PROVIDING **SAFETY**

WIJ BESCHERMEN
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UW MEDEWERKERS

T +31 (0)10 822 44 00
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SAFETY SENSORS

Catalog No. 11

Safety System Products

Safety solutions from a single source

Years of experience, innovative products, concentrated know-how in the area of machine safety

we simplify safety

Table of Contents

Non-contact RFID safety sensor SAFIX 3

Connections

5 m cable / 10 m cable

or pigtail cable M12 8-pin

High protection classes

IP 67 - IP 69K

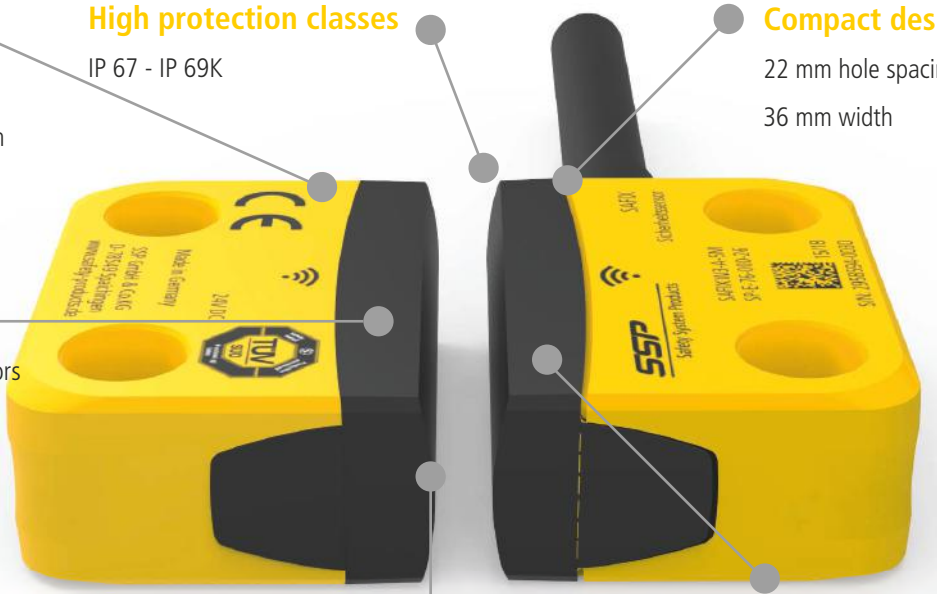
Compact design

22 mm hole spacing

36 mm width

Technology

State-of-the-art RFID sensors



Switching distance

12 mm, can also be

approached from the side

Extended LED diagnosis

On both sides

Waterproof housing

Resistant to cleaning agents

Flat actuator SAFIX T6

Next generation of our RFID safety sensor SAFIX

SAFIX 3 not only impresses with its compact design, but also makes use of state-of-the-art RFID technology. It is available in three different versions with optional low or high coding level acc. to EN ISO 14119 provides high protection against manipulation.

Thanks to different actuators, SAFIX 3 can be easily and quickly installed in a broad number of applications, regardless of whether in wing door, lifting gate or aluminum profile.

Up to 30 units in a row

SAFIX 3 can be connected in series up to 30 times in accordance with PLe EN ISO 13849-1. Flexible pigtail connections allow quick and easy installation.

The number of connecting cables is significantly reduced. The extended diagnosis is shown user-friendly via three-color LED display and thus enables rapid maintenance and commissioning.

If it is stated in the risk assessment that the safety switch must be prevented from loosening (EN ISO 14119), the screw covers supplied are a possibility to omit the safety screws. For subsequent opening of the screws, the cover must be opened with a special tool.

EXCERPT FROM EN ISO 14119

5.2 Arrangement and installation of position switches

Position switches must be arranged in such a way that they are adequately protected against any change in their position. To achieve this, the following requirements must be met:

(a) the fastening elements of the position switches must be reliable and a tool must be required to loosen them.

Extensive in the safety application

- ✓ PLe acc. to EN ISO 13849-1
- ✓ High coded acc. to EN ISO 14119
- ✓ Series connection of up to 30 sensors without loss of safety
- ✓ Integrated EDM function for direct connection of contactors (no safety relay required)
- ✓ Manual / automatic start

Flexible in assembly and wiring

- ✓ Can be used for small windows up to large security doors
- ✓ High protection classes IP67 and IP69K for use in harsh environments
- ✓ Suitable for the food and packaging industry in accordance with ECOLAB
- ✓ Flexible wiring concept with the passive distributor XCONN or wireless distributor
- ✓ Connections via fixed 5 m and 10 m cable or M12 pigtail connection

Diagnostic function of SAFIX 3

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 or 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

Diagnosis advantages

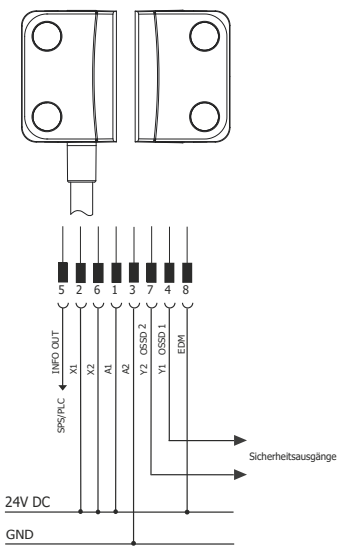
✓ Reduced machine downtime thanks to LED diagnostic function

- Door open / closed
- Error in input / output circuit
- Series connection - diagnosis of whether a door in the previous series has been opened

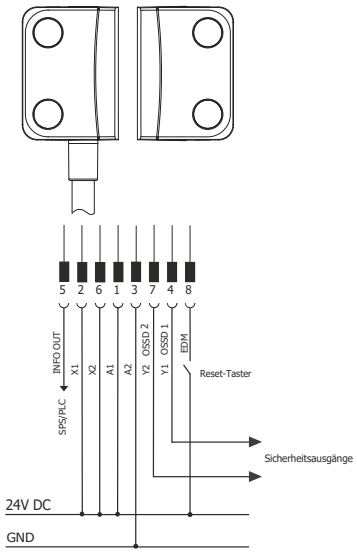
✓ Diagnostic output for visualization on the standard PLC

Electrical connection

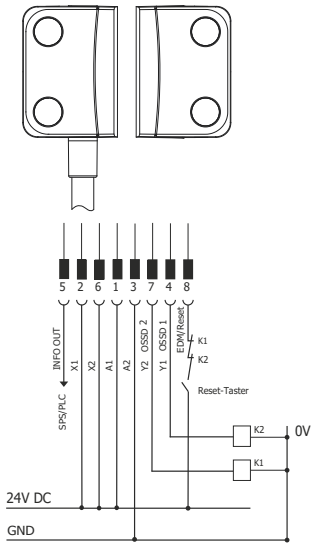
SAFIX 3 _-A-_ _
Automatic reset



SAFIX 3 _-X-_ _
Manual reset

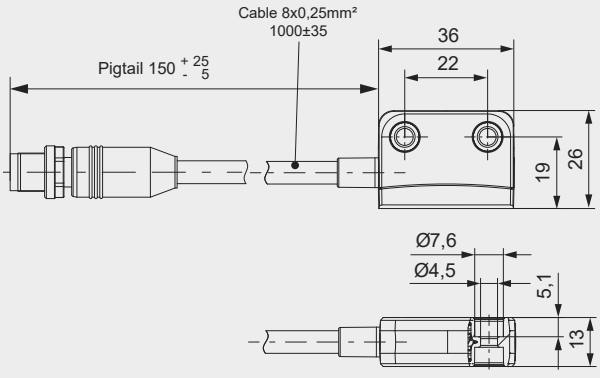


SAFIX 3 _-X-_ _
Manual reset + EDM

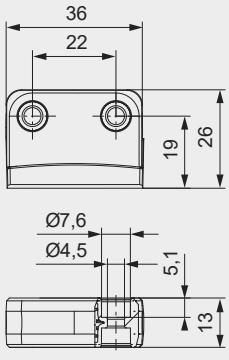


Dimensioning

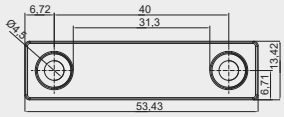
Sensor



standard actuator T5



flat actuator T6



DID YOU KNOW...

what EDM stands for?

EDM stands for "External Device Monitoring" (feedback circuit)

The safety relay monitors the feedback circuits of externally connected contactors with positively driven contacts. The signal at the EDM input is compared with the status of the safety outputs.

When the safety output is switched on, the feedback circuit is open and when the safety output is switched off, the EDM input 24 V is connected. The NC contacts of the contactors with positively driven contacts are used to check whether the contactors have reached their safe state before they are actuated again.

If a safety relay with manual reset function is used, the reset button is connected in series with the feedback circuit contacts.

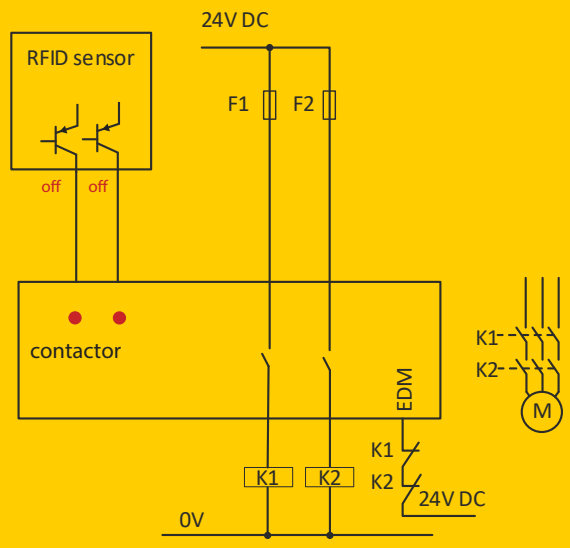


Figure 1:
Safety sensor has shut down,
Contactor are switched off, motor is off,
24 V is available at the EDM input

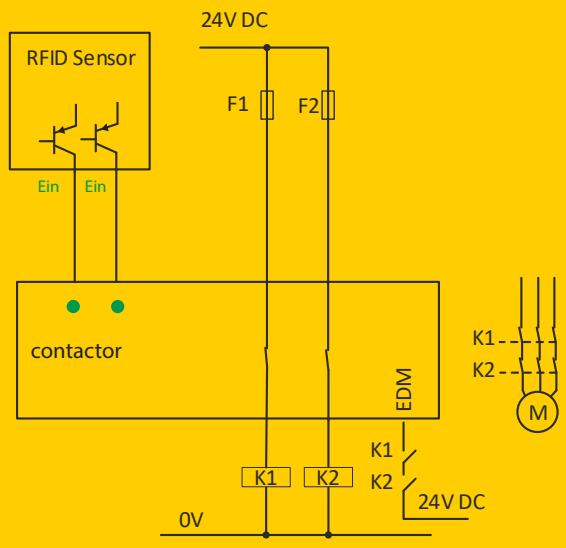


Figure 2:
Safety sensor is switched on,
Contactors are switched on, motor running,
no voltage present at the EDM input

EDM function of RFID safety sensor SAFIX 3

The SAFIX 3 safety sensor and the HOLDX R smart process guard locking have not only implemented state-of-the-art RFID technology, but also the full function of a safety switch device with EDM function.

The SAFIX 3 / HOLDX R sensor can optionally be ordered with a manual or automatic reset function. Downstream contactors up to a current consumption of 500 mA can be connected directly to the safe OSSD outputs on the sensor. EDM- input monitors the externally connected contactors with positively driven contacts.

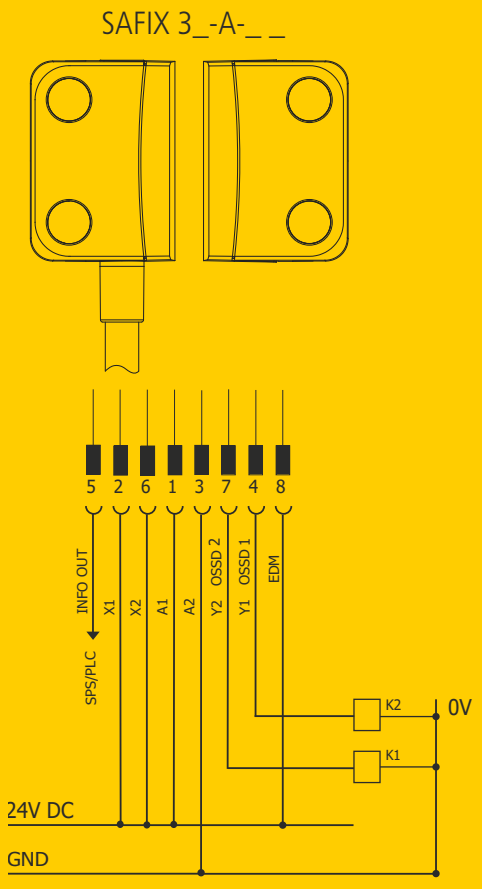


Figure 3:
EDM function with automatic reset button

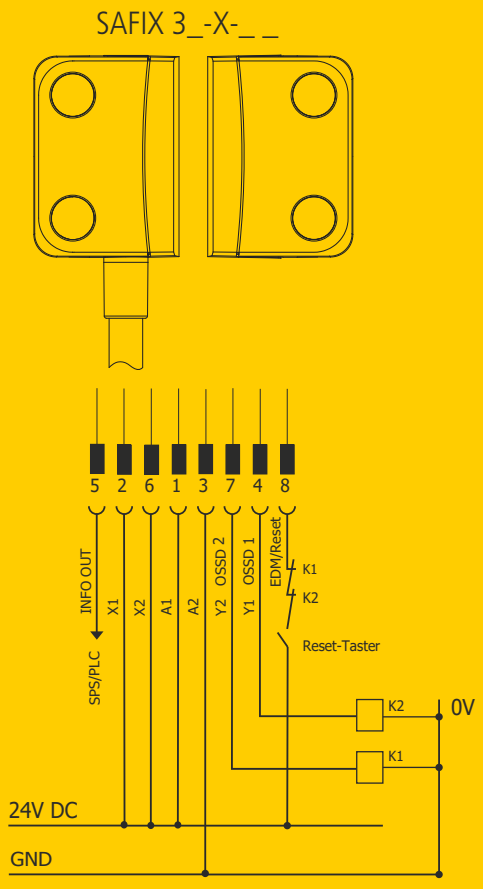


Figure 4:
EDM function with manual reset button

The smart process guard locking HOLDX R

INDUSTRY 4.0

The new generation of magnetic process guard lockings - Award winners, innovative and intelligent.

