

## VSPC 2SL 12VDC R

**Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 26

D-32758 Detmold

Germany

[www.weidmueller.com](http://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, with warning function / function indicator
Order No.	<a href="#">8951620000</a>
Type	VSPC 2SL 12VDC R
GTIN (EAN)	4032248742868
Qty.	1 items

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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	44 g		

## Temperatures

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

## Probability of failure

SIL in compliance with IEC 61508	2	MTTF	2665 a
SFF	86.02 %	λges	43
PFH in 1*10 <sup>-9</sup> per hour	10.7		

## 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	2 nF	Input voltage, max. Ui	15 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	protected binary signals	2

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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	250 V 1A 1CO
Rated voltage (DC)	12 V	Rated current I <sub>N</sub>	300 mA
Protection level on output side Wire-wire	45 V	Protection level on output side Wire-PE	25 V
1 kV/μs, typically		1 kV/μs, typically	
Protection level on output side Wire-wire	45 V	Protection level, UP wire - wire	45 V
8/20 μs, typically			
Protection level, UP wire - PE	450 V	Voltage type	DC
Fuse protection	0.5 A	Volume resistance	4.7 Ω
Frequency range, max.	730 kHz	Standards	IEC 61643-21
Requirements category acc. to IEC	C1, C2, C3, D1	Max. continuous voltage, U <sub>c</sub> (DC)	15 V
61643-21		Surge current-carrying capacity D1	2.5 kA 10/350 μs
Lightning test current, limp (10/350 μs)	2.5 kA	Surge current-carrying capacity C3	100 A 10/1000 μs
wire-wire		Pulse-reset capacity	≤ 20 ms
Surge current-carrying capacity C1	<1 kA 8/20 μs	Lightning test current, limp (10/350 μs)	2.5 kA
Lightning test current, limp (10/350 μs)	2.5 kA	Wire-PE	
GND-PE		Discharge current I <sub>max</sub> (8/20μs) GND-PE	10 kA
Signal transmission properties (-3 dB)	2.5 MHz	Discharge current I <sub>n</sub> (8/20μs) wire-wire	2.5 kA
Overload - failure mode	Modus 2	Discharge current I <sub>max</sub> (8/20μs) wire-PE	10 kA
Rated load current I <sub>L</sub>	300 mA	Discharge current I <sub>n</sub> (8/20μs) GND-PE	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-wire	10 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	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

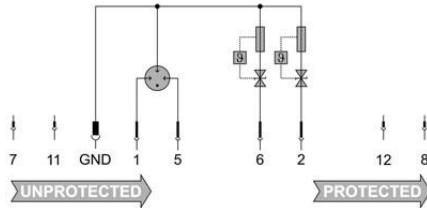
**Important note**

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	27-17-15-01
ECLASS 15.0	27-17-15-01		

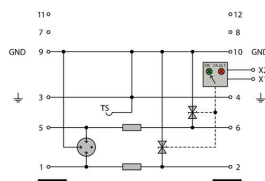
Electric symbol



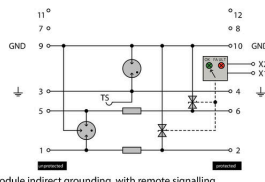
Circuit diagram

Category	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



Complete module direct grounding, with remote signalling  
 Komplettnetz direkte Erdung, mit Fernmeldung



Complete module indirect grounding, with remote signalling  
 Komplettnetz indirekte Erdung, mit Fernmeldung

Komplettnetz