

S2FPxxx

Guard locking device

Safety switch with interlocking function



Operating Instructions

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1. Operating Instructions

1.1 Function

This operating instructions manual provides all the information you need for the mounting, set-up and commissioning to ensure the safe operation and disassembly of the safety switchgear. The operating instructions must be available in a legible condition and a complete version in the vicinity of the device.

1.2 Target group

All operations described in this operating instructions manual must be carried out by trained specialist personnel, authorized by the plant operator only.

Please make sure that you have read and understood these operating instructions and that you know all applicable legislations regarding occupational safety and accident prevention prior to installation and putting the component into operation.

The machine builder must carefully select the harmonized standards to be complied with as well as other technical specifications for the selection, mounting and integration of the components.

1.3 Product Overview

Guard locking device monitored

Interlock \ Encoding	Standard	Individual teachable
Power to unlock	S2FP001	S2FP004
Power to unlock including escape release	S2FP002	S2FP005
Power to lock	S2FP003	S2FP006

Actuator monitored

Interlock \ Encoding	Standard	Individual teachable
Power to unlock	S2FP101	S2FP103
Power to lock	S2FP102	S2FP104

2. Proper Use

This wenglor product has to be used according to the following functional principle:

Guard locking device

The contactless guard locking device is designed for use in electrical safety circuits and functions as a position monitoring and locking device for movable guards.




NOTE!

The guard locking devices are classified according to ISO 14119 as type 4 interlocking devices. Designs with individual coding are classified as highly coded.

The different variants can be used as safety switch with interlocking function either as guard locking device.



CAUTION!

If the risk analysis indicates the use of a monitored interlock then a variant with the monitored interlock is to be used, labelled with the  symbol. The actuator monitoring variant (S2FP1xx) is a safety switch with an interlock function for process protection.

The safety function involves reliable shutdown of the safety outputs when unlocking or opening the guard, as well as reliable prevention of reactivation of the safety outputs as long as the guard is open or unlocked.



CAUTION!

Interlocks with power to lock principle may only be used in special cases after a thorough evaluation of the accident risk, since the safety guard can be opened immediately on failure of the power supply or upon activation of the main switch.

Escape release



CAUTION!

Fitting and actuation only from within the hazardous area.

To activate the escape release, turn the red lever in the direction of the arrow to the end stop. The safety outputs switch off and the guard system can be opened. The blocked position is cancelled by turning the lever in the opposite direction. In the unlocked position, the guard system is secured against unintentional locking.

3. For Your Safety

3.1 General Safety Precautions



NOTE!

- These instructions are an integral part of the product and must be kept on hand for the entire duration of its service life.
- Read the operating instructions carefully before using the product.
- Installation, initial start-up and maintenance of the product may only be carried out by qualified personnel.
- Tampering with or modifying the product is impermissible.



CAUTION!

Nonobservance of this warning may result in failures or malfunctioning.



DANGER!

Nonobservance of this warning may result in personal injury and/or damage to the machine.

3.2 Warning about misuse



DANGER!

In case of improper use or manipulation of the guard locking device, personal hazards or damages to machinery or plant components cannot be excluded when safety switchgear is used. The relevant requirements of the standard ISO 14119 must be observed.

3.3 Exclusion of liability

The products described in these operating instructions are developed to execute safety-related functions as part of an entire plant or machine. It is the responsibility of the manufacturer of a machine or plant to ensure the correct functionality of the entire machine or plant.

We shall accept no liability for damages and malfunctions resulting from defective mounting or failure to comply with this operating instructions manual. The manufacturer shall accept no liability for damages resulting from the use of unauthorized spare parts or accessories.

For safety reasons, invasive work on the device as well as arbitrary repairs, conversions and modifications to the device are strictly forbidden; the manufacturer shall accept no liability for damages resulting from such invasive work, arbitrary repairs, conversions and/or modifications to the device.

4. Technical Data

4.1 Guard locking device

Electrical Data	
Supply voltage	20,4...26,4 V DC (stabilized PELV units)
No-load supply current I_0	< 0,1 A
Current consumption device with magnet switched on	Average: < 0.2 A Peak current: < 0.35 A / 200 ms
Conditional rated short-circuit current	100 A
External line and equipment protection	2 A gG
Response time	Actuator: ≤ 100 ms Inputs: ≤ 0.5 ms
Risk time	≤ 200 ms
Time delay before availability	≤ 5 s
Switching frequency	≤ 0,5 Hz
Protection class	III
Rated insulation voltage U_i	32 V DC
Rated impulse withstand voltage U_{imp}	0,8 kV
Overvoltage category	III
Pollution degree	3
Safety Outputs OSSD1 / OSSD2	
Safety output	Semiconductor, PNP output, short-circuit proof
Number of safety outputs	2
Utilization category	DC-12: U_e/I_e : 24 V DC / 250 mA DC-13: U_e/I_e : 24 V DC / 250 mA
Rated operating voltage U_e	24 V DC
Rated operating current I_e	250 mA
Residual current I_r	≤ 0,5 mA
Voltage drop U_d	≤ 4V
Test pulse duration	< 0,3 ms
Test pulse interval	1000 ms
ZVEI classification	ZVEI CB24I
Source	C2
Sink	C1, C2
Cross-circuit monitoring with sensor	yes
Safety Inputs IN1 / IN2	
Number of safety inputs	2
Voltage range	−3...5 V (low) 15...30 V (high)
Current consumption per input	≤ 5 mA / 24 V
Accepted test pulse duration to input signal	≤ 1,0 ms
With a test pulse interval of	≥ 100 ms
ZVEI classification	ZVEI CB24I