The HOLDX R series cleverly combines a secure non-contact RFID safety sensor with an intelligent electromagnet in a single device. With this combination of safe position monitoring and process guard locking, the HOLDX R is universally applicable and ensures increasing quality as well as less downtime and set-up times.

innovative **smart** **safe**

MM MASCHINENMARKT AWARD ZUR automatica 2018

GIT SICHERHEIT AWARD 2019 WINNER

Two designs for your application

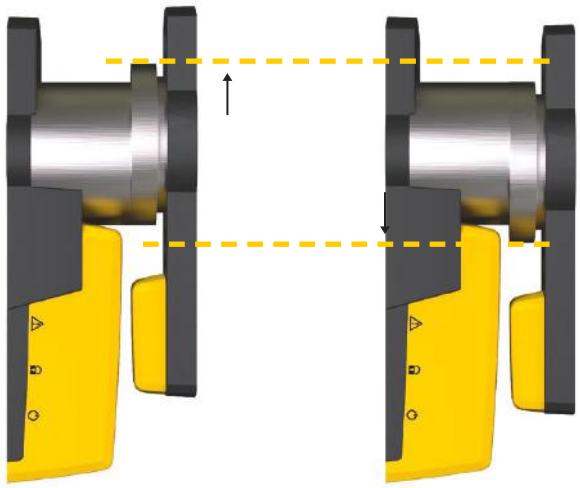
HOLDX RS

In its small and compact design, the HOLDX RS enables a locking force of 600 N. In addition to the locking force of the electromagnet, the movably supported anchor plate has a 50 N permanent magnet which prevents a door from instant opening.

HOLDX RL

Ideal for large doors. Thanks to the locking force of 1200 N, the HOLDX RL prevents doors from tearing open. With a slim width of only 35 mm, the guard locking is ideal for space-saving installation on aluminum profile systems. Like the HOLDX RS, the guard locking has also has a permanent magnet of 50 N, which prevents a door from opening.

Simple installation, reduced commissioning time



Flexible door offset

Through the combination of RFID technology and a modern electromagnet, HOLDX R allows a large tolerance in door offset and thus significantly increases machine availability even with inaccurate door guidance.

Simplified application

- ✓ Reduced commissioning time thanks to flexible assembly concept on aluminum systems
- ✓ Pigtail connection reduces cable diversity (straight and angled cables)
- ✓ Reduced machine downtime thanks to diagnostic function

Quick installation

- ✓ 600 N locking force for small flaps
- ✓ 1200 N locking force for heavy doors
  50 N permanent latching force (optional)
- ✓ Flexible adjustment of latching force from 0-50 N via free mobile app or desktop software
- ✓ Integrated magnetic flux measurement for contamination diagnosis

Extended LED diagnosis

The smart HOLDX R process guard locking enables simple and fast diagnostics thanks to LEDs on both sides. It immediately detects if another process guard locking in the system does not achieve the desired locking force or if there is a fault in the input or output circuit of the guard locking. In this way, you can clean or realign the guard locking completely in line with the preventive maintenance of your system.

Extended LED diagnosis

Green	Safe sensor function
on	OSSD input circuit available, Door closed
flashes 1x	Door opened
flashes 2x	OSSD input circuit not available, Door closed
flashes 3x	Actuator at the reception limit, Switching distance in limit range

Blue	Guard locking function
off	Magnet not actuated
on	Door closed, Locking force available
flashes 1x	Door closed, Locking force not reached
flashes 2x	Door opened, Magnet actuated

Red	Fault diagnosis
off	No error present
on	Internal device error
flashes 1x	Error safety outputs
flashes 2x	Error safety inputs
flashes 3x	Overvoltage or undervoltage
flashes 4x	Error door torn opened
flashes 5x	Temperature outside the permitted range
flashes 6x	Wrong RFID actuator
flashes 7x	Error magnetic flux measurement

Green	Red	Blue	System states
on	on	on	Device start
flashes 2x	flashes 2x	flashes 2x	Teach-in process only for relearnable variant

Predictive maintenance thanks to self-monitoring

The smart HOLDX R process guard locking communicates with your standard PLC via the diagnostic outputs or via the built-in Bluetooth interface with your mobile phone or laptop.

HOLDX R independently and intelligently monitors the application and the process as well as the downstream actuators in the safety circuit. This enables you to find errors quickly and easily, without the need for additional measuring or diagnostic equipment.

Innovative, intelligent technology

- ✓ Detects a system failure by magnetic flux measurement before it occurs
- ✓ Manipulation attempts can be detected subsequently
- ✓ Monitoring of downstream participants and B_{10D} values
- ✓ Monitoring of lifetime according to EN ISO13849-1, notification before exceeding for timely ordering and replacement of spare parts.
- ✓ Actuation of the door magnet during commissioning even without a running safety PLC
- ✓ Flexible adjustment of the latching force
- ✓ Status information on the current locking force
- ✓ Information about power interruption, short circuits or cross circuits
- ✓ Software password protection against manipulation

HOLDX R - standalone versions

Magnetic power

600 N locking force variant S

1200 N locking force variant L

50 N permanent magnet

Flexible

Movable anchor plate

Compact design

Installation on aluminum profiles

from 35 mm construction width

Intelligent failure monitoring

By magnetic flux measurement

Secure electrical locking

acc. to PLe EN ISO 13849-1

High coding

2 coding levels acc. to EN 14119

Standard/ individually coded

LED diagnosis

Extended status display

Connection

flexible pigtail cable

with M12 8-pin or M12 12-pin

Advantages in the safety application

- ✓ PLe acc. to EN ISO 13849-1
- ✓ Series connection of up to 30 guard lockings without loss of safety

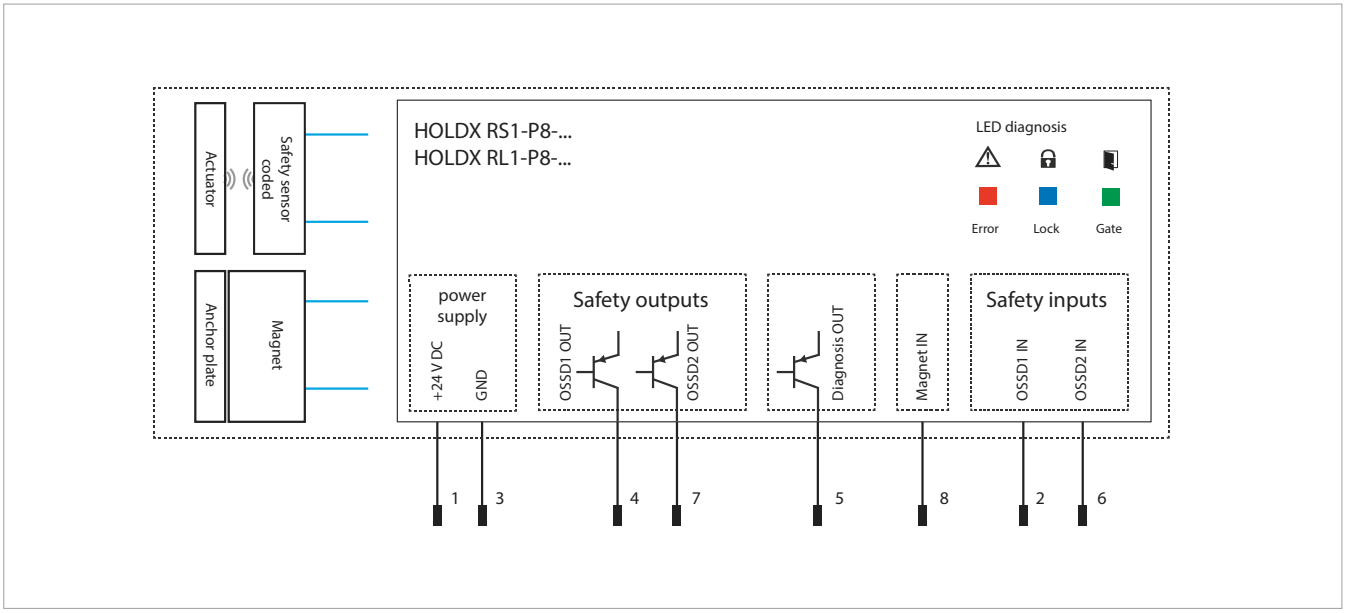
Advantages in assembly and wiring

- ✓ Process guard locking is to be used as stop
- ✓ High protection classes IP67 for use in harsh environments
- ✓ Flexible wiring concept with the passive distributor XCONN or wireless distributor

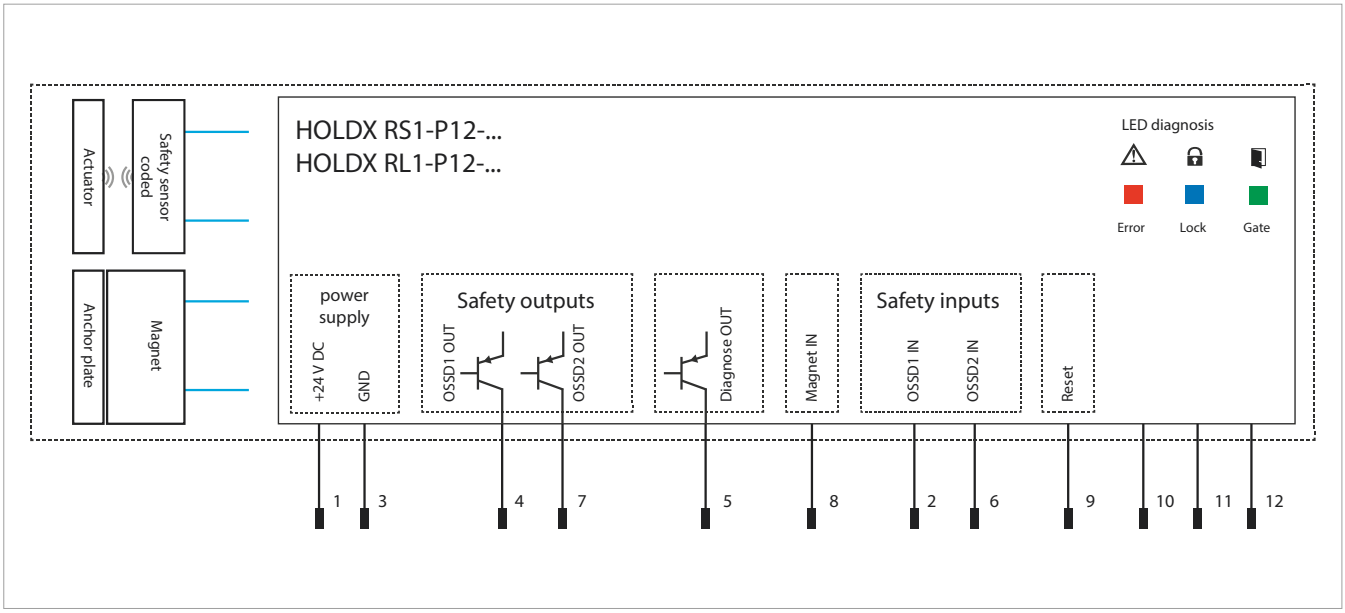
Diagnosis advantages

- ✓ Extended diagnosis to standard PLC via one output / input
  - Door open / closed
  - Door locked
  - Locking force not reached
  - Door torn opened
  - Error in the input circuit of the guard locking
  - Error in OSSD output circuit of the guard locking
  - Wrong actuator
- ✓ Functional modules for Siemens / Beckhoff / Rockwell/ B&R available on the homepage for evaluation of diagnostics

Electrical connection



HOLDX R_1 standalone 8-pin pigtail without EDM function



HOLDX R_1 standalone 12-pin pigtail with EDM function

Diagnostics via an output

The Serial-Out diagnosis output of the HOLDX RS1 and RL1 provides the higher-level PLC with up to 10 pieces of information. The free-of-charge blocks for diagnosis evaluation for a Siemens, Beckhoff, Rockwell or B&R standard PLC's are available on our website ww.safety-products.de.

Diagnostic input (magnet ON)

The guard locking function can be switched on via the "magnet ON" input. If the input is activated via the communication module on the standard PLC, the built-in Bluetooth interface can be switched on / off.

HOLDX R - networkable versions

Magnetic power

600 N locking force variant S

1200 N locking force variant L

50 N permanent magnet

Flexible

Movable anchor plate

Compact design

Installation on aluminum profiles

from 35 mm construction width

Intelligent failure monitoring

With the aid of magnetic flux measurement

Secure electrical locking

acc. to PLe EN ISO 13849-1

High coding

2 coding levels acc. to EN 14119

Standard/ individually coded

LED diagnosis

Extended status display

Connection

2 flexible pigtail cable

with M12 8-pin or M12 12-pin

for easy wiring

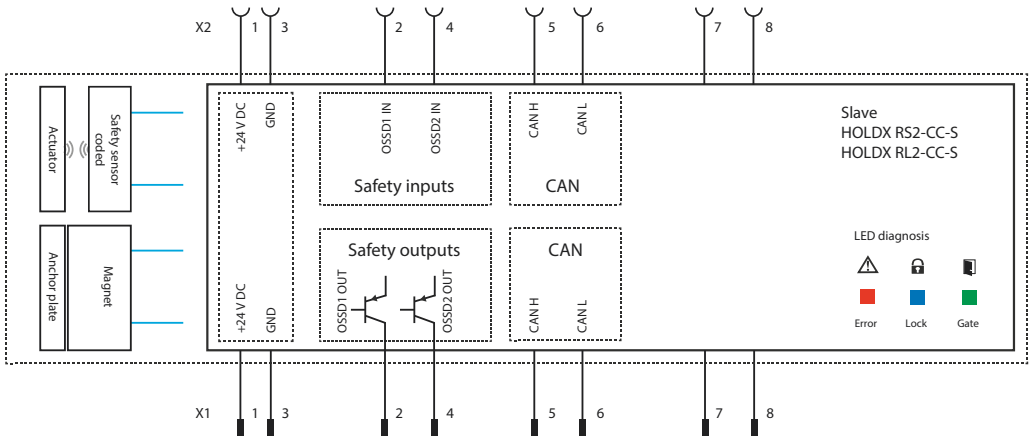
Advantages of intelligent series connection

- ✓ Series connection of up to 17 process guard lockings up to PLe according to EN ISO 13849-1
- ✓ Up to 170 diagnostic information are available in the system with series connection
- ✓ Each process guard locking can be controlled individually
- ✓ Evaluation of diagnostics on the standard PLC without gateway
- ✓ Functional modules for Siemens / Beckhoff / Rockwell/ B&R available on the homepage for evaluation of diagnostics
- ✓ Wireless transmission of safe and non-safe diagnostic information even with series connection via the wireless safety PLC Safety Simplifier

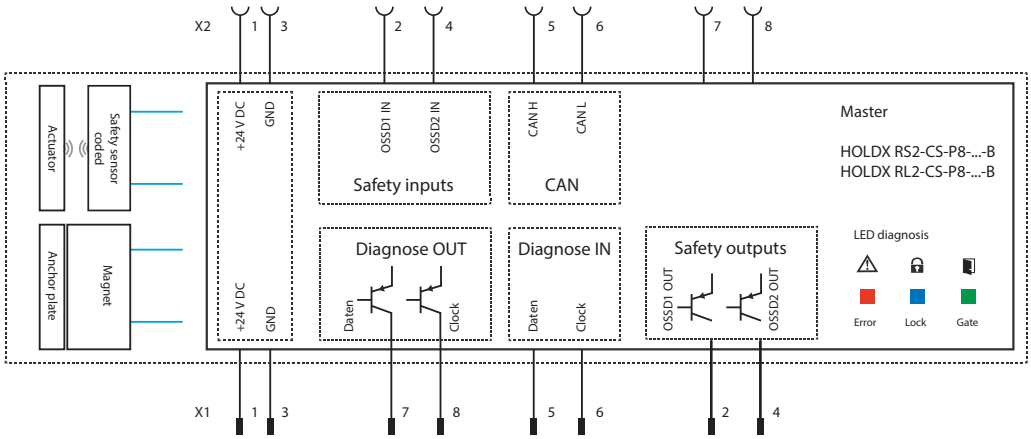
Addressing without laptop & without software

Simply address the HOLDX RS2 and RL2 process guard lockings via the selector switch. In addition to the master, set up to 16 additional slaves once.

