

VSPC RS485 2CH R**Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com**Data surge protection**

- for RS 422 and RS 485 signal
- suitable as transient surge protection for fast data signals

General ordering data

| | |
|------------|--|
| Version | Surge protection for instrumentation and control, with warning function / function indicator, UP(L/N-PE) 250 V |
| Order No. | 8951670000 |
| Type | VSPC RS485 2CH R |
| GTIN (EAN) | 4032248742912 |
| Qty. | 1 items |

VSPC RS485 2CH R

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Technical data

Approvals

Approvals



ROHS Conform

UL File Number Search [UL Website](#)

Certificate No. (UL) E311081

Dimensions and weights

| | | | |
|------------|---------|-----------------|-------------|
| Depth | 69 mm | Depth (inches) | 2.7165 inch |
| Height | 98 mm | Height (inches) | 3.8583 inch |
| Width | 17.8 mm | Width (inches) | 0.7008 inch |
| Net weight | 47 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 | 3 | MTTF | 1266 a |
| SFF | 93.35 % | λges | 90 |
| PFH in 1*10 ⁻⁹ per hour | 6 | | |

Environmental Product Compliance

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

Rated data UL

| | | | |
|----------------------|---------|----------------|--|
| Certificate No. (UL) | E311081 | UL certificate | UL 497b Certificate - PDF/ E311081VOL1SEC2.pdf (application/pdf) |
|----------------------|---------|----------------|--|

CSA protection data

| | | | |
|----------------------------|-------|------------------------------|-------|
| Gas group D | IIA | Gas groups A, B | IIC |
| Gas group C | IIB | Internal inductance, max. LI | 0 μH |
| Internal capacity, max. CI | 11 nF | Input voltage, max. Ui | 6.4 V |

General data

| | | | |
|---------------------------|--|---------|---------------------------------------|
| Optical function display | green = OK; red = arrester is defective - replace | Segment | Measurement - Monitoring - Setting |
| Version | with warning function / function indicator | Design | Terminal, miscellaneous |
| UL 94 flammability rating | V-0 | Colour | orange |
| Protection degree | IP20 | | |

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Insulation coordination acc. to EN 50178

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

Rated data IEC / EN

| | | | |
|--|------------------|--|--|
| Number of poles | 1 | Signalling contact | UN 250 V AC 0.1 A 1CO at VSPC R with VSPC control unit |
| Rated voltage (AC) | 5 V | Rated voltage (DC) | 5 V |
| Rated current I _N | 450 mA | Protection level on output side Wire-wire | 10 V |
| Protection level on output side Wire-PE | 10 V | 1 kV/μs, typically | |
| Protection level, UP wire - wire | 15 V | Protection level on output side Wire-wire | 15 V |
| Protection level UP (typ.) | 250 V | 8/20 μs, typically | |
| Volume resistance | 2.20 Ω | Protection level, UP wire - PE | 35 V |
| Requirements category acc. to IEC | C1, C2, C3, D1 | Voltage type | AC/DC |
| 61643-21 | | Standards | IEC 61643-21 |
| Max. continuous voltage, U _c (AC) | 5 V | Insertion loss | 113.7 MHz |
| Lightning test current, I _{imp} (10/350 μs) | 0.2 kA | Max. continuous voltage, U _c (DC) | 6.4 V |
| wire-wire | | Surge current-carrying capacity D1 | 2.5 kA 10/350 μs |
| Protection level, UP GND - PE | 500 V | Surge current-carrying capacity C1 | <1 kA 8/20 μs |
| Surge current-carrying capacity C3 | 100 A 10/1000 μs | Lightning test current, I _{imp} (10/350 μs) | 0.2 kA |
| Pulse-reset capacity | ≤ 20 ms | GND-PE | |
| Lightning test current, I _{imp} (10/350 μs) | 2 x 0.2 kA | Signal transmission properties (-3 dB) | 113.6 MHz |
| Wire-PE | | Overload - failure mode | Modus 2 |
| Discharge current I _{max} (8/20 μs) GND-PE | 10 kA | Discharge current I _n (8/20 μs) wire-wire | 2.5 kA |
| Discharge current I _n (8/20 μs) wire-PE | 2.5 kA | Discharge current I _{max} (8/20 μs) wire-PE | 2 x 10 kA |
| Discharge current I _{max} (8/20 μs) wire-wire | 10 kA | Discharge current I _n (8/20 μs) GND-PE | 2.5 kA |
| Surge current-carrying capacity C2 | 5 kA 8/20 μs | | |

Further details of approvals

| | |
|------------------|--|
| GOST certificate | GOST-Zertifikat - PDF/7950_n1-n4.pdf (application/pdf) |
|------------------|--|

Connection data

| | |
|--------------------|------------------------|
| Type of connection | Pluggable in VSPC BASE |
|--------------------|------------------------|

Electrical data

| | |
|--------------|-------|
| Voltage type | AC/DC |
|--------------|-------|

General data

| | | | |
|-----------------|--------|-------------------|------|
| Number of poles | 1 | Protection degree | IP20 |
| Colour | orange | | |

Ratings IECEx/ATEX/cUL

| | |
|-----------------|--|
| cUL certificate | cUL Certificate - pdf/ VSPC.PDF (application/ pdf) |
|-----------------|--|

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Technical data

Guarantee

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

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. |
|---------------------|--|

