

VSSC6 TR SL FG 24VAC/DC EX

Weidmüller Interface GmbH & Co. KG

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com



Overvoltage coupling along the conductor path may disturb or destroy sensitive signal inputs. It is important to provide protection in the immediate vicinity of I&C devices. Weidmüller's broad product range for the I&C sector offers products in a 2-piece, pluggable design and modular terminals for tension clamp or screw connection. These products are suitable for both binary and analogue signals. Weidmüller also offers other designs with integrated components such as gas discharge tubes or varistors. VARITECTOR stands for flexible and variable surge protection by Weidmüller, tested according to product standard IEC61643-21. The VARITECTOR series can be used in applications according to IEC 61643-22 / VDE 0845-3 for classes C1, C2, C3 and D1. The VARITECTOR SPC, SSC and MCZ OVP product families optimally combine electrical and mechanical properties. Size and easy handling play an important role. This surge protection is suited for confined spaces in industrial and process automation as well as in building automation applications.

General ordering data

Version	Surge protection for instrumentation and control, Surge protection for measurement and control, UP(L/N-PE) ≤ 1870 V
Order No.	1421440000
Type	VSSC6 TR SL FG 24VAC/DC EX
GTIN (EAN)	4050118225228
Qty.	1 ST

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Technical data

Approvals

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ROHS Conform

Dimensions and weights

Depth	81 mm	Depth (inches)	3.189 inch
Height	88.5 mm	Height (inches)	3.4842 inch
Width	12.4 mm	Width (inches)	0.4882 inch
Net weight	81 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	1342 a
SFF	96.67 %	λges	54
PFH in 1*10 ⁻⁹ per hour	1.8		

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

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
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. PI	0.75 W	Input voltage, max. Ui	42 V
Internal capacity, max. CI	2 nF	Internal inductance, max. LI	0 μH
Temperature class T4/135°C (-40°C ... +120 °C) li	300 mA	Temperature class T5/100°C (-40 °C ... +85 °C) li	300 mA
Temperature class T6/85 °C (-40 °C ... +70 °C) li	300 mA		

CSA protection data

Gas group D	IIA	Gas groups A, B	IIC
Input current, max. II	300 mA	Gas group C	IIB
Internal inductance, max. LI	0 μH	Internal capacity, max. CI	2 nF
Input voltage, max. Ui	42 V		

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Technical data

General data

Optical function display	No	Segment	Measurement - Monitoring - Setting
Version	Surge protection for measurement and control	Design	Terminal
UL 94 flammability rating	V-0	Colour	Light Blue
Protection degree	IP20	Rail	TS 35
Isolating function	Yes	Testing option	Functional screw with test plug receptacle, connections 1, 2, 4, 5

Insulation coordination acc. to EN 50178

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

Number of poles	1	Rated voltage (AC)	24 V
Rated voltage (DC)	34 V	Rated current I _N	300 mA
Protection level on output side Wire-wire	70 V	Protection level, UP wire - wire	70 V
1 kV/μs, typically		Voltage type	AC/DC
Protection level UP (typ.)	≤ 1870 V	Standards	IEC61643-21:2009, DIN EN 60079-0:2009, DIN EN 60079-26:2007, DIN EN 61241-11:2006
Volume resistance	1.8 Ω 10 %	Discharge current, max. (8/20 μs)	10 kA
Lightning test current I _{imp} (10/350 μs)	1 kA	Requirements category acc. to IEC 61643-21	C2, C3, D1
Dielectric strength at FG against PE	≥ 500 V	Max. continuous voltage, U _c (AC)	30 V
Insertion loss	250 MHz	Surge current-carrying capacity D1	1 kA 10/350 μs
Max. continuous voltage, U _c (DC)	42 V	Surge current-carrying capacity C3	50 A 10/1000 μs
Protection level, UP GND - PE	2200 V	Signal transmission properties (-3 dB)	270 Mhz
Pulse-reset capacity	≤ 20 ms	Overload - failure mode	Modus 2
Lightning test current, I _{imp} (10/350 μs) Wire-PE	0.5 kA	Discharge current I _n (8/20μs) wire-PE	2.5 kA
Discharge current I _n (8/20μs) wire-wire	2.5 kA	Discharge current I _{max} (8/20μs) wire-wire	10 kA
Discharge current I _{max} (8/20μs) wire-PE	10 kA	Surge current-carrying capacity C2	2.5 kA 8/20 μs 5 kV 1.2/50 μs
Input voltage, max. U _i	42 V		