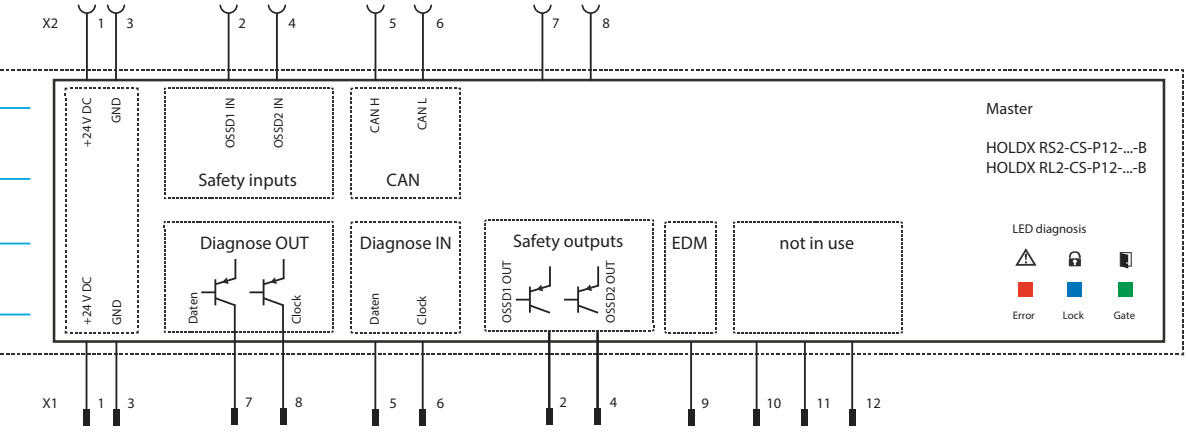
Electrical connection



HOLDX R_2 slave 8-pin pigtail



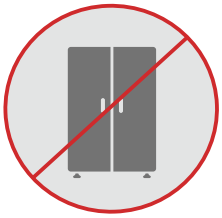
HOLDX R_2 master 8-pin pigtail



HOLDX R master 12-pin pigtail with EDM function and manual or automatic reset

Intelligent combination of series connection and high diagnostics

Reduction of commissioning time



Reduce your effort and do without an additional, external safety PLC or switch cabinets for the safety technology. Thanks to the Safety Simplifier with IP65 protection, you no longer need them. The wiring effort of the safety components is reduced to a minimum using the safe wireless communication.

Thanks to the two existing pigtail connections, Y-distributors and terminal boxes are no longer necessary. The line is simply looped through from process guard locking to process guard locking.

Thus, up to 17 smart HOLDX R process guard locking act on a safety circuit. The guard lockings connected in series are simply evaluated with the aid of a Safety Simplifier. The communication between the robot control cabinet and the control cabinet of the machine controller is then securely transmitted via a wireless network.

Status information can be evaluated and visualized by the standard PLC. The interface can be easily configured with the free-of-charge functional modules from SSP. All information of the security chain and the diagnosis is transmitted.

WIRELESS
Safety Communication
SIL 3, Ple, cat 4

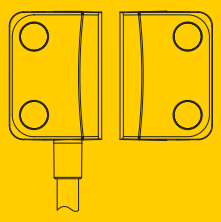
DID YOU KNOW...

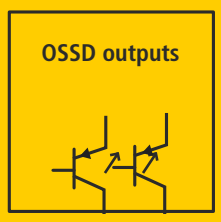
how OSSD outputs work?

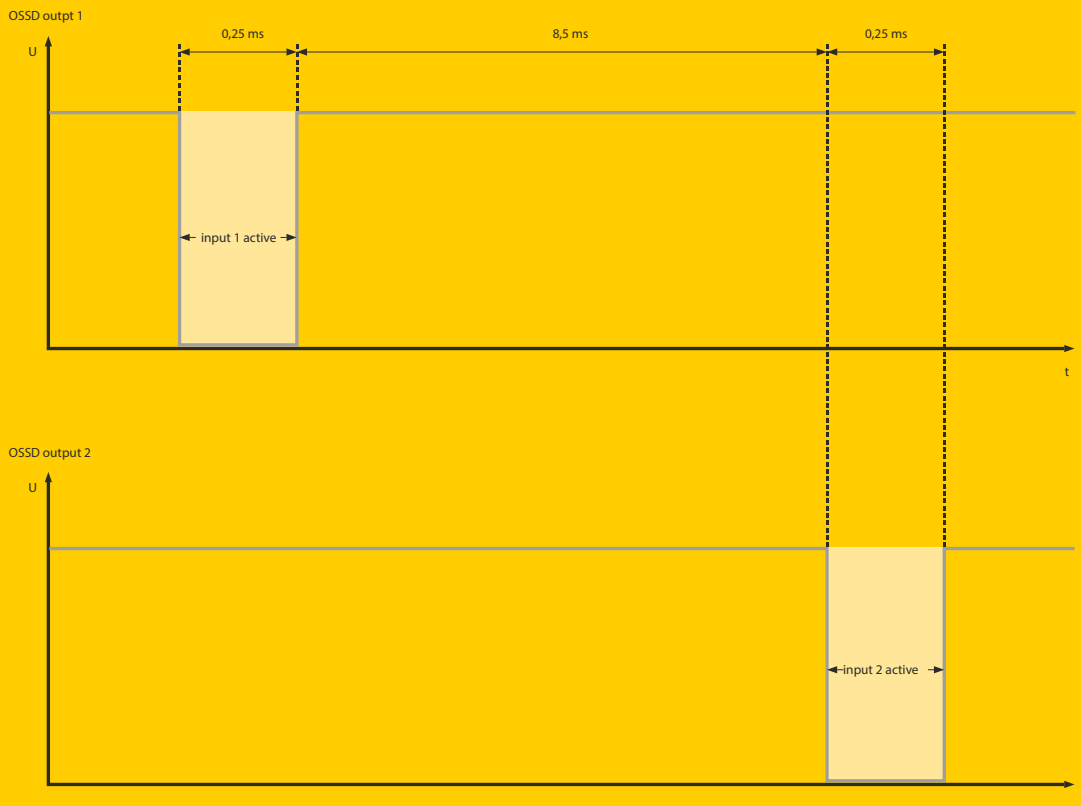
OSSD means "Output Switching Signal Device".

This output type is typically used with safety sensors and safety light curtains or for safe control outputs. Conventional 24 V DC outputs are actually critical for safety functions, as they cannot be detected by an external 24 V line via a short circuit. For this reason, the two OSSD outputs are switched off with a time delay. During the pause time of the output, a built-in input is activated and read back. If 24 V is present at the input after switching off the output, an error is detected and the two built-in processors safely switch off both outputs.

This technology makes it easy to monitor short circuits and cross circuits up to PLe according to EN ISO 13849-1. With the aid of an extended LED diagnosis, such as on the HOLDX R process guard locking or the RFID safety sensors of the SAFIX, the detected faults on the safety sensor can be quickly detected and make troubleshooting considerably easier.

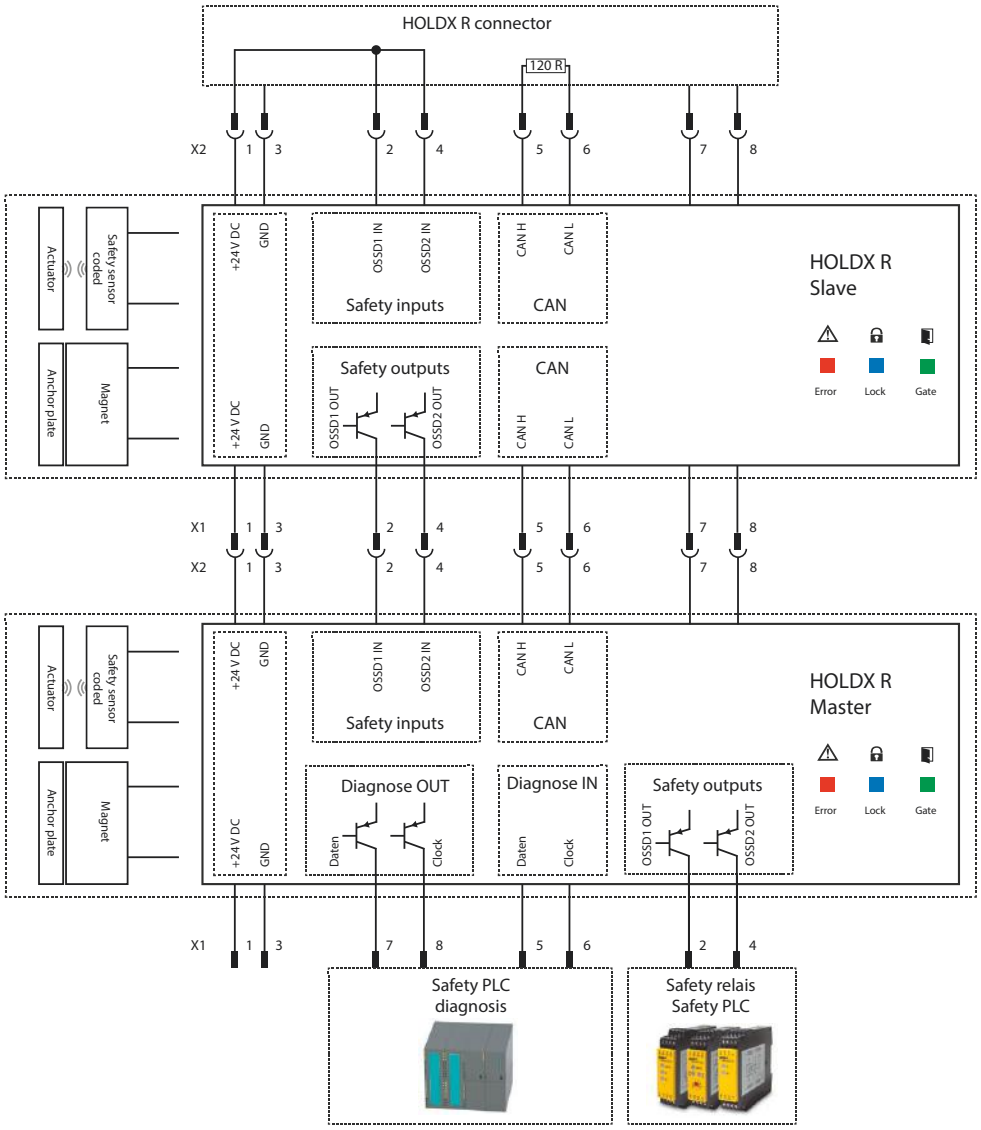






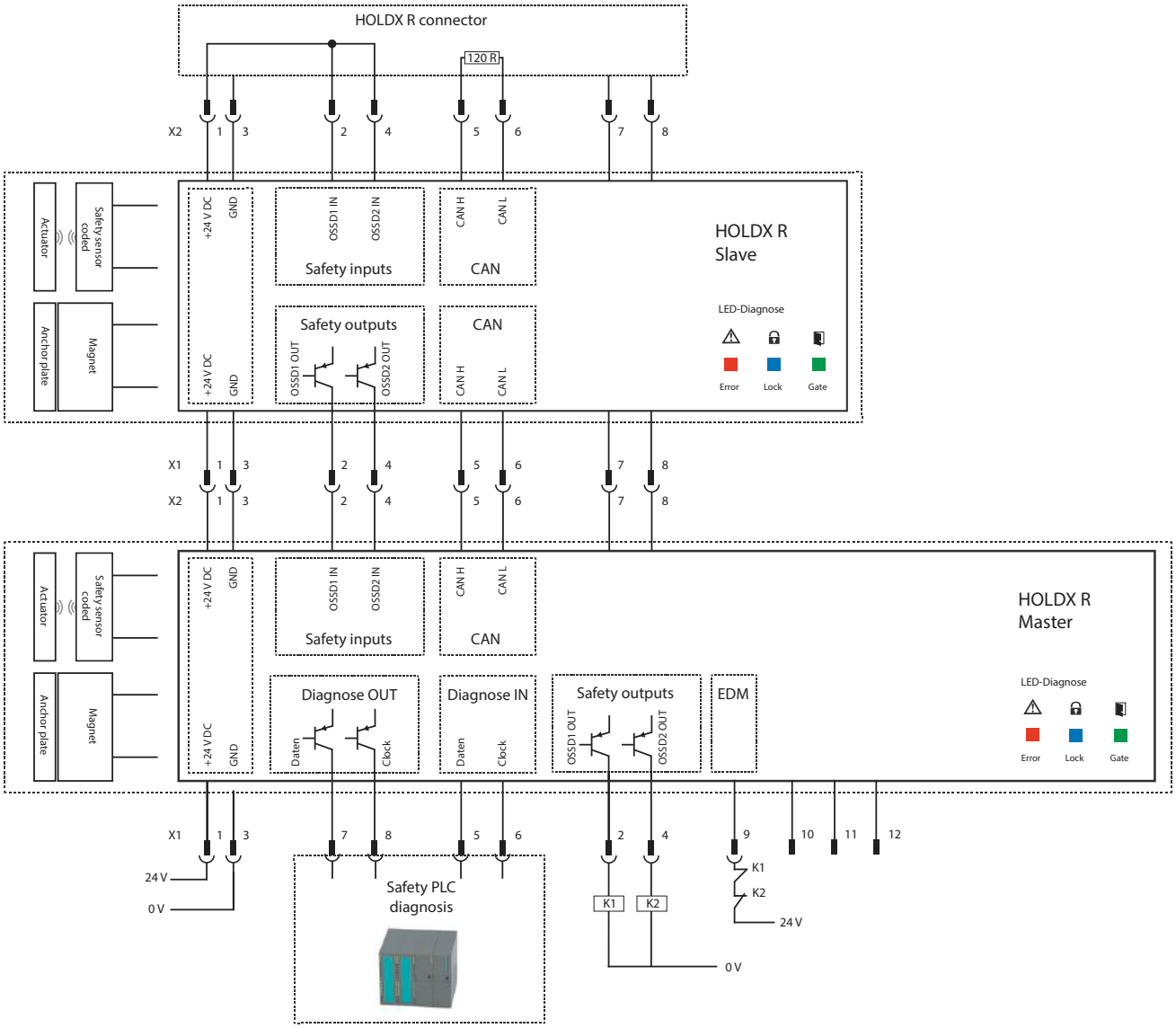
Time course of input and output functions

Electrical connection



HOLDX R master slave series connection 8-pin

Electrical connection



HOLDX R master slave series connection 12-pin with EDM function

DID YOU KNOW...

that the Performace Level (PL) is reduced with a series connection of safety switches with mechanical contacts?