Source	C1, C2, C3
Sink	C1
Signal Output (not safety-relevant)	
Signal output	Semiconductor, PNP output, short-circuit proof
Utilization category	DC-12: U _e /I _e : 24 V DC / 50 mA DC-13: U _e /I _e : 24 V DC / 50 mA
Rated operating voltage U _e	24 V DC
Rated operating current I _e	50 mA
Voltage drop U _d	≤ 4 V
Accepted test pulse duration to input signal	≤ 5,0 ms
With a test pulse interval of	≥ 40 ms
ZVEI classification	ZVEI CB24I
Source	C1, C2, C3
Sink	C0
Solenoid Activation, Mag	
Voltage range	−3...5 V (low) 15...30 V (high)
Current consumption	10 mA / 24 V
Duty cycle of magnet	100 %
Mechanical Data	
Interlocking force F _{max}	1500 N
Interlocking force F _{zh}	1150 N
Detent force	25 N / 50 N
Mechanical service life	≥ 1,000,000 switching cycles (for door weights of ≤ 5 kg and actuating speeds of ≤ 0.5 m/s)
Angular offset between interlock and actuator	≤ 2°
Connector type	M12×1, 8-pin
Mounting screws	2 × M6
Tightening torque for mounting screws	6...7 Nm
Housing material	Fiberglass reinforced plastic, self-extinguishing thermoplastic
Vibration resistance	10...150 Hz, amplitude: 0.35 mm
Shock resistance	30 g / 11 ms
Service life when used as a door stop	≥ 50,000 switching cycles (for door weights of ≤ 5 kg and actuating speeds of ≤ 0.5 m/s)
Switching distance	2 mm
Assured switching distance S _{ao}	1 mm
Assured switch-off distance S _{ar}	20 mm
Ambient Conditions	
Temperature range	0...60 °C
Storage and transport temperature	−10...90 °C
Protection	IP66/IP67/IP69 (IEC60529)
Altitude / installation altitude above sea level	max. 2000 m

Technical Safety Data	
Functional safety characteristics	(see section "4.3 Safety classification" on page 10)
PDDb (EN 60947-5-3)	yes
Function	
Power to unlock Principle	S2FP001, S2FP002, S2FP004, S2FP005, S2FP101, S2FP103
Power to lock Principle	S2FP003, S2FP006, S2FP102, S2FP104
Operating principle	RFID
Frequency band	125 kHz
Emitting power	max. –6 dBm
Encoding level (ISO 14119)	Standard: Low Individual teachable: high
Series connection	yes Unlimited number of sensors, observe external conductor protection Max. sensor string length: 200 m
Interlock monitored	S2FP001, S2FP002, S2FP003, S2FP004, S2FP005, S2FP006
Actuator monitored	S2FP101, S2FP102, S2FP103, S2FP104
Detent	yes
Auxiliary release	yes
Escape release	S2FP002, S2FP005
Other Data	
Suitable actuator	S2FP200

4.2 Actuator

Electrical Data	
Temperature range	0...60°C
Storage and transport temperature	–10...90°C
Mechanical Data	
Housing material	Fiberglass reinforced plastic, self-extinguishing thermoplastic
Protection	IP66/IP67/IP69 (IEC60529)

4.3 Safety classification

Latching Function	
Performance level (EN ISO 13849-1)	To PL e
Safety category (EN ISO 13849-1)	Cat. 4
Safety integrity level (EN 61508)	Suitable for SIL 3 applications
PFH _D	5.2 × E-10 1 / hr.
Service life T _M (EN ISO 13849-1)	20 years
Interlocking Function	
Performance level (EN ISO 13849-1)	To PL d
Safety category (EN ISO 13849-1)	Cat. 2
Safety integrity level (EN 61508)	Suitable for SIL 2 applications
PFH _D	2,0 × E-9 1/h
Service life T _M (EN ISO 13849-1)	20 years

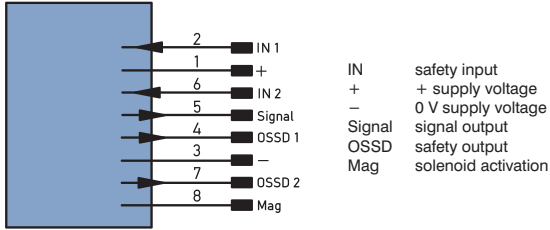
CAUTION!

- The safety assessment of the interlocking function is only valid for products with monitored interlocking function S2FP0xxx.
- The actuation of the interlock must be compared with the external OSSD enabler. If a shut-down now occurs due to an unintentional unlocking this is detected by an external diagnostic.
- If for a certain application the quiescent current version of a guard locking device cannot be used, then for this exception an interlock with power to lock can be used if additional safety measure need to be realized that have an equivalent safety level.
- The safety analysis of the guard locking function refers to the component guard locking device S2FPxxx as part of the complete system.
- On the customer side further measures such as safe actuation and safe cable installation to prevent faults are to be implemented.
- In the event of a fault resulting in the unlocking of the guard locking, this is detected by the guard locking device and the safety gates switch off. When such a fault occurs the protection equipment may open immediately, just once, before the safe condition of the machine is reached. The system reaction of category 2 allows that a fault can occur between tests causing the loss of the safety function which is detected by the test.



