

## VSPC RS485 2CH R

**Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 26

D-32758 Detmold

Germany

[www.weidmueller.com](http://www.weidmueller.com)



Under the protection of the data protection RS 485 come the following signals:

- Protection for wire connected serial data transmission – RS 485 or RS 422
- Pluggable arrester, with no-interrupt and impedance-neutral plug-in and pull-out
- Low residual voltage
- Can be used in accordance with the IEC 62305 and IEC61643-22 installation standards
- Can be tested with the V-TEST testing device
- Integrated PE foot, safely discharges up to 20 kA (8/20  $\mu$ s) and 2.5 kA (10/350  $\mu$ s) to PE

### General ordering data

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

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**Technical data**

**Approvals**

Approvals



ROHS	Conform
UL File Number Search	<a href="#">UL Website</a>
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 <sup>-9</sup> 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)
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**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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## Technical data

### Insulation coordination acc. to EN 50178

Surge voltage category	III	Pollution severity	2
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### 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 <sub>N</sub>	450 mA	Protection level on output side Wire-wire	10 V 1 kV/μs, typically
Protection level on output side Wire-PE	10 V 1kV/μs, typically	Protection level on output side Wire-wire	15 V 8/20 μs, typically
Protection level, UP wire - wire	15 V	Protection level, UP wire - PE	35 V
Protection level UP (typ.)	250 V	Voltage type	AC/DC
Volume resistance	2.20 Ω	Standards	IEC 61643-21
Requirements category acc. to IEC 61643-21	C1, C2, C3, D1	Insertion loss	113.7 MHz
Max. continuous voltage, U <sub>c</sub> (AC)	5 V	Max. continuous voltage, U <sub>c</sub> (DC)	6.4 V
Lightning test current, I <sub>imp</sub> (10/350 μs) wire-wire	0.2 kA	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 <sub>imp</sub> (10/350 μs) GND-PE	0.2 kA
Pulse-reset capacity	≤ 20 ms	Signal transmission properties (-3 dB)	113.6 MHz
Lightning test current, I <sub>imp</sub> (10/350 μs) Wire-PE	2 x 0.2 kA	Overload - failure mode	Modus 2
Discharge current I <sub>max</sub> (8/20μs) GND-PE	10 kA	Discharge current I <sub>n</sub> (8/20μs) wire-wire	2.5 kA
Discharge current I <sub>n</sub> (8/20μs) wire-PE	2.5 kA	Discharge current I <sub>max</sub> (8/20μs) wire-PE	2 x 10 kA
Discharge current I <sub>max</sub> (8/20μs) wire-wire	10 kA	Discharge current I <sub>n</sub> (8/20μs) 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)
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### Connection data

Type of connection	Pluggable in VSPC BASE
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### Electrical data

Voltage type	AC/DC
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### 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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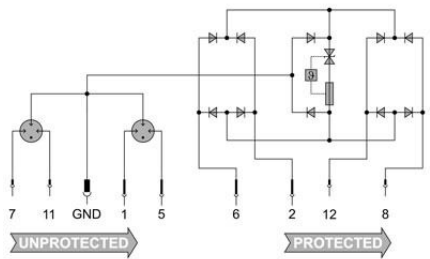
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Drawings

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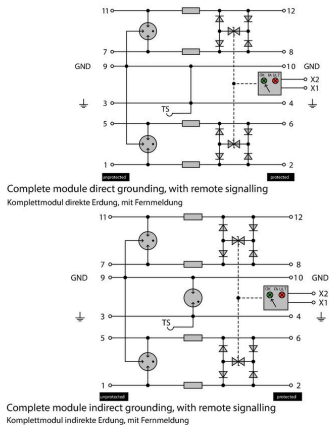
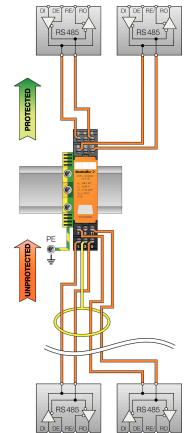
Electric symbol



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 mit 10/350 µs	0.5 - 2.5 kA 2	Arrester for lightning current and surge voltages

Discharge capacity



Komplettmodul

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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.	<a href="#">8972270000</a>	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  $\mu$ s) and 2.5 kA (10/350  $\mu$ s) to the PE.

### General ordering data

Type	VSPC BASE 2CL R	Version	
Order No.	<a href="#">8951710000</a>	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  $\mu$ s) and 2.5 kA (10/350  $\mu$ s) to PE. Suitable for unearthed signal circuits.

### General ordering data

Type	VSPC BASE 2CL FG R	Version	
Order No.	<a href="#">8951720000</a>	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.	<a href="#">8951860000</a>	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.	<a href="#">1854490000</a>	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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## 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.	<a href="#">1317340000</a>	Fastening element, Latches	
GTIN (EAN)	4050118121179		
Qty.	100 ST		

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## Counterpart

### Direct earthing



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### General ordering data

Type	VSPC BASE 2CL R	Version	
Order No.	<a href="#">8951710000</a>	Surge protection, Flange-mounted housing, Flange-mounted housing	
GTIN (EAN)	4032248742950		
Qty.	1 ST		

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### General ordering data

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Order No.	<a href="#">8951720000</a>	Surge protection, Flange-mounted housing, Flange-mounted housing	
GTIN (EAN)	4032248742967		
Qty.	1 ST		