In order to save costs, safety switches of several safety doors are often connected in series to a safety relay. However, the diagnostic capability of the faults is greatly reduced with a series connection of door switches with mechanical contacts. This makes it difficult to determine the achievable performance level. This topic is described in EN ISO 14119 in paragraph "8.6 Logic series connection of interlocking devices" and reference is made to the technical report ISO/TR 24119.

In the past, the same degree of diagnostic coverage (DC) was often incorrectly assumed for mechanical safety switches with a series connection and a DC of 99% was specified by the manufacturer. However, in a series connection the actual DC often shrinks below 60% and the achievable performance level of PLe drops to PLc.

For this reason, many machines are unnoticed equipped with an inadequate PL and are therefore not safe. According to ISO/TR, these faults are referred to as fault concealment, but EN ISO 13849-1 requires for Cat. 3 or Cat. 4 that every first fault is detected by the system and that the protective function is not impaired. For this reason, no category 3 can be claimed for these machines and the performance level PLe is not achieved, regardless of whether the DC is above 60%.

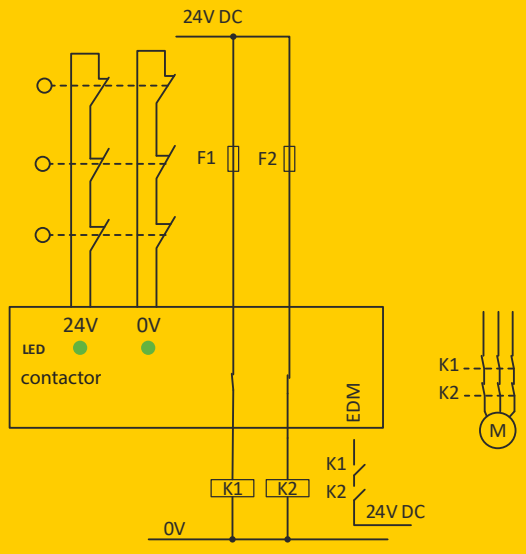


Figure 1:
All doors are closed,
No error in the safety circuit,
Motor running

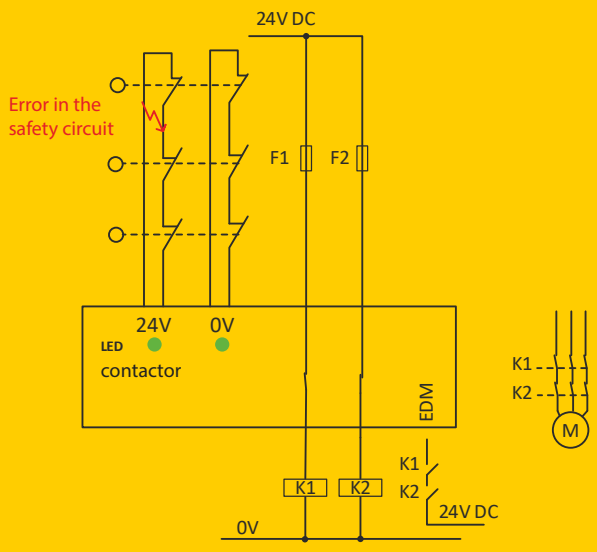


Figure 2:
All doors are closed,
Error in the safety circuit (cross circuit),
Fault due to safety relay not detected,
Motor running

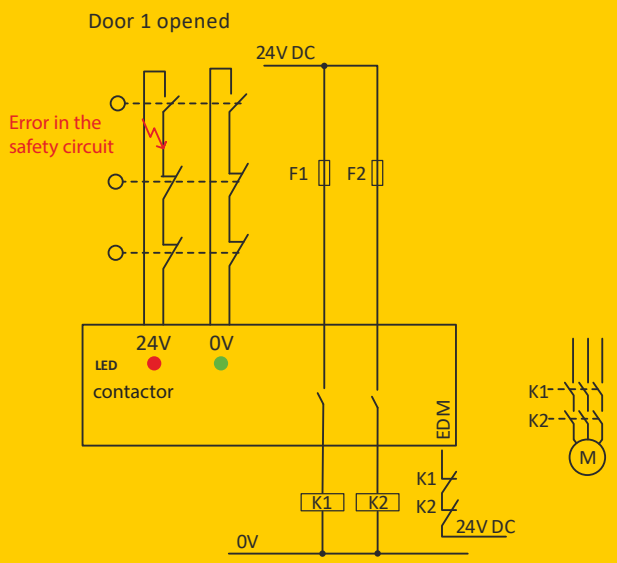


Figure 3:
Door 1 opened,
Error in the safety circuit,
2-channel error is detected by the safety relay (only one channel switches off),
Motor stopped

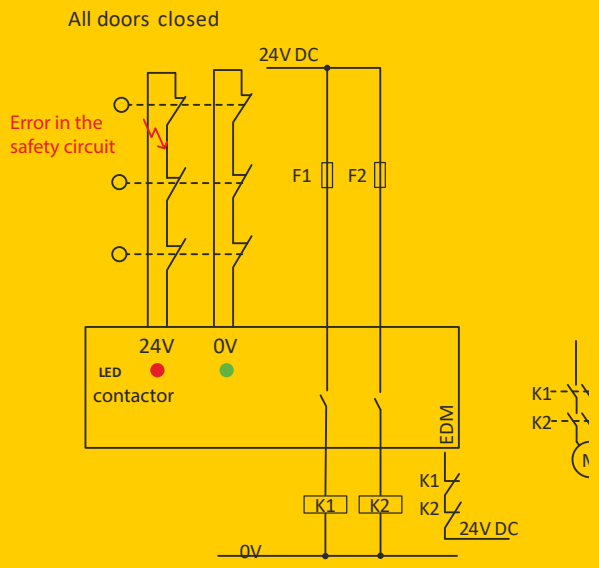


Figure 4:
All doors are closed,
Error in the safety circuit,
2-channel error is detected by the safety relay,
Motor stopped

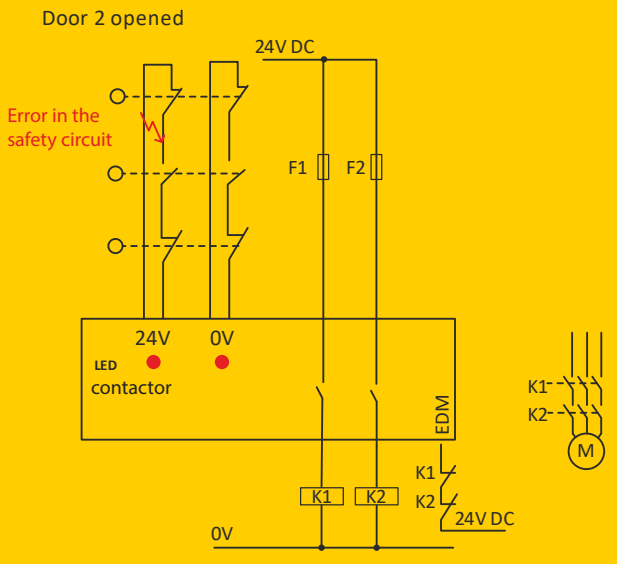


Figure 5:
Door 2 is opened
Error in the safety circuit,
Errors are cleared in the safety relay by opening both channels,
Motor stopped

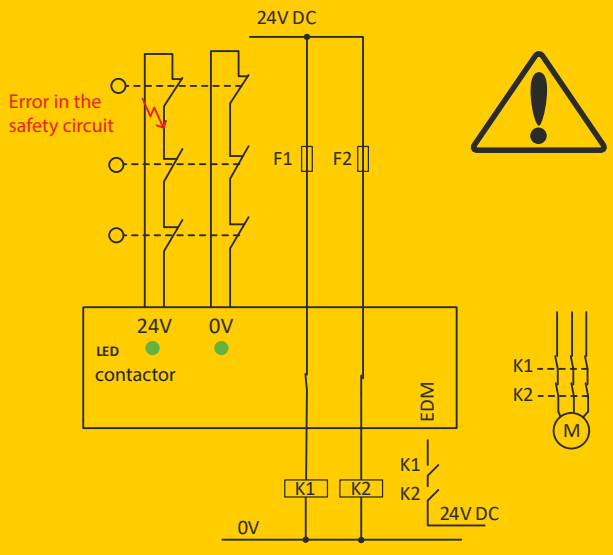
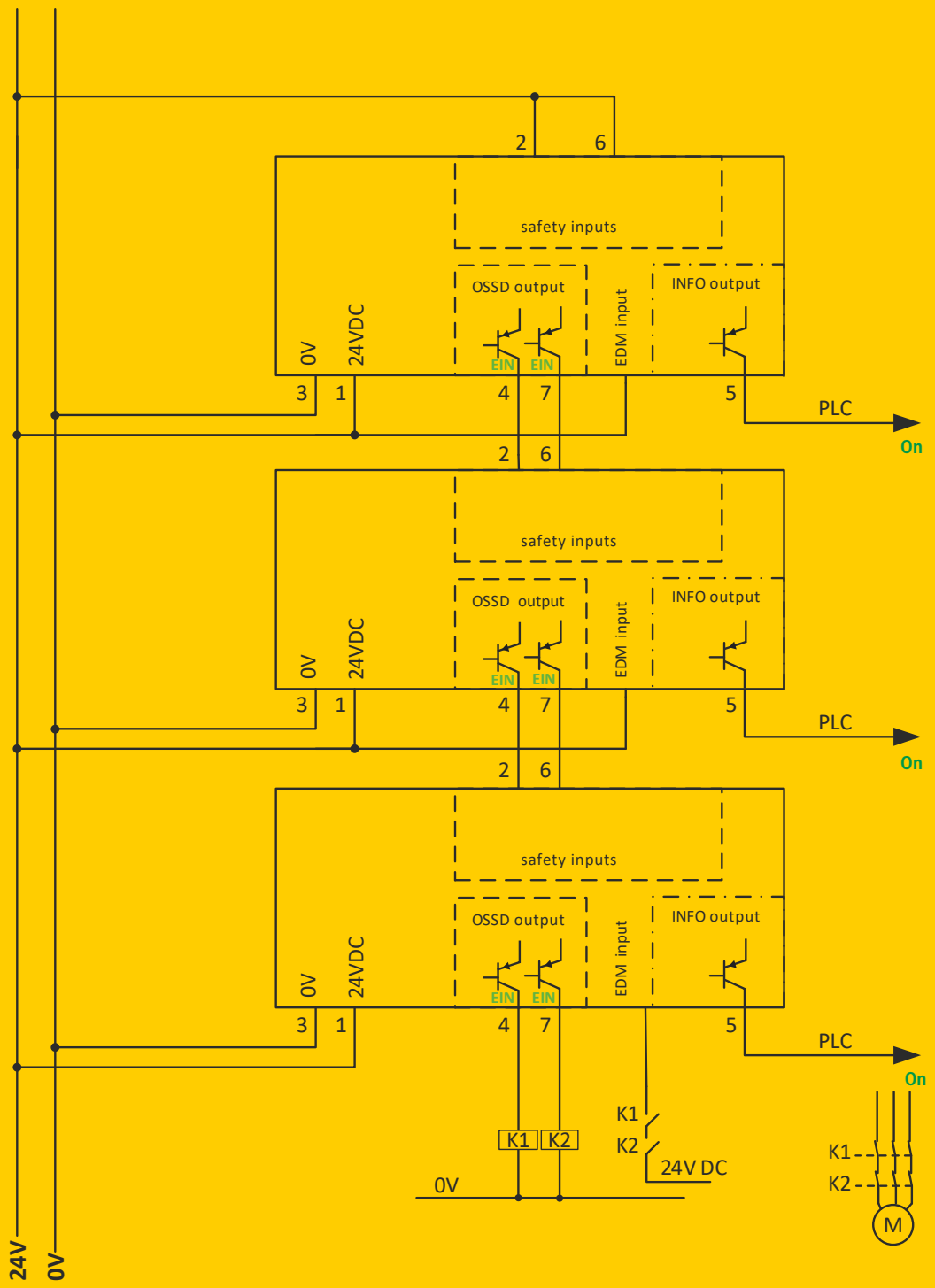


Figure 6:
All doors are closed,
Error in the safety circuit,
But no error detected in the safety relay (error over-written by opening both channels),
Motor running

