

SURGE PROTECTION

FOR CONTROL & INSTRUMENTATION



Weidmüller introduces a new family of surge protection modules for Control and Instrumentation in the form of its VARITECTOR SSC AND SPC modules.

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Weidmüller 

VARITECTOR SPC



▪ **Imax 10kA**

VSPC 1CL - Protection for one analogue signal

- Optional monitoring function with status indicator and alert function
- Pluggable arrester (plug-in / disconnect interruption-free and impedance neutral)
- Testable with V-TEST instrument
- Version with non-earthed PE connection for avoiding potential differences
- Usable in accordance with installations standard IEC 62305
- Integrated PE contact in base element, safely discharges up to 20 kA (8/20 μ s) and 2.5 kA (10/350 μ s) to PE

VSPC 2CL - Protection for two analogue signals

- Optional monitoring function with status indicator and alert function
- Pluggable arrester (plug-in / disconnect interruption-free and impedance neutral)
- Testable with V-TEST instrument
- Space-saving design for two analogue signals with signaling contact, without additional space requirements
- Version with non-earthed PE connection for avoiding potential differences
- Usable in accordance with installations standard IEC 62305
- Integrated PE contact in base element, safely discharges up to 20 kA (8/20 μ s) and 2.5 kA (10/350 μ s) to PE

Technical Data

Dielectric strength with FG against PE	> 500 V
Volume resistivity per path	2.2 Ω
Overstressed fault mode	Mode 2
Requirement category acc. to IEC 61643-21	C1; C2; C3; D1
Surge strength C1	< 1 kA / 8/20 μ s
Surge strength C2	5 kA / 8/20 μ s
Surge strength C3	100 A / 10/1000 μ s
Surge strength D1	1 kA 10/350 μ s
Rated discharge current	
I_{N} (8/20 μ s) wire-wire / wire-PE / GND-PE	2.5 kA / 2.5 kA / 2.5 kA
Rated discharge current	
I_{max} (8/20 μ s) wire-wire / wire-PE / GND-PE	10 kA / 10 kA / 10 kA
Lightning test current	
I_{imp} (10/350 μ s) wire-wire / wire-PE / GND-PE	2.5 kA / 2.5 kA / 2.5 kA
Type of connection	Pluggable in VSPC BASE
Storage temperature	-40 °C...+80 °C
Ambient temperature (operational)	-40 °C...+70 °C
Rel. humidity	5 %...96 % RH
Degree of protection	IP20

Ordering data for base		VSPC 1CL	VSPC 2CL
Type	Qty.	Order No.	Order No.
Base element, direct earthing	1	8924730000	8924710000
Base element, indirect earthing	1	8924290000	8924270000
Via spark gap (FG, floating ground)			
Base element, direct earthing with remote alert	1	8951730000	8951710000
Base element, indirect earthing with remote alert	1	8951740000	8951720000

Ordering Data

	VSPC 1CL 24 V DC	VSPC 2CL 24 V DC
Rated voltage (DC)	24 V DC	24 V DC
Max. continuous voltage, U_c (DC)	28 V DC	28 V DC
Alternating-current strength		
Rated current	450 mA	450 mA
Surge strength		
Signaling contact	U_N 250 V AC 0.1 A 1CO at VSPC R with VSPC CONTROL UNIT	U_N 250 V AC 0.1 A 1CO at VSPC R with VSPC CONTROL UNIT
Optical function indicator (VSPC R)	green = OK; red = arrester faulty, replace	green = OK; red = arrester faulty, replace
Transmission test (-3dB)	730 KHz	2.2 MHz
Impulse reset	30 ms	30 ms
tested	acc. to IEC61643-21	acc. to IEC61643-21
Residual voltage U_R	< 650 V	< 800 V
wire-wire / wire-PE / GND-PE	45 V / 450 V / 650 V	45 V / 450 V / 800 V
Protection level on output side sym.,		
input 1 kV/ μ s, typ.	< 45 V	< 45 V
input 8/20 μ s, typ.	< 45 V	< 45 V
Protection level on output side unsym.,		
input 1 kV/ μ s, typ.	< 450 V	< 450 V
input 8/20 μ s, typ.	< 650 V	< 800 V

Ordering data			
Without signaling	Type	VSPC 1CL	VSPC 2CL
contact/function indicator		24VDC 0.5A	24VDC 0.5A
	Order No.	8924480000	8924470000
With signaling	Type	VSPC 1CL	VSPC 2CL
contact/function indicator		24VDC 0.5A R	24VDC 0.5A R
	Order No.	8951550000	8951480000

VARITECTOR SSG



VSSC 6AN CL and TR CL - Protection for analogue signals (CL) with and without disconnect lever (TR)

