





Safety System Products

SAFIX W3-X-5M

RFID Safety Sensor, high coded, EDM, man. reset, 5m

Your advantages

- PLe according to EN ISO 13849-1
- IP 69K and ECOLAB
- Series connection of up to 30 sensors without reduction in safety
- No special analysis system required
- LED diagnosis
- Single information signal for diagnosis
- Highly coded according to EN ISO 14119 (version I3 and W3)
- Small compact design
- Different cable lengths
- Fastest sensor available (risk time)



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The new SAFIX 3 RFID safety sensor impresses due to its compact design and a hole distance of 22 mm. It can be actuated from the front and both sides and is available in 3 different versions with a choice of low level or high level coding according to EN ISO 14119. The sensor has protection class IP69K, holds an ECOLAB approval and can either be purchased with an M12, 8-pin pigtail cable or a fixed cable length of 5 or 10 metres.

Thanks to its OSSD output signals, the sensor can be connected to all standard control and safety relays. A total of up to 30 sensors can be switched in series. An information signal and a three colour LED display on the sensor are provided for diagnosis purposes.

General data	
Type designation	SAFIX W3-X-5M
Item number	SP-E-76-000-30
Functional type	RFID safety sensor
Service life TM (EN ISO 13849-1)	20 Years
Coding levels	Individually coded, learnable

Safety data	
Performance Level (EN ISO 13849)	PLe
Category (EN ISO 13849-1:2015)	cat. 4
SIL (acc. IEC 62061)	SIL3, SILCL3
PFHd (EN ISO 13849)	2,24 x 10□⁹
Approvals	TÜV_SÜD, CE

Environmental conditions	
Max. storage temperature	−25 ... +70 °C
Max. operating temperature	−25 ... +70 °C
Contamination level	2

Electrical data	
Overvoltage category	II
Rated impulse withstand voltage Uimp	1 kV

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Electrical service life (nominal load)	20 years Years
Design / Connections	5m fixed cable with open end
Contact type	OSSD
Supply voltage	DC +/- 10% 24 V
Rated insulation voltage Ui	50 V
Power consumption in ambient conditions	23,75 W
No-load current I0	(not activated) 10 mA / (activated) 30 mA
Max. voltage (VDC)	1 A
Switching frequency	3
LED lighting	3 colors
Utilisation category	D-12/DC-13
Risk time	75 ms
Series connection	30
Pin assignment according DIN 47100	
BN	UB
WH	safety input 1
BU	GND
BK	safety output 1
GY	diagnostic output
PK	safety input 2
VT	safety output 2
OG	EDM/Start-input

Mechanical data	
Dimensions	
Width	36 mm
Length	13 mm
Height	2 mm
Torque (mounting nut)	0,7 Nm
Mounting	Screw connection with M4 screws (sunk)
Housing material	PBT
Shock resistance	30 g/11 ms
Vibration resistance	Amplitude 1 mm, 10 ... 55 Hz

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Switching distance Sn	12 mm
Assured switching distance ON S(ao)	8 mm
Assured switching distance OFF S(ar)	18 mm
Hysteresis	2 mm
Repeat accuracy R	< 0,5 mm

LED diagnostics

Advanced LED diagnosis

Extended LED-Diagnosis

Green	Red	Yellow	Remark
off	off	on	Sensor not actuated, voltage applied
on	off	off	Sensor actuated, all inputs set correctly
flashes	off	off	Sensor actuated, safety inputs not set (low level)
flashes	off	off	Safety inputs set (high level), waiting for start pulse
off	off	flashes	Actuator at the reception limit
off	off	flashes	Teach in process

Green	Red	Yellow	Remark
off	flashes 1x	off	Error safety outputs
off	flashes 2x	off	Error safety inputs
off	flashes 3x	off	Error safety inputs. EDM automatic: Safety relay fault. EDM manual: Faulty start impulse
off	flashes 4x	off	Overvoltage and undervoltage fault
off	flashes 5x	off	Temperature outside the permitted range
off	flashes 6x	off	Wrong actuator
off	on	off	Permanent light Internal device error

