CSS 12-34-V-D-M-ST



- **Actuation from top**
- **Thermoplastic enclosure**
- **27 mm x 108.2 mm x 35 mm**
- **Misaligned actuation possible**
- **1 x connector plug M12, 8-pole**
- **Electronic contact-free, coded system**
- **Max. length of the sensor chain 200 m**
- **Max. 31 sensors can be wired in series.**
- **2 short-circuit proof PNP safety outputs**
- **High repeat accuracy of the switching points**
- **Integral cross-short, wire-breakage and external voltage monitoring of the safety cables up to the control cabinet**

Data

Ordering data	
	CSS 12-34-V-D-M-ST 101181065
EAN (European Article Number)	4030661314884
eCl@ss number, Version 9.0	27-27-24-03
Approval - Standards	
	TÜV cULus EAC
General data	
	CSS 34 IEC 60947-5-3

Active principle	inductive
Housing construction form	Block
Installation conditions (mechanical)	not flush
Sensor topology	Sensor for series wiring
Enclosure material	Glass-fibre, reinforced thermoplastic
Active area	Glass-fibre, reinforced thermoplastic
Gross weight	140 g
Reaction time, maximum	30 ms
Duration of risk, maximum	60 ms

General data - Features

Diagnostic output	Yes
Short circuit detection	Yes
Short-circuit recognition	Yes
Safety functions	Yes
Cascadable	Yes
Integral System Diagnostics, status	Yes
Number of LEDs	3
Number of semi-conductor outputs with signaling function	1
Number of fail-safe digital outputs	2
Number of Series-wiring of sensors	31

Safety appraisal

	ISO 13849-1 IEC 60947-5-3 IEC 61508
Performance level, up to	e
Control category to EN13849	4
PFH-value	3.60×10^{-9} /h
Safety Integrity Level (SIL), applicable for	3
Mission Time	20 Year(s)

Mechanical data

Actuating panels	Actuation from top
Active area	front side
Switch distance	15 mm

Ensured switch distance "ON" S_{ao}	8 mm
Ensured switch distance "OFF" S_{ar}	18 mm
Actuator switch distance	Actuator CST 34-V-1: 12 mm Actuator CST 34-S-2: 10 mm Actuator CST 34-S-3: 15 mm Actuator CST 180-1 / CST 180-2: 12 mm Actuator CST 34-V-1: 10 mm Actuator CST 34-S-2: 8 mm Actuator CST 34-S-3: 13 mm Actuator CST 180-1 / CST 180-2: 10 mm Actuator CST 34-V-1: 15 mm Actuator CST 34-S-2: 16 mm Actuator CST 34-S-3: 18 mm Actuator CST 180-1 / CST 180-2: 16 mm
Hysteresis (Switch distance), maximum	1.5 mm
Repeat accuracy R R	0.5 mm
Note (Repeat accuracy $_{R}$)	Axial offset: the front face allows for an axial misalignment (z) of max. ± 8 mm (see figure: operating principle).
Mechanical data - Connection technique	
Terminal Connector	Connector plug M12, 8-pole
Note	The cable section of the interconnecting cable must be observed for both wiring variants! Cable length and cable section alter the voltage drop depending on the output current
Mechanical data - Dimensions	
Height of sensor	108.2 mm
Length of sensor	35 mm
Width of sensor	27 mm
Ambient conditions	
Protection class	IP 65 to IEC/EN 60529 IP 67 to IEC/EN 60529
Ambient temperature, minimum	-25 °C
Ambient temperature, maximum	+70 °C
Storage and transport temperature, minimum	-25 °C
Storage and transport temperature, maximum	+85 °C
Resistance to vibrations to EN 60068-2-6	10 ... 55 Hz, amplitude 1 mm
	30 g / 11 ms

