

# Technical Data

## Safety switch

### Series CSMS

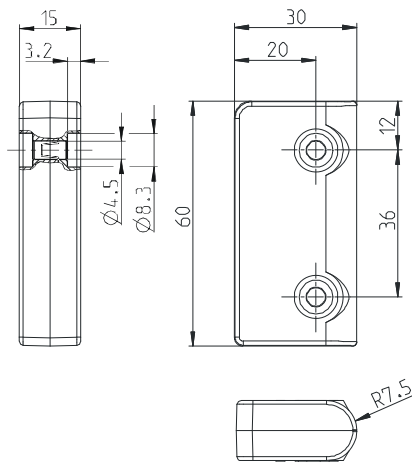
Type designation **CSMS-SET-R-U-ST**

Article number **6075988028**

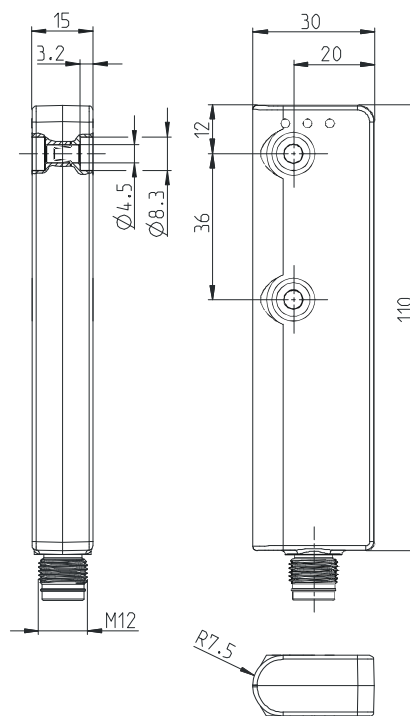
### Set consisting of

Article number	Type designation	Description
<b>6075986024</b>	<b>CSMS-M-R-U-ST</b>	<b>CSMS, plug connector version</b>
<b>6075980023</b>	<b>CSMS-S</b>	<b>Actuator</b>

**6075980023**



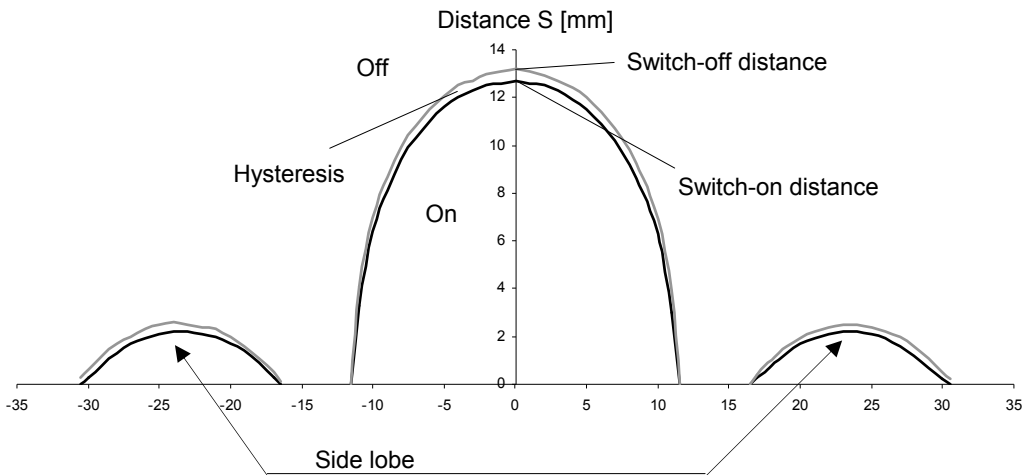
**6075986024**



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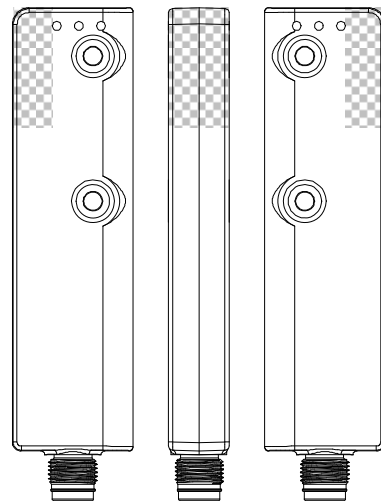
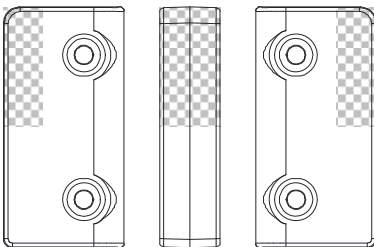
Date of issue: 19.06.2012 / Page 1 of 4  
 Document : 6075988028\_en.doc / Last update : 2 / 0221-12

