

VSPC 1CL 12VDC EX

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.	8953590000
Type	VSPC 1CL 12VDC EX
GTIN (EAN)	4032248745746
Qty.	1 items

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Technical data

Approvals

Approvals



ROHS Conform

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 ⁻⁹ per hour	1.95		

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

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) II	350 mA	Temperature class T5/100°C (-40 °C ... +75°C) II	250 mA
Temperature class T6/85 °C (-40 °C ... +60°C) II	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	UL 94 flammability rating	V-0

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Colour	Light Blue	Protection degree	IP20
protected current loops	1		

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 (DC)	12 V
Rated current I _N	350 mA	Protection level on output side Wire-wire	25 V 1 kV/μs, typically
Protection level on output side Wire-PE	450 V 1kV/μs, typically	Protection level on output side Wire-wire	25 V 8/20 μs, typically
Volume resistance	2.20 Ω	Dielectric strength at FG against PE	≥ 500 V
Lightning test current, limp (10/350 μs) wire-wire	2.5 kA	Surge current-carrying capacity D1	1 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	≤ 20 ms
Signal transmission properties (-3 dB)	1.7 MHz	Lightning test current, limp (10/350 μs) Wire-PE	2.5 kA
Overload - failure mode	Modus 2	Discharge current I _{max} (8/20μs) GND-PE	10 kA
Rated load current I _L	350 mA	Discharge current I _n (8/20μs) wire-wire	2.5 kA
Discharge current I _{max} (8/20μs) wire-PE	10 kA	Discharge current I _{max} (8/20μs) wire-wire	10 kA
Discharge current I _n (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 IIC 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 IIC T135 °C ... T85 °C Da
IECEX - gas labelling	II 1 G Ex ia IIC T4... T6 Ga	Marking EN 60079	Ex ec nC IIC T4 Gc
cUL certificate	cUL Certificate - pdf/VSPC.PDF (application/pdf)		

Guarantee

Time interval	5 years
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Technical data**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		

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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



Komplettmodul