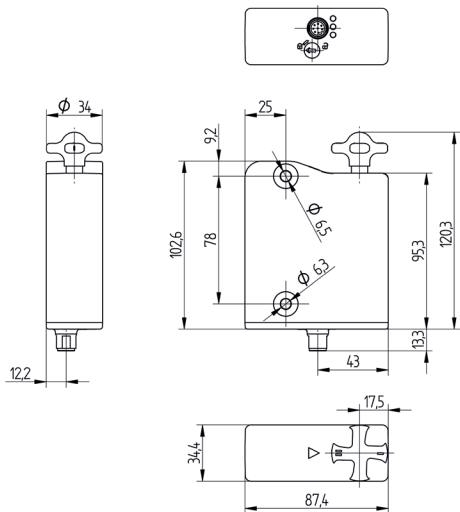
4.4 Connection Diagram

P03

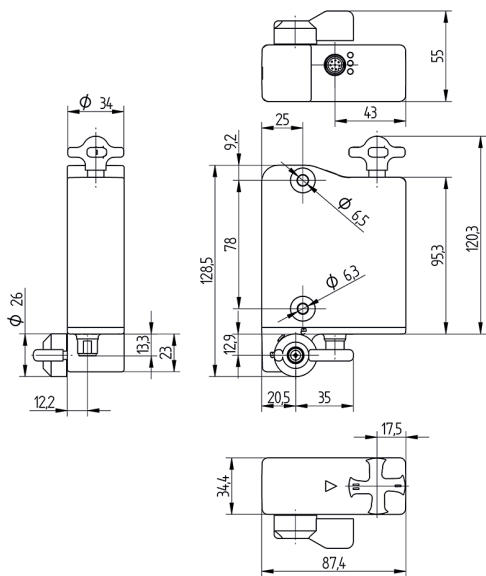


4.5 Housing Dimensions

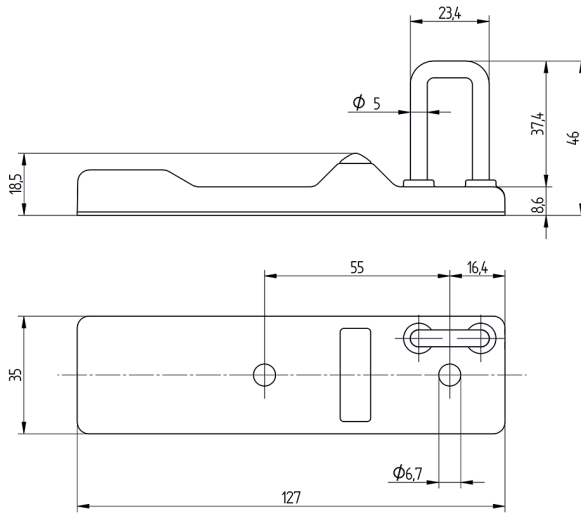
Guard locking device S2FPxxx



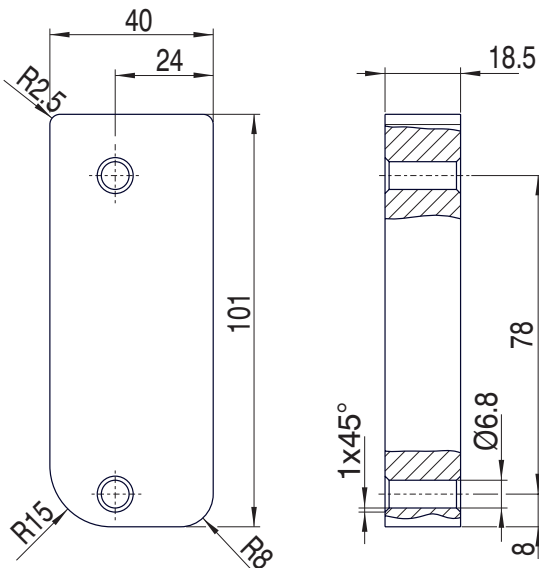
S2FPxxx guard locking device with emergency release



S2FP200 actuator



Z2FM001 mounting Plate

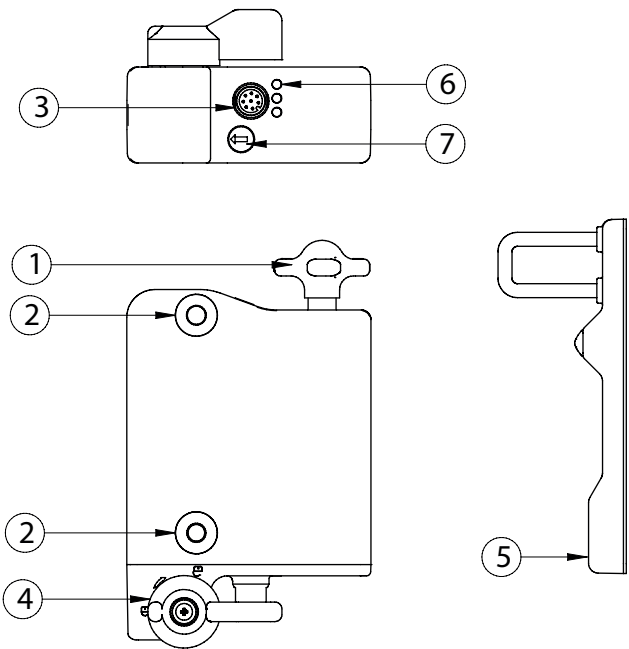


4.6 Complementary Products (see catalog)

wenglor offers Connection Technology for field wiring.

Suitable Connection Technology No.	89
Z2FM001 mounting plate	
SR4 safety relay	

4.7 Layout



- ① Star handle
- ② Mounting holes
- ③ Plug connector
- ④ Escape release (optional)
- ⑤ Rating plate and RFID chip (actuator)
- ⑥ Diagnostic LEDs (green, red, yellow)
- ⑦ Auxiliary release

5. Installation Instructions

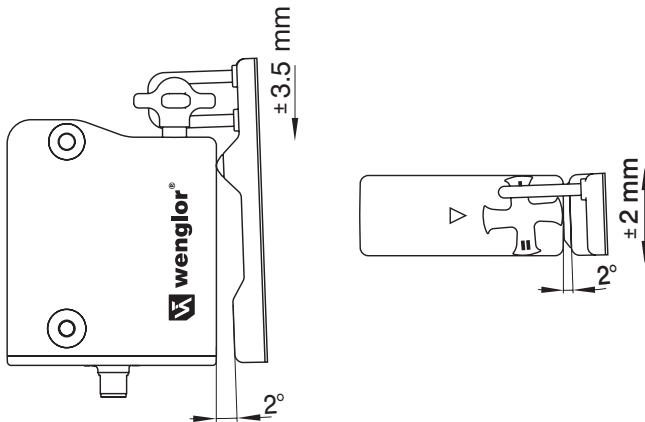
5.1 General Installation Instructions



CAUTION!

