

Safety gate systems



PSEN sl-0.5p



PSEN sl-1.0p



PSEN sg1c-2/1

… for protecting guards

When a guard is opened, hazardous machine movements must be stopped in accordance with EN 1088 and a restart must be prevented. It must not be possible to either defeat or manipulate the guards.

Pilz safety gate systems are particularly effective in meeting this requirement and incorporate additional functionalities for greater economy:

- PSENslock – Safety gate monitoring with process guarding
- PSENsgate – Safety gate monitoring, safe guard locking and control elements



Application overview and distinction between safety gate systems

Type	PSENslock	PSENsgate
Application on guards		
Covers	◆	
Flaps	◆	
Hinged safety gates	◆	◆
Sliding safety gates	◆	(◆) [1]
Operating principle	▸ Non-contact, coded ▸ Transponder technology	▸ Mechanical, coded ▸ Transponder technology
Manipulation protection	Very high	Very high
Safe position monitoring	Yes	Yes
Guard locking	Process guard locking (magnetic interlock)	Safe guard locking up to ▸ PL e of EN ISO 13849-1 ▸ SIL CL 3 of EN/IEC 62061
Auxiliary/escape release	No	Integrated
Emergency stop pushbutton	No	Integrated
Illuminated button for request and reset	No	2 or 2+2 additional pushbuttons
Additional functions	▸ Series connection possible with PSENini, PSENcode, PSENslock, PSENsgate	▸ Series connection possible with PSENini, PSENcode, PSENslock, PSENsgate ▸ Broken pin and broken bolt are safely detected ▸ Closing lock (padlock on the bolt) ▸ Enabling switch can be connected

[1] *Limited suitability, without escape release*

Keep up-to-date on safety gate systems:

Webcode 4901

Online information at www.pilz.com



Safety gate systems PSENslock



PSEN sl-0.5p



PSEN sl-1.0p

… safe position monitoring with process guarding in one system

Safety gate systems PSENslock provide secure safety gate monitoring with a non-contact magnetic interlock of 500 N or 1,000 N (BG GS-ET 19) within one system.

With this combination of safe position monitoring and process guarding, PSENslock are designed for the highest category applications.

Stringent protection of man and machine

PSENslock are a safe alternative to existing mechanical technology. Highest possible manipulation protection and low wear and tear ensure a long service life and protect your investment.

Combined with Pilz control technology, you receive a safe, complete solution for guard monitoring.

Save time and costs during commissioning

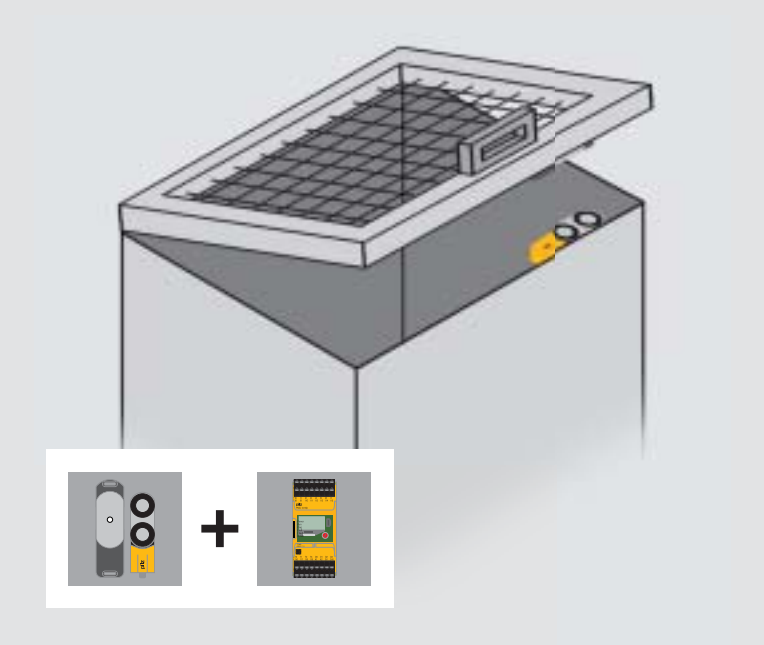
Thanks to its flexible connections, PSENslock can be installed and commissioned quickly and easily. They are optimised for mounting on the popular 45 mm profiles.

