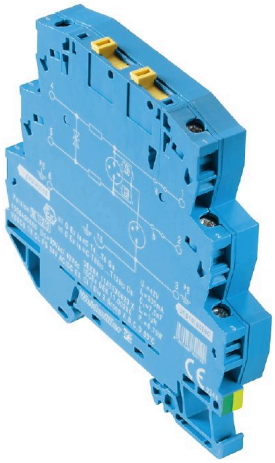
Data sheet

VSSC6 TR SL FG 24VAC/DC EX

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

www.weidmueller.com



Similar to illustration

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 industrical 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
Order No.	1421440000
Type	VSSC6 TR SL FG 24VAC/DC EX
GTIN (EAN)	4050118225228
Qty.	5 items

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Technical data

Approvals

Approvals	CE CSAEX ATEX IECEx
ROHS	Conform

Dimensions and weights

Net weight	16.6 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, 7cI
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	Internal capacity, max. CI	2 nF
Internal inductance, max. LI	0 µH	Temperature class T4/135°C (-40°C ... +120 °C) Ii	300 mA
Temperature class T5/100°C (-40 ° C ... +85 °C) Ii	300 mA	Temperature class T6/85 °C (-40 °C ... +70 °C) Ii	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

General data

Optical function display	No	Segment	Measurement - Monitoring - Setting
Version	Surge protection for measurement and control	Colour	Light Blue
Mounting rail	TS 35	Isolating function	Yes
Testing option	Functional screw with test plug receptacle, connections 1, 2, 4, 5		

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Technical data

Insulation coordination acc. to EN 50178

Surge voltage category	III	Pollution severity	2

Rated data IEC / EN

Number of poles	1	Rated current IN	300 mA
Protection level on output side Wire-wire 1 kV/µs, typically	70 V	Volume resistance	1.8 Ω 10 %
Lightning test current Iimp (10/350 µs)	1 kA	Discharge current, max. (8/20 µs)	10 kA
Dielectric strength at FG against PE	≥ 500 V	Surge current-carrying capacity D1	1 kA 10/350 µs
Surge current-carrying capacity C3	50 A 10/1000 µs	Pulse-reset capacity	≤ 20 ms
Signal transmission properties (-3 dB)	270 Mhz	Lightning test current, Iimp (10/350 µs) Wire-PE	0.5 kA
Overload - failure mode	Modus 2	Discharge current In (8/20µs) wire-wire	2.5 kA
Discharge current Imax (8/20µs) wire-PE	10 kA	Discharge current Imax (8/20µs) wire-wire	10 kA
Surge current-carrying capacity C2	2.5 kA 8/20 µs 5 kV 1.2/50 µs		

Connection data

Stripping length	10 mm	Tightening torque, min.	0.5 Nm
Tightening torque, max.	0.8 Nm	Clamping range, min.	0.5 mm²
Clamping range, max.	4 mm²	Wire cross-section, solid, min.	0.5 mm²
Wire cross-section, solid, max.	6 mm²	Conductor cross-section, flexible, AEH (DIN 46228-1), min.	0.5 mm²
Conductor cross-section, flexible, AEH (DIN 46228-1), max.	4 mm²	Connection cross-section, stranded, min.	0.5 mm²
Connection cross-section, stranded, max.	4 mm²		

General data

Number of poles	1	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
Marking EN 60079	Ex ec nC IIC T4 Gc	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.

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

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Technical data

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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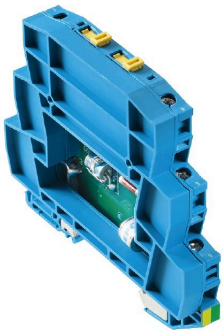
Drawings



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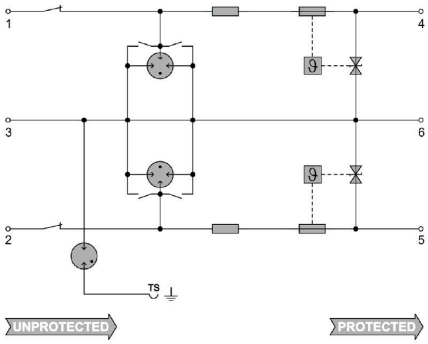

Circuit diagram

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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	

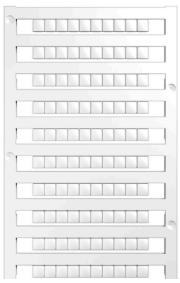
Testadapter and testsockets

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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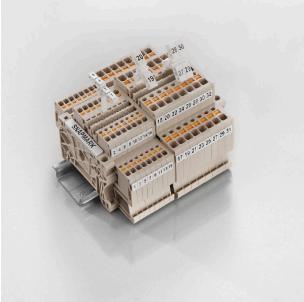
Accessories

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 especifically 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	