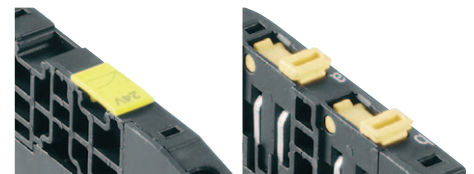
- Optional monitoring function with status indicator and alert function
- Pluggable arrester (plug-in / disconnect interruption-free and impedance neutral)
- Testable with V-TEST instrument
- Version with non-earthed PE connection for avoiding potential differences
- Usable in accordance with installations standard IEC 62305
- Integrated PE contact in base element, safely discharges up to 20 kA (8/20 μ s) and 2.5 kA (10/350 μ s) to PE

▪ I_{max} 5kA

Technical Data

Nominal current	500 mA (see derating curve)
Dielectric strength at FG against PE	-
Volume resistivity	1.8 $\Omega \pm 10 \%$
Overstressed fault mode	Mode 2
Requirement category IEC 61643-21	C2; C3; D1
Standards	IEC 61643-21
Surge strength C2	2.5 kA
Surge strength C3	50 A
Surge strength D1	0.5 kA
Rated discharge current	
I _n (8/20 μ s) wire-wire / wire-PE / GND-PE	2.5 kA / 2.5 kA / -
Rated discharge current	
I _{max} (8/20 μ s) wire-wire / wire-PE / GND-PE	5 kA / 5 kA / -
Lightning test current	
I _{imp} (10/350 μ s) wire-wire / wire-PE / GND-PE	- / 0.5 kA / -
Storage temperature	-40 °C...+80 °C
Ambient temperature (operational)	-40 °C...+70 °C
Humidity	5...96 % RH
Degree of protection	IP20
Flammability class	V0

Ordering Data



	CL 24 V UC	TR CL 24 V UC
Rated voltage AC/DC	24 V AC / 34 V DC	24 V AC / 34 V DC
Max. continuous voltage U _c (AC) / (DC)	30 V AC / 42 V DC	30 V AC / 42 V DC
Signal transmission properties (-3 dB)	≤ 700 kHz	≤ 700 kHz
Pulse reset capacity	≤ 170 ms	≤ 170 ms
Residual voltage U_p	≤ 1650 V	≤ 1650 V
wire-wire / wire-PE / GND-PE	90 V / 900 V / -	90 V / 900 V / -
Protection level on output side sym., input 1 kV/ μ s, typ.	70 V	70 V
Protection level on output side unsym., input 1 kV/ μ s, typ.	900 V	900 V
Disconnect lever		Yes
Testing option		Functional screw with test plug receptacle connection 1, 2, 4, 5

Ordering data

Type	VSSC6 CL 24Vuc 0.5A	VSSC6 TR CL 24Vuc 0.5A
Order No.	1064170000	1064230000

Available from your local Power Product Distributor

NSW: Sydney & Western Plains

Ramelec (NSW) Pty Ltd

Phone: (02) 9684 6700

Fax: (02) 9684 6722

nsw@ramelec.com.au

NSW: Central Coast & Northern NSW

PDC Group (Aust) Pty Ltd

Phone: (02) 4952 5200

Fax: (02) 4952 9337

pdce@pdcgroup.com.au

NSW: Wollongong & Southern NSW

Excell Control Pty Ltd

Phone: (02) 4272 1922

Fax: (02) 4272 2957

sales@excellcontrol.com.au

QLD

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Fax: (07) 3899 1422

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Quador (Aust) Pty Ltd

Phone: (03) 9874 7388

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Phone: (03) 6273 9855

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V-TEST



A testing device for pluggable surge protection: for testing in compliance with the IEC 62305-3 standard

The V-TEST is a compact and portable testing device intended for the pluggable VARITECTOR SPC (measurement and control) and the PU I/PU II (power supply) surge protection product lines. This testing device can be used to check the functionality of Weidmüller's surge protection components in accordance with the test intervals stipulated in IEC 62305-3. It indicates the functional state of protective components.

The backlit display shows the measured reading per component (GDT, MOV, TAZ) as „ok“ or „not ok“. This function allows you to detect ageing components by displaying possible damages right away. Thus total protection is guaranteed.

The V-TEST is equipped with a charger and a battery set which allows autonomous use in the field. A comfortable and protective carry bag is delivered free with the tester.

Technical data

Rated voltage	100...240 V AC
Accumulator set	8 NiMH with 2600 mA
Storage temperature	0 °C ... 40 °C
Ambient temperature (operational)	0 °C ... 40 °C
Degree of protection	IP20
Measuring range	$U < 1000 \text{ V} / I = 1 \text{ mA}$
UL94 flammability class	V0

General tolerances of measurement range

Gas discharge tube	+/- 10%
Varistor	+/- 5%
TVS-diode	+/- 5%

Ordering data

Dimensions	
Length x Width x Height	mm 230 x 122 x 65
Ordering data	
Type	V-Test
Order No.	8951860000
Qty.	1

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