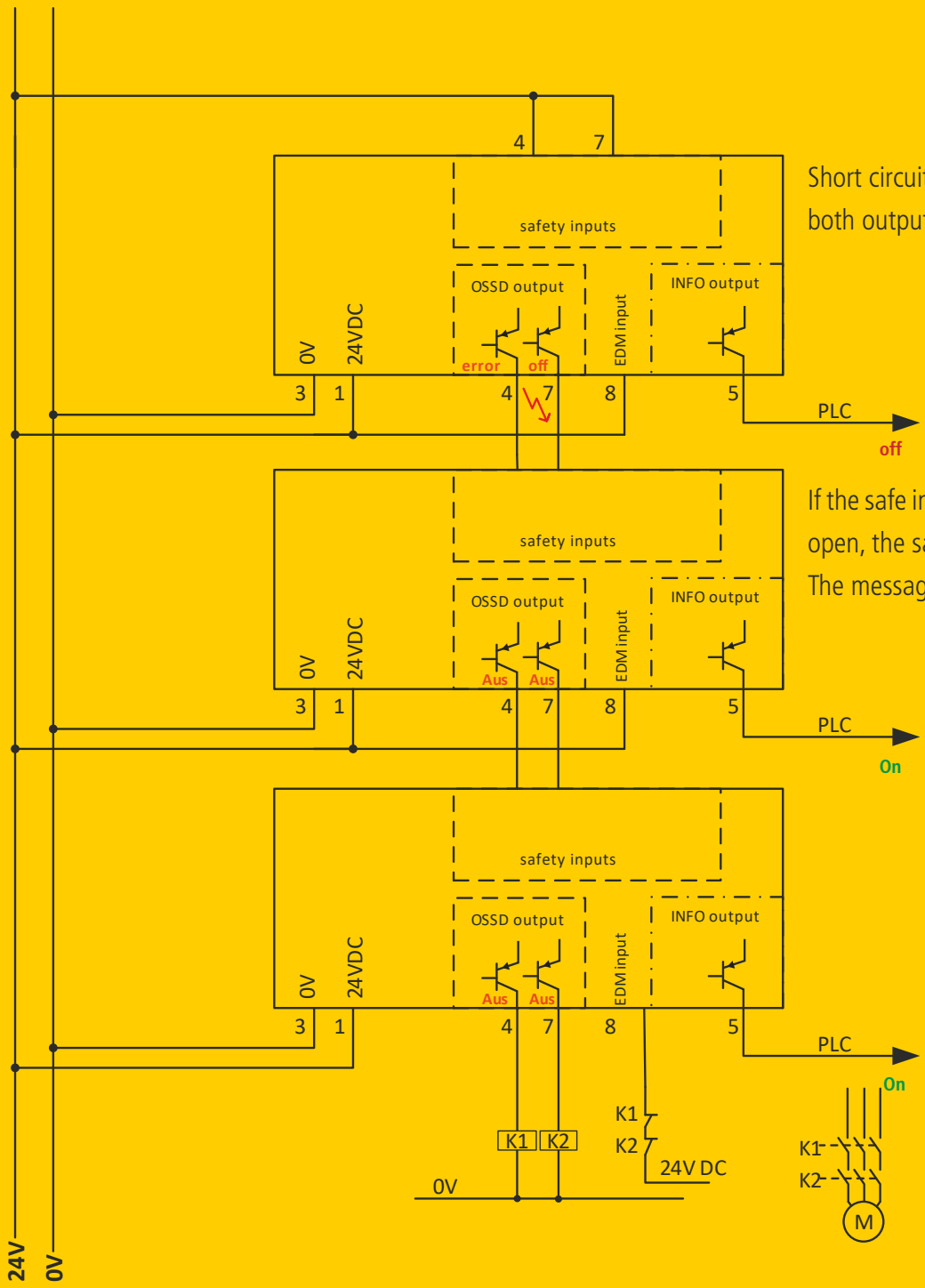
The SAFIX 3 safety sensors and the HOLDX R process guard locking have safe OSSD outputs in the output circuit.

The use of OSSD outputs changes neither the wiring category nor the diagnostic coverage (DC) according to EN ISO 13849-1. Every single error that occurs is detected in the system and leads to a safe shutdown. Several safety switches up to PLe can be connected in series without any problems.

If the safety sensors are cascaded (connected in series), only the PFHD value of the entire circuit must be calculated. For the validation software SISTEMA libraries are available which can be downloaded from the SSP website.



The built-in EDM function monitors downstream, positively driven contactors. A safety relay is no longer necessary.



Error detection in the system thanks to the built-in OSSD outputs

Further information on page 21

Magnetic process guard locking HOLDX S1

HOLDX S · The hybrid approach = All in one

Modern RFID sensor SAFIX

HOLDX S1 process guard locking

SAFIX and HOLDX combined

HOLDX

SAFE POSITION MONITORING

The HOLDX S1 is equipped with both **RFID sensors** SAFIX 1 and SAFIX 3 can be combined to achieve a secure locking up to PLe according to EN ISO 13849-1

Magnetic power
500 N locking force
30 N permanent magnet

Flexible
Movable anchor plate

Protection class
IP67

Smallest process guard locking
Mounting on aluminum profile systems

Connection
M12 8-pin

Secure electrical locking
In combination with SAFIX acc. To PLe EN ISO 13849-1

LED diagnosis
Extended status display in combination with SAFIX

Applications for HOLDX S1

Easy installation for various applications

LED diagnosis

HOLDX S1

HOLDX L1 movable anchor plate

The compact magnetic process guard locking HOLDX S1 with 500 N locking force, protection class IP67 and easy installation is used everywhere where doors, hatches or drawers have to be locked.

The process guard locking HOLDX S1 provides an easy mounting possibility for safety sensors. In combination with the non-contact RFID sensor SAFIX, it enables a safe position monitoring (PLe acc. to EN ISO 13849-1) with process guard locking. The process guard locking HOLDX S1 opened in de-energized state can be installed with a locking force of 500 N in almost all safety doors and openings. When the magnetic clamp is unlocked, a 30 N permanent magnet provides the fixation. Only an 8-pin cable is necessary for the connection of the HOLDX S1, regardless of whether standalone or in combination with SAFIX. In addition, with the safety distribution box XCONN, it is possible to connect in series without great wiring effort.

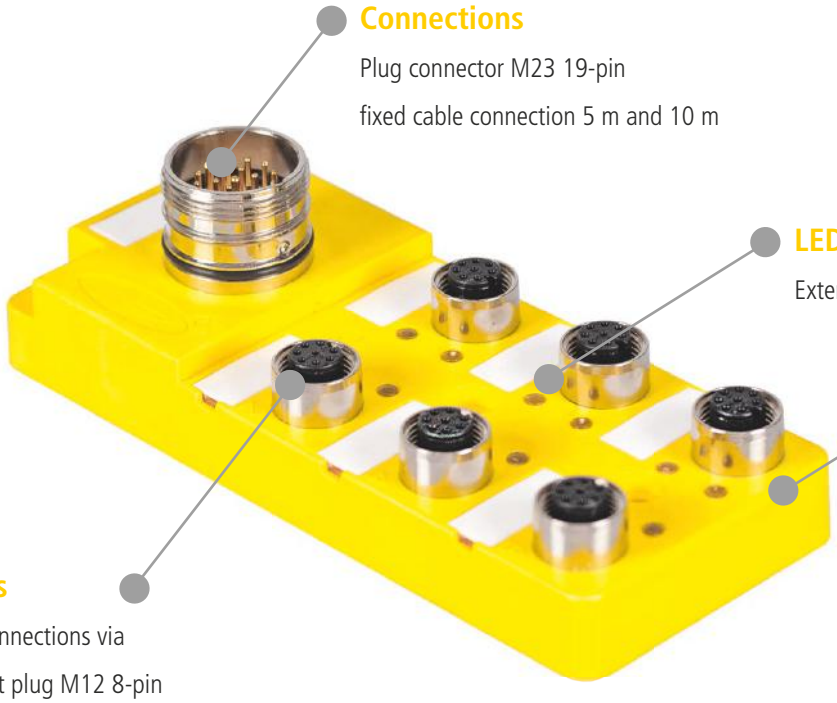
The LED diagnosis is installed user-friendly next to the guard locking and is visible from all areas. With the blue LED the operator can recognize if the guard locking is locked.

Compact design and easy installation

Simplify your installation and wiring effort

Advantages of the XCONN passive junction

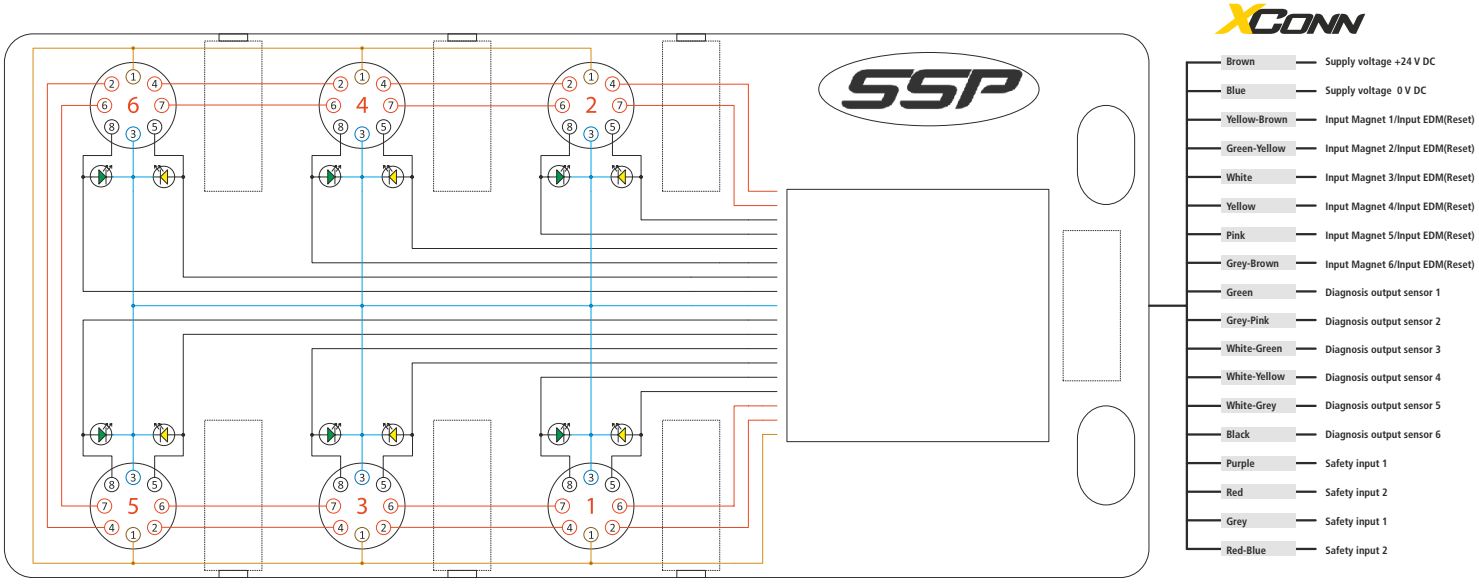
- ✓ Connection of up to six SAFIX safety sensor with RFID technology
- ✓ Connection of up to six HOLDX process guard lockings
- ✓ Release of all process guard lockings can be set individually
- ✓ Connection of up to six EDI emergency stop buttons



