

VSPC VSPC 2SL 24VDC

Weidmüller Interface GmbH & Co. KG
Klingenbergstraße 26
D-32758 Detmold
Germany
Fon: +49 5231 14-0
Fax: +49 5231 14-292083
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 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

Type	VSPC 2SL 24VDC
Order No.	8924330000
Version	Surge protection for instrumentation and control, 24 V, 300 mA, IEC 61643-21
GTIN (EAN)	4032248695973
Qty.	1 pc(s).

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Technical data**Dimensions and weights**

Width	17.8 mm	Width (inches)	0.701 inch
Height	90 mm	Height (inches)	3.543 inch
Depth	69 mm	Depth (inches)	2.717 inch
Net weight	42 g		

Temperatures

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

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	No	Protection degree	IP20
Segment	Measurement - Monitoring - Setting	UL 94 flammability rating	V-0
Version	without 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**

Rated voltage (DC)	24 V	Voltage type	DC
Max. continuous voltage, U _c (DC)	28 V	Discharge current I _n (8/20µs) GND-PE	2.5 kA
Discharge current I _{max} (8/20µs) GND-PE	10 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 _n (8/20µs) wire-wire	2.5 kA
Discharge current I _{max} (8/20µs) wire-wire	10 kA	Lightning test current, I _{imp} (10/350 µs) GND-PE	2.5 kA
Lightning test current, I _{imp} (10/350 µs) Wire-PE	2.5 kA	Lightning test current, I _{imp} (10/350 µs) wire-wire	2.5 kA
Fuse	0.5 A	Standards	IEC 61643-21
Protection level U _p (typ.)	250 V	Protection level on output side Wire-PE 1kV/µs, typically	40 V
Protection level on output side Wire-wire 1 kV/µs, typically	80 V	Protection level on output side Wire-wire 8/20 µs, typically	80 V
Protection level, U _p GND - PE	450 V	Protection level, U _p wire - PE	40 V
Capacitance	2.0 nF	Number of poles	1
Overload - failure mode	Modus 2	Pulse-reset capacity	≤ 30 ms
Rated current I _N	300 mA	Requirements category acc. to IEC 61643-21	C1, C2, C3, D1
Signal transmission properties (-3 dB)	2.7 MHz	Signalling contact	No
Surge current-carrying capacity C1	< 1 kA 8/20 µs	Surge current-carrying capacity C2	5 kA 8/20 µs
Surge current-carrying capacity C3	100 A 10/1000 µs	Surge current-carrying capacity D1	2.5 kA 10/350 µs
Volume resistance	4.7 Ω		

Further details of approvals

GOST certificate GOST-Zertifikat

Connection data

Type of connection Pluggable in VSPC BASE

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	UNSPSC	30-21-19-21

Approvals

Approvals



ROHS Conform

Downloads

Approval/Certificate/Document of Conformity	SIL Paper CE PAPER
Brochure/Catalogue	CAT 4.4 ELECTR 16/17 EN
Engineering Data	EPLAN, WSCAD
Engineering Data	STEP
User Documentation	Instruction sheet

Creation date May 1, 2020 5:10:13 AM CEST

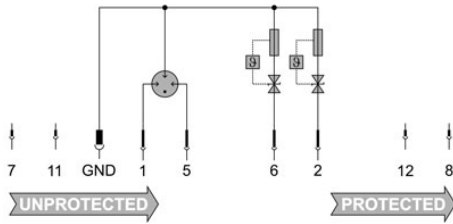
Catalogue status 17.04.2020 / We reserve the right to make technical changes.