You can also save time and costs through series connection, even with the very highest safety requirements.

Type code for PSENslock

PSEN sl-1.0p 2.2

Product area Pilz **SEN**sors	Magnetic powered	Connection	Coding
Product range **sl – PSENslock**	0.5 500 N **1.0 1,000 N**	n Connector, M12, 5-pin **p Connector, M12, 8-pin**	1.1 Coded 2.1 Fully coded **2.2 Unique, fully coded**
Operation ▸ Non-contact, coded ▸ Transponder (RFID) ▸ With safe semiconductor outputs			



The optimum solution: Guard locking on the flap using the safety gate system PSENslock, evaluated using the safety relay PNOZmulti Mini.

Your benefits at a glance

- System optimised for safe position monitoring with process guarding
- High availability for your plant:
  - Suitable for the highest safety requirements
  - Highest level of manipulation protection (coding)
  - Process protection via magnetic guard locking
- Fast commissioning:
  - Four assembly directions
  - Tolerant to gate misalignment
  - Flexible connection via connector
- User-friendly diagnostics via double-sided LED display
- Save power, as the magnet on PSENslock is optimised for energy efficiency

Selection guide

The product selection guide
can be found on page 38–39.



Keep up-to-date on safety gate systems PSENslock:

Webcode 4898

Online information at www.pilz.com



Safety gate systems PSENsgate



PSEN sg1c-2/1

… the integrated system for safety gate monitoring

PSENsgate combine secure safety gate monitoring, safe guard locking and control elements in just one system. And that includes additional functions such as emergency stop and escape release.

Connected in series with other PSENsgate, PSENini, PSENcode and/or PSENslock sensors, and in conjunction with Pilz control technology, what you get is a safe, complete solution to suit all categories.

Save time and components

You can benefit from a high savings potential: use just one ready-to-install system and all your safety functions and control elements are integrated.

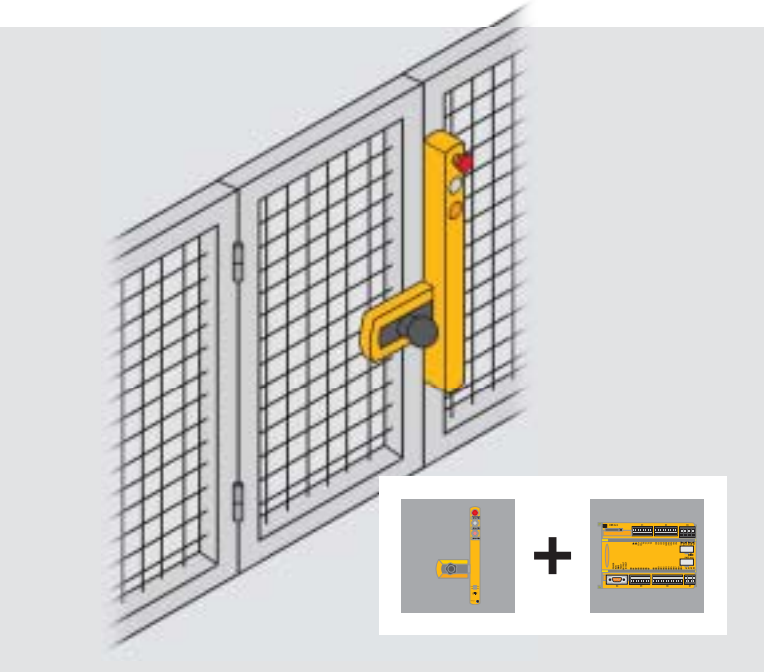
With PSENsgate you save time and money during configuration, design, documentation, purchasing and installation.

