

VSPC VSPC 2CL 24VDC

Weidmüller Interface GmbH & Co. KG
Klingenbergstraße 26
D-32758 Detmold
Germany
Fon: +49 5231 14-0
Fax: +49 5231 14-292083
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 μ s) and 2.5 kA (10/350 μ 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

Type	VSPC 2CL 24VDC
Order No.	8924470000
Version	Surge protection for instrumentation and control, 24 V, 450 mA, IEC 61643-21, HART-compatible
GTIN (EAN)	4032248696109
Qty.	1 pc(s).

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Technical data**Dimensions and weights**

Width	17.8 mm	Width (inches)	0.701 inch
Height	90 mm	Height (inches)	3.543 inch
Depth	69 mm	Depth (inches)	2.717 inch
Net weight	45 g		

Temperatures

Humidity	5...96 %	Operating temperature, max.	70 °C
Operating temperature, min.	-40 °C	Storage temperature, max.	80 °C
Storage temperature, min.	-40 °C	Operating temperature	-40 °C...70 °C
Storage temperature	-40 °C...80 °C		

Probability of failure

λ_{ges}	45	MTTF	2,537 Years
PFH in $1 \cdot 10^{-9}$ per hour	1.95	SFF	95.67 %
SIL in compliance with IEC 61508	3		

Environmental Product Compliance

REACH SVHC	Lead 7439-92-1
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Rated data UL

Certificate No. (UL)	E311081	UL certificate	UL 497b Certificate
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CSA protection data

Gas group C	IIB	Gas group D	IIA
Gas groups A, B	IIC	Input voltage, max. U_i	28 V
Internal capacity, max. C_i	2 nF	Internal inductance, max. L_i	0 μ H

General data

Colour	orange	Design	Terminal, miscellaneous
Optical function display	No	Protection degree	IP20
Segment	Measurement - Monitoring - Setting	UL 94 flammability rating	V-0
Version	without warning function / function indicator	protected current loops	2

Insulation coordination acc. to EN 50178

Pollution severity	2	Surge voltage category	III
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Technical data**Rated data IEC / EN**

Rated voltage (DC)	24 V	Voltage type	DC
Max. continuous voltage, U _c (DC)	28 V	Discharge current I _n (8/20µs) GND-PE	2.5 kA
Discharge current I _{max} (8/20µs) GND-PE	10 kA	Discharge current I _n (8/20µs) wire-PE	2.5 kA
Discharge current I _{max} (8/20µs) wire-PE	2 x 10 kA	Discharge current I _n (8/20µs) wire-wire	2.5 kA
Discharge current I _{max} (8/20µs) wire-wire	10 kA	Lightning test current, I _{imp} (10/350 µs) GND-PE	2.5 kA
Lightning test current, I _{imp} (10/350 µs) Wire-PE	2.5 kA	Lightning test current, I _{imp} (10/350 µs) wire-wire	2.5 kA
Fuse	0.5 A	Standards	IEC 61643-21, HART-compatible
Protection level U _p (typ.)	< 800 V	Protection level on output side Wire-PE 1kV/µs, typically	450 V
Protection level on output side Wire-wire 1 kV/µs, typically	45 V	Protection level on output side Wire-wire 8/20 µs, typically	45 V
Protection level, U _p GND - PE	800 V	Protection level, U _p wire - PE	450 V
Number of poles	1	Overload - failure mode	Modus 2
Protection level, U _p wire - wire	45 V	Pulse-reset capacity	≤ 30 ms
Rated current I _N	450 mA	Requirements category acc. to IEC 61643-21	C1, C2, C3, D1
Signal transmission properties (-3 dB)	2.3 MHz	Signalling contact	No
Surge current-carrying capacity C1	< 1 kA 8/20 µs	Surge current-carrying capacity C2	5 kA 8/20 µs
Surge current-carrying capacity C3	100 A 10/1000 µs	Surge current-carrying capacity D1	2.5 kA 10/350 µs
Volume resistance	2.20 Ω		

Further details of approvals

GOST certificate GOST-Zertifikat

Connection data

Type of connection Pluggable in VSPC BASE

Classifications

ETIM 6.0	EC000943	ETIM 7.0	EC000943
eClass 9.0	27-13-08-07	eClass 9.1	27-13-08-07
eClass 10.0	27-13-08-07	UNSPSC	30-21-19-21

Approvals

Approvals



ROHS Conform

Downloads

Approval/Certificate/Document of Conformity	SIL Paper CE PAPER
Brochure/Catalogue	CAT 4.4 ELECTR 16/17 EN
Engineering Data	EPLAN, WSCAD
Engineering Data	STEP
User Documentation	Instruction sheet

Creation date April 22, 2020 7:23:45 AM CEST

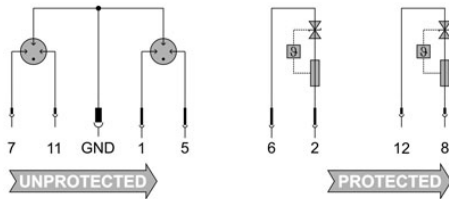
Catalogue status 17.04.2020 / We reserve the right to make technical changes.

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Drawings

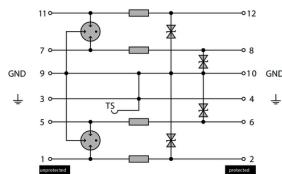
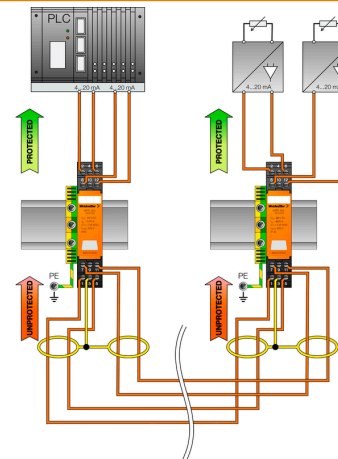
Electric symbol



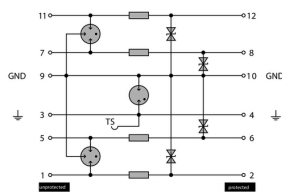
Circuit diagram

Category	Testing pulse	Surge voltage	Surge current	Pulse	Type
C1	Quick-rising edge	0.5 - 2 kV 1.2/50 µs	0.25 - 1 kA 8/20 µs	300	Surge voltage arrester
C2	Quick-rising edge	2 - 10 kV 1.2/50 µs	1 - 5 kA 8/20 µs	10	Surge voltage arrester
C3	Quick-rising edge	≥ 1 kV 1 kV/µs	10 - 100 A 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



Komplettmodul direkte Erdung



Komplettmodul indirekte Erdung

Komplettmodul