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



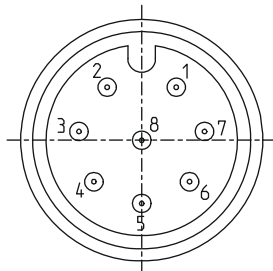
Metal can influence the sensing distance.

### Active surfaces



### Connection

- Pin 1 – DI - white
- Pin 2 – I1 - brown
- Pin 3 – I2 / Q3 - green
- Pin 4 – DO - yellow
- Pin 5 – Q1 - grey
- Pin 6 – Q2 - pink
- Pin 7 – + - blue
- Pin 8 – - - red



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## Safety switch

Electrical Data		
Rated operating voltage	$U_e$	24 V, Reverse polarity protection
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	$I_0$	$\leq 55$ mA
Transponder frequency		6,78 MHz
Repeatability		0,1 x S (within the limits $S_{min}$ and $S_{max}$ )
Operating frequency		$\leq 1$ Hz
Switch-off	$t_a$	5 ms + 260 $\mu$ s x following CSMS
Time delay start button	$t_v$	33 ms +33 ms x following CSMS
Automatic start on delay	$t_v$	2 s +33 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	$U_d$	$\leq 1$ V
Type of short circuit protection		Clocking
Utilization category		DC-13
Output Do		
Switching element function		nnp NO
Rated operating current	$I_e$	2 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	$U_d$	$\leq 3$ V
Type of short circuit protection		thermal, current limited
Utilization category		DC-12
Mechanical Data		
Enclosure		Macromelt, red / PA 6, black
Mounting		2 holes $\varnothing 4,5$ (for M4 screws)
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		$\leq 2000$ m NHN
Connection		Plug connector M12 male
Mass 6075986022		60g
6075980023		27g
Type of protection		IP67
Protection class acc. to EN IEC 61558		III
Pollution degree		3 (metallic pollution can cause impairments of the operating distances.)

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### Safety data (according to EN ISO 13849-1)

Up to PL	e
Category	4
Service life	20 years
MTTFd	High
SIL	3 (according to EN 62061:2005)

### Standards

VDE 0660 T100, DIN EN 60947-1, IEC 60947-1  
 VDE 0660 T200, DIN EN 60947-5-1, IEC 60947-5-1  
 EN 50295, EN ISO 13849-1 (IEC/EN 61508,  
 EN 60947-5-3)  
 EN 300330-2

### EU-Conformity

according to Directive 2006/42/EG  
 according to Directive 2004/108/EG  
 according to Directive 1999/5/EG

### Approvals

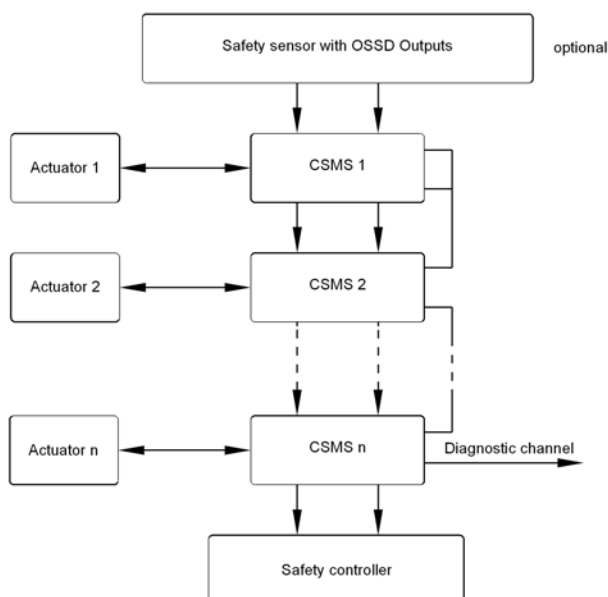
TÜV Nord (being prepared)

### 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

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