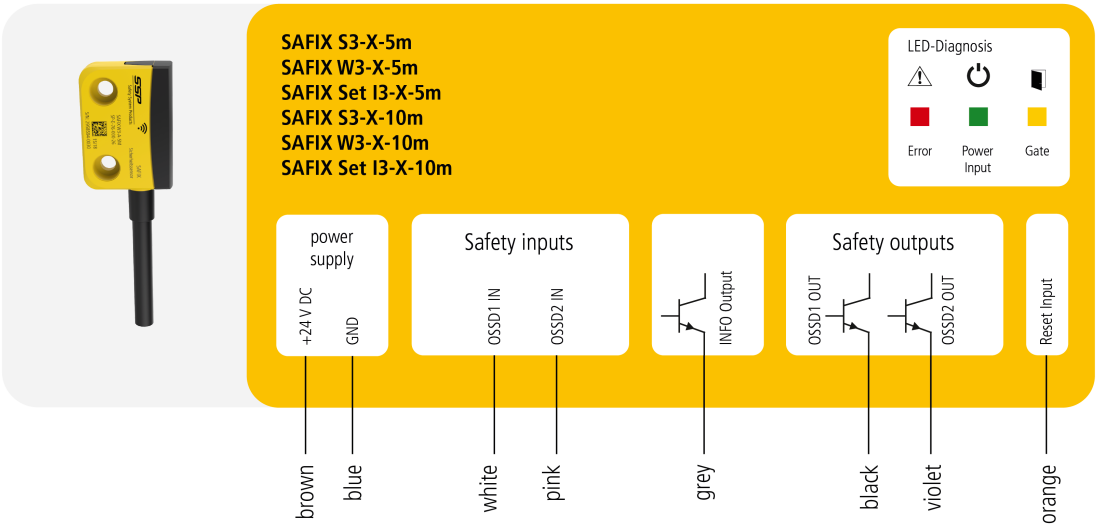
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SAFIX W3-X-5M

Electrical drawings

Connection drawing



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SAFIX W3-X-5M

Connection example 1

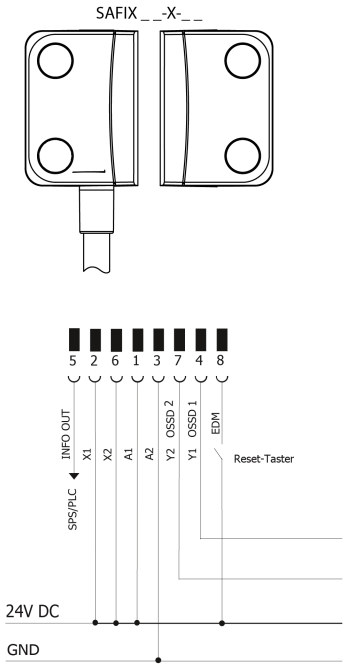


Figure 7: Input from a reset button
Monitored for the EMD input variation (SAFIX _ _-X-_ _)
The inputs X1 and X2 are supplied with 24 V DC. The outputs Y1 and Y2 are included in the analysis. The diagnosis output can be connected, for example, to an SPS.
The input EDM waits for a start pulse duration between 30 ms and 5 s.