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Drawings

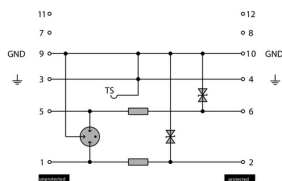
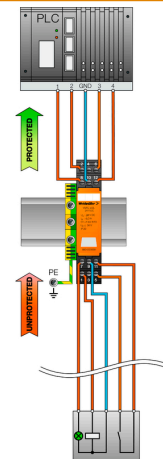
Electric symbol



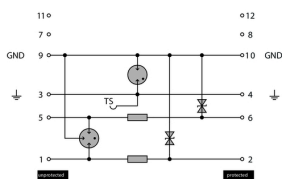
Circuit diagram

Cate- gory	Testing pulse	Surge voltage	Surge current	Pulse	Type
C1	Quick-rising edge	0.5 - 2 kV 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

Discharge capacity



Komplettmodul direkte Erdung



Komplettmodul indirekte Erdung

Komplettmodul

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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

Type	VSPC BASE 2SL	Version
Order No.	8924720000	Surge protection, Flange-mounted housing, 300 mA, IEC 61643-21,
GTIN (EAN)	4032248696369	IEC 62305, DIN EN 60079-0:2009, DIN EN 60079-11:2007, DIN EN
Qty.	1 pc(s).	60079-26:2007, DIN EN 61241-11:2006

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



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

General ordering data

Type	VSPC BASE 2SL FG	Version
Order No.	8924280000	Surge protection, Flange-mounted housing, 300 mA, IEC 61643-21,
GTIN (EAN)	4032248695928	IEC 62305, DIN EN 60079-0:2009, DIN EN 60079-11:2007, DIN EN
Qty.	1 pc(s).	60079-26:2007, DIN EN 61241-11:2006

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Accessories

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

Type	VSPC BASE 2SL	Version
Order No.	8924720000	Surge protection, Flange-mounted housing, 300 mA, IEC 61643-21,
GTIN (EAN)	4032248696369	IEC 62305, DIN EN 60079-0:2009, DIN EN 60079-11:2007, DIN EN
Qty.	1 pc(s).	60079-26:2007, DIN EN 61241-11:2006

Retaining clip



The interlock mechanism on the VSPC Series pluggable arrester delivers extra reliability and an improved permanent contact under strong vibrating conditions.

General ordering data

Type	VSPC LOCKING CLIP	Version
Order No.	1317340000	Fastening element
GTIN (EAN)	4050118121179	
Qty.	100 pc(s).	

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Accessories

V-TEST testing device: for the VSPC, PU I and PU II series



V-TEST

- Testing device for checking the protective function of the pluggable overvoltage protection PU I, PU II and VSPC series
- Device for implementing the IEC 62305 standard (regarding periodic testing)
- Easy-to-use device with integrated battery set for on-site measurements
- LCD results display
- Menu in two languages
- Including a protective bag and power supply
- User friendly navigation in German and English

The V-TEST is a compact, portable test instrument for the plug-in surge protectors VARITECTOR (VSPC) and the surge protectors for the power supply line PU I and PU II. Using this instrument Weidmüller overvoltage protectors can be tested for their protective function in line with the testing schedules laid down in IEC 62305-3 (DIN VDE 0185 part 3). In a display with background illumination, the test result is indicated with "OK" or "Not OK".

General ordering data

Type	V-TEST	Version
Order No.	8951860000	Lightning and surge protection, Testing device
GTIN (EAN)	4032248743100	
Qty.	1 pc(s).	

Data sheet

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Accessories

Plus



The Dekafix (DEK) marker is the universal marker for all conductor and plug-in connectors as well as for electronic sub-assemblies. The system is ideal for short number sequences and covers a wide range of ready-printed markers.

Strips for fast installation in only one work step. The printing is easy to read, rich in contrast and available in various widths.

- Large range of ready-to-use markers
- Strips for fast installation
- Terminal markers, suitable for all Weidmüller cable connectors
- Available as blank MultiCard or with standard printing

For custom printing: Please send us a file of our labeling software M-Print PRO or M-Print PRO Online (without installation) for your labeling specifications.

General ordering data

Type	DEK 5/5 PLUS MC NE WS	Version
Order No.	1854490000	Dekafix, Terminal marker, 5 x 5 mm, Pitch in mm (P): 5.00
GTIN (EAN)	4032248393596	Weidmueller, white
Qty.	1,000 pc(s).	