

VSPC 1CL PW 24V

Weidmüller Interface GmbH & Co. KG

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com



Combined protection of one current loop 0(4) ... 20 mA and 24 VDC supply voltage

- Protects the 24 V power supply with type III arrester (IEC 61643-11)
- Pluggable arrester, with interruption-free and impedance-neutral plug-in and pull-out
- For use in accordance with installation standard IEC 62305 / IEC 61643-22 (D1, C1, C2 and C3)
- Integrated PE foot safely discharges up to 20 kA (8/20 μ s) and 2.5 kA (10/350 μ s) to the PE

General ordering data

Version	Surge protection for instrumentation and control, without warning function / function indicator, $U_p(L/N-PE) \leq 0.8$ kV
Order No.	8951510000
Type	VSPC 1CL PW 24V
GTIN (EAN)	4032248742752
Qty.	1 pc(s).

Creation date March 1, 2023 3:15:03 PM CET

Catalogue status 18.02.2023 / We reserve the right to make technical changes.

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Technical data

Dimensions and weights

Depth	69 mm	Depth (inches)	2.717 inch
Height	90 mm	Height (inches)	3.543 inch
Width	17.8 mm	Width (inches)	0.701 inch
Net weight	50 g		

Temperatures

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

Probability of failure

SIL in compliance with IEC 61508	3	MTTF	2,537 Years
SFF	95.67 %	λges	45
PFH in 1*10 ⁻⁹ per hour	1.95		

Power protection Class III

Combined pulse U _{OC}	6 kV	Max. continuous voltage, U _c (AC)	27 V
Max. continuous voltage, U _c (DC)	38 V	Protection level U _p (typ.)	≤ 0.8 kV
Rated voltage (AC)	24 V	Rated voltage (DC)	24 V

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	39 V
Internal inductance, max. L _i	0 μH		

General data

Colour	orange	Design	Terminal, miscellaneous
Optical function display	For Class III protection, green = OK; red = arrester is defective - replace	Protection degree	IP20
Segment	Measurement - Monitoring - Setting	UL 94 flammability rating	V-0
Version	without warning function / function indicator		

Insulation coordination acc. to EN 50178

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

Combined pulse U_{OC}	6 kV	Discharge current I_{max} (8/20 μ s) GND-PE	10 kA
Discharge current I_{max} (8/20 μ s) wire-PE	10 kA	Discharge current I_{max} (8/20 μ s) wire-wire	10 kA
Discharge current I_n (8/20 μ s) GND-PE	2.5 kA	Discharge current I_n (8/20 μ s) wire-PE	2.5 kA
Discharge current I_n (8/20 μ s) wire-wire	2.5 kA	Fuse	0.5 A
Lightning test current, I_{imp} (10/350 μ s) GND-PE	2.5 kA	Lightning test current, I_{imp} (10/350 μ s) Wire-PE	2.5 kA
Lightning test current, I_{imp} (10/350 μ s) wire-wire	2.5 kA	Max. continuous voltage, U_c (AC)	27 V
Max. continuous voltage, U_c (DC)	38 V	Number of poles	1
Overload - failure mode	Modus 2	Protection level U_p (typ.)	≤ 0.8 kV
Protection level on output side Wire-PE 1kV/ μ s, typically	450 V	Protection level on output side Wire-wire 1 kV/ μ s, typically	60 V
Protection level on output side Wire-wire 8/20 μ s, typically	60 V	Protection level, U_p GND - PE	450 V
Protection level, U_p wire - PE	450 V	Protection level, U_p wire - wire	40 V
Pulse-reset capacity	≤ 10 ms	Rated current	450 mA
Rated current I_N	10 A	Rated voltage (AC)	24 V
Rated voltage (DC)	24 V	Requirements category acc. to IEC 61643-21	C1, C2, C3, D1
Signal transmission properties (-3 dB)	3 MHz	Signalling contact	No
Standards	IEC 61643-21, HART-compatible	Surge current-carrying capacity C1	< 1 kA 8/20 μ s
Surge current-carrying capacity C2	5 kA 8/20 μ s	Surge current-carrying capacity C3	100 A 10/1000 μ s
Surge current-carrying capacity D1	2.5 kA 10/350 μ s	Voltage type	AC/DC
Volume resistance	2.20 Ω		