- Please observe the remarks of the standards ISO 12100, ISO 14119 and ISO 14120.
- The guard locking device must be permanently mounted to the guard by means of suitable measures (use of one-way screws, bonding, drilling screw holes, fastened with pins) and secured against shifting.

- For the correct fixing of the guard locking device and the actuator, two mounting holes for M6 screws are provided (tightening torque: 6... 7 Nm).
- Any mounting position. The system must only be operated with an angle of $\leq 2^\circ$ between the guard locking device and the actuator.
- Connection must be realized between the mounting surface and fixing point „A“.



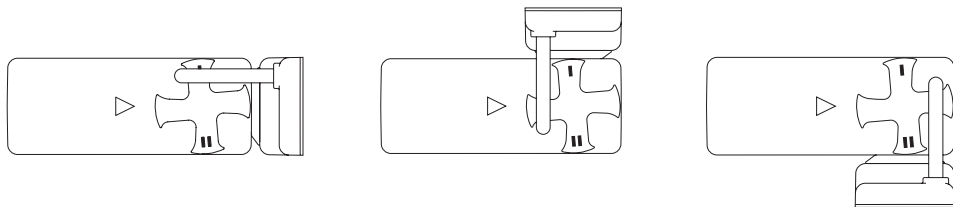
NOTE!

The guard locking device can be used as an end stop. Dependant upon the door weight and the actuating speed, the mechanical life could be reduced.

Mounting of the guard locking device and the actuator

Refer to the mounting instructions manual for the corresponding actuator.

5.2 Actuating directions



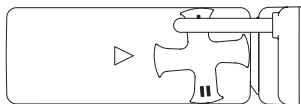
The diagrams show a closed guard system with a set latching force of 50 N (see section “6.4 Detent Force” on page 23).



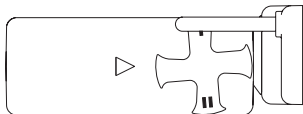
CAUTION!

Provide for a sufficient insertion of the actuator into the rotary handle.

Correct



False



NOTE!

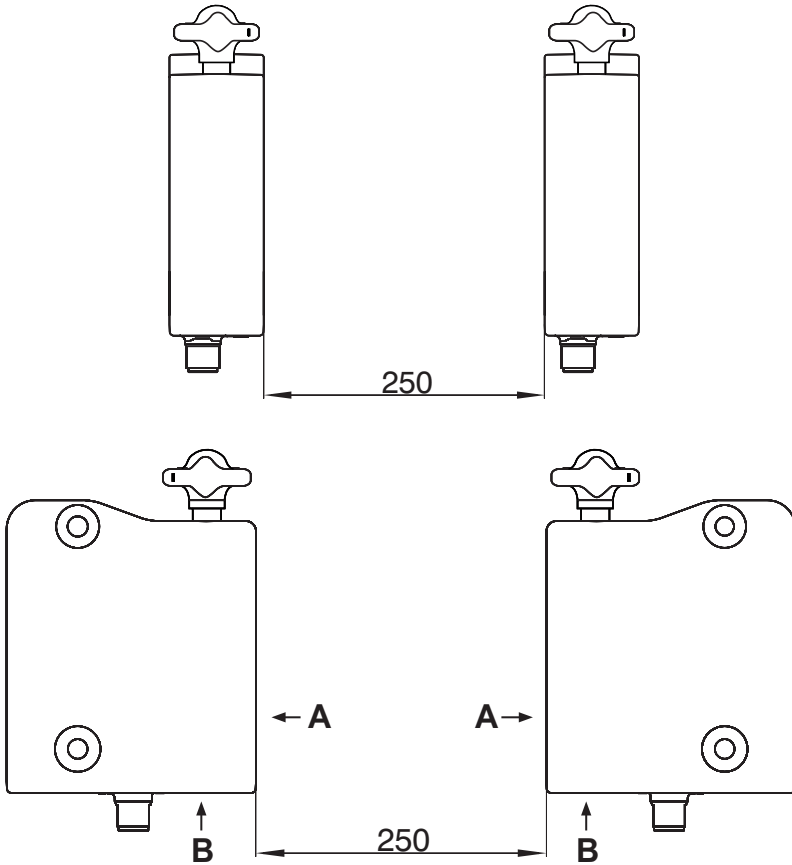
To avoid any interference inherent to this kind of system and any reduction of the switching distances, please observe the following guidelines:



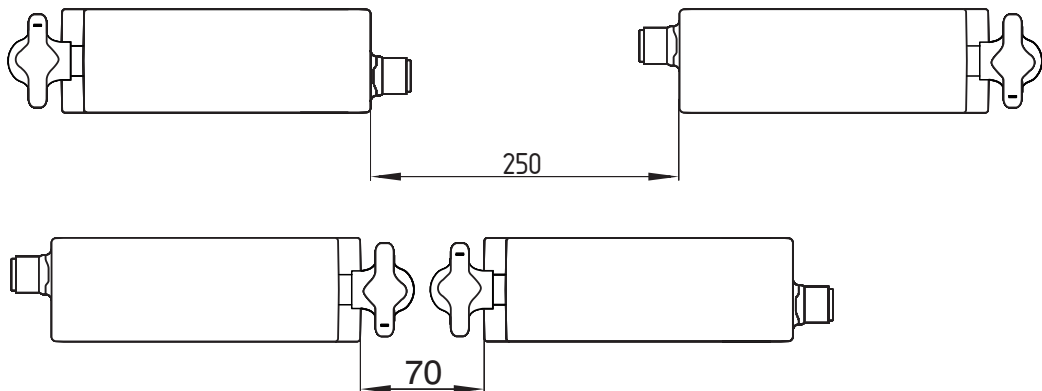
- The presence of metal chips in the vicinity of the guard locking device is liable to modify the switching distance.
- Keep away from metal chips.

