

- **Actuation from side**
- **Thermoplastic enclosure**
- **27 mm x 108.2 mm x 35 mm**
- **serial diagnostic output**



- **1 x Pre-wired cable 8-pole**
- **Misaligned actuation possible**
- **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**

Ordering data

EAN (European Article Number)	4030661314853
eCl@ss number, Version 9.0	27-27-24-03

TÜV
cULus
EAC

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	295 g
Reaction time, maximum	30 ms
Duration of risk, maximum	60 ms

General data - Features

Serial diagnostics	Yes
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	$3.60 \times 10^{-9} / \text{h}$
Safety Integrity Level (SIL), applicable for	3
Mission Time	20 Year(s)

Mechanical data

Actuating panels	lateral
------------------	---------

Active area	lateral
Switch distance	14 mm
Ensured switch distance "ON" S_{ao}	8 mm
Ensured switch distance "OFF" S_{ar}	17 mm
Actuator switch distance	Actuator CST 180-1 / CST 180-2: 10 mm
	Actuator CST 34-S-1: 14 mm
	Actuator CST 34-S-2: 14 mm
	Actuator CST 34-S-3: 14 mm
	Actuator CST 34-S-1: 12 mm
	Actuator CST 34-S-2: 12 mm
	Actuator CST 34-S-3: 12 mm
	Actuator CST 180-1 / CST 180-2: 8 mm
	Actuator CST 34-S-1: 17 mm
	Actuator CST 34-S-2: 17 mm
	Actuator CST 34-S-3: 17 mm
	Actuator CST 180-1 / CST 180-2: 13 mm
Hysteresis (Switch distance), maximum	1.5 mm
Repeat accuracy R R	0.5 mm
Note (Repeat accuracy R)	Axial offset: The long side allows for a maximum height misalignment (x) of sensor and actuator of 36 mm (e.g. mounting tolerance or due to guard door sagging).
	Increased misalignment, max. 53 mm, possible when the CST 34-S-2 actuator is used. The axial misalignment (y) is max. ± 10 mm (see figure: Operating principle)

Mechanical data - Connection technique

Terminal Connector	Cable (Y-UL 2517), 8-pole
Length of cable	2 m
	8 x 0.35 mm ²
Wire cross-section	22 AWG
	LiYY
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

Operating current
(diagnostic output) 150 mA

Versions p-type

Voltage drop U_d ,
maximum 5 V

Electrical data - Electromagnetic compatibility (EMC)

IEC 61000-6-4

IEC 61000-6-2

Pin assignment

PIN 1	A1 Ue Brown
PIN 2	X1 Safety input 1 White
PIN 3	A2 GND Blue
PIN 4	Y1 Safety output 1 Black
PIN 5	SD serial diagnostic output: Grey
PIN 6	X2 Safety input 2 violet
PIN 7	Y2 Safety output 2 red
PIN 8	IN serial diagnostic input Pink

Scope of delivery

Included in delivery Actuators must be ordered separately.

Accessory

CST 34-S-2
CST 34-S-3
CST 180-1
CST 180-2
CST 34-S-1
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



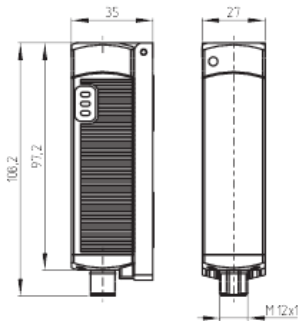
| 24,8 kB | .png | 74.083 x 49.389 mm - 210 x 140

Pixel - 72 dpi

| 346,8 kB | .jpg | 352.778 x 235.303 mm - 1000 x 667

Pixel - 72 dpi

Dimension/Product/Basic



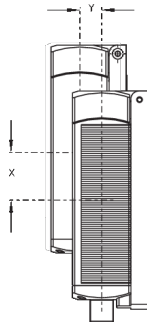
ID: 1css3g01

| 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

Illustration/Product/Function



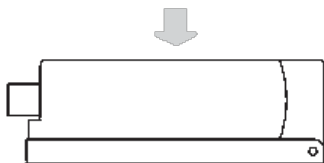
ID: kcss3a02

| 46,4 kB | .cdr |

| 321,9 kB | .jpg | 352.778 x 796.219 mm - 1000 x
2257 Pixel - 72 dpi

| 5,5 kB | .png | 74.083 x 167.217 mm - 210 x 474
Pixel - 72 dpi

Graphic/Clipart



ID: kcss3c06

| 932,0 b | .png | 74.083 x 35.983 mm - 210 x 102
Pixel - 72 dpi

| 16,0 kB | .cdr |

K.A. Schmersal GmbH & Co. KG, Möddinghofe 3, D-42279 Wuppertal

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.

Generated on 242021-01-31T06:07:24+01:000601Europe/BerlinSun, 31 Jan 2021 06:07:24

+010024amSunday.31am31Europe/BerlinCET0701Europe/BerlinJanuary2021Sun, 31 Jan 2021 06:07:24

+010001am31