Data sheet

VSPC 1CL 24VDC

Weidmüller Interface GmbH & Co. KG
Klingenbergstraße 26
D-32758 Detmold
Germany

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 µs) and 2.5 kA (10/350 µs) 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.	8924480000
Type	VSPC 1CL 24VDC
GTIN (EAN)	4032248696116
Qty.	1 items

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Technical data

Approvals

Approvals	CSAEX
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	41 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*10-9 per hour	1.95		

Environmental Product Compliance

RoHS Compliance Status	Compliant with exemption
RoHS Exemption (if applicable/known)	7a, 7cI
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)

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	1 nF	Input voltage, max. Ui	28 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	1

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Insulation coordination acc. to EN 50178

Surge voltage category	III	Pollution severity	2

Rated data IEC / EN

Number of poles	1	Signalling contact	No
Rated voltage (DC)	24 V	Rated current IN	450 mA
Protection level on output side Wire-wire 1 kV/µs, typically	45 V	Protection level on output side Wire-PE 1kV/µs, typically	450 V
Protection level on output side Wire-wire 8/20 µs, typically	45 V	Protection level, UP wire - wire	450 V
Protection level, UP wire - PE	450 V	Voltage type	DC
Fuse protection	0.5 A	Volume resistance	2.20 Ω
Frequency range, max.	2.4 MHz	Standards	IEC 61643-21, HART-compatible
Requirements category acc. to IEC 61643-21	C1, C2, C3, D1	Max. continuous voltage, Uc (DC)	28 V
Lightning test current, limp (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, limp (10/350 µs) GND-PE	2.5 kA	Pulse-reset capacity	≤ 30 ms
Signal transmission properties (-3 dB)	2.4 MHz	Lightning test current, limp (10/350 µs) Wire-PE	2.5 kA
Overload - failure mode	Modus 2	Discharge current Imax (8/20µs) GND-PE	10 kA
Rated load current IL	450 mA	Discharge current In (8/20µs) wire-wire	2.5 kA
Discharge current In (8/20µs) wire-PE	2.5 kA	Discharge current Imax (8/20µs) wire-PE	10 kA
Discharge current Imax (8/20µs) wire-wire	10 kA	Discharge current In (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)

Connection data

Type of connection	Pluggable in VSPC BASE

Electrical data

Voltage type	DC

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		

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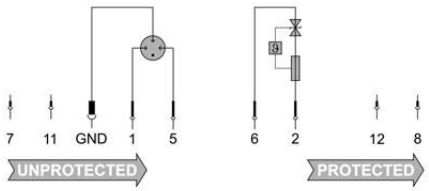
Drawings

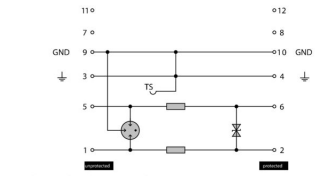
Electric symbol



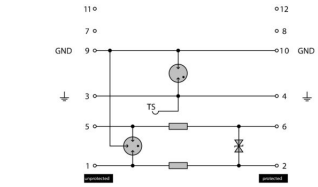
Circuit diagram

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
Komplettmodul direkte Erdung



Complete module indirect grounding
Komplettmodul indirekte Erdung

Komplettmodul