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Connection example 2

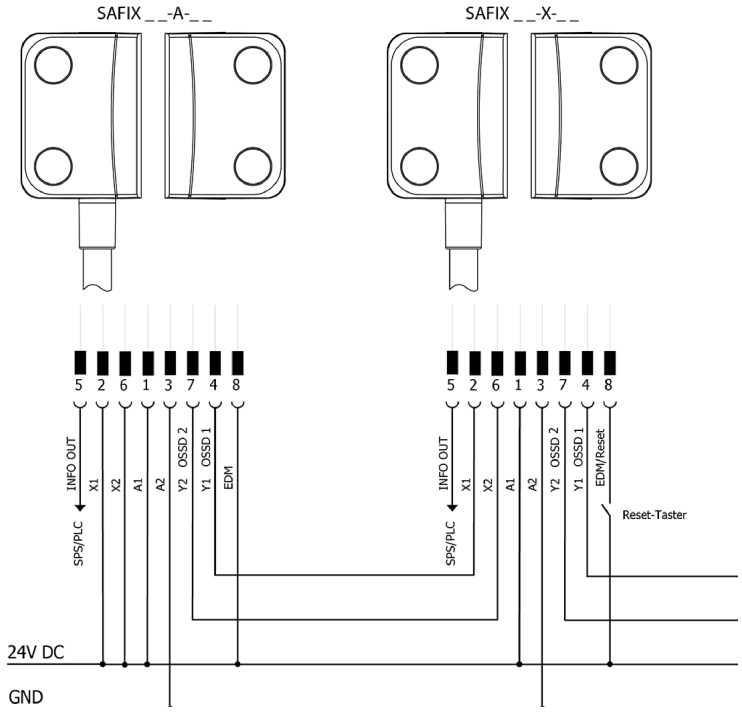


Figure 8: Input from a rest button + every door circuit can be acknowledged, SAFIX _ _-X-_ _
Series connection of multiple SAFIX sensors with manual reset.
The reset button always has to be connected to the last sensor. (SAFIX _ _X_ _)
All other sensors musts be used with the automatic start variation (SAFIX _ _A_ _)

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Connection example 3

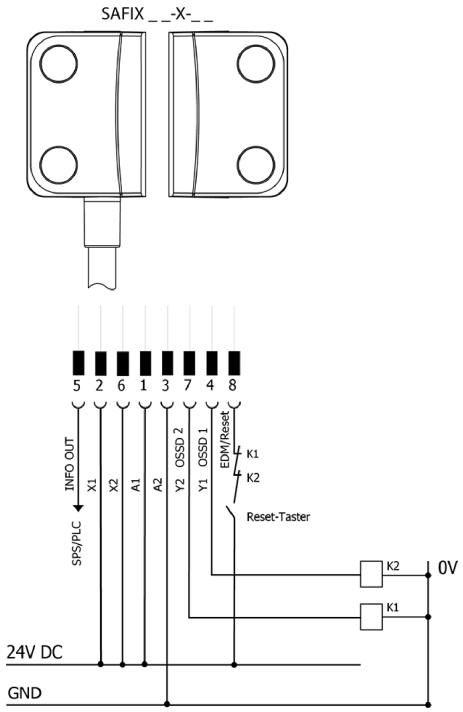


Figure 9: Direct connection of two protections according to PL e, SAFIX _ _-X-_ _
The inputs X1 and X2 are supplied with 24 V DC. The outputs Y1 and Y2 are included in the analysis. The diagnosis output can be connected, for example, to an SPS.
The EDM input waits for a start pulse duration between 30 ms and 5 s. The return circuits from protections K1 and K2 are also connected to the EDM input.