Connection data

Stripping length	10 mm	Type of connection	Screw connection
Tightening torque, min.	0.5 Nm	Tightening torque, max.	0.8 Nm
Clamping range, min.	0.5 mm ²	Clamping range, max.	4 mm ²
Wire cross-section, solid, min.	0.5 mm ²	Wire cross-section, solid, max.	6 mm ²
Conductor cross-section, flexible, AEH (DIN 46228-1), min.	0.5 mm ²	Conductor cross-section, flexible, AEH (DIN 46228-1), max.	4 mm ²
Connection cross-section, stranded, min.	0.5 mm ²	Connection cross-section, stranded, max.	4 mm ²

Electrical data

Voltage type	AC/DC
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Technical data

General data

Number of poles	1	Protection degree	IP20
Colour	Light Blue		

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
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 - pdf/ VSSC.PDF (application/ pdf)		

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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Classifications

ETIM 7.0	EC000943	ETIM 8.0	EC000943
ETIM 9.0	EC000943	ETIM 10.0	EC000943
ECLASS 12.0	27-17-15-02	ECLASS 13.0	27-17-15-02
ECLASS 14.0	27-17-15-02	ECLASS 15.0	27-17-15-02

Tender specification sheets

Long specification	Surge protection in a one piece, 12.4 mm wide terminal rail module for a floating-ground, intrinsically safe signal circuit with 48 VUC in 2-wire technology. A current loop with max. 0.6 A can be protected here. Each signal path can be opened using an isolator. When the terminal is fitted, a sparkover gap is simultaneously created to the high-impedance earth between the terminal rail (earth) and the reference potential (ground) of the protective circuit. Optical identification of the terminal based on the type of protective circuit and the voltage level. The terminal can be labelled.	Short specification	Surge protection in a one piece, 12.4 mm wide terminal rail module for an intrinsically safe, floating-ground driven signal circuit with 2-wire technology and a common wire. Each signal path can be opened using an isolator. Version: 48 VUC
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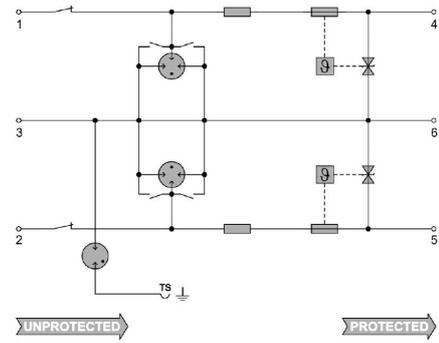
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Drawings



Similar to illustration



Circuit diagram

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Accessories

Accessories (end plates)

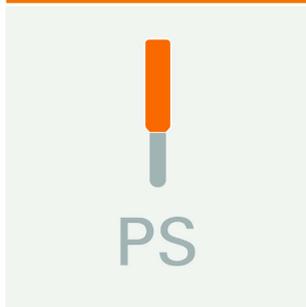


End plates (AP) for the VSSC product series in light blue and black

General ordering data

Type	AP VSSC6 LB	Version	
Order No.	1067230000	VSSC, End plate	
GTIN (EAN)	4032248999866		
Qty.	50 ST		

Test plugs

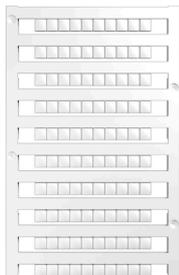


Test adapters and test plugs are used for the electrical connection between terminal blocks and the test equipment. In this way, an electrical contact can be established in the wired state and measurements can be done easily.

General ordering data

Type	PS 2.3 RT	Version	
Order No.	0180400000	Test adapter (terminal), 230 V, 20 mA	
GTIN (EAN)	4008190060121		
Qty.	20 ST		

Blank



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.

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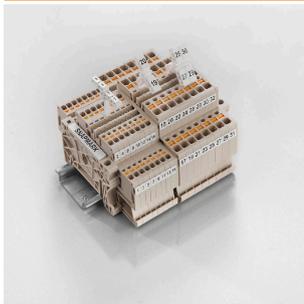
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Accessories

General ordering data

Type	DEK 5/5 MC NE WS	Version	
Order No.	1609801044	Dekafix, Terminal marker, 5 x 5 mm, Pitch in mm (P): 5.00	
GTIN (EAN)	4008190397111	Weidmueller, white	
Qty.	1000 ST		

SnapMark



SnapMark - this tag carrier has been developed specifically for the I-series double-level terminal IDK 1.5N. The flexible pivot mechanism allows cross-connections to be easily installed or removed. It can hold four DEK 5 labelling tags or two WS 10/5 Middle connector markers.

General ordering data

Type	SNAPMARK I	Version	
Order No.	1805880000	Group markers, Terminal marker, 23 x 5 mm, Pitch in mm (P): 5.00	
GTIN (EAN)	4032248273614	Weidmueller, white	
Qty.	50 ST		