

VSPC 2CL 24VAC R

Weidmüller Interface GmbH & Co. KG

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com



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

- Signals from current loops (analogue measurements of sensors over long distances) 4 – 20 mA, 0 – 20 mA etc.
- Two-wire, three-wire and four-wire, without a common reference potential
- e.g. level indication signals from voltage sensors (analogue measurements of sensors over short distances) 0 – 10 V, PT 100 etc.; e.g. temperature measurement
- Pluggable arrester, with 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 differences in 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 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, with warning function / function indicator, $U_P(L/N-PE) < 800$ V
Order No.	1093400000
Type	VSPC 2CL 24VAC R
GTIN (EAN)	4032248864317
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
Width	17.8 mm	Width (inches)	0.701 inch
Net weight	46 g		

Temperatures

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

Probability of failure

SIL in compliance with IEC 61508	3	MTTF	2,537 a
SFF	95.27 %	λ_{ges}	45
PFH in $1 \cdot 10^{-9}$ per hour	3.7		

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	39 V
Internal capacity, max. C_i	2 nF	Internal inductance, max. L_i	0 μ H

General data

Protection degree	IP20	Colour	orange
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Insulation coordination acc. to EN 50178

Pollution severity	2	Surge voltage category	III
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Rated data IEC / EN

Capacitance	2.0 nF	Discharge current $I_{\max}$ (8/20 μ s) GND-PE	10 kA
Discharge current $I_{\max}$ (8/20 μ s) wire-PE	2 x 10 kA	Discharge current $I_{\max}$ (8/20 μ s) wire-wire	10 kA
Discharge current I_n (8/20 μ s) GND-PE	2.5 kA	Discharge current I_n (8/20 μ s) wire-PE	2.5 kA
Discharge current I_n (8/20 μ s) wire-wire	2.5 kA	Fuse	0.5 A
Lightning test current, I_{imp} (10/350 μ s) GND-PE	2.5 kA	Lightning test current, I_{imp} (10/350 μ s) Wire-PE	2.5 kA
Lightning test current, I_{imp} (10/350 μ s) wire-wire	2.5 kA	Max. continuous voltage, U_c (AC)	28 V
Max. continuous voltage, U_c (DC)	40 V	Overload - failure mode	Modus 2
Protection level U_p (typ.)	<800 V	Protection level on output side Wire-PE 1kV/ μ s, typically	450 V
Protection level on output side Wire-wire 1 kV/ μ s, typically	60 V	Protection level on output side Wire-wire 8/20 μ s, typically	60 V
Protection level, U_p GND - PE	800 V	Protection level, U_p wire - PE	450 V
Protection level, U_p wire - wire	60 V	Pulse-reset capacity	≤ 450 ms
Rated current I_N	450 mA	Rated voltage (AC)	24 V
Rated voltage (DC)	24 V	Requirements category acc. to IEC 61643-21	C1, C2, C3, D1
Signal transmission properties (-3 dB)	2.7 MHz	Signalling contact	U_N 250 V AC 0.1 A 1CO at VSPC R with VSPC control unit
Standards	IEC 61643-21, HART-compatible	Surge current-carrying capacity C1	<1 kA 8/20 μ s
Surge current-carrying capacity C2	5 kA 8/20 μ s	Surge current-carrying capacity C3	100 A 10/1000 μ s
Surge current-carrying capacity D1	2.5 kA 10/350 μ s	Voltage type	AC
Volume resistance	2.20 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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Electrical data

Voltage type	AC
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Ratings IECEx/ATEX/cUL

cUL certificate	cUL Certificate
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Guarantee

Time interval	5 years
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Technical data

Classifications

ETIM 6.0	EC000943	ETIM 7.0	EC000943
ETIM 8.0	EC000943	ETIM 9.0	EC000943
ETIM 10.0	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	ECLASS 12.0	27-17-90-90
ECLASS 13.0	27-17-90-90	ECLASS 14.0	27-17-90-90
ECLASS 15.0	27-17-90-90		

Tender specification sheets

Long specification	Surge protection plug for use in connection with the base element VSPC BASE 2CL R for two floating-ground driven paired cables with integrated status display and remote monitoring option. Two-stage protection circuit consisting of coarse protection, decoupling resistors and fine protection between the signal wires and coarse common mode voltage protection to earth. Mechanical identification of the plug to the base element according to the switching type and rated voltage. Optical identification of the protected plug based on the type of protected switching and the voltage level. Protected plug with coding pin and counter-profile for the base element. It is possible to mark the plug.	Short specification	Surge protection plug for base element VSPC BASE 2CL R with integrated status indicator and remote monitoring option, transverse voltage coarse and fine protection for two floating-ground powered paired cables and alert function, coarse common mode voltage protection to earth. Version: 24 V AC
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Environmental Product Compliance

RoHS Compliance Status	Compliant with exemption
RoHS Exemption (if applicable/known)	7a, 7cl
REACH SVHC	Lead 7439-92-1
SCIP	71e97bb7-979f-4330-94c0-20c629bb05e3

Important note

Product information	Mode 2: State where the voltage-limiting part of the SPD was short-circuited due to a very low impedance within the SPD. The line is inoperable, but the measuring equipment is still protected by means of a short-circuit.
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Approvals



Approvals MAMID	https://mdcop.weidmueller.com/mediadelivery/rendition/900_319222/-T1z1mm-S800/ https://mdcop.weidmueller.com/mediadelivery/rendition/900_319227/-T1z1mm-S800/ https://mdcop.weidmueller.com/mediadelivery/rendition/900_319238/-T1z1mm-S800/ https://mdcop.weidmueller.com/mediadelivery/rendition/900_319261/-T1z1mm-S800/
ROHS	Conform
UL File Number Search	UL Website
Certificate No. (UL)	E311081

Downloads

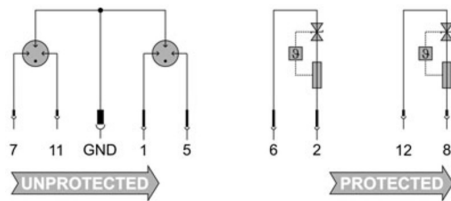
Approval/Certificate/Document of Conformity	SIL Paper EU Konformitätserklärung / EU Declaration of Conformity
Engineering Data	CAD data – STEP
Technical Documentation	VSPC 2CL 5VDC R
User Documentation	Beipackzettel / Instruction sheet
Catalogues	Catalogues in PDF-format
Brochures	

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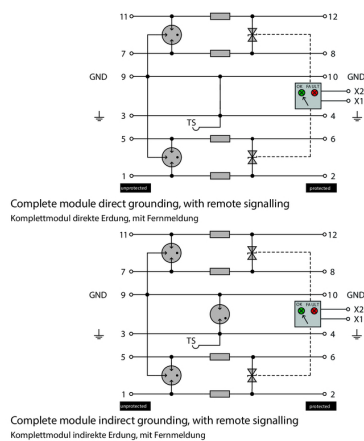
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Drawings
Electric symbol


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



Komplettmodul