

VSPC 1CL 24VDC
Weidmüller Interface GmbH & Co. KG

Klingenbergstraße 16

D-32758 Detmold

Germany

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Analogue signal / CL (current loop) protection includes the following signals:

- Signals from current loops (analogue measurements of transmitters over long distances) 4-20 mA, 0-20 mA, etc.
- Two-wire, three-wire and four-wire, without a common reference potential
- for example: fill-level measurement signals from voltage transmitters (analogue measurements of transmitters over short distances) 0-10 V, PT 100 etc.; for example: temperature measurements
- Pluggable arrester, with no-interrupt and impedance-neutral plug-in and pull-out
- Can be tested with the V-TEST testing device
- Space-saving design for 2 analogue signals
- Version with floating-earth PE connection used to avoid differences in voltage potential
- Can be used in compliance with the IEC 62305 (D1, C1, C2 and C3) installation standard
- Integrated PE foot, safely discharges up to 20 kA (8/20 µs) and 2.5 kA (10/350 µs) to PE
- Quick identification in the electrical cabinet with coloured labelling of the voltage levels
- Coding element for the different voltage levels provides safety

General ordering data

Order No.	8924480000
Type	VSPC 1CL 24VDC
Version	Surge protection for instrumentation and control, without warning function / function indicator
GTIN (EAN)	4032248696116
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	41 g

Temperatures

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

Probability of failure

λ_{ges}	45	MTTF	2,537 Years
PFH in $1 \cdot 10^{-9}$ per hour	1.95	SFF	95.67 %
SIL in compliance with IEC 61508	3		

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	45 V	Protection level on output side Wire-wire 8/20 μ s, typically	45 V
Protection level on output side Wire-PE 1kV/ μ s, typically	450 V	Protection level on output side Wire-PE 8/20 μ s, typically	650 V

Protection level

Protection level, U_p GND - PE	650 V	Protection level, U_p wire - PE	450 V
Protection level, U_p wire - wire	45 V		

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Technical data

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Rated voltage (DC)	24 V	Rated current	450 mA
Rated voltage (DC), max.	28 V	Max. continuous voltage, U_c (DC)	28 V
Highest continuous voltage (AC)	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.)	< 650 V	Protection level on output side Wire-wire	8/20 µs, typically
Protection level on output side Wire-PE	8/20 µs, typically	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	2.20 Ω	Residual voltage, U_p typical	800 V
Dielectric strength at FG against PE	≥ 500 V	Overload - failure mode	Modus 2

Further details of approvals

GOST certificate GOST-Zertifikat

Rated data UL

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

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

Probability of failure

SIL PAPER [SIL Paper](#)
[3-D model](#)

Downloads

Package insert [Instruction Sheet](#)
Declaration of Conformity [K316_07_09.pdf](#)
EPLAN [8924480000.ema](#)
Selection matrix [Preference selection VSPC](#)
[3-D model](#)

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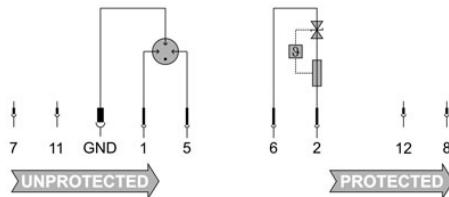
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Drawings
Electric symbol


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 µs) and 2.5 kA (10/350 µs) to the PE.

General ordering data

Order No.	Type	Version	GTIN (EAN)	Qty.
8924730000	VSPC BASE 1CL	Surge protection for instrumentation and control	4032248696376	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 µs) and 2.5 kA (10/350 µs) to the PE. Suitable for unearthed signal circuits.

General ordering data

Order No.	Type	Version	GTIN (EAN)	Qty.
8924290000	VSPC BASE 1CL FG	Surge protection for instrumentation and control	4032248695935	1 pc(s).