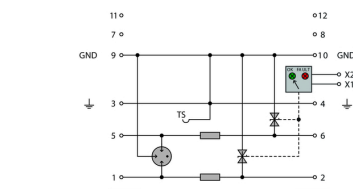
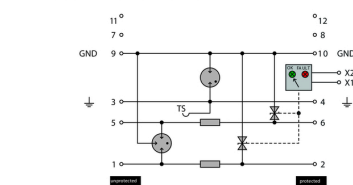
Electric symbol



Circuit diagram

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

Discharge capacity

Complete module direct grounding, with remote signalling
Komplettmodul direkte Erdung, mit FernmeldungComplete module indirect grounding, with remote signalling
Komplettmodul indirekte Erdung, mit Fernmeldung

Komplettmodul

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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 R | Version |
| Order No. | 8951770000 | Surge protection, Flange-mounted housing, Flange-mounted housing |
| GTIN (EAN) | 4032248743018 | |
| Qty. | 1 pc(s). | |

Supply and alert unit for VSPC R arresters



- Signalling module for all VSPCs with status indicator
- Signalling of cable breaks / signal interruptions
- Power supply of 20 to 31 V DC
- No-voltage changeover contact
- Function display with red/green LED
- Functional alerts with different signal types.

General ordering data

| | | |
|------------|----------------------------|--|
| Type | VSPC CONTROL UNIT 24VDC | Version |
| Order No. | 8972270000 | Surge protection for instrumentation and control, with warning function / function indicator |
| GTIN (EAN) | 4032248793488 | |
| Qty. | 1 pc(s). | |

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www.weidmueller.com**Accessories****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. | 1317340000 | Fastening element, Latches |
| GTIN (EAN) | 4050118121179 | |
| Qty. | 100 pc(s). | |

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. | 8951860000 | Lightning and surge protection, Testing device |
| GTIN (EAN) | 4032248743100 | |
| Qty. | 1 pc(s). | |

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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. | 1854490000 | Dekafix, Terminal marker, 5 x 5 mm, Pitch in mm (P): 5.00 |
| GTIN (EAN) | 4032248393596 | Weidmueller, white |
| Qty. | 1,000 pc(s). | |