	II
Ambient conditions - Insulation value	
Rated impulse withstand voltage	0.8 kV
	III
	3
Electrical data	
Voltage type	DC (direct current)
No-load current	100 mA
Operating current	600 mA
Required rated short-circuit current to EN 60947-5-1	100 A
Switching frequency, approx.	3 Hz
Electrical data - Fail-safe digital outputs	
Rated operating current (safety outputs)	250 mA
Output current, (fail-safe output), maximum	0.3 A
Versions	p-type
Voltage drop U_d, maximum	0.5 V
Current leakage	0.5 mA
Voltage, Utilisation category DC12	24 VDC
Current, Utilisation category DC12	0.3 A
Voltage, Utilisation category DC13	24 VDC
Current, Utilisation category DC13	0.3 A
Electrical data - Diagnostic output	
Versions	p-type
Voltage drop U_d, maximum	5 V
Voltage, Utilisation category DC12	24 VDC
Current, Utilisation category DC12	0.1 A

Voltage, Utilisation category DC13	24 VDC
Current, Utilisation category DC13	0.1 A

Electrical data - Electromagnetic compatibility (EMC)	
	IEC 61000-6-4 IEC 61000-6-2

Pin assignment	
PIN 1	1A1 Ue: (1)
PIN 2	X1 Safety input 1
PIN 3	A2 GND
PIN 4	Y1 Safety output 1
PIN 5	OUT Diagnostic output OUT
PIN 6	X2 Safety input 2
PIN 7	Y2 Safety output 2
PIN 8	IN without function

Scope of delivery	
Included in delivery	Actuators must be ordered separately.

Accessory	
	CST 34-V-1 CST 34-S-2 CST 34-S-3 CST 180-1 CST 180-2 PROTECT PSC1 SRB-E-301ST SRB-E-201LC

Notes	
Note (General)	Evaluation requirements: dual-channel safety input, suitable for p-type sensors with NO function. The safety-monitoring module must tolerate internal functional tests of the sensors with cyclic switch-off of the sensor outputs for max. 0.5 ms. Short-circuit recognition by the evaluation is not necessary.

Ordering code

Product type description:

CSS (1)-34-(2)-(3)-(4)-M-(5)

(1)

12 Actuation from top

14 Actuation from side

(2)

without Standard version

F0 Input for enabling pushbutton, suitable for automatic start

F1 Input for reset pushbutton, with edge monitoring

(3)

S lateral active surface

V frontal active surface

(4)

D With diagnostic output

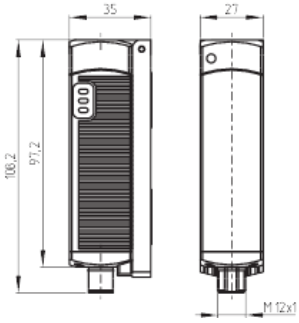
SD Serial diagnostic output

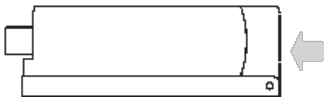
(5)

L with connecting cable

ST with connector

Pictures

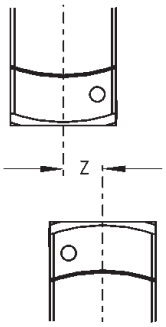
Photo/Product/Catalogue	
	ID: kcss3f10 | 24,8 kB | .png | 74.083 x 49.389 mm - 210 x 140 Pixel - 72 dpi | 346,8 kB | .jpg | 352.778 x 235.303 mm - 1000 x 667 Pixel - 72 dpi
Dimension/Product/Basic	
	ID: 1css3g01 | 4,4 kB | .png | 73.731 x 79.022 mm - 209 x 224 Pixel - 72 dpi | 50,7 kB | .cdr | | 204,8 kB | .jpg | 352.778 x 377.119 mm - 1000 x 1069 Pixel - 72 dpi
Graphic/Clipart	



ID: kcss3c07

| 875,0 b | .png | 74.083 x 21.167 mm - 210 x 60 Pixel - 72 dpi
| 16,0 kB | .cdr |

Illistration/Product/Function



ID: kcss3a10

| 2,3 kB | .png | 74.083 x 148.167 mm - 210 x 420 Pixel - 72 dpi
| 138,9 kB | .jpg | 352.778 x 705.556 mm - 1000 x 2000 Pixel - 72 dpi
| 22,4 kB | .cdr |

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The details and data referred to have been carefully checked. Images may diverge from original. Further technical data can be found in the manual. Technical amendments and errors possible.
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