

## VSPC 2CL 48VAC

**Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 26

D-32758 Detmold

Germany

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



Analogue signal/current loop (CL) protection includes the following signals:

- Signals from current loops (analogue measurements of sensors over long distances) 4 – 20 mA, 0 – 20 mA etc.
- Two-wire, three-wire and four-wire, without a common reference potential
- e.g. level indication signals from voltage sensors (analogue measurements of sensors over short distances) 0 – 10 V, PT 100 etc. ; e.g. temperature measurement
- Pluggable arrester, with 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 differences in potential
- Can be used in compliance with the IEC 62305 (D1, C1, C2 and C3) installation standard
- 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="#">8951490000</a>
Type	VSPC 2CL 48VAC
GTIN (EAN)	4032248742738
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	90 mm	Height (inches)	3.5433 inch
Width	17.8 mm	Width (inches)	0.7008 inch
Net weight	45 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	3	MTTF	2537 a
SFF	95.67 %	λges	45
PFH in 1*10 <sup>-9</sup> per hour	1.95		

## 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

## 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	85 V

## General data

Optical function display	No	Segment	Measurement - Monitoring - Setting
Version	without warning function / function indicator	Design	Terminal, miscellaneous
UL 94 flammability rating	V-0	Colour	orange
Protection degree	IP20	protected current loops	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	No
Rated voltage (AC)	48 V	Rated voltage (DC)	68 V
Rated current I <sub>N</sub>	350 mA	Protection level on output side Wire-wire	85 V 1 kV/μs, typically
Protection level on output side Wire-PE	450 V 1 kV/μs, typically	Protection level on output side Wire-wire	85 V 8/20 μs, typically
Protection level, UP wire - wire	85 V	Protection level, UP wire - PE	450 V
Voltage type	AC	Fuse protection	0.5 A
Volume resistance	2.20 Ω	Standards	IEC 61643-21, HART-compatible
Requirements category acc. to IEC 61643-21	C1, C2, C3, D1	Max. continuous voltage, U <sub>c</sub> (AC)	60 V
Max. continuous voltage, U <sub>c</sub> (DC)	85 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	≤ 500 ms	Signal transmission properties (-3 dB)	4.8 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>	350 mA
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-PE2 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
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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
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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.
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### 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		

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Drawings

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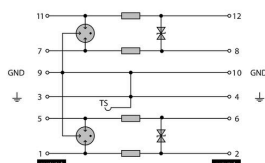
Electric symbol



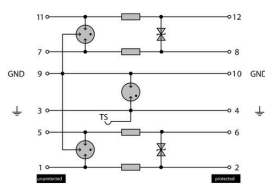
Circuit diagram

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

Discharge capacity



Complete module direct grounding  
 Komplettnodul direkte Erdung



Complete module indirect grounding  
 Komplettnodul indirekte Erdung

Komplettnodul