5.3 Minimum distance



Minimum clearance between two guard locking devices
or to other systems of the same frequency (125 kHz)



The minimum distance from metallic securing surfaces to the face side „A“ and underside „B“ of the device is 5 mm.



5.4 Auxiliary Release

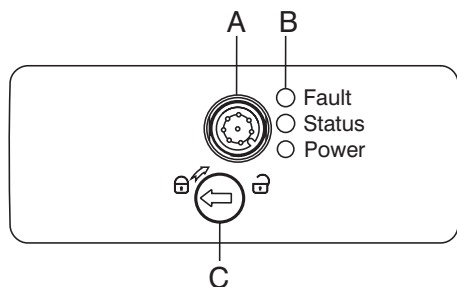
For the machine set-up, the guard locking device can be unlocked in a de-energised condition. The guard locking device is released by turning the auxiliary release to the  position. The normal function is not restored until the auxiliary release is turned back to initial position .



CAUTION!

Do not turn beyond the end stop!

The manual release must be protected against accidental actuation, e.g. by using the enclosed seal after completing commissioning.



Key

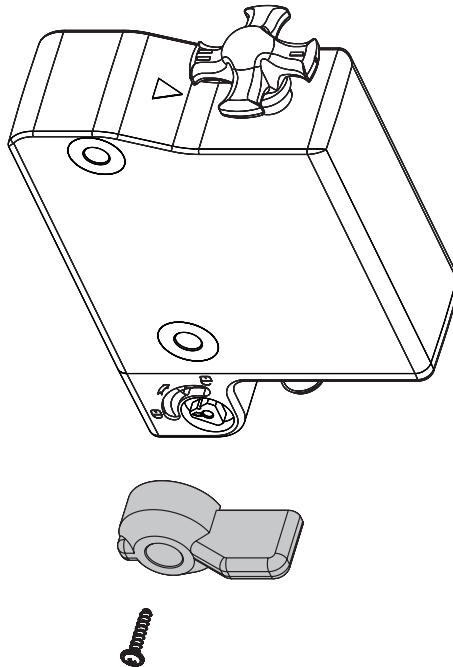
A: connector plug M12, 8-pole

B: LED indications

C: Manual release

5.5 Escape Release

The red lever is shipped loose for the variant with the escape release. The lever should be fastened to the position intended with the supplied screws before first being used. The lever should be installed on the unlocking triangle in such a way that the arrow on the triangle and the lever pivot are congruent. The installation of the lever is possible on both sides. The opposite side can be used as a manual release by means of a triangular key.



CAUTION!

Reset of the manual release by actuating the red emergency exit lever must be prevented by the user.



CAUTION!

Escape Release

Fitting and actuation only from within the hazardous area.

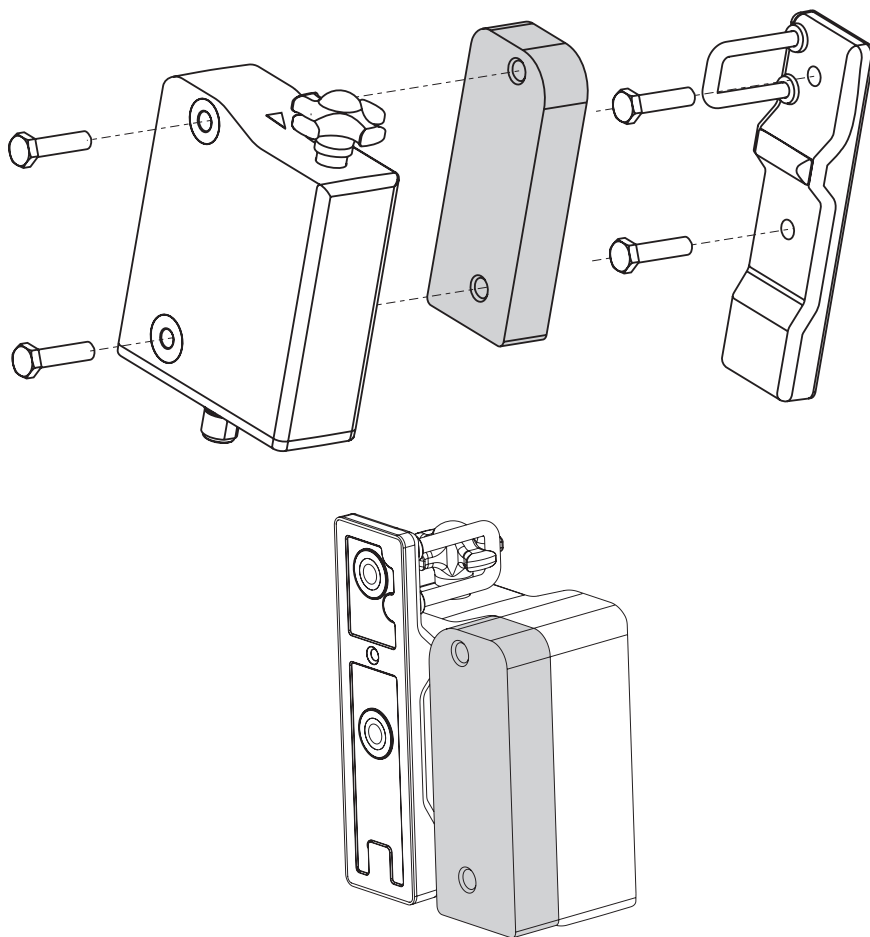


NOTE!

