VSPC 2SL 12VDC EX

Weidmüller Interface GmbH & Co. KG
Klingenbergstraße 26
D-32758 Detmold
Germany

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

Version	Surge protection for instrumentation and control, without warning function / function indicator, U_P(L/N-PE) < 200 V
Order No.	8953620000
Type	VSPC 2SL 12VDC EX
GTIN (EAN)	4032248745777
Qty.	1 pc(s).

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Technical data

Dimensions and weights

Depth	69 mm	Depth (inches)	2.717 inch
Height	90 mm	Height (inches)	3.543 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	2	MTTF	2,665 a
SFF	79.3 %	λges	43
PFH in $1*10^{-9}$ per hour	8.9		

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	14 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	14 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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Technical data

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	14 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)	14 V
Number of poles	1	Overload - failure mode	Modus 2
Protection level U_P (typ.)	< 200 V	Protection level on output side Wire-PE 1kV/µs, typically	25 V
Protection level on output side Wire-wire 1 kV/µs, typically	20 V	Protection level on output side Wire-wire 8/20 µs, typically	45 V
Protection level, U_P GND - PE	450 V	Protection level, U_P wire - PE	20 V
Pulse-reset capacity	≤ 20 ms	Rated current I_N	250 mA
Rated voltage (DC)	12 V	Requirements category acc. to IEC 61643-21	C1, C2, C3, D1
Signal transmission properties (-3 dB)	1.2 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 - 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
ATEX certificate	ATEX Certificate	Certificate No. (ATEX)	KEMA10ATEX0148X
IEC Ex certificate	IECEX Zertifikat	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	cUL certificate	cUL Certificate

Classifications

ETIM 6.0	EC000943	ETIM 7.0	EC000943
ETIM 8.0	EC000943	ETIM 9.0	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

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Technical data

Tender specification sheets

Long specification	Surge protection plug for use in connection with the base element VSPC BASE 2SL FG for two wires with a common ground. Two-stage protection circuit in the plug consisting of coarse protection, decoupling resistors and fine protection between the signal wires and the signal ground/ground/earth. Suitable for intrinsically safe powered signal cables EX ia. Mechanical identification of the plug to the base element according to the switching type and rated voltage. Protected plug with coding pin and counter-profile for the base element. Optical identification of the protected plug based on the type of protected switching and the voltage level. It is possible to mark the plug.	Short specification	Surge protection plugs for base element VSPC BASE 2SL FG, coarse and fine common mode voltage protection for two wires with a common signal ground for intrinsically safe signal cables EX ia. Version: 12 V DC

Environmental Product Compliance

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.

Approvals

Approvals	
ROHS	Conform

Downloads

Approval/Certificate/Document of Conformity	EG Baumusterprüfung / EC Type Examination SIL Paper KEMA 10 ATEX 0148X EU_Konformitätserklärung / EU_Declaration_of_Conformity
Engineering Data	CAD data – STEP
User Documentation	Beipackzettel / Instruction sheet Beipackzettel Atex / Instruction Sheet
Catalogues	Catalogues in PDF-format
Brochures	

Creation date April 29, 2024 7:36:54 AM CEST

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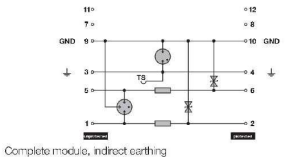
Drawings

Electric symbol

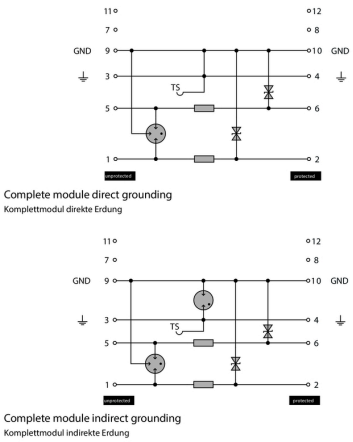


Complete module, indirect earthing

Circuit diagram

Category	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



Complete module direct grounding
Komplettmodul direkte Erdung

Complete module indirect grounding
Komplettmodul indirekte Erdung

Komplettmodul

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Accessories

V-TEST testing device for VSPC

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).	

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 µs) and 2.5 kA (10/350 µs) to PE. Suitable for unearthed signal circuits.

General ordering data

Type	VSPC BASE 2SL FG EX	Version
Order No.	8951830000	Surge protection, Flange-mounted housing, Flange-mounted housing
GTIN (EAN)	4032248743070	
Qty.	1 pc(s).	

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Accessories

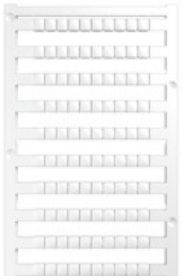
Retaining clip

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, Latches
GTIN (EAN)	4050118121179	
Qty.	100 pc(s).	

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).	