Classifications

| | | | |
|-------------|-------------|-------------|-------------|
| ETIM 8.0 | EC000943 | ETIM 9.0 | EC000943 |
| ETIM 10.0 | EC000943 | ECLASS 14.0 | 27-17-15-03 |
| ECLASS 15.0 | 27-17-15-03 | | |

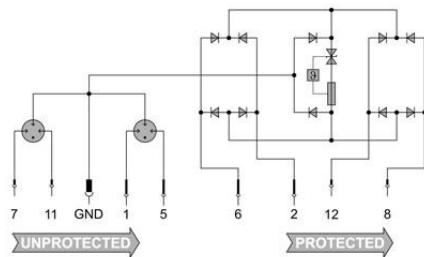
Tender specification sheets

| | | | |
|--------------------|---|---------------------|---|
| Long specification | Surge protection plug for use in connection with the base element VSPC BASE 2CL for two floating-ground driven signal cables and ground, e.g. for bus systems. Two-stage protection circuit consisting of coarse protection, decoupling resistors and fine protection between the signal wires and additional coarse common mode voltage protection to earth as well as an integrated status display and remote monitoring option. 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. It is possible to mark the plug. | Short specification | Surge protection plug for base element VSPC BASE 2CL, transverse voltage coarse and fine protection for two floating-ground powered IT signal cables, coarse common mode voltage protection to earth. Version: 5V DC With optional remote monitoring. |
|--------------------|---|---------------------|---|

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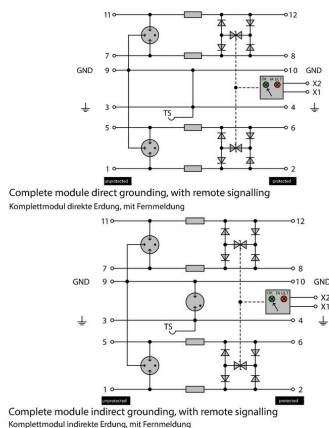
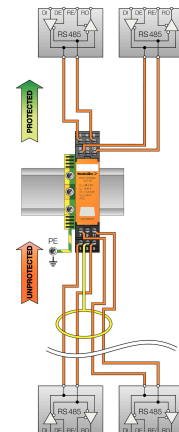
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Drawings
Electric symbol


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



Kompletmodul

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Accessories

Supply and alert unit for VSPC R arresters

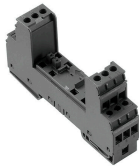


- Signalling module for all VSPCs with status indicator
- Signalling of cable breaks / signal interruptions
- Power supply of 20 to 31 V DC
- No-voltage changeover contact
- Function display with red/green LED
- Functional alerts with different signal types.

General ordering data

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

Direct earthing

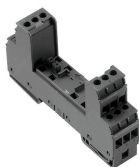


Base element for the pluggable VSPC arrester, integrated PE foot in impedance-neutral VSPC BASE. Can safely discharge up to 20 kA (8/20 µs) and 2.5 kA (10/350 µs) to the PE.

General ordering data

| | | |
|------------|----------------------------|--|
| Type | VSPC BASE 2CL R | Version |
| Order No. | 8951710000 | Surge protection, Flange-mounted housing, Flange-mounted housing |
| GTIN (EAN) | 4032248742950 | |
| Qty. | 1 ST | |

Indirect earthing / floating ground via sparkover gap, also suitable for EX ia applications



Base element for the pluggable VSPC arresters. Integrated PE foot in the base of the impedance-neutral VSPC BASE and floating earth PE connection (FG) via integrated sparkover gap, safely discharges up to 20 kA (8/20 µs) and 2.5 kA (10/350 µs) to PE. Suitable for unearthed signal circuits.

General ordering data

| | | |
|------------|----------------------------|--|
| Type | VSPC BASE 2CL FG R | Version |
| Order No. | 8951720000 | Surge protection, Flange-mounted housing, Flange-mounted housing |
| GTIN (EAN) | 4032248742967 | |
| Qty. | 1 ST | |

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

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

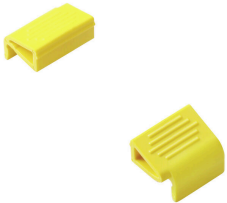
| | | |
|------------|----------------------------|---|
| Type | DEK 5/5 PLUS MC NE WS | Version |
| Order No. | 1854490000 | Dekafix, Terminal marker, 5 x 5 mm, Pitch in mm (P): 5.00 |
| GTIN (EAN) | 4032248393596 | Weidmueller, white |
| Qty. | 1000 ST | |

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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 ST | | |

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Counterpart

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 2CL R | Version |
| Order No. | 8951710000 | Surge protection, Flange-mounted housing, Flange-mounted housing |
| GTIN (EAN) | 4032248742950 | |
| Qty. | 1 ST | |

Indirect earthing / floating ground via sparkover gap, also suitable for EX ia applications



Base element for the pluggable VSPC arresters. Integrated PE foot in the base of the impedance-neutral VSPC BASE and floating earth PE connection (FG) via integrated sparkover gap, safely discharges up to 20 kA (8/20 µs) and 2.5 kA (10/350 µs) to PE. Suitable for unearthed signal circuits.

General ordering data

| | | |
|------------|----------------------------|--|
| Type | VSPC BASE 2CL FG R | Version |
| Order No. | 8951720000 | Surge protection, Flange-mounted housing, Flange-mounted housing |
| GTIN (EAN) | 4032248742967 | |
| Qty. | 1 ST | |