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
Humidity	5...96 %		

Probability of failure

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

Rated data UL

Certificate No. (UL)	E311081	UL certificate	UL 497b Certificate

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 µH

General data

Colour	orange	Design	Terminal, miscellaneous
Optical function display	green = OK; red = arrester is defective - replace	Protection degree	IP20
Segment	Measurement - Monitoring - Setting	UL 94 flammability rating	V-0
Version	with warning function / function indicator	protected current loops	2

Insulation coordination acc. to EN 50178

Pollution severity	2	Surge voltage category	III

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Technical data

Rated data IEC / EN

Capacitance	2.0 nF	Discharge current I_{max} (8/20µs) GND-PE	10 kA
Discharge current I_{max} (8/20µs) wire-PE	2 x 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	Fuse	0.5 A
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 (AC)	28 V
Max. continuous voltage, Uc (DC)	40 V	Overload - failure mode	Modus 2
Protection level U_P (typ.)	< 800 V	Protection level on output side Wire-PE 1kV/µs, typically	450 V
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, 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 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	AC
Volume resistance	2.20 Ω		

Further details of approvals

GOST certificate	GOST-Zertifikat

Connection data

Type of connection	Pluggable in VSPC BASE

Ratings IECEx/ATEX/cUL

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 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

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
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
User Documentation	Beipackzettel / Instruction sheet
Catalogues	Catalogues in PDF-format
Brochures	

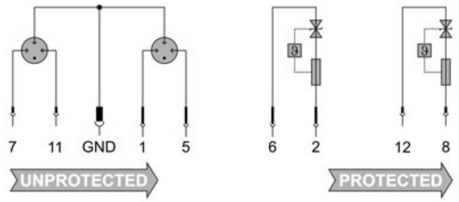
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Drawings

Electric symbol

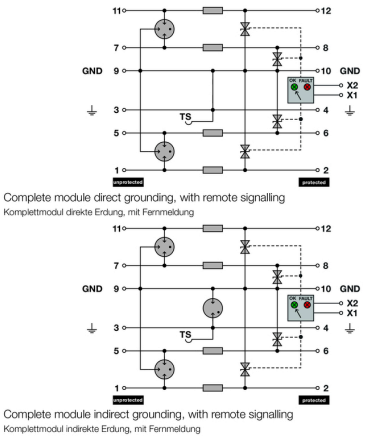


Circuit diagram

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





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).	

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).	

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Accessories

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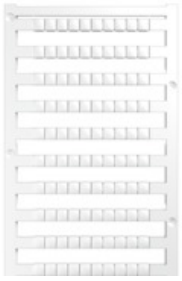


Base element for the pluggable VSPC arrester, integrated PE foot in impedance-neutral VSPC BASE. Can safely discharge up to 20 kA (8/20 µs) and 2.5 kA (10/350 µs) to the PE.

General ordering data

Type	VSPC BASE 2CL R	Version
Order No.	8951710000	Surge protection, Flange-mounted housing, Flange-mounted housing
GTIN (EAN)	4032248742950	
Qty.	1 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).	

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Accessories

Supply and alert unit for VSPC R arresters



- Signalling module for all VSPCs with status indicator
- Signalling of cable breaks / signal interruptions
- Power supply of 20 to 31 V DC
- No-voltage changeover contact
- Function display with red/green LED
- Functional alerts with different signal types.

General ordering data

Type	VSPC CONTROL UNIT 24VDC	Version
Order No.	8972270000	Surge protection for instrumentation and control, with warning
GTIN (EAN)	4032248793488	function / function indicator
Qty.	1 pc(s).	