In order to ensure correct functioning of the escape release, the safety door may not be in a mechanically stressed state.

5.6 Mounting with mounting plate

For doors, which close flush with the door frame, the optional mounting late Z2FM001 can be used.



6. Initial Start-Up

6.1 Electrical connection



NOTE!

The electrical connection may only be carried out by authorized personnel in a de-energised condition.

The voltage inputs +24 V, IN1, IN2 and IN must have a protection against permanent overvoltage. PELV power packs in accordance with IEC 60204-1 must be used. The required electrical line and equipment protection must be provided in the installation.

The safety outputs can be integrated in the safety circuit of the control system.

6.1.1 Mode of operation of the safety outputs

In the standard S2FP0xxx variant, the unlocking of the guard locking device causes the safety outputs to be disabled. The unlocked safety guard can be relocked as long as the actuator is inserted in the S2FP0xxx guard locking device; in that case, the safety outputs are re-enabled. The safety guard must not be opened. In the S2FP1xxx version, only the opening of the safety guard causes the safety outputs to be disabled.

If the safety outputs are already enabled, any error that does not immediately affect the functionality of the guard locking device (e.g. too high an ambient temperature, interference potential at the safety outputs, cross-wire short) will lead to a warning message, the disabling of the diagnostic output and the delayed shutdown of the safety outputs. The safety outputs are disabled if the error warning is active for 30 minutes. The signal combination, diagnostic output disabled and safety channels still enabled, can be used to stop the production process in a controlled manner. After the rectification of the error, the error message is reset by opening the corresponding safety guard.

6.1.2 Requirements for the connected safety-monitoring module

Dual-channel safety input, suitable for p-type semi-conductor outputs

NOTE!

Configuration of the safety-monitoring module



If the safety sensor is connected to electronic safety-monitoring modules, we recommend that you set a discrepancy time of min. 100 ms. The safety inputs of the safety-monitoring module must be able to blank a test impulse of approx. 1 ms. The safety-monitoring module does not need to have a crosswire short monitoring function, if necessary, the cross-wire short monitoring function must be disabled.

6.1.3 Series-wiring

Series-wiring can be set up. The response and risk times are not altered by wiring in series. The number of components is only limited by the external cable protection according to the technical data and the line loss.

CAUTION!



The user must evaluate and design the safety chain in accordance with the relevant standards and the required safety level. If multiple safety sensors are involved in the same safety function, the PFH₀ values of the individual components must be added.

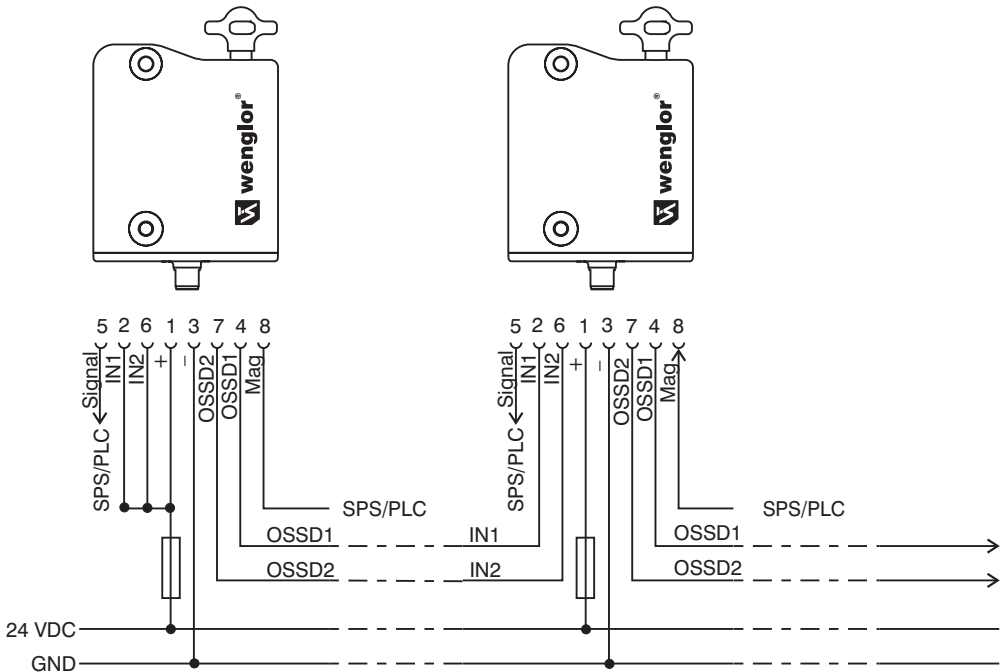
The entire concept of the control system, in which the safety component is integrated, must be validated to the relevant standards.

6.1.4 Wiring example

The connection example shown below is a suggestion only and does not release the user from his obligation to carefully examine the circuit with regard to its suitability in the respective individual case.

Connector example 1: series wiring of the S2FPxxx

The voltage is supplied at both safety inputs of the terminal safety component of the chain (considered from the safety-monitoring module). The safety outputs at the first guard locking device are connected to the evaluation unit.