So we can help you achieve an efficient time-to-market.

Type code for PSENsgate

PSEN sg1c-4/1

Product area Pilz **SEN**sors	Type	Connection via	Number of request or reset buttons	Number of emergency stop devices
Product range **sg – PSENsgate**	**1 With safe guard locking and safety gate monitoring**	**c Spring-loaded terminal, plug in**	2 2 illuminated buttons **4 4 illuminated buttons**	**1 1 emergency stop device**
Operation ▸ Mechanical, coded ▸ Transponder (RFID) ▸ With safe semiconductor outputs				



The optimum solution: Monitoring a safety gate using the safety gate system PSENsgate and the control system PNOZmulti.

Your benefits at a glance

- Combination of safety gate monitoring, safe guard locking and broken bolt monitoring all in one system – including emergency stop devices and control elements
- Reduced installation and wiring effort due to integrated control elements and the ability for series connection
- Highest category with just one switch per safety gate: for protection of personnel and plant
- Unit width of 45 mm = suitable for 45 mm profiles
- Diagnostics enable fast reaction times to status changes
- Integrated emergency stop removes the need for an evaluation device and expansion modules
- Safe, complete solution when combined with Pilz control technology
- Save power, PSENsgate is optimised for energy efficiency



Keep up-to-date on safety gate systems PSENsgate:

Webcode 5546

Online information at www.pilz.com



Selection guide – Safety gate systems

Common features

- Safety gate systems for monitoring the position of movable guards in accordance with EN 60947-5-3
- Suitable for applications up to PL e of EN ISO 13849-1, SIL CL 3 of EN/IEC 62061 and Cat. 4 of EN 954-1
- Series connection in combination with PSENslock, PSENsgate, PSENini, PSENcode up to PL e of EN ISO 13849-1, SIL CL 3 of EN/IEC 62061 and Cat. 4 of EN 954-1

Safety gate systems PSENslock



PSEN sl-0.5p



PSEN sl-1.0p

Type	Type of coding
PSEN sl-0.5p 1.1/PSEN sl-0.5	Coded [3]
PSEN sl-0.5n 1.1/PSEN sl-0.5	Coded [3]
PSEN sl-0.5p 2.1/PSEN sl-0.5	Fully coded [4]
PSEN sl-0.5n 2.1/PSEN sl-0.5	Fully coded [4]
PSEN sl-0.5p 2.2/PSEN sl-0.5	Unique, fully coded [5]
PSEN sl-0.5n 2.2/PSEN sl-0.5	Unique, fully coded [5]
PSEN sl-1.0p 1.1/PSEN sl-1.0	Coded [3]
PSEN sl-1.0p 1.1 VA/PSEN sl-1.0	Coded [3]
PSEN sl-1.0n 1.1/PSEN sl-1.0	Coded [3]
PSEN sl-1.0p 2.1/PSEN sl-1.0	Fully coded [4]
PSEN sl-1.0n 2.1/PSEN sl-1.0	Fully coded [4]
PSEN sl-1.0p 2.2/PSEN sl-1.0	Unique, fully coded [5]
PSEN sl-1.0n 2.2/PSEN sl-1.0	Unique, fully coded [5]

Electrical data

- Supply voltage: 24 VDC
- Safety outputs: 2
- Signal output: 1

Safety gate systems PSENsgate



PSEN sg1c-2/1

Type
PSEN sg1c-2/1
PSEN sg1c-4/1

Electrical data

- Supply voltage: 24 VDC
- Safety outputs: 2 (semiconductor, max. 500 mA each)
- Signal output: 500 mA
- "Safe range" input (solenoid pin): 1.5 A, 150 ms
- Power consumption depends on configuration (gate locked): Max. 2 W
- Voltage tolerance: -15/+10 %