Further details of approvals

GOST certificate	GOST-Zertifikat
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Connection data

Type of connection	Pluggable in VSPC BASE
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Ratings IECEx/ATEX/cUL

cUL certificate	cUL Certificate
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Classifications

ETIM 6.0	EC000943	ETIM 7.0	EC000943
ETIM 8.0	EC000943	ECLASS 9.0	27-13-08-07
ECLASS 9.1	27-13-08-07	ECLASS 10.0	27-13-08-07
ECLASS 11.0	27-13-08-07	ECLASS 12.0	27-17-90-90

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Technical data

Tender specification sheets

Long specification		Short specification
	<p>Surge protection plug for base element VSPC BASE 1CL PW with dual protective circuits, for power supply and a paired cable for floating-ground powered signal circuit (forexample, supply isolation amplifiers) protective switched power supply: temperature controlled varistors as a cross-protection between the active lines. Coarse protection of the common mode voltage to earth. Optical defect signal coupled with the temperature monitoring. Protective circuits, floating-ground driven signal circuits: two-stage protection switches consisting of coarse and fine protection between the signal wires as well as decoupling resistors. Mechanical identification of the plug to the base element according to the switching type and rated voltage. Protected plug with coding pin and counter-profile for the base element. Optical identification of the protected plug based on the type of protected switching and the voltage level. It is possible to mark the plug.</p>	<p>Surge protection plug for base element VSPC BASE 1CL PW with dual protective circuits, for 24 V power supply and a paired cable for floating-ground powered signal circuit.</p>

Environmental Product Compliance

REACH SVHC	Lead 7439-92-1
SCIP	71e97bb7-979f-4330-94c0-20c629bb05e3

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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Data sheet

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Approvals

Approvals



ROHS	Conform
UL File Number Search	UL Website
Certificate No. (UL)	E311081

Downloads

Approval/Certificate/Document of Conformity	SIL Paper EU_Konformitätserklärung / EU_Declaration_of_Conformity
Engineering Data	CAD data – STEP
Engineering Data	WSCAD
User Documentation	Beipackzettel / Instruction sheet
Catalogues	Catalogues in PDF-format
Brochures	

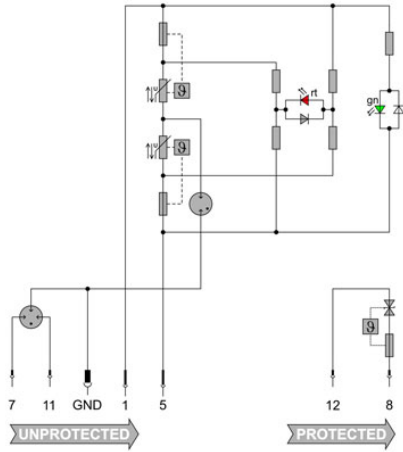
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Drawings

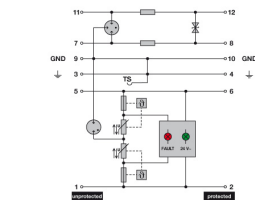
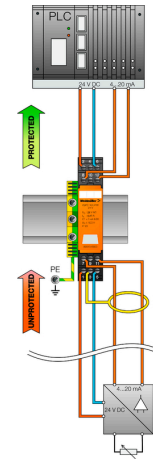
Electric symbol



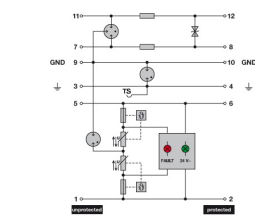
Circuit diagram

Derating curve

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 mit 8/20 µs	300	Surge voltage arrester
C2	Quick-rising edge	2 - 10 kV 1.2/50 µs	1 - 5 kA mit 8/20 µs	10	Surge voltage arrester
C3	Quick-rising edge	≥ 1 kV 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



Complete module, direct earthing



Complete module, indirect earthing

Komplettmodul