

VSPC 1CL PW 24V EX

Weidmüller Interface GmbH & Co. KG

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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 μ s) and 2.5 kA (10/350 μ s) 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.	8953610000
Type	VSPC 1CL PW 24V EX
Version	Surge protection for instrumentation and control, without warning function / function indicator
GTIN (EAN)	4032248745760
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	50 g

Temperatures

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

Probability of failure

λges	45	MTTF	2,537 Years
PFH in 1*10 ⁻⁹ per hour	1.95	SFF	95.67 %
SIL in compliance with IEC 61508	3		

General data

Colour	Light Blue	Optical function display	For Class III protection, green = OK; red = arrester is defective - replace
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/μs, typically	60 V	Protection level on output side Wire-wire 8/20 μs, typically	60 V
Protection level on output side Wire-PE 1kV/μs, typically	450 V	Protection level on output side Wire-PE 8/20 μs, typically	650 V

Protection level

Protection level, U _p GND - PE	450 V	Protection level, U _p wire - PE	450 V
Protection level, U _p wire - wire	40 V		

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Technical data**technical data**

Rated voltage (AC)	34 V	Rated voltage (DC)	24 V
Rated current	350 mA	Rated voltage (DC), max.	38 V
Max. continuous voltage, U_c (AC)	27 V	Max. continuous voltage, U_c (DC)	28 V
Discharge current I_n (8/20 μ s) wire-wire	2.5 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	Discharge current I_n (8/20 μ s) GND-PE	2.5 kA
Discharge current I_{max} (8/20 μ s) GND-PE	10 kA	Discharge current I_{max} (8/20 μ s) wire-PE	10 kA
Combined pulse U_{OC}	6 kV	Protection level U_p (typ.)	< 650 V
Protection level on output side Wire-wire		Protection level on output side Wire-PE	
8/20 μ s, typically	60 V	8/20 μ s, typically	650 V
Standards	IEC 61643-21, IEC 62305, DIN EN 60079-0:2009, DIN EN 60079-11:2007, DIN EN 60079-26:2007, DIN EN 61241-11:2006	Colour	Light Blue
Humidity	5...96 %	Requirements category acc. to IEC 61643-21	C1, C2, C3, D1
Lightning test current I_{imp} (10/350 μ s)	2.5 kA	Lightning test current I_{imp} (10/350 μ s) [L-PE]	2.5 kA
Lightning test current I_{imp} (10/350 μ s) [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		

EX protection data

Certificate No. (ATEX)	KEMA10ATEX0148X	Input power, max. P_I	3 W
Internal capacitance, max. C_I	< 4 nF	Internal inductance, max. L_I	0 μ H
Temperature class T4/135°C (-40°C ... +85°C) li	350 mA	Temperature class T5/100°C (-40 ° C ... +75°C) li	250 mA
Temperature class T6/85 °C (-40 °C ... +60°C) li	250 mA		

Further details of approvals

GOST certificate GOST-Zertifikat

Rated data UL

UL certificate UL 497b Certificate

Ratings IECEx/ATEX

ATEX certificate	ATEX Certificate	Certificate No. (ATEX)	KEMA10ATEX0148X
IEC Ex certificate	IECEx Zertifikat		

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

Creation date April 29, 2013 5:24:35 PM CEST

Catalogue status 12.03.2013 / We reserve the right to make technical changes.

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Technical data**Approvals**

Approvals



ROHS

Conform

Probability of failure

SIL PAPER

[SIL Paper](#)**Downloads**

Package insert

[Instruction Sheet](#)

Declaration of Conformity

[K346_07_10.pdf](#)

EPLAN

[8953610000.ema](#)

Selection matrix

[Preference selection VSPC](#)

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Drawings

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)

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.
1105700000	VSPC BASE 1CL PW FG	Surge protection for instrumentation and control	4032248881055	1 pc(s).