6.2 Magnet control

In the power to unlock version of the S2FPxxx, the guard locking device is unlocked when the “Mag” signal (= 24 V) is set. In the power to lock version of the S2FPxxx, the guard locking device is locked when the “Mag” signal (= 24 V) is set.

6.3 Actuator Coding

Guard locking devices with standard coding are ready to use upon delivery.

Individually coded guard locking devices and actuators will require the following „teach-in“ procedure:

1. Switch the guard locking device's voltage supply off and back on.
2. Introduce the actuator in the detection range. The teach-in procedure is signalled at the guard locking device, green LED off, red LED on, yellow LED flashes (1 Hz).
3. After 10 seconds, brief yellow cyclic flashes (3 Hz) request the switch-off of the operating voltage of the guard locking device (If the voltage is not switched off within 5 minutes, the guard locking device cancels the “teach-in” procedure and signals a false actuator by 5 red flashes).
4. After the operating voltage is switched back on, the actuator must be detected once more in order to activate the taught actuator code. In this way, the activated code is definitively saved!

For ordering suffix “Individual teachable”, the „teach-in“ procedure for a new actuator can be repeated an unlimited number of times. When a new actuator is taught, the code, which was applicable until that moment, becomes invalid. Subsequent to that, an enabling inhibit will be active for ten minutes, thus providing for an increased protection against tampering. The green LED will flash until the expiration of the time of the enabling inhibit and the detection of the new actuator. In case of power failure during the lapse of time, the 10-minutes tampering protection time will restart.

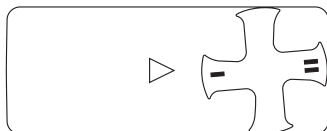
6.4 Detent Force

In order to enable trouble-free functionality of the device, the rotary handle must be in position I or II when the safety guard is open. In the intermediate positions, locking is impossible.

The latching force is changed by turning the rotary handle by 180°.

In position I, the latching force is approx. 25 N.

In position II, the latching force is approx. 50 N.



6.5 Functional testing

The safety function of the safety components must be tested. The following conditions must be previously checked and met:

1. Check max. axial misalignment of actuator and guard locking device.
2. Check max. angular misalignment ([see section “5. Installation Instructions” on page 15](#)).
3. Fitting and integrity of the cable connections.
4. Fitting and integrity of the cable connections.
5. Remove particles of dust and soiling.
6. The following must also be observed for the variant with escape release:
 - It must be possible to open the guard inside the danger zone.
 - It must not be possible to lock the guard from the inside.

7. Maintenance Instructions

When correctly installed and used for its intended purpose, the guard locking device is maintenance-free. A regular visual inspection and functional test, including the following steps, is recommended:

- Check for a secure installation of the actuator and the guard locking device.
- Check max. axial misalignment of actuator and guard locking device.
- Check max. angular misalignment ([see section “5. Installation Instructions” on page 15](#)).
- Fitting and integrity of the cable connections.
- Check the switch enclosure for damages.
- Remove soiling.



CAUTION!

During all operational lifecycle phases of the guard locking device, suitable design and organizational measures must be implemented for protection against manipulation and against circumventing the security device, for example through the use of a replacement actuator.

Damaged or defective components must be replaced.

8. Diagnostic

8.1 Diagnostic information

The guard locking device signals the operating condition, as well as errors through 3-colour LED's.

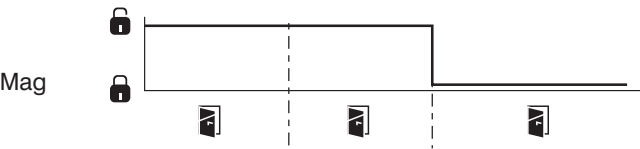
green (Power)	Supply voltage on		
yellow (Status)	Operating condition		
red (Fault)	Fault (see Table 2: Flash codes of the red diagnostic LED)		
	Flash codes (red)	Designation	Autonomous switch-off after
	1 flash pulse	Error (warning) at output Y1	30 min
	2 flash pulses	Error (warning) at output Y2	30 min
	3 flash pulses	Error (warning) cross-wire short	30 min
	4 flash pulses	Error (warning) temperature too high	30 min
	5 flash pulses	Actuator fault	0 min
	6 flash pulses	Fault rotary handle	0 min
	Continuous red signal	Internal error	0 min
			Error cause
			Fault in output test or voltage at output Y1, although the output is disabled.
			Fault in output test or voltage at output Y2, although the output is disabled.
			Cross-wire short between the output cables or fault at both outputs.
			The temperature measurement reveals an internal temperature that is too high.
			Incorrect or defective actuator, bracket broken.
			Rotary handle not in authorized intermediate position.
			Device defective.

8.2 Signal Output

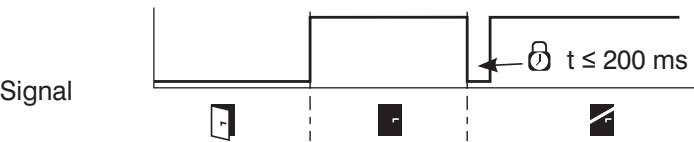
The short-circuit-proof signal output can be used for central displays or control tasks, for example in a PLC. The signal output is not a safety-relevant output!

