VSPC
VSPC 2SL 24VDC EX

Weidmüller Interface GmbH & Co. KG
Klingenbergstraße 16
D-32758 Detmold
Germany
Fon: +49 5231 14-0
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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 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

Type	VSPC 2SL 24VDC EX
Order No.	8953670000
Version	Surge protection for instrumentation and control, 24 V, 250 mA, 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
GTIN (EAN)	4032248745821
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	47 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

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

Environmental Product Compliance

REACH SVHC	Lead 7439-92-1

Protection Ex - Data

ATEX - dust labelling	II 1 D Ex ia IIIC T135 °C ... T85 °C Da	ATEX - gas labelling	II 1 G Ex ia IIC T4... T6 Ga
Certificate No. (ATEX)	KEMA10ATEX0148X	IECEx - dust labelling	II 1 D Ex ia IIIC T135 °C ... T85 °C Da
IECEx - gas labelling	II 1 G Ex ia IIC T4... T6 Ga	Input power, max. P_I	3 W
Input voltage, max. U_i	26 V	Internal capacity, max. C_I	< 4 nF
Internal inductance, max. L_I	0 µH	Temperature class T4/135°C (-40°C ... +85°C) Ii	350 mA
Temperature class T5/100°C (-40 ° C ... +75°C) Ii	250 mA	Temperature class T6/85 °C (-40 °C ... +60°C) Ii	250 mA

CSA protection data

Gas group C	IIB	Gas group D	IIA
Gas groups A, B	IIC	Input voltage, max. U_i	26 V
Internal capacity, max. C_I	4 nF	Internal inductance, max. L_I	0 µH

General data

Colour	Light Blue	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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Rated data IEC / EN

Dielectric strength at FG against PE	≥ 500 V	Discharge current I_{max} (8/20µs) GND-PE	10 kA
Discharge current I_{max} (8/20µs) wire-PE	10 kA	Discharge current I_{max} (8/20µs) wire-wire	10 kA
Discharge current I_n (8/20µs) GND-PE	2.5 kA	Discharge current I_n (8/20µs) wire-PE	2.5 kA
Discharge current I_n (8/20µs) wire-wire	2.5 kA	Input voltage, max. U_i	26 V
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	Max. continuous voltage, Uc (DC)	28 V
Overload - failure mode	Modus 2	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	40 V
Protection level on output side Wire-wire 8/20 µs, typically	75 V	Protection level, U_P GND - PE	450 V
Protection level, U_P wire - PE	40 V	Pulse-reset capacity	≤ 30 ms
Rated current I_N	250 mA	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	No	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
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
Voltage type	DC	Volume resistance	4.7 Ω

Further details of approvals

GOST certificate	GOST-Zertifikat

Connection data

Type of connection	Pluggable in VSPC BASE

Ratings IECEx/ATEX/cUL

ATEX certificate	ATEX Certificate	IEC Ex certificate	IECEX Zertifikat
Certificate No. (ATEX)	KEMA10ATEX0148X	cUL certificate	cUL Certificate

Classifications

ETIM 3.0	EC000943	ETIM 4.0	EC000381
ETIM 5.0	EC000943	ETIM 6.0	EC000943
UNSPSC	30-21-19-21	eClass 5.1	27-13-08-01
eClass 6.2	27-13-08-02	eClass 7.1	27-13-08-09
eClass 8.1	27-13-08-11	eClass 9.0	27-13-08-07
eClass 9.1	27-13-08-07		

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Technical data

Approvals

Approvals	
ROHS	Conform

Downloads

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

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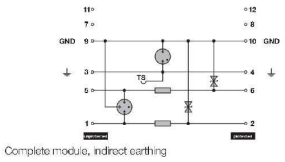
Drawings

Electric symbol



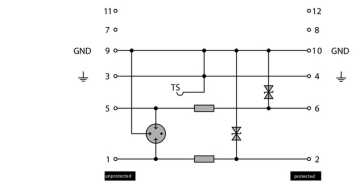
Complete module, indirect earthing

Circuit diagram

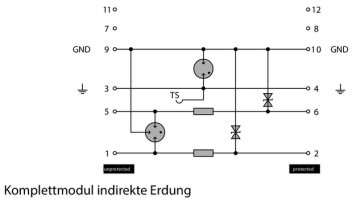
Cate-gory	Testing pulse	Surge voltage	Surge current	Pulse	Type
C1	Quick-rising edge	0.5 - 2 kV with 1.2/50 µs	0.25 - 1 kA mit 8/20 µs	300	Surge voltage arrester
C2	Quick-rising edge	2 - 10 kV with 1.2/50 µs	1 - 5 kA mit 8/20 µs	10	Surge voltage arrester
C3	Quick-rising edge	≥ 1 kV with 1 kV/µs	10 - 100 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 direkte Erdung



Komplettmodul indirekte Erdung

Komplettmodul