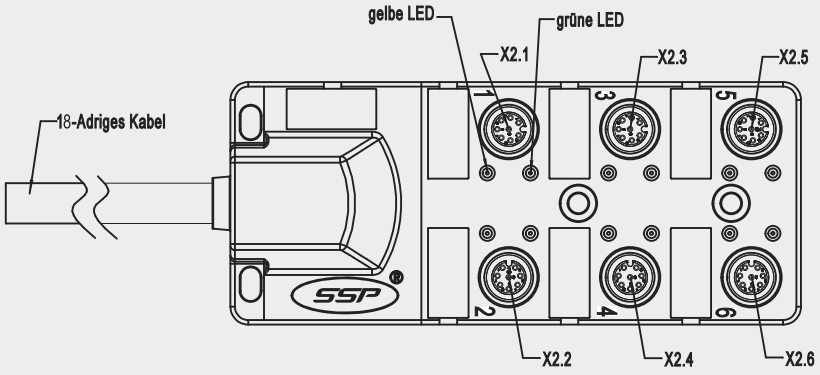
Extended LED diagnosis

Green	
	Sensor state
Yellow	
	Magnet/EDM function triggering

Electrical connection



Dimensioning



Safe wireless distributors

Construction width

40 mm suitable for aluminum systems

Connections

Socket plug M12 8-pin

Protection class

IP65

4 shutdown circuits

Individually evaluable safety functions

Networkable

Safe LED wireless or CAN interface

Diagnosis

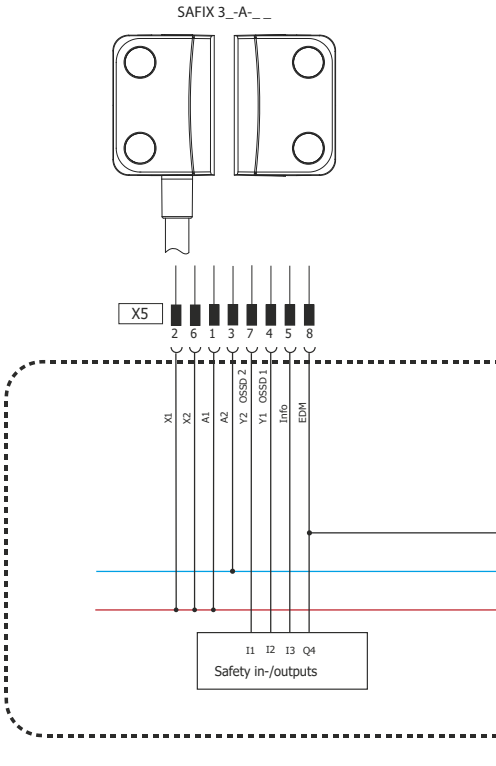
Extended LED diagnosis with touch panel

Voltage supply

Male connector M12 5-pin

WIRELESS

Safety Communication
SIL 3, Ple, cat 4



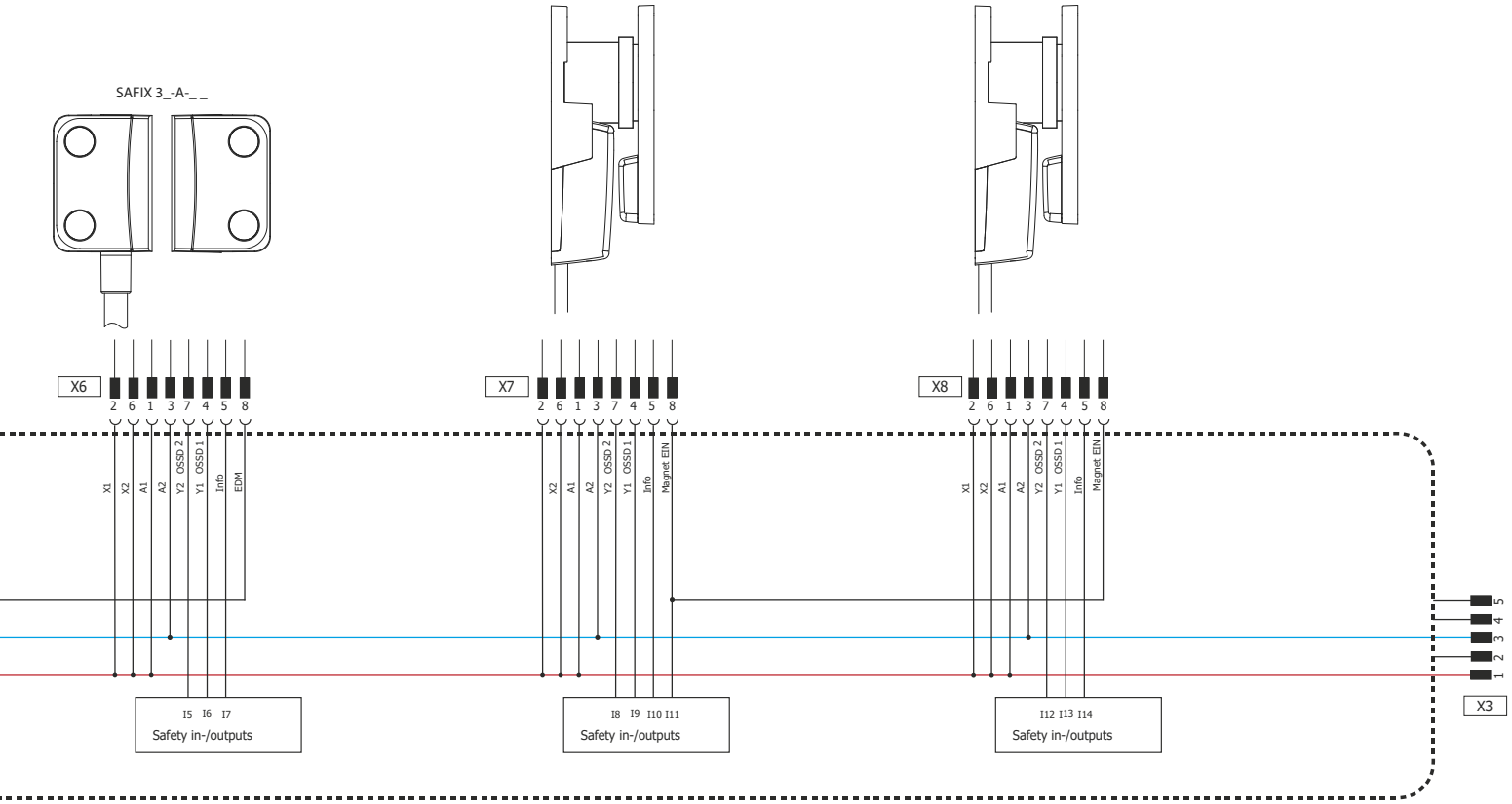
The safe wireless distributors from SSP enable networking and decentralized configuration of up to 16 units acc. to PLe. Each safe distributor contains 14 safe inputs/outputs, which can be flexibly configured.

Further information can be found in our Safety Simplifier catalog or at www.safety-products.de

Decentralized safety concept

Each connection can be used individually or in combination with a safety function. With the free software "Simplifier Manager" the safety function can be programmed. The safe wireless distributors with the functions of the Safety Simplifier can take over the entire safety technology of your system. A higher-level safety control is not necessary.

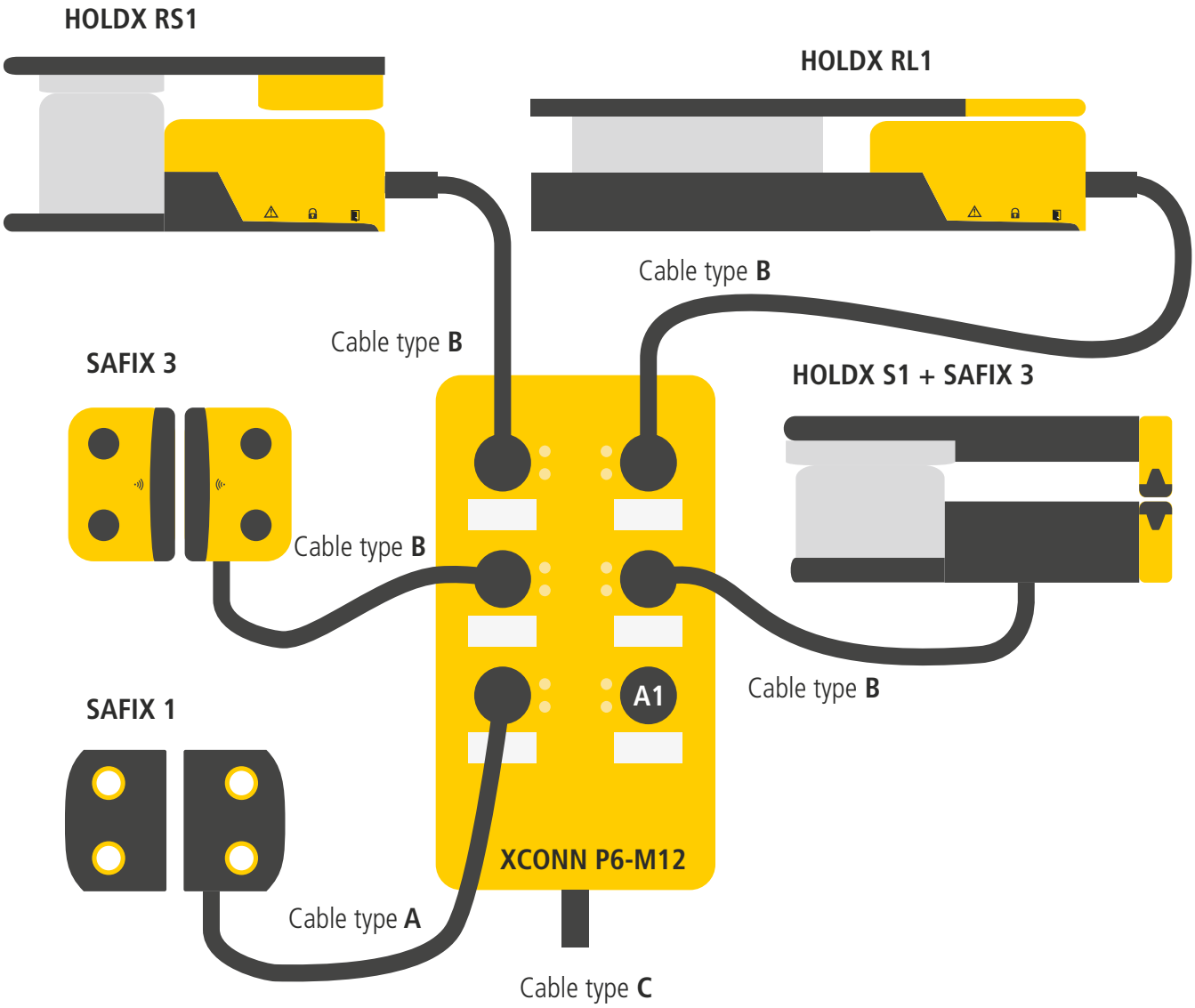
Electrical connection

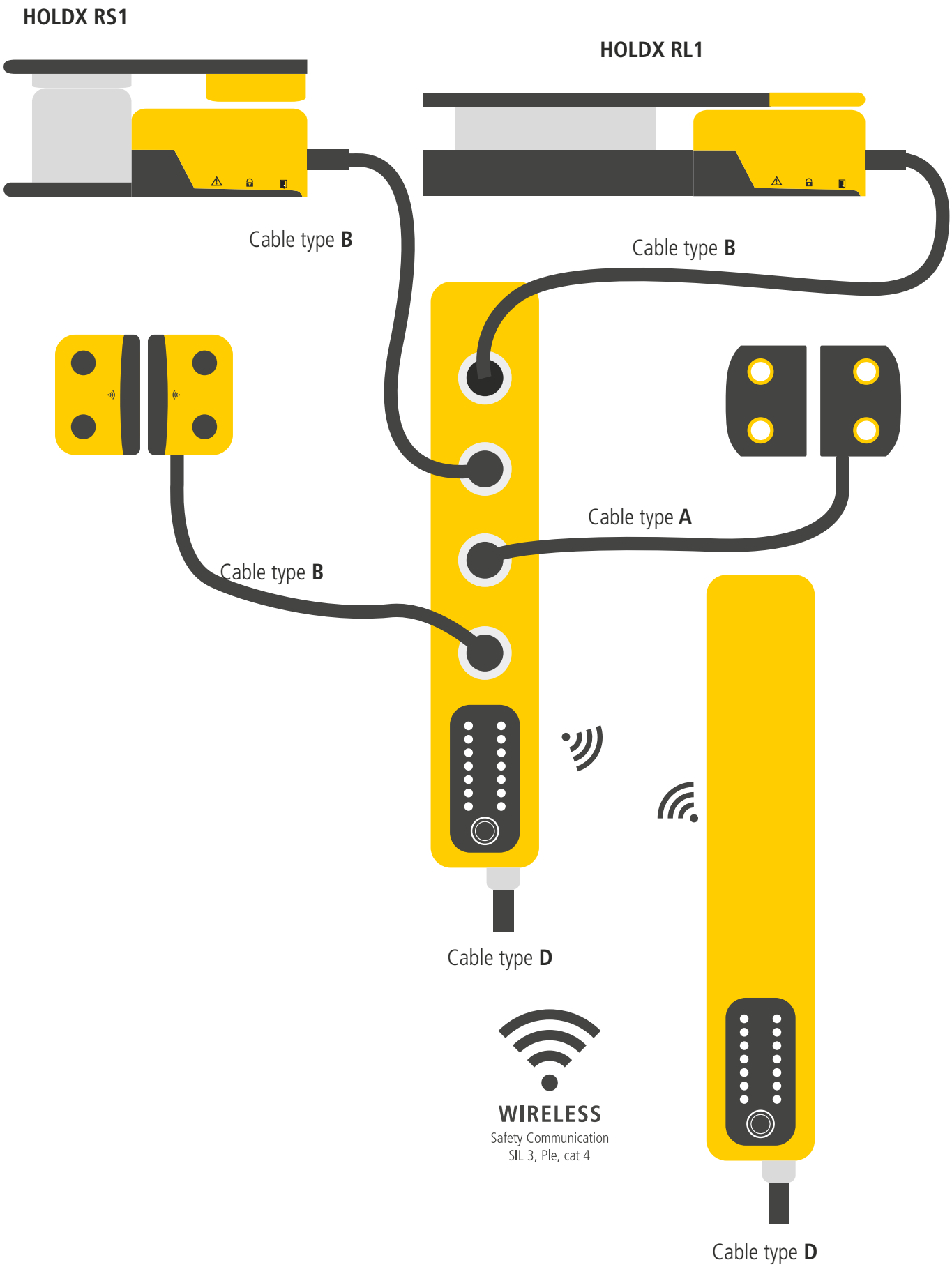


Connection cables overview

Cable types

Cable type **A**	connection line SAFIX 1
Cable type **B**	connection line SAFIX 3, HOLDX S1 and HOLDX R_1
Cable type **C**	connection line for M23 plug connection 19 pin
Cable type **D**	connection line for M12 plug connection 5 pin for Safety Simplifier




HOLDX RS1
HOLDX RL1
Cable type B
Cable type B
Cable type A
Cable type B
Cable type D
WIRELESS
Safety Communication
SIL 3, PIe, cat 4
Cable type D

Order lists

SAFIX 3 - RFID safety sensor

Product image	Denomination	Coding	EDM/reset	Connection	Item no.
SAFIX 3 - Sensors					
	SAFIX S3-A-P	standard	automatic	pigtail M12 8-pin	SP-E-76-000-01
	SAFIX S3-X-P	standard	manual	pigtail M12 8-pin	SP-E-76-000-02
	SAFIX W3-A-P	relearnable high	automatic	pigtail M12 8-pin	SP-E-76-000-05
	SAFIX W3-X-P	relearnable high	manual	pigtail M12 8-pin	SP-E-76-000-06
	SAFIX S3-A-10M	standard	automatic	cable 10 m	SP-E-76-000-08
	SAFIX S3-X-10M	standard	manual	cable 10 m	SP-E-76-000-12
	SAFIX W3-A-10M	relearnable high	automatic	cable 10 m	SP-E-76-000-24
	SAFIX W3-X-10M	relearnable high	manual	cable 10 m	SP-E-76-000-28
	SAFIX S3-A-5M	standard	automatic	cable 5 m	SP-E-76-000-10
	SAFIX S3-X-5M	standard	manual	cable 5 m	SP-E-76-000-14
	SAFIX W3-A-5M	relearnable high	automatic	cable 5 m	SP-E-76-000-26
	SAFIX W3-X-5M	relearnable high	manual	cable 5 m	SP-E-76-000-30
SAFIX 3 kit - sensors incl. SAFIX T5 standard actuator					
	SAFIX SET I3-A-P	individual high	automatic	pigtail M12 8-pin	SP-E-76-000-33
	SAFIX SET I3-X-P	Individual high	manual	pigtail M12 8-pin	SP-E-76-000-34
	SAFIX SET I3-A-10M	individual high	automatic	cable 10 m	SP-E-76-000-46
	SAFIX SET I3-X-10M	individual high	manual	cable 10 m	SP-E-76-000-50
	SAFIX SET I3-A-5M	individual high	automatic	cable 5 m	SP-E-76-000-48
	SAFIX SET I3-X-5M	individual high	manual	cable 5 m	SP-E-76-000-52

Product image	Denomination	Article information	Item no.
SAFIX 3 - Actuator			
	SAFIX T5	standard actuator	SP-E-76-000-00
	SAFIX T6	flat actuator	SP-E-76-000-61

