



Sensor technology PSEN[®], control and signal devices PIT[®]

PILZ
THE SPIRIT OF SAFETY

- ▶ Devices for position monitoring ▶ Safety switches
- ▶ Safety gate systems ▶ Light curtains ▶ Safety laser scanners
- ▶ Safe camera systems ▶ Control and signal devices



► Modular safety gate system

The modular safety gate system offers you an individual safety gate solution that is ideally tailored to your application. That means you can combine individual components flexibly to suit your own particular requirements. Simply customise your safety gate monitoring system with our optional economical series connection, rapid diagnostics, additional operating and pushbutton elements, escape releases and door handles.



PSEnslock



PSEnmlock



Safety Device
Diagnostics (SDD)
















PITgatebox

The heart of the modular safety gate system: the safety gate sensors PSEnslock and PSEnmlock
Achieve safe position monitoring with process guarding with the safety gate sensor PSEnslock. It can be used up to the highest category and in series connection.

The safety gate sensor PSEnmlock offers safe interlocking and safe guard locking up to PL e. Connect PSEnmlock in series and benefit from a low-cost installation. In combination with Safety Device Diagnostics (SDD), individual switches or gates can be controlled in a targeted manner – and all this without

expensive individual wiring in the control cabinet. In addition you also achieve simple and comprehensive diagnostics of the safety switches, reducing downtimes. As an optional accessory, two versions of escape release can be combined with PSEnmlock: a bar is used to connect the PSEN ml escape release directly to the base unit, while the remote PSEN ml escape release cordset is mounted on the PSEnmlock via a pull-push wire. Whether it's for a swing gate or sliding gate: we also offer you the right handle (further information from page 56).

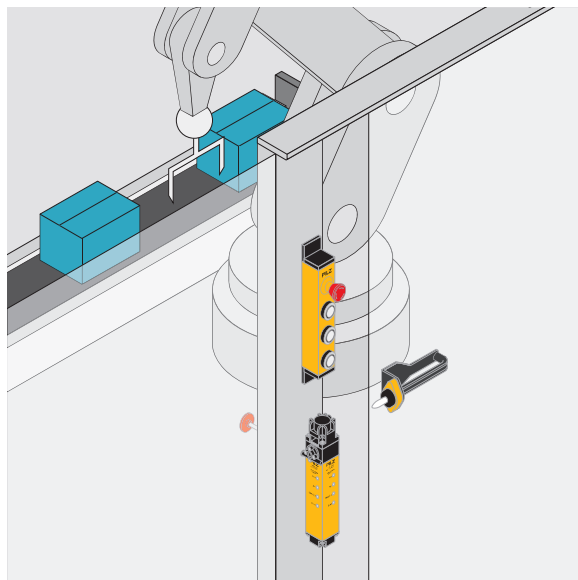


Modular safety gate system					
	PSEnlock (process guarding)		PSEnlock (safe guard locking)		
Sensor	Series connection, 500 N 	Series connection, 1000 N 	Base version 	Series connection 	Optional: SDD 
Escape release			Escape release 	Remote escape release 	
Handles			For swing gates 	For sliding gates 	
Pushbutton unit	PITgatebox    				


The perfect partner: simple operation with the pushbutton unit PITgatebox

Each preconfigured version with various combinations of pushbuttons, key switches and E-STOP pushbuttons gives you maximum flexibility for your individual application. Thanks to the slimline design, the robust control unit can be installed quickly and easily on standard profile systems. Combine the pushbutton unit PITgatebox with the safety gate systems PSEnlock and PSEnlock.

When combined with our safe control technology, you receive a one-stop modular safety gate solution tailored to your particular needs.



Keep up-to-date on safety gate systems:

 Webcode: web150524

Online information at www.pilz.com

▶ Safety gate system PSENSlock

The safety gate system PSENSlock offers secure safety gate monitoring based on the non-contact, coded safety switch with electromagnetic process guarding of 500 N or 1000 N (BG GS-ET 19).



Stringent protection of human and machine

PSENSlock is a safe alternative to existing mechanical technology for safety gate monitoring. 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.

Whether separately or in series, PSENSlock is configured for the highest categories in safety gate monitoring.

Save time and costs during commissioning

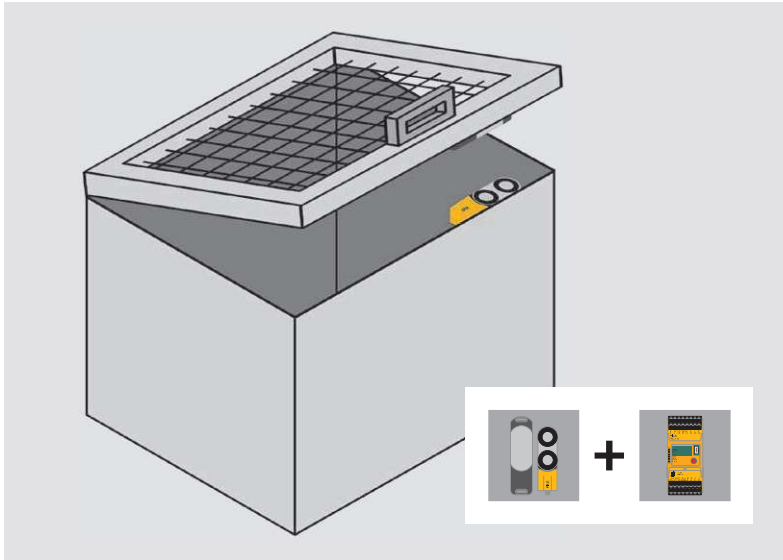
Thanks to its different assembly directions, PSENSlock can be installed and commissioned quickly and easily. It is optimised for mounting on the popular 45 mm profiles.