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Connection example 4

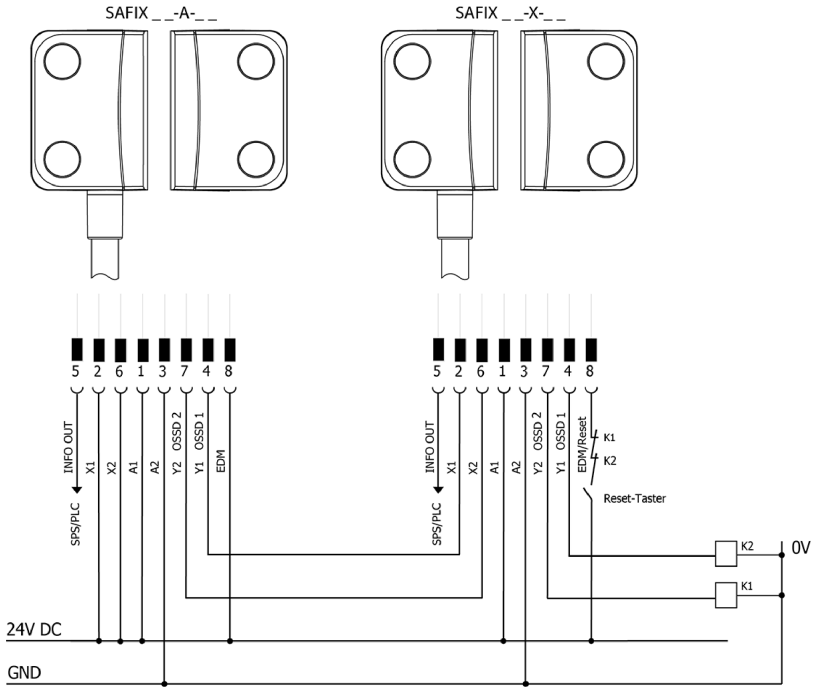


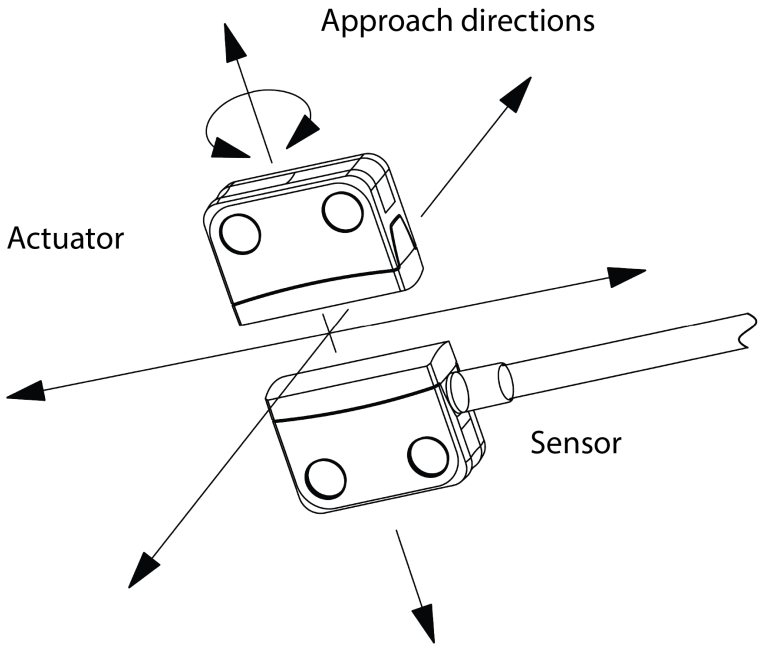
Figure 10: Direct connection of two protections according to PL e, SAFIX _ _-A-_ _ & SAFIX_ _-X-_ _
The EDM input waits for a start pulse duration between 30 ms and 5 s. The return circuits from protections K1 and K2 are also connected to the EDM input.

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Drawings

Assembly



Equipment

Safe control technology			
	MOSAIC M1	SP-R-11-000-00	
Standard safety relay 1 safety function	S2 series	SP-K-70-001-00	
Time delay safety relay 1 safety function	T2 series	SP-K-70-001-02	
Multi-function safety relay 2 safety functions	X2 series	SP-K-70-001-03	
Wireless Safety			

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Safety Simplifier | for SAFIX	S14LDRB-H08-E2-I1-Q1A0-Q	SP-X-89-100-07
Safety Simplifier | for SAFIX	2A0-Q3C0-Q4I0-W38 S14LDRB-H09-E2-I1-I1-Q1A0-	SP-X-89-100-08
Safety Simplifier | for SAFIX	Q2A0-Q3C0-Q4I0-W39 S14LDRB-H0A-E2-I1-I1-I1-Q1	SP-X-89-100-09
Safety Simplifier | for SAFIX	A0-Q2A0-Q3C0-Q4I0-W40 S14LDRB-H0A-E2-I1-I1-K4-Q1	SP-X-89-100-10
	A0-Q2A0-Q3C0-Q4I0-W41	
Safety switches		
Standard-Actuator for SAFIX 3	SAFIX T5	SP-E-76-000-00
Flat actuator for SAFIX 3	SAFIX T6	SP-E-76-000-61
Mounting	SAFIX Z B5	SP-K-71-000-08
Passive distributor	XCONN P6-M12-10m	SP-X-71-000-04
Passive distributor	XCONN P6-M12-M23	SP-X-71-000-01
Y distributor	XCONN Y2-M12	SP-X-33-000-71
Passive distributor	XCONN P6-M12-5m	SP-X-71-000-00



Downloads

- Operating manual
- CAD Data
- SISTEMA - Data V 4.1
- Certificate
- Product line
- Catalog
- Catalog packaging systems
- Certificate
- EPLAN-Data

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