

# VSSC6 TR SL FG 24VAC/DC EX

**Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 26

D-32758 Detmold

Germany

[www.weidmueller.com](http://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 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, $U_p(L/N-PE) \leq 1870 \text{ V}$
Order No.	<a href="#">1421440000</a>
Type	VSSC6 TR SL FG 24VAC/DC EX
GTIN (EAN)	4050118225228
Qty.	1 pc(s).

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## Technical data

## Dimensions and weights

Depth	81 mm	Depth (inches)	3.189 inch
Height	88.5 mm	Height (inches)	3.484 inch
Width	12.4 mm	Width (inches)	0.488 inch
Net weight	0.081 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	1,342 a
SFF	96.67 %	λges	54
PFH in 1*10 <sup>-9</sup> per hour	1.8		

## 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. P <sub>i</sub>	0.75 W	Input voltage, max. U <sub>i</sub>	42 V
Internal capacity, max. C <sub>i</sub>	2 nF	Internal inductance, max. L <sub>i</sub>	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 C	IIB	Gas group D	IIA
Gas groups A, B	IIC	Input current, max. I <sub>i</sub>	300 mA
Input voltage, max. U <sub>i</sub>	42 V	Internal capacity, max. C <sub>i</sub>	2 nF
Internal inductance, max. L <sub>i</sub>	0 μH		

## General data

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

## Insulation coordination acc. to EN 50178

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

Dielectric strength at FG against PE	≥ 500 V	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) wire-PE	2.5 kA
Discharge current $I_n$ (8/20μs) wire-wire	2.5 kA	Discharge current, max. (8/20 μs)	10 kA
Input voltage, max. $U_i$	42 V	Insertion loss	250 MHz
Lightning test current $I_{\text{imp}}$ (10/350 μs)	1 kA	Lightning test current, $I_{\text{imp}}$ (10/350 μs) Wire-PE	0.5 kA
Max. continuous voltage, $U_c$ (AC)	30 V	Max. continuous voltage, $U_c$ (DC)	42 V
Number of poles	1	Overload - failure mode	Modus 2
Protection level $U_p$ (typ.)	≤ 1870 V	Protection level on output side Wire-wire	1 kV/μs, typically
Protection level, $U_p$ GND - PE	2,200 V	Protection level, $U_p$ wire - wire	70 V
Pulse-reset capacity	≤ 20 ms	Rated current $I_N$	300 mA
Rated voltage (AC)	24 V	Rated voltage (DC)	34 V
Requirements category acc. to IEC 61643-21	C2, C3, D1	Signal transmission properties (-3 dB)	270 Mhz
Standards	IEC61643-21:2009, DIN EN 60079-0:2009, DIN EN 60079-26:2007, DIN EN 61241-11:2006	Surge current-carrying capacity C2	2.5 kA 8/20 μs 5 kV 1.2/50 μs
Surge current-carrying capacity C3	50 A 10/1000 μs	Surge current-carrying capacity D1	1 kA 10/350 μs
Voltage type	AC/DC	Volume resistance	1.8 Ω 10 %

## 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 <sup>2</sup>	Clamping range, max.	4 mm <sup>2</sup>
Wire cross-section, solid, min.	0.5 mm <sup>2</sup>	Wire cross-section, solid, max.	6 mm <sup>2</sup>
Conductor cross-section, flexible, AEH (DIN 46228-1), min.	0.5 mm <sup>2</sup>	Conductor cross-section, flexible, AEH (DIN 46228-1), max.	4 mm <sup>2</sup>
Connection cross-section, stranded, min.	0.5 mm <sup>2</sup>	Connection cross-section, stranded, max.	4 mm <sup>2</sup>

## 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		

## 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
ECLASS 14.0	27-17-90-90		

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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 (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

## Environmental Product Compliance

REACH SVHC	Lead 7439-92-1
SCIP	71e97bb7-979f-4330-94c0-20c629bb05e3
RoHS Compliance Status	Compliant with exemption
RoHS Exemption (if applicable/known)	7a, 7cl

## 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	<a href="#">EG Baumusterprüfung / EC Type Examination</a> <a href="#">SIL Paper</a> <a href="#">EU Konformitätserklärung / EU Declaration of Conformity</a>
Engineering Data	<a href="#">CAD data – STEP</a>
User Documentation	<a href="#">Beipackzettel / Instruction sheet</a> <a href="#">Beipackzettel / Instruction sheet</a>
Catalogues	<a href="#">Catalogues in PDF-format</a>
Brochures	

## VSSC6 TR SL FG 24VAC/DC EX

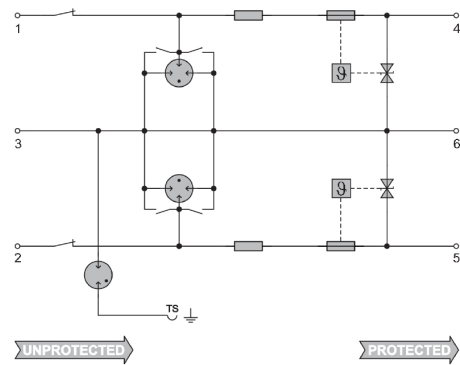
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# Drawings



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.	<a href="#">1067230000</a>	VSSC, End plate
GTIN (EAN)	4032248999866	
Qty.	50 pc(s).	

## 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.

## General ordering data

Type	DEK 5/5 MC NE WS	Version
Order No.	<a href="#">1609801044</a>	Dekafix, Terminal marker, 5 x 5 mm, Pitch in mm (P): 5.00
GTIN (EAN)	4008190397111	Weidmueller, white
Qty.	1,000 pc(s).	

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[www.weidmueller.com](http://www.weidmueller.com)**Accessories****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.	<a href="#">1805880000</a>	Group markers, Terminal marker, 23 x 5 mm, Pitch in mm (P): 5.00
GTIN (EAN)	4032248273614	Weidmueller, white
Qty.	50 pc(s).	

**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.	<a href="#">0180400000</a>	Test adapter (terminal), 230 V, 20 mA
GTIN (EAN)	4008190060121	
Qty.	20 pc(s).	