With the free-moving anchor plate (free moving actuator), even gates requiring high tolerances can be monitored and locked.

Type code for PSENSlock

PSEN sl-1.0fm p 2.2

Product area Pilz SENSors	Magnetic force	Actuator	Connection	Coding/Firmware	Material
Product group sl – PSENSlock Operation ▶ Non-contact, coded ▶ Transponder (RFID) ▶ With safe semiconductor outputs	0.5 500 N 1.0 1000 N	fm Free moving	p Connector, M12, 8-pin (series connection integrated in sensor) n Connector, M12, 5-pin	1.1 Basic software, coded 2.1 Basic software, fully coded 2.2 Basic software, unique, fully coded 3.1 OSSDs independent of guard locking, coded 4.1 OSSDs independent of guard locking, fully coded 4.2 OSSDs independent of guard locking, unique, fully coded 6.1 Extended diagnostic functions, fully coded	VA With stainless steel elements - Base plate - Connector



Your benefits at a glance

- ▶ Secure safety gate monitoring for the highest safety requirements
- ▶ High availability for your plant:
 - Highest level of manipulation protection (coding)
 - Process protection via magnetic guard locking
- ▶ Rapid commissioning:
 - 4 assembly directions
 - Tolerant to gate misalignment
 - Flexible connection via connector
- ▶ User-friendly diagnostics via double-sided LED display
- ▶ Saves power, as the magnet on PSEnSlock is optimised for energy efficiency

Components for your safe solution	Order number
Sensor: PSEN sl-1.0p 2,2/PSEN sl-1.0	570602
Connection: PSEN cable, M12, 8-pin, 5 m	540320
Evaluation device: PNOZ m B0	772 100
- Spring loaded terminals (1 set)	751 008

The optimum solution: guard locking on the flap using the safety gate system PSEnSlock, evaluated using the configurable safe small controllers PNOZmulti 2.

Safety gate systems



PSEnSlock with free-moving anchor plate (free-moving actuator)



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

Webcode: web150408

Online information at www.pilz.com

► Selection guide – PSENslock

Safety gate system PSENslock with 8-pin connector

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 with magnetic guard locking for process protection tasks
- ▶ Series connection up to PL e of EN ISO 13849-1:
 - PSENcode, PSENslock with 5-pin connection for decentralised module PDP67 F8 DI ION
 - PSENslock and Pilz sensor technology with 8-pin connection for passive junction PDP67 F 4 code or PSEN Y junction (cable separator)
- ▶ Electrical data:
 - Supply voltage: 24 VDC
 - Voltage tolerance: -15 ... + 10 %
 - Outputs: 2 safety outputs and 1 signal output
- ▶ Mechanical data:
 - Vertical and lateral offset: +/- 3 or +/- 5 mm
 - Protection type: IP67



PSEN sl-0.5



PSEN sl-0.5 ... fm



PSEN sl-1.0p 1.1 VA/
PSEN sl-1.0

Type (switch/actuator)	Holding force
PSEN sl-0.5p 1.1/PSEN sl-0.5	500 N
PSEN sl-0.5p 1.1/PSEN sl-0.5fm ³⁾	500 N
PSEN sl-0.5p 2.1/PSEN sl-0.5	500 N
PSEN sl-0.5p 2.1/PSEN sl-0.5fm ³⁾	500 N
PSEN sl-0.5p 2.2/PSEN sl-0.5	500 N
PSEN sl-0.5p 2.2/PSEN sl-0.5fm ³⁾	500 N
PSEN sl-0.5p 3.1/PSEN sl-0.5	500 N
PSEN sl-0.5p 3.1/PSEN sl-0.5fm ³⁾	500 N
PSEN sl-0.5p 4.1/PSEN sl-0.5	500 N
PSEN sl-0.5p 4.1/PSEN sl-0.5fm ³⁾	500 N
PSEN sl-0.5p 4.2/PSEN sl-0.5	500 N
PSEN sl-0.5p 4.2/PSEN sl-0.5fm ³⁾	500 N
PSEN sl-0.5p 6.1/PSEN sl-0.5	500 N
PSEN sl-0.5p 6.1/PSEN sl-0.5fm ³⁾	500 N
PSEN sl-1.0p 1.1/PSEN sl-1.0	1000 N
PSEN sl-1.0p 1.1/PSEN sl-1.0fm ³⁾	1000 N
PSEN