CSS 14-34F1-S-D-M-ST



- **Actuation from side**
- **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**
- **2 short-circuit proof PNP safety outputs**
- **High repeat accuracy of the switching points**
- **with edge monitoring of the reset pushbutton**
- **To control positive-guided relay without downstream safety monitoring module**
- **Integral cross-short, wire-breakage and external voltage monitoring of the safety cables up to the control cabinet**
- **Suitable as individual or terminal device in series-wiring of standards sensors to replace a safety monitoring module**
- **Self-monitored series-wiring of up to 30 CSS 34 sensors and one CSS 34F0/F1 sensor for control category 4 to ISO 13849-1**

Data

Ordering data	
	CSS 14-34F1-S-D-M-ST
	101189087
EAN (European Article Number)	4030661354873

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	141.5 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
Input for reset pushbutton, with edge monitoring	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 x 10^{-9} /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	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-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

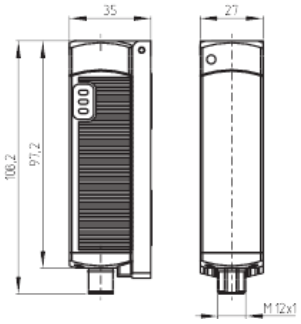
Photo/Product/Catalogue



ID: kcss3f09

| 273,0 kB | .jpg | 352.778 x 235.303 mm - 1000 x 667 Pixel - 72 dpi
| 21,0 kB | .png | 74.083 x 49.389 mm - 210 x 140 Pixel - 72 dpi

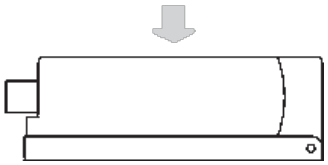
Dimension/Product/Basic



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

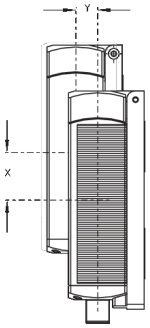
Graphic/Clipart



ID: kcss3c06

| 932,0 b | .png | 74.083 x 35.983 mm - 210 x 102 Pixel - 72 dpi
| 16,0 kB | .cdr |

Illistration/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

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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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