

VSPC 1CL 5VDC R

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 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

Version	Surge protection for instrumentation and control, with warning function / function indicator, UP(L/N-PE) <800 V
Order No.	8951530000
Type	VSPC 1CL 5VDC R
GTIN (EAN)	4032248742776
Qty.	1 items

VSPC 1CL 5VDC R

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

www.weidmueller.com

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	98 mm	Height (inches)	3.8583 inch
Width	17.8 mm	Width (inches)	0.7008 inch
Net weight	42 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	95.27 %	λges	45
PFH in 1*10 ⁻⁹ per hour	3.7		

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

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	6.4 V

General data

Optical function display	green = OK; red = arrester is defective - replace	Segment	Measurement - Monitoring - Setting
Version	with warning function / function indicator	Design	miscellaneous, Terminal
UL 94 flammability rating	V-0	Colour	orange
Protection degree	IP20	protected current loops	1

VSPC 1CL 5VDC R

Weidmüller Interface GmbH & Co. KG

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com

Technical data

Insulation coordination acc. to EN 50178

Surge voltage category	III	Pollution severity	2
------------------------	-----	--------------------	---

Rated data IEC / EN

Number of poles	1	Signalling contact	250 V 1A 1CO
Rated voltage (DC)	5 V	Rated current I _N	450 mA
Protection level on output side Wire-wire	12 V 1 kV/μs, typically	Protection level on output side Wire-PE	450 V 1kV/μs, typically
Protection level on output side Wire-wire	12 V 8/20 μs, typically	Protection level, UP wire - wire	12 V
Protection level, UP wire - PE	450 V	Protection level UP (typ.)	<800 V
Voltage type	DC	Fuse protection	0.5 A
Volume resistance	2.20 Ω	Standards	HART-compatible, IEC 61643-21
Requirements category acc. to IEC 61643-21	C1, C2, C3, D1	Max. continuous voltage, U _c (DC)	6.4 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	≤ 20 ms
Signal transmission properties (-3 dB)	730 KHz	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	450 mA	Discharge current I _n (8/20μs) wire-wire	2.5 kA
Discharge current I _n (8/20μs) wire-PE	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)
------------------	--

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)
-----------------	--

VSPC 1CL 5VDC R

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

www.weidmueller.com

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		

VSPC 1CL 5VDC R

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

Drawings

www.weidmueller.com

Electric symbol



Circuit diagram

Category	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