

## VSPC 2SL 48VAC EX

**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, without warning function / function indicator
Order No.	<a href="#">8953640000</a>
Type	VSPC 2SL 48VAC EX
GTIN (EAN)	4032248745791
Qty.	1 items

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## Technical data

### Approvals

Approvals



ROHS Conform

### Dimensions and weights

Width	17.8 mm	Width (inches)	0.7008 inch
Net weight	24 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	2665 a
SFF	79.3 %	λges	43
PFH in 1*10 <sup>-9</sup> per hour	8.9		

### Environmental Product Compliance

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

### Protection Ex - Data

ATEX - dust labelling	II 1 D Ex ia IIIC T135 °C ... T85 °C Da	ATEX - gas labelling	II 1 G Ex ia IIC T4... T6 Ga
Certificate No. (ATEX)	KEMA10ATEX0148X	IECEx - dust labelling	II 1 D Ex ia IIIC T135 °C ... T85 °C Da
IECEx - gas labelling	II 1 G Ex ia IIC T4... T6 Ga	Input power, max. PI	3 W
Internal capacity, max. CI	<4 nF	Internal inductance, max. LI	0 µH
Temperature class T4/135°C (-40°C ... +85°C) li	350 mA	Temperature class T5/100°C (-40 °C ... +75°C) li	250 mA
Temperature class T6/85 °C (-40 °C ... +60°C) li	250 mA		

### 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	4 nF		

### General data

Optical function display	No	Segment	Measurement - Monitoring - Setting
Version	without warning function / function indicator	Colour	Light Blue
Protection degree	IP20	protected binary signals	2

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### 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	Rated voltage (AC)	48 V
Rated current I <sub>N</sub>	250 mA	Protection level on output side Wire-wire	80 V 1 kV/μs, typically
Protection level on output side Wire-PE	85 V 1 kV/μs, typically	Protection level on output side Wire-wire	80 V 8/20 μs, typically
Volume resistance	4.7 Ω	Dielectric strength at FG against PE	≥ 500 V
Lightning test current, I <sub>imp</sub> (10/350 μs) wire-wire	2.5 kA	Surge current-carrying capacity D1	2.5 kA 10/350 μs
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	2.5 kA	Pulse-reset capacity	≤ 60 ms
Signal transmission properties (-3 dB)	2.7 MHz	Lightning test current, I <sub>imp</sub> (10/350 μs) Wire-PE	2.5 kA
Overload - failure mode	Modus 2	Discharge current I <sub>max</sub> (8/20μs) GND-PE	10 kA
Rated load current I <sub>L</sub>	250 mA	Discharge current I <sub>n</sub> (8/20μs) wire-wire	2.5 kA
Discharge current I <sub>max</sub> (8/20μs) wire-PE	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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### General data

Number of poles	1	Protection degree	IP20
Colour	Light Blue		

### Ratings IECEx/ATEX/cUL

ATEX - dust labelling	II 1 D Ex ia IIIC T135 °C ... T85 °C Da	ATEX - gas labelling	II 1 G Ex ia IIC T4... T6 Ga
ATEX certificate	ATEX Certificate	Certificate No. (ATEX)	KEMA10ATEX0148X
IEC Ex certificate	IECEX Zertifikat - PDF/IECEXCertificateDEK.pdf (application/pdf)	IECEX - dust labelling	II 1 D Ex ia IIIC T135 °C ... T85 °C Da
IECEX - gas labelling	II 1 G Ex ia IIC T4... T6 Ga	cUL certificate	cUL Certificate - pdf/VSPC.PDF (application/pdf)

### Guarantee

Time interval	5 years
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### 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	27-17-15-02
ECLASS 15.0	27-17-15-02		

### Tender specification sheets

Long specification	Surge protection plug for use in connection with the base element VSPC BASE 2SL FG for two wires with a common ground. 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. Suitable for intrinsically safe powered signal cables EX ia. Version: 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 plugs for base element VSPC BASE 2SL FG, coarse and fine common mode voltage protection for two wires with a common signal ground for intrinsically safe signal cables EX ia. Version: 48 V AC
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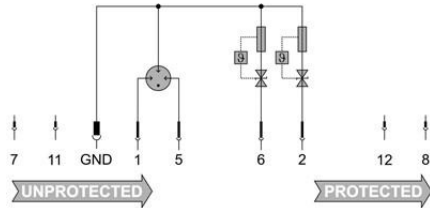
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Drawings

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Electric symbol



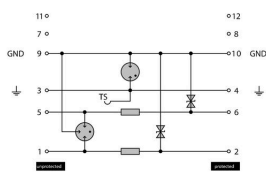
Circuit diagram

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 µs	2 Arrester for lightning current and surge voltages

Discharge capacity



Complete module direct grounding  
 Komplettdirekte Erdung



Complete module indirect grounding  
 Komplettdirekte Erdung

Komplettdirekte Erdung