



## EX-CSS 8-16-2P+D-M-L-3G/D

- Pre-wired cable 7-pole
- Comfortable diagnostics through sensor LED and electronic signalling output
- Ex certified
- Thermoplastic enclosure
- Non-contact, coded electronic safety sensor for use in areas of zone with gas and dust-explosion hazard
- Category 3GD, ATEX Zone 2 and 22
- High repeat accuracy of the switching points
- Misaligned actuation possible
- Early warning when operating near the limit of the sensor's hysteresis range
- Self-monitoring series-wiring of 16 sensors
- Suitable for applications up to PL e / SIL 3

## Data

### Ordering data

Note (Delivery capacity)	Not available!
EAN (European Article Number)	4030661427195

### Explosion protection

Explosion protection: regulations	EN 60079-0 EN 60079-15 EN 60079-31
Explosion protection zones	22 2
Explosion protection category	3D 3G

Explosion protection designation	 II 3G Ex nA IIB T6 Gc X
	 II 3D Ex tc IIIC T80°C Dc X
Manufacturer declaration	ATEX Zone 2 and 22

## General data

Active principle	inductive
Housing construction form	Block
Installation conditions (mechanical)	not flush
Sensor topology	Sensor for series wiring Individual sensor or end sensor in a series
Enclosure material	Plastic, glass-fibre reinforced thermoplastic, self-extinguishing
Active area	Glass-fibre, reinforced thermoplastic
Gross weight	278 g
Reaction time, maximum	30 ms
Duration of risk, maximum	30 ms

## General data - Features

Short circuit detection	Yes
Short-circuit recognition	Yes
Safety functions	Yes
Cascadable	Yes
Integral System Diagnostics, status	Yes
Number of semi-conductor outputs with signaling function	1
Number of fail-safe digital outputs	2
Number of Series-wiring of sensors	16

## Safety appraisal

Standards	EN ISO 13849-1 IEC 60947-5-3 IEC 61508
Performance level, up to	e
Control category to EN13849	4
PFH-value	$6.10 \times 10^{-9}$ /h
Safety Integrity Level (SIL), suitable for applications in	3
Mission Time	20 Year(s)

## Mechanical data

Hysteresis (Switch distance), maximum	1 mm
Repeat accuracy R R	0.5 mm

## Mechanical data - Switching distances according IEC 60947-5-3

Switch distance	8 mm
Ensured switch distance "ON" $S_{ao}$	6 mm
Ensured switch distance "OFF" $S_{ar}$	11 mm

## Mechanical data - Connection technique

Terminal Connector	Cable
Length of cable	2 m
Terminal connector, Input/Output	7-pole
Wire cross-section	$0.25 \text{ mm}^2$
Wire cross-section	23 AWG

## Mechanical data - Dimensions

Length of sensor	39.5 mm
Width of sensor	55 mm
Height of sensor	93 mm

## Ambient conditions

Degree of protection	IP65 to EN 60529 IP67 to EN 60529
Ambient temperature, minimum	-25 °C
Ambient temperature, maximum	+50 °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
Resistance to shock	30 g / 11 ms
Protection rating	II

## Ambient conditions - Insulation value

Rated insulation voltage $U_i$	32 VDC
Rated impulse withstand voltage $U_{imp}$	0.8 kV
Overvoltage category	III
Degree of pollution to VDE 0100	3

## Electrical data

Voltage type	DC (direct current)
No-load supply current $I_0$	50 mA
Rated operating voltage, minimum	20.4 V
Rated operating voltage, maximum	26.4 V
Operating current	500 mA
Switching frequency, approx.	3 Hz

### Electrical data - Fail-safe digital outputs

Versions	p-type
Voltage drop $U_d$ , maximum	0.5 V
Current leakage $I_r$	0.5 mA
Voltage, Utilisation category DC12	24 VDC
Current, Utilisation category DC12	0.5 A
Voltage, Utilisation category DC13	24 VDC
Current, Utilisation category DC13	0.5 A

### Electrical data - Digital Output

Versions	p-type
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### Electrical data - Diagnostic output

Voltage drop $U_d$ , maximum	4 V
Voltage, Utilisation category DC12	24 VDC
Current, Utilisation category DC12	0.05 A

Voltage, Utilisation category	24 VDC
DC13	

Current, Utilisation category	0.05 A
DC13	

## Status indication

Note (LED switching conditions display)	Multi-coloured LED: Green, Red, Yellow
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## Scope of delivery

Included in delivery	Actuators must be ordered separately.
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## Accessory

Recommendation (actuator)	CST 16-1
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## 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. 0.25 ms. Short-circuit recognition by the evaluation is not necessary.
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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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