Performance of the signal output based on the example of a lock with closed-circuit current principle

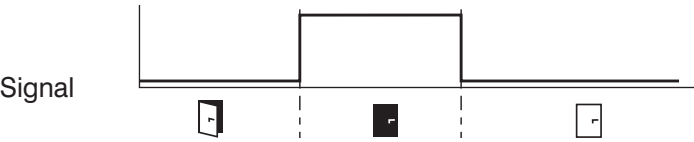
Input signal magnet control



Normal sequence, door was locked



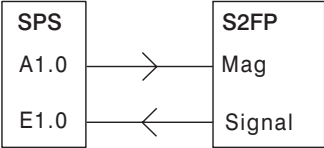
Door could not be locked or fault



Key

- | | |
|-----------------------|-----------------------------|
| 🔒 Lock | 🔓 Unlock |
| 🚪 Safety guard open | 🚪 Safety guard closed |
| 🚪 Unlock safety guard | 🚪 Safety guard locked |
| ⌚ Delay time | 🚪 Guard not locked or fault |

Evaluation of the signal outputs



Power to unlock: Mag = 0 = locking



Power to lock: Mag = 1 = locking



System Status	Solenoid Activation Mag		LED			Safety Outputs OSSD1, OSSD2		Signal Output
	Power to unlock	Power to lock	green	red	yellow	S2FP0xx	S2FP1xx	Signal
Safety guard open	24 V (0 V)	0 V (24 V)	On	Off	Off	0 V	0 V	0 V
Door closed, not locked	24 V	0 V	On	Off	Flashes	0 V	24 V	24 V
Door closed, locking impossible	0 V	24 V	On	Off	Flashes	0 V	24 V	0 V
Door closed and locked	0 V	24 V	On	Off	On	24 V	24 V	24 V
Error warning ¹⁾	0 V	24 V	On	Flashes ²⁾	Off	24 V ¹⁾	24 V ¹⁾	0 V
Error	0 V (24 V)	24 V (0 V)	On	Flashes ²⁾	On / Flashes	0 V	0 V	0 V
Additionally with “Individual teachable” Variant								
Actuator teach-in procedure (release disable)			Flashes	Off	Off	0 V	0 V	0 V

Table 1: Safety Switch Diagnostics Information
The safety switch signals the operational state as well as errors through three colored LED's installed on the device.
1) after 30 min: disabling due to fault, 2) refer to flash code

8.3 Error

Errors, in case of which reliable functioning of the guard locking device is no longer assured (internal errors), result in shutdown of the safety outputs within the specified risk time. An error which does not currently threaten reliable functioning of the S2FPxxx guard locking device (e.g. excessive ambient temperature, safety output connected to external potential, cross-circuit) results in delayed shutdown. After the error has been eliminated, the error message is acknowledged by opening the respective safety door. After the error has been eliminated, the error message is acknowledged by opening the respective safety door and closing it again.

8.4 Error warning

A fault has occurred, which causes the safety outputs to be disabled after 30 minutes (LED „fault“ flashes). The safety outputs initially remain enabled. This enables the shutdown of the process in a controlled manner. An error warning is deleted when the cause of error is eliminated. The signal combination “Diagnosis output switched off” and “Safety outputs still switched on” can be used to move the machine into an ordered stop position.

9. Disassembly

The guard locking device may only be dismantled in the de-energized state.

10. Proper Disposal

wenglor sensoric GmbH does not accept the return of unusable or irreparable products. Respectively valid national waste disposal regulations apply to product disposal.

11. Appendix

11.1 Change Index, Operating Instructions

Version	Date	Description/Change
1.0.0	16.01.17	Initial version of the operating instructions
1.1.0	04.10.17	Introduction of a new declaration of conformity and several small changes in the overall instructions
2.0.0	13.07.18	Updating of technical data and other minor revisions
2.1.0	29.08.19	Interlocking force (see section “4. Technical Data” on page 7)
2.2.0	01.03.21	Updating of technical data and other minor revisions

11.2 EU Declaration of Conformity

The EU declaration of conformity can be found on our website at www.wenglor.com in the product's separate download area.

EU Konformitätserklärung EU Declaration of Conformity (DoC)



Name und Anschrift des Herstellers / Name and address of manufacturer:

wenglor sensoric GmbH
wenglor Straße 3
88069 Tettnang / GERMANY

Diese Erklärung gilt für die folgenden Produkte: This declaration applies to the following products:

S2FP...

Wir bestätigen die Übereinstimmung mit den
grundlegenden Anforderungen der Europäischen
Richtlinien

We confirm compliance with the essential
requirements of the European Directives

Richtlinie / Directive

Fundstelle / Reference

EMV / EMC

2014/30/EU

Amtsblatt / Official Journal L96 29.03.2014

Funkanlagen / RED

2014/53/EU

Amtsblatt / Official Journal L153 22.05.2014

Maschinen / MD

2006/42/EG

Amtsblatt / Official Journal L157 09.06.2006

Folgende Normen wurden angewandt:

The following standards have been used:

EN 60947-5-3:2013
EN ISO 14119:2013
EN ISO 13849-1:2015

EN 300 330-2 V2.1.1:2017

Produkt-Beschreibung

Product description

Verriegelung für Sicherheitsfunktionen
Sicherheits-Bauteil nach 2006/42/EG Anhang IV

Interlocking device for safety functions
Safety component per 2006/42/EC annex IV

Benannte Stelle

TÜV Rheinland Industrie Service GmbH
Albainstraße 56
D-12103 Berlin

Notified Body

NB Nr. 0035
Zertifikat 01/205/5531.01/20

Dr. Alexander Ohl ist bevollmächtigt, die techni-
schen Unterlagen zusammenzustellen.

Dr. Alexander Ohl is authorized to compile the
technical documentation.

Diese Erklärung stellvertretend für den Hersteller
wird abgegeben durch:

On account of the manufacturer, this declaration
is given by:

Dr. Alexander Ohl

Leiter Forschung & Entwicklung / Head of Research & Development

Tettnang, 18.01.2021

Ort / Place Datum / Date

Unterschrift / Signature



This device is intended to be powered by a Listed Limited Voltage, Limited Current or Class 2 source. This device shall be powered with the use of a Listed (CYJV) cable/ connector assembly rated 24Vdc, 0.8 A minimum.