Product image	Denomination	Article information	Item no.
SAFIX 3 - Equipment			
	SAFIX Z B5	installation kit for wing doors aluminum profiles, SAFIX (S, I, W)	SP-K-71-000-08
	SAFIX Z B6	installation kit for sliding doors aluminum profiles, SAFIX (S, I, W)	SP-K-71-000-09
	SAFIX Z-S12T	screw kit 4 x M4x12 incl. torx bit T20H	SP-E-76-000-11

Product image	Denomination	Length	Article information	Item no.
SAFIX 3 - Cable				
	C8D5	5 m	M12 socket plug, 8-pin open end	SP-R-13-309-80
	C8D10	10 m	M12 socket plug, 8-pin open end	SP-R-13-309-81
	C8D15	15 m	M12 socket plug, 8-pin open end	SP-R-13-309-82
	C8D25	25 m	M12 socket plug, 8-pin open end	SP-R-13-309-67
	C8D40	40 m	M12 socket plug, 8-pin open end	SP-R-13-309-66

Connecting cable for XCONN or Safety Simplifier on Page 43

HOLDX R - smart process guard locking

Product image	Denomination	Locking force	Coding	Network	Connection	Item no.
HOLDX RS						
	RS1-P8-S-B	600 N	standard		1 x pigtail 8-pin	SP-X-71-001-04
	RS1-P8-W-B	600 N	individual teachable		1 x pigtail 8-pin	SP-X-71-001-05
	RS1-P12-S-B	600 N	standard		1 x pigtail 12-pin	SP-X-71-001-20
	RS1-P12-W-B	600 N	individual teachable		1 x pigtail 12-pin	SP-X-71-001-21
	RS2-CS-P8-S-B	600 N	standard	master	2 x pigtail 8-pin	SP-X-71-001-10
	RS2-CS-P8-W-B	600 N	individual teachable	master	2 x pigtail 8-pin	SP-X-71-001-11
	RS2-CS-P12-S-B	600 N	standard	master	2 x pigtail - 8-pin/12-pin	SP-X-71-001-24
	RS2-CS-P12-W-B	600 N	individual teachable	master	2 x pigtail - 8-pin/12-pin	SP-X-71-001-25
HOLDX RL						
	RL1-P8-S-B	1200 N	standard		1 x pigtail 8-pin	SP-X-71-001-06
	RL1-P8-W-B	1200 N	individual teachable		1 x pigtail 8-pin	SP-X-71-001-07
	RL1-P12-S-B	1200 N	standard		1 x pigtail 12-pin	SP-X-71-001-22
	RL1-P12-W-B	1200 N	individual teachable		1 x pigtail 12-pin	SP-X-71-001-23
	RL2-CS-P8-S-B	1200 N	standard	master	2 x pigtail 8-pin	SP-X-71-001-14
	RL2-CS-P8-W-B	1200 N	individual teachable	master	2 x pigtail 8-pin	SP-X-71-001-15
	RL2-CS-P12-S-B	1200 N	standard	master	2 x pigtail - 8-pin/12-pin	SP-X-71-001-26
	RL2-CS-P12-W-B	1200 N	individual teachable	master	2 x pigtail - 8-pin/12-pin	SP-X-71-001-27

Product image	Denomination	Article information	Item no.
HOLDX RS anchor plate			
	HOLDX RS-A1	anchor plate with RFID tag - fixed grid 50 N	SP-X-71-001-42
	HOLDX RS-A2	anchor plate with RFID Tag - no grid	SP-X-71-001-43
HOLDX RL anchor plate			
	HOLDX RL-A1	anchor plate with RFID tag - fixed grid 50 N	SP-X-71-001-40
	HOLDX RL-A2	anchor plate with RFID Tag - no grid	SP-X-71-001-41

Product image	Denomination	Article information	Item no.
HOLDX R - equipment			
	HOLDX R1	connector plug 120 Ohm for HOLDX_R2	SP-X-71-002-06
	HOLDX RL-Z-MF1	HOLDX RL installation kit wing doors	SP-X-71-002-00
	HOLDX RL-Z-MS1	HOLDX RL installation kit for sliding doors	SP-X-71-002-01
	HOLDX RS-Z-MF1	HOLDX RS installation kit for wing doors	SP-X-71-002-02
	HOLDX RS-Z-MS1	HOLDX RS installation kit for sliding doors	SP-X-71-002-03

Product image	Denomination	Length	Article information	Item no.
HOLDX R_2 master/slave - connection cable				
	M12-M12-C-C8053-G	0.5 m	M12 socket plug, 8-pole - M12 male connector	SP-X-33-000-35
	M12-M12-C-C813-G	1 m	M12 socket plug, 8-pole - M12 male connector	SP-X-33-000-36
	M12-M12-C-C823-G	2 m	M12 socket plug, 8-pole - M12 male connector	SP-X-33-000-37
	M12-M12-C-C853-G	5 m	M12 socket plug, 8-pole - M12 male connector	SP-X-33-000-38
	M12-M12-C-C8103-G	10 m	M12 socket plug, 8-pole - M12 male connector	SP-X-33-000-39
HOLDX R Master - Cable				
	C8D5	5 m	M12 socket plug, 8-pin open end	SP-R-13-309-80
	C8D10	10 m	M12 socket plug, 8-pin open end	SP-R-13-309-81
	C8D15	15 m	M12 socket plug, 8-pin open end	SP-R-13-309-82
	C8D25	25 m	M12 socket plug, 8-pin open end	SP-R-13-309-67
	C8D40	40 m	M12 socket plug, 8-pin open end	SP-R-13-309-66
	M12-C12101-G	10 m	M12 socket plug, 12-pin open end	SP-X-33-000-21
	M12-C12201-G	20 m	M12 socket plug, 12-pin open end	SP-X-33-000-22

Connecting cable for XCONN or Safety Simplifier on Page 43

HOLDX S1 - Magnetic process guard locking

Product image	Denomination	Article information	Item no.
	HOLDX S1	magnetic guard locking 500 Nm, M12 8-pin	SP-X-73-000-00

Product image	Denomination	Coding	EDM/reset	Connection	Connection line	Item no.
HOLDX S1 kit - HOLDX S1 incl. SAFIX1, actuator T3, connecting cable M8-M12-C80153-VG, screw kit 4 x M4x16						
	HOLDX S1-S1 SET	standard		male connector M8 8-pin		SP-X-73-000-05
	HOLDX S1-W1 SET	relearnable high		male connector M8 8-pin		SP-X-73-000-06
	HOLDX S1-I1 SET	individual high		male connector M8 8-pin		SP-X-73-000-07
HOLDX S1 Set - HOLDX S1 incl. SAFIX3, actuator T5, bolt kit 4 x M4x16						
	HOLDX S1-S3-A-P SET	standard	automatic	pigtail M12 8-pin		SP-X-73-000-51
	HOLDX S1-W3-A-P SET	relearnable high	automatic	pigtail M12 8-pin		SP-X-73-000-52
	HOLDX S1-I3-A-P SET	individual high	automatic	pigtail M12 8-pin		SP-X-73-000-53

Product image	Denomination	Article information	Item no.
HOLDX S1 - equipment			
	HOLDX S1 distance kit	change kit for reduced switching distance (SAFIX 3)	SP-X-73-000-54
	HOLDX S1-M0	installation kit sliding door	SP-X-73-000-02
	HOLDX S1-M2	installation kit wing door	SP-X-73-000-04

Product image	Denomination	Length	Article information	Item no.
HOLDX S1 - Cable				
	C8D5	5 m	M12 socket plug, 8-pin open end	SP-R-13-309-80
	C8D10	10 m	M12 socket plug, 8-pin open end	SP-R-13-309-81
	C8D15	15 m	M12 socket plug, 8-pin open end	SP-R-13-309-82
	C8D25	25 m	M12 socket plug, 8-pin open end	SP-R-13-309-67
	C8D40	40 m	M12 socket plug, 8-pin open end	SP-R-13-309-66

Connecting cable for XCONN or Safety Simplifier on Page 43

XCONN - Passive Distributor

Product image	Denomination	Article information	Item no.
Passive distributor XCONN - 6 slots M12 8-pin			
	XCONN P6-M12-5m	connector 5 m cable	SP-X-71-000-00
	XCONN P6-M12-10m	connector 10 m cable	SP-X-71-000-04
	XCONN P6-M12-M23	connector M23 19-pin	SP-X-71-000-01
XCONN - equipment			
	XCONN A1	jumper plug M12 8-pin	SP-X-71-000-03

Safety Simplifier - wireless distributor

Product image	Denomination	Article information	Item no.
Wireless distributor Safety Simplifier - 4 slots M12 5-pin			
	S14LDRB-H10-Q1A-Q2A-Q3C-Q4A-Q5I-Q6I-Q7I-Q8I-W34		SP-X-89-100-01
	S16LDRB-H10-Q1A-Q2A-Q3A-Q4A		SP-X-89-000-03
	S14LDRB-H10-Q1A-Q2A-Q3A-Q4A		SP-X-89-000-04
	Simplifier SRM	Simplifier radio monitor	SP-N-88-850-03
	Simplifier ZMS	Mounting plate small	SP-N-88-850-01
	Simplifier ZMB	Mounting plate large	SP-N-88-850-02
	Simplifier ZSD	Bolt with seal	SP-N-88-001-89

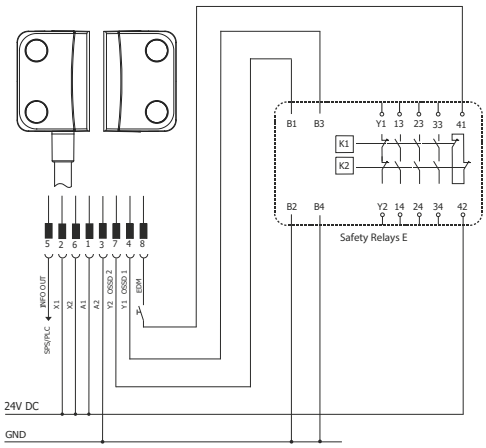
Connection lines according to cable type p.34

Product image	Denomination	Length	Article information	Item no.
Cable (type B) connection line SAFIX 3, HOLDX S1 and HOLDX R_1				
	M12-M12-C823-G	2 m	M12-socket plug, 8-pin - M12-male connector	SP-X-33-000-07
	M12-M12-C853-G	5 m	M12-socket plug, 8-pin - M12-male connector	SP-X-33-000-08
	M12-M12-C8103-G	10 m	M12-socket plug, 8-pin - M12-male connector	SP-X-33-000-09
Cable (type C) connection line for M23 plug connection 19-pin				
	M23-C19101-G	10 m	M23 socket plug, 19-pin - open end	SP-X-33-000-19
	M23-C19201-G	20 m	M23 socket plug, 19-pin - open end	SP-X-33-000-20
Cable (type D) connection line for M12 plug connection 5-pin for Safety Simplifier				
	CD5	5 m	M12 socket plug, 5-pin - open end	SP-R-13-309-50
	CD10	10 m	M12 socket plug, 5-pin - open end	SP-R-13-309-56
	CD20	20 m	M12 socket plug, 5-pin - open end	SP-R-12-100-32

Wiring examples

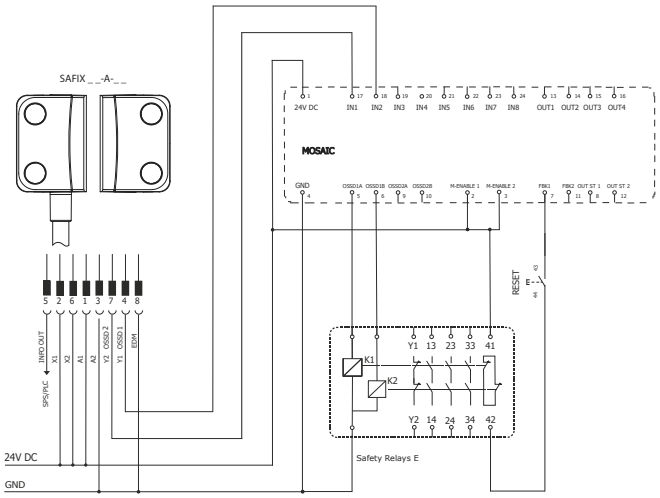
Example 1:

RFID sensor SAFIX 3 with safety relay E series

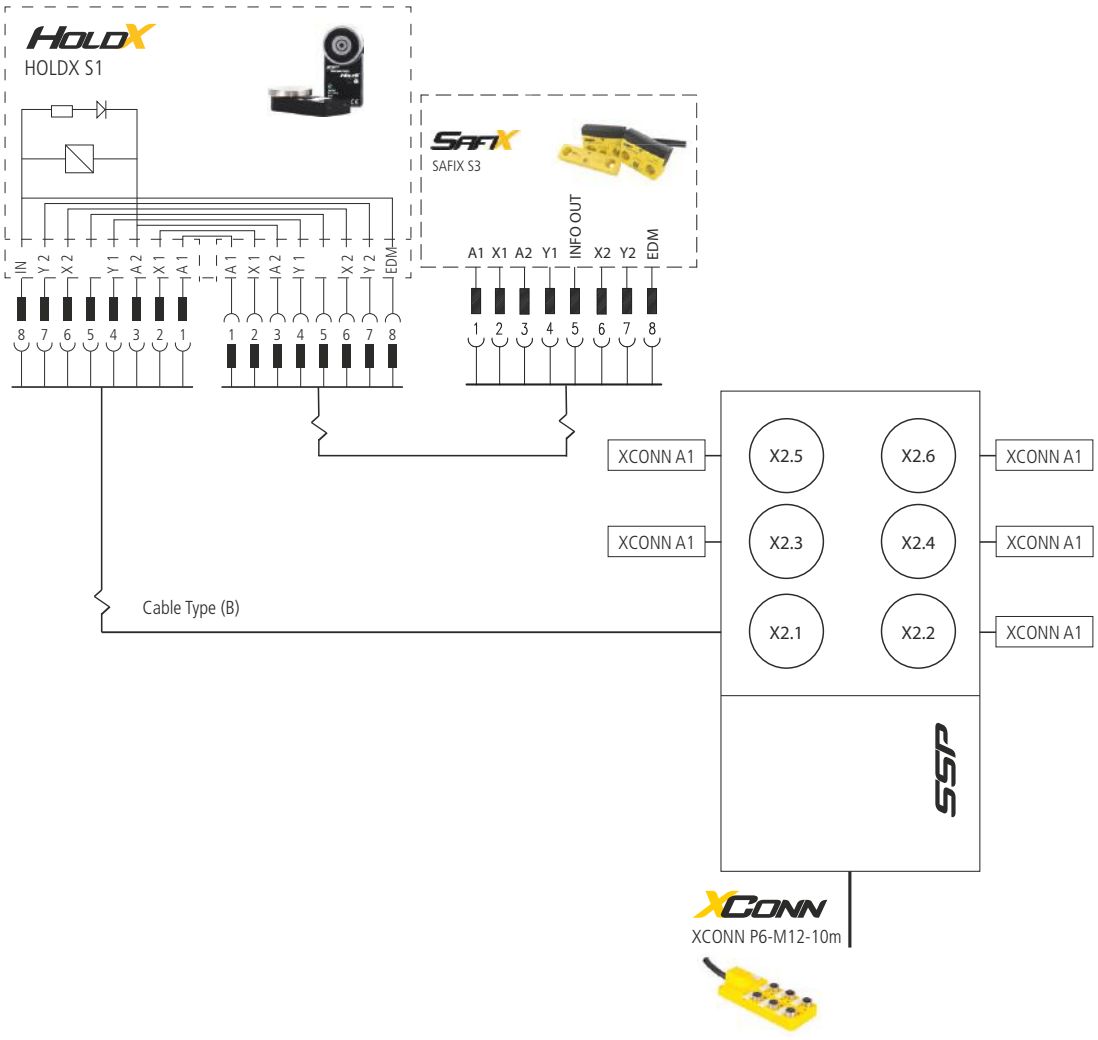


Example 2:

