

Safety switch

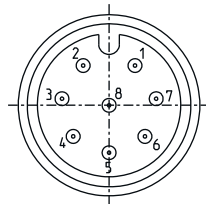
Series CSMS

Description **CSMS-M-R-H-ST**

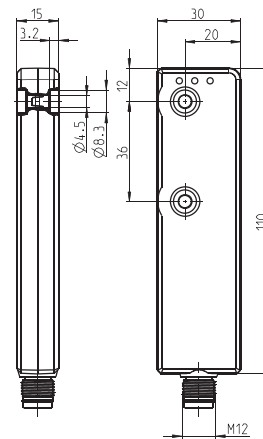
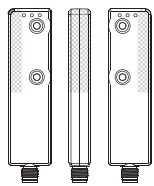
Article number **6075986051**

Connection

- Pin 1 – DI
- Pin 2 – I1
- Pin 3 – I2 / Q3
- Pin 4 – DO
- Pin 5 – Q1
- Pin 6 – Q2
- Pin 7 – -
- Pin 8 – +

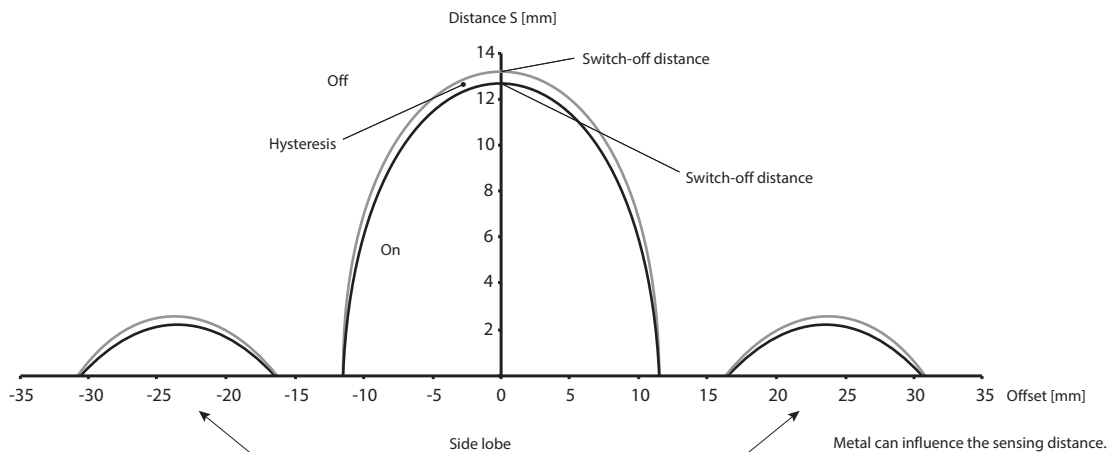


Active surfaces



Sensing distance (Only in conjunction with actuator 6075980052 (CSMS-S-H))

	min.	typ.	max.
Rated sensing distance	S_n	13 mm	
Assured sensing distance – On	S_{so}	10 mm	
Hysteresis	H	0,5 mm	
Assured sensing distance – Off	S_{ar}		19 mm



Electrical Data		
Rated operating voltage	U_e	24 V, Reverse polarity protection, +10 %, -15 %
Voltage level		according to Typ 3 EN 61131-2
Rated insulation voltage	U_i	75 V DC
Rated impulse withstand voltage	U_{imp}	500 V
Rated conditional short circuit current		100 A
No-load current	I_0	≤ 55 mA
Transponder frequency		6,78 MHz
Repeatability		0,1 x S (within the limits S_{min} and S_{max})
Operating frequency		≤ 1Hz
Switch-off	t_a	13 ms + 200 μs x following CSMS
Time delay	t_v	320 ms + 50 ms x following CSMS
Electromagnetic interference		according to EN IEC 60947-5-2 and EN 61326-3-1
Inputs I1,I2, Di (digital inputs according to EN61131-2)		
Voltage	U_{Hmax}	30 V
	U_{Hmin}	11 V
	U_{Lmin}	-3 V
	U_{Lmax}	5 V
Outputs Q1,Q2		
Switching element function		pnp NO
Rated operating current	I_e	250 mA
Minimum operating current	I_m	1 mA DC
Leakage current	I_r	0,5 mA DC
Switching elements		Sustained short-circuit and overload protection
Voltage drop	U_d	≤ 1 V
Type of short circuit protection		Clocking
Utilization category		DC-13
Output Do		
Rated operating current	I_e	Source: 2 mA, sink: 1 mA
Data rate		2400 Bit/s
Switching elements		Sustained short-circuit and overload protection
Voltage at Do	V_{High}	≥ $U_e - 3V$
Voltage at Do	V_{Low}	≤ 3V
Utilization category		thermal, current limited

Mechanical Data	
Enclosure	Macromelt, red / PA 6, black
Mounting	2 holes Ø 4,5 (for M4 screws)
Tightening torque (max.)	1Nm
Indication	3 LEDs (for diagnosis)
Shock and Swing	acc. to EN IEC 60947-5-2
Ambient temperature	-25°C ... +70°C
Storage temperature	-25°C ... +70°C
Maximum relative humidity	90 % @ 40 °C without condensation
Altitude	≤ 2000 m NHN
Connection	Plug connector M12 male
Mass	60 g
Type of protection	IP67
Protection class acc. to EN IEC 61558	III
Pollution degree	3 (metallic pollution can cause impairments of the operating distances.)

Safety data (according to EN ISO 13849-1)	
Up to PL	e
Category	4
Service life	20 years
PFH module 1	$2.05 \cdot 10^{-9}$ 1/h
PFH cascaded modules 2 ... n	$1.70 \cdot 10^{-9}$ 1/h per module
MTTFd	High
SIL	3 (according to EN 62061:2005)

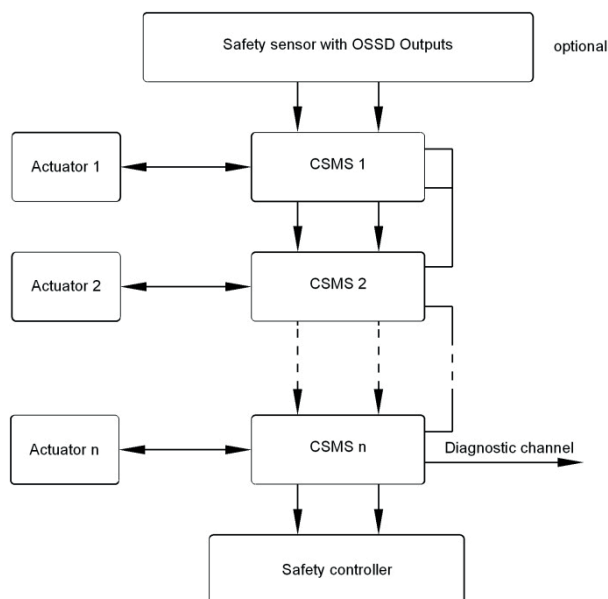
Standards	
	EN 60947-1, EN 60947-5-2, EN 61326-3-1
	EN ISO 13849-1, EN ISO 13849-2, EN 61508
	EN 60947-5-3, EN 60204-1, EN 61131-2, EN 62061
	ETSI EN 300330-1, ETSI EN 300330-2

EU-Conformity	
	according to Directive 2006/42/EG
	according to Directive 1999/5/EG

Approvals	
	TÜV Nord, cCSAus

Notes	
The specified protection classification (IP code) applies only when an appropriate plug connector is used.	

Intended use	
Application without return circuit (for connection to an evaluation unit)	



Application without return circuit