

VSPC 2SL 24VDC
Weidmüller Interface GmbH & Co. KG

Klingenbergstraße 16

D-32758 Detmold

Germany

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

- Switching signals with and without a common reference potential, e.g. 5 V...24 V...60 V
- Two-conductor systems usually involve 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 arrestor, for interruption-free and neutral impedance insertion and removal
- Can be tested with the V-TEST testing device
- Space-saving design for up to 4 binary signals
- Version with floating-earth PE connection used to avoid interference currents with differences in voltage potential
- Can be used in compliance with the IEC 62305 and IEC 61643-22 installation standard (**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 PE
- Colour coding of the voltage levels for quick identification in the cabinet
- Safety function through coding element for different voltage levels

General ordering data

Order No.	8924330000
Type	VSPC 2SL 24VDC
Version	Surge protection for instrumentation and control, without warning function / function indicator
GTIN (EAN)	4032248695973
Qty.	1 pc(s).

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Technical data**Dimensions and weights**

Width	17.8 mm	Height	90 mm
Depth	69 mm	Net weight	42 g

Temperatures

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

Probability of failure

λ_{ges}	43	MTTF	2,665 Years
PFH in $1 \cdot 10^{-9}$ per hour	8.9	SFF	79.3 %
SIL in compliance with IEC 61508	2		

General data

Colour	Arrester red	Optical function display	No
Protection degree	IP 20	Segment	Instrumentation and Control
UL 94 flammability rating	V-0		

Insulation coordination acc. to EN 50178

Pollution severity	2	Surge voltage category	III
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Interference voltage

Protection level on output side Wire-wire 1 kV/ μ s, typically	80 V	Protection level on output side Wire-wire 8/20 μ s, typically	80 V
Protection level on output side Wire-PE 1kV/ μ s, typically	40 V	Protection level on output side Wire-PE 8/20 μ s, typically	60 V

Protection level

Protection level, U_p GND - PE	450 V	Protection level, U_p wire - PE	40 V
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Technical data

technical data

Rated voltage (DC)	24 V	Rated current	300 mA
Rated voltage (DC), max.	28 V	Max. continuous voltage, U_c (DC)	28 V
Discharge current I_n (8/20µs) wire-wire	2.5 kA	Discharge current I_{max} (8/20µs) wire-wire	10 kA
Discharge current I_n (8/20µs) wire-PE	2.5 kA	Discharge current I_n (8/20µs) GND-PE	2.5 kA
Discharge current I_{max} (8/20µs) GND-PE	10 kA	Discharge current I_{max} (8/20µs) wire-PE	10 kA
Fuse, max.	0.5 A	Protection level U_p (typ.)	< 60 V
Protection level on output side Wire-wire 8/20 µs, typically	80 V	Protection level on output side Wire-PE 8/20 µs, typically	60 V
Standards	IEC 61643-21	Colour	Arrester red
Humidity	5...96 %	Requirements category acc. to IEC 61643-21	C1, C2, C3, D1
Lightning test current I_{imp} (10/350 µs)	2.5 kA	Lightning test current I_{imp} (10/350 µs) [L-PE]	2.5 kA
Lightning test current I_{imp} (10/350 µs) [N-PE]	2.5 kA	Volume resistance	4.7 Ω
Residual voltage, U_p typical	60 V	Dielectric strength at FG against PE	≥ 500 V
Overload - failure mode	Modus 2		

Further details of approvals

GOST certificate	GOST-Zertifikat
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Rated data UL

Certificate No. (UL)	E311081VOL1SEC2	UL certificate	UL 497b Certificate
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Classifications

ETIM 3.0	EC000943	UNSPSC	30-21-19-21
eClass 4.1	27-13-08-01	eClass 5.1	27-13-08-01
eClass 6.2	27-13-08-02	eClass 7.1	27-13-08-02

Approvals

Approvals



ROHS	Conform
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Probability of failure

SIL PAPER	SIL Paper
3-D model	

Downloads

Package insert	Instruction sheet
Declaration of Conformity	K316_07_09.pdf
EPLAN	8924330000.ema
Selection matrix	Preference selection VSPC
3-D model	

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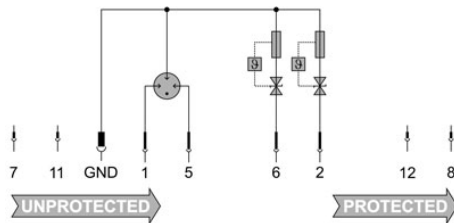
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Drawings
Electric symbol


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



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Mating connector (fully pluggable)**Direct earthing**

Base element for the pluggable VSPC arrester, integrated PE foot in impedance-neutral VSPC BASE. Can safely discharge up to 20 kA (8/20 μ s) and 2.5 kA (10/350 μ s) to the PE.

General ordering data

Order No.	Type	Version	GTIN (EAN)	Qty.
8924720000	VSPC BASE 2SL	Surge protection for instrumentation and control	4032248696369	1 pc(s).

Indirect earthing / floating ground via sparkover gap, also suitable for EX ia applications

Base element for the pluggable VSPC arresters. Integrated PE foot in impedance-neutral VSPC BASE and floating-earth PE connection (FG) via a built-in **sparkover gap**. Can safely discharge up to 20 kA (8/20 μ s) and 2.5 kA (10/350 μ s) to the PE. Suitable for unearthed signal circuits.

General ordering data

Order No.	Type	Version	GTIN (EAN)	Qty.
8924280000	VSPC BASE 2SL FG	Surge protection for instrumentation and control	4032248695928	1 pc(s).