

VSPC 2SL 24VAC R**Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com

Binary signal (SL – Symmetrical Load) protection includes the following signals:

- Switching signals with and without a common reference potential e.g. 5 V – 24V – 60 V
- Two-conductor systems usually involve a common reference potential of binary sensors, actuators and indicators such as limit switches, buttons, position sensors, photoelectric barriers, contactors, solenoid valves, indicator lamps, etc.
- Pluggable arrester, for 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 interference currents resulting from differences in potential
- For use in compliance with the IEC 62305 and IEC 61643-22 installation standards (D1, C1, C2 and C3)
- 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, with warning function / function indicator, U _P (L/N-PE) 250 V
Order No.	8951640000
Type	VSPC 2SL 24VAC R
GTIN (EAN)	4032248742882
Qty.	1 pc(s).

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Technical data**Dimensions and weights**

Depth	69 mm	Depth (inches)	2.717 inch
Height	98 mm	Height (inches)	3.858 inch
Width	17.8 mm	Width (inches)	0.701 inch
Net weight	45 g		

Temperatures

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

Probability of failure

SIL in compliance with IEC 61508	2	MTTF	2,665 a
SFF	86.02 %	λ_{ges}	43
PFH in $1 \cdot 10^{-9}$ per hour	10.7		

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 capacity, max. C_i	2 nF	Internal inductance, max. L_i	0 μ H

General data

Number of poles	1	Protection degree	IP20
Colour	orange		

Insulation coordination acc. to EN 50178

Pollution severity	2	Surge voltage category	III
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Technical data

Rated data IEC / EN

Discharge current $I_{\max}$ (8/20 μ s) GND-PE 10 kADischarge current $I_{\max}$ (8/20 μ s) wire-wire 10 kADischarge current I_n (8/20 μ s) wire-PE 2.5 kA

Fuse 0.5 A

Lightning test current, I_{imp} (10/350 μ s) Wire-PE 2.5 kAMax. continuous voltage, U_c (AC) 28 V

Number of poles 1

Protection level U_p (typ.) 250 VProtection level on output side Wire-wire 1 kV/ μ s, typically 110 VProtection level, U_p GND - PE 450 VPulse-reset capacity ≤ 60 ms

Rated voltage (AC) 24 V

Requirements category acc. to IEC 61643-21 C1, C2, C3, D1

Signalling contact U_N 250 V AC 0.1 A 1CO at VSPC R with VSPC control unitSurge current-carrying capacity C1 < 1 kA 8/20 μ sSurge current-carrying capacity C3 100 A 10/1000 μ s

Voltage type AC

Discharge current $I_{\max}$ (8/20 μ s) wire-PE 10 kADischarge current I_n (8/20 μ s) GND-PE 2.5 kADischarge current I_n (8/20 μ s) wire-wire 2.5 kALightning test current, I_{imp} (10/350 μ s) GND-PE 2.5 kALightning test current, I_{imp} (10/350 μ s) wire-wire 2.5 kAMax. continuous voltage, U_c (DC) 40 V

Overload - failure mode Modus 2

Protection level on output side Wire-PE 1 kV/ μ s, typically 60 VProtection level on output side Wire-wire 8/20 μ s, typically 80 VProtection level, U_p wire - PE 40 VRated current I_N 300 mA

Rated voltage (DC) 34 V

Signal transmission properties (-3 dB) 5.5 MHz

Standards

IEC 61643-21

Surge current-carrying capacity C2 5 kA 8/20 μ sSurge current-carrying capacity D1 2.5 kA 10/350 μ sVolume resistance 4.7 Ω

Further details of approvals

GOST certificate GOST-Zertifikat

Connection data

Type of connection Pluggable in VSPC BASE

Electrical data

Voltage type AC

Ratings IECEx/ATEX/cUL

cUL certificate cUL Certificate

Guarantee

Time interval 5 years

Classifications

ETIM 6.0 EC000943

ETIM 8.0 EC000943

ETIM 10.0 EC000943

ECLASS 9.1 27-13-08-07

ECLASS 11.0 27-13-08-07

ECLASS 13.0 27-17-90-90

ECLASS 15.0 27-17-90-90

ETIM 7.0 EC000943

ETIM 9.0 EC000943

ECLASS 9.0 27-13-08-07

ECLASS 10.0 27-13-08-07

ECLASS 12.0 27-17-90-90

ECLASS 14.0 27-17-90-90

Creation date May 16, 2025 9:02:15 AM CEST

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Technical data

Tender specification sheets

Long specification	Short specification
Surge protection plug for use in connection with the base element VSPC BASE 2SL R for two wires with a common ground and with integrated status display and remote monitoring option. Two-stage protection circuit in the plug consisting of coarse protection, decoupling resistors and fine protection between the signal wires and the signal ground/ground/earth. 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.	Surge protection plug for base element VSPC BASE 2SL R, with integrated status display and remote monitoring option. Coarse and fine common mode voltage protection for two wires with a common ground. Version: 24 V AC

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

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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Approvals

Approvals	  
Approvals MAMID	https://mdcop.weidmueller.com/mediadelivery/rendition/900_319222/-T1z1mm-S800/ https://mdcop.weidmueller.com/mediadelivery/rendition/900_319227/-T1z1mm-S800/ https://mdcop.weidmueller.com/mediadelivery/rendition/900_319238/-T1z1mm-S800/ https://mdcop.weidmueller.com/mediadelivery/rendition/900_319261/-T1z1mm-S800/
ROHS	Conform
UL File Number Search	UL Website
Certificate No. (UL)	E311081

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Technical data

Downloads

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

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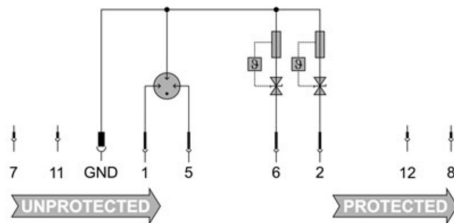
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Drawings

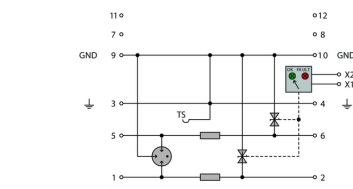
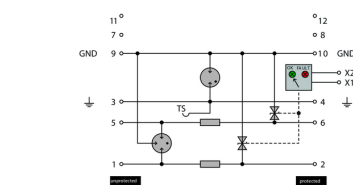
Electric symbol



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, with remote signalling
Komplettmodul direkte Erdung, mit FernmeldungComplete module indirect grounding, with remote signalling
Komplettmodul indirekte Erdung, mit Fernmeldung

Komplettmodul