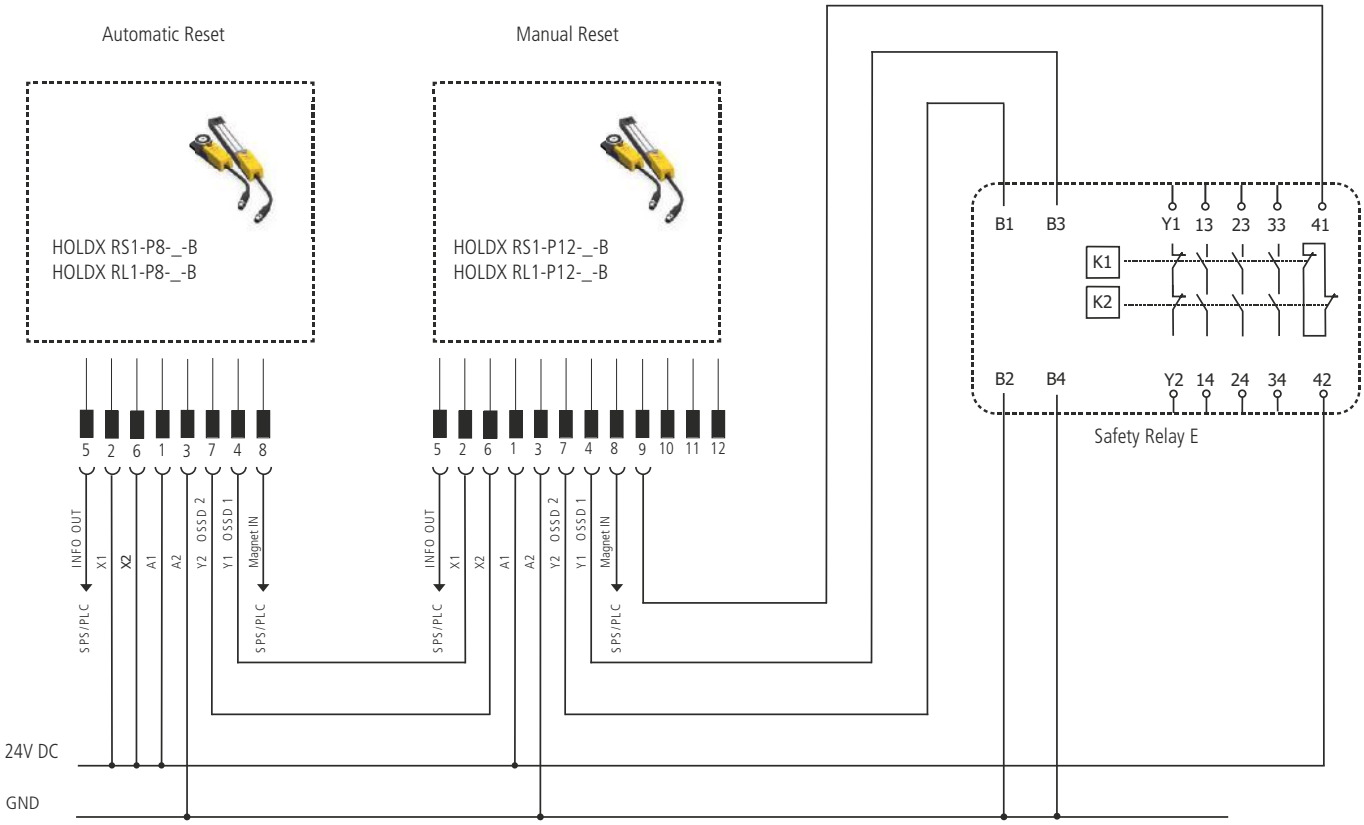
RFID sensor SAFIX 3 with safety PLC MOSAIC



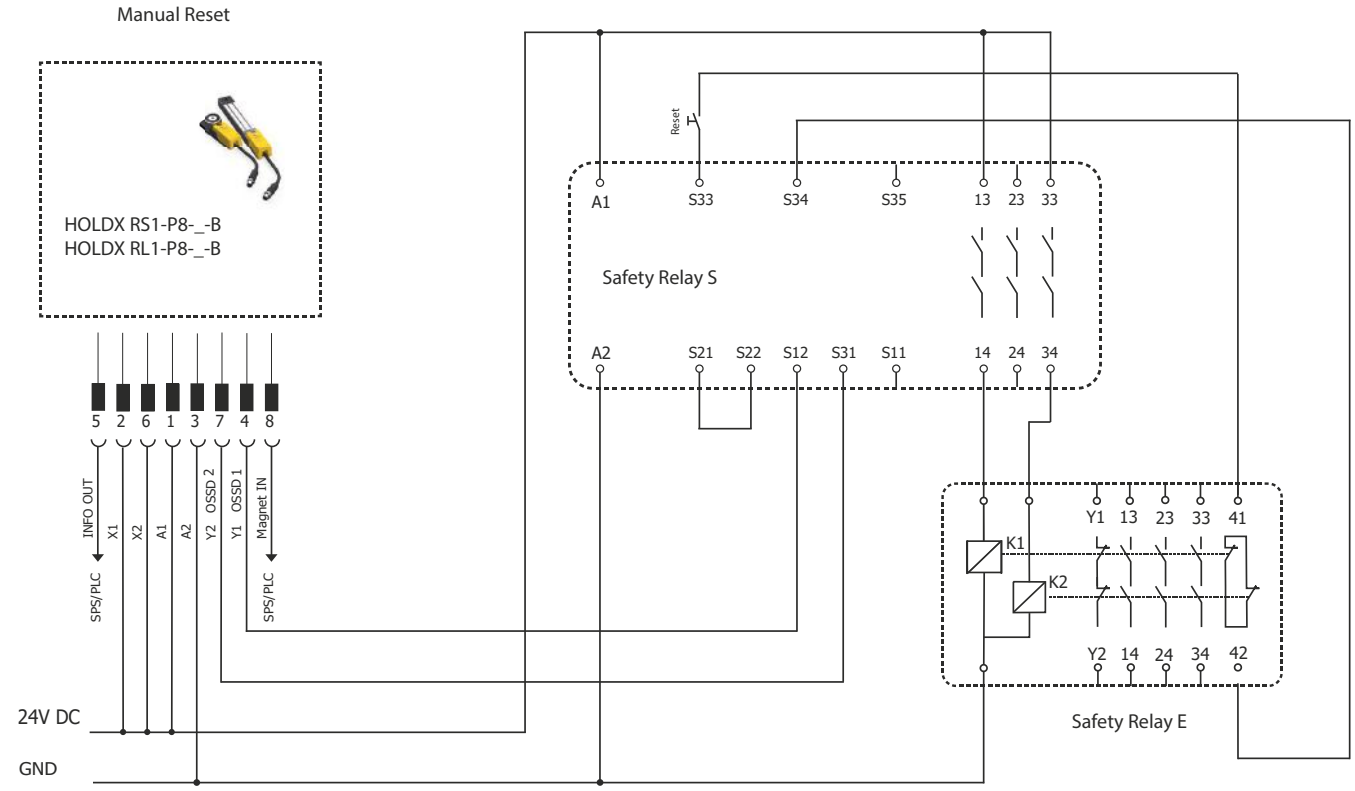
Example 3: Wiring concept SAFIX 3, HOLDX S1 & XCONN



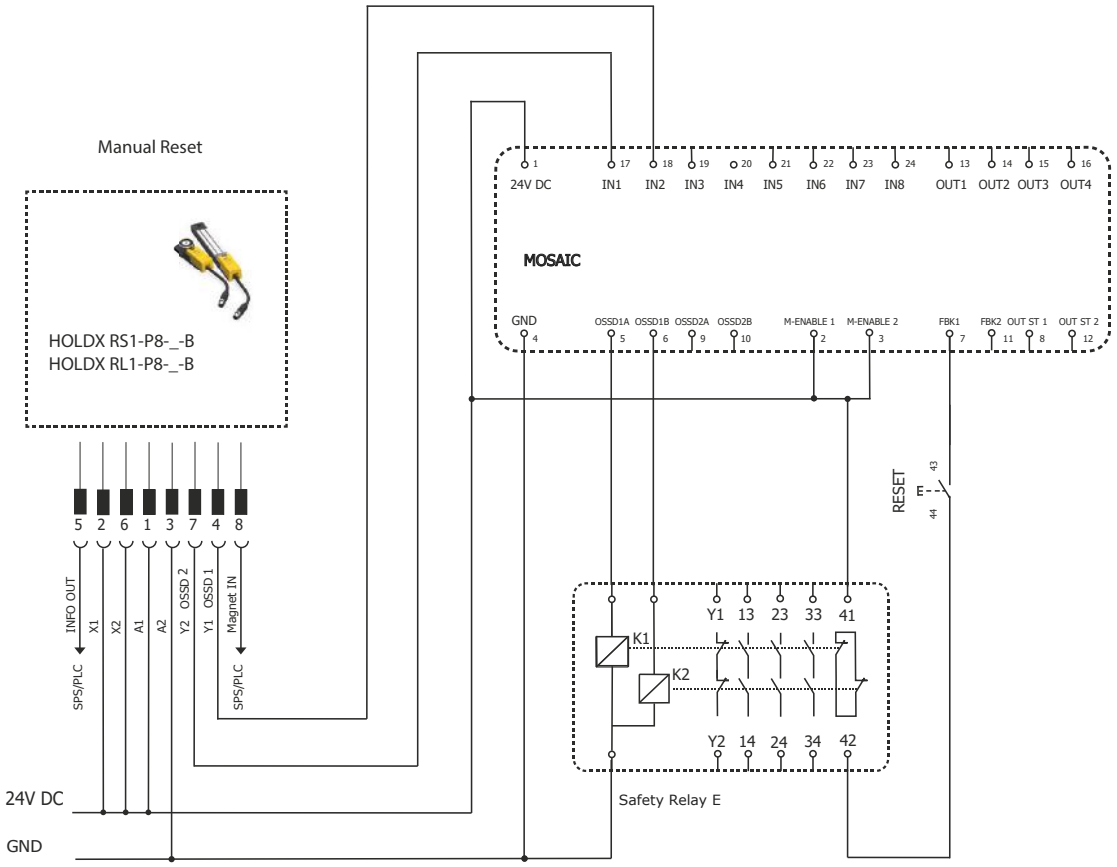
Example 4: Series connection of two smart HOLDX R_1 process guard lockings with E series safety relays and manual reset



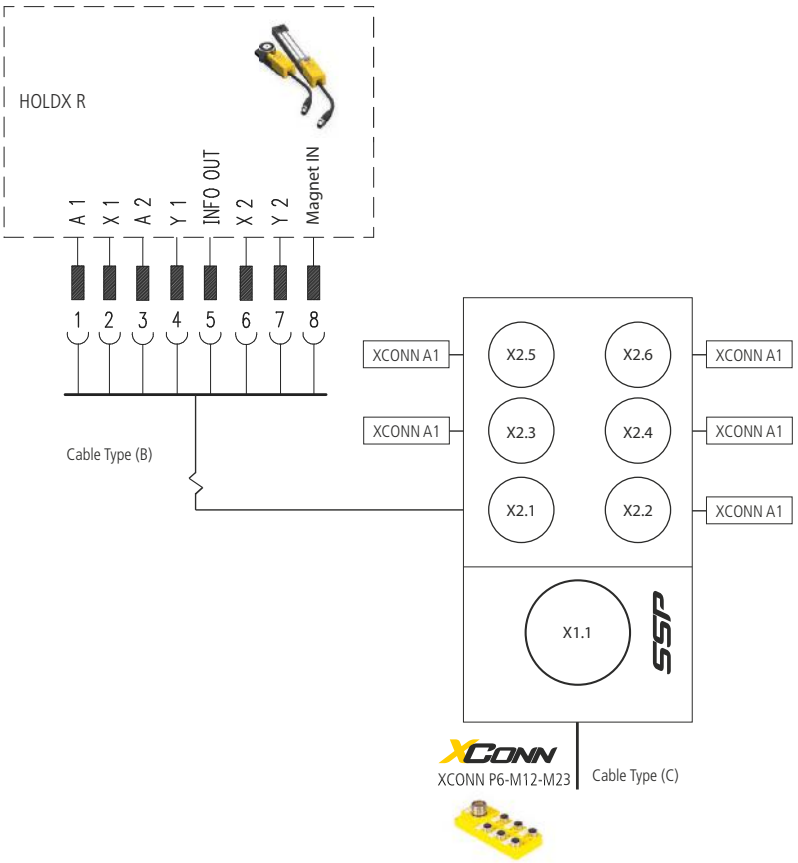
Example 5: Smart process guard locking HOLDX R_1 with safety relay S series



Example 6: Smart process guard locking HOLDX R_1 with safety PLC MOSAIC



Example 7: Wiring concept HOLDX R_1 & XCONN



Safety System Products

SSP Safety System Products GmbH & Co. KG
Zeppelinweg 4 · 78549 Spaichingen · Germany
Tel. +49 7424 98049-0 · Fax +49 7424 98049-99
www.safety-products.de · info@ssp.de.com

INTERNATIONAL PARTNERS

Find them on our website

www.safety-products.de

we simplify safety

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