

VSPC 2SL 24VDC 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, 24 V, 300 mA, IEC 61643-21
Order No.	8951630000
Type	VSPC 2SL 24VDC R
GTIN (EAN)	4032248742875
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
Net weight	45 g	Width	17.8 mm
Width (inches)	0.701 inch		

Temperatures

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

Probability of failure

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

Environmental Product Compliance

REACH SVHC	Lead 7439-92-1
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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	28 V
Internal capacity, max. C_i	2 nF	Internal inductance, max. L_i	0 μ H

General data

Colour	orange	Design	Terminal, miscellaneous
Optical function display	green = OK; red = arrester is defective - replace	Protection degree	IP20
Segment	Measurement - Monitoring - Setting	UL 94 flammability rating	V-0
Version	with warning function / function indicator	protected binary signals	2

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 kA
Discharge current $I_{\max}$ (8/20 μ s) wire-wire	10 kA
Discharge 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 kA
Max. continuous voltage, U_c (DC)	28 V
Overload - failure mode	Modus 2
Protection level on output side Wire-PE 1kV/ μ s, typically	40 V
Protection level on output side Wire-wire 8/20 μ s, typically	80 V
Protection level, U_p wire - PE	40 V
Rated current I_N	300 mA
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 unit
Surge current-carrying capacity C1	< 1 kA 8/20 μ s
Surge current-carrying capacity C3	100 A 10/1000 μ s
Voltage type	DC

Discharge current $I_{\max}$ (8/20 μ s) wire-PE	10 kA
Discharge current I_n (8/20 μ s) GND-PE	2.5 kA
Discharge current I_n (8/20 μ s) wire-wire	2.5 kA
Lightning test current, I_{imp} (10/350 μ s) GND-PE	2.5 kA
Lightning test current, I_{imp} (10/350 μ s) wire-wire	2.5 kA
Number of poles	1
Protection level U_p (typ.)	< 200 V
Protection level on output side Wire-wire 1 kV/ μ s, typically	80 V
Protection level, U_p GND - PE	450 V
Pulse-reset capacity	≤ 30 ms
Rated voltage (DC)	24 V
Signal transmission properties (-3 dB)	2.7 MHz
Standards	IEC 61643-21
Surge current-carrying capacity C2	5 kA 8/20 μ s
Surge current-carrying capacity D1	2.5 kA 10/350 μ s
Volume resistance	4.7 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
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

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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 DC

Approvals

Approvals



ROHS	Conform
UL File Number Search	E311081

Downloads

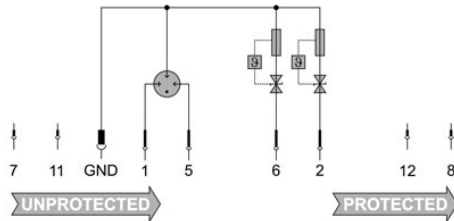
Approval/Certificate/Document of Conformity	SIL Paper CE PAPER
Engineering Data	STEP
Engineering Data	EPLAN, WSCAD
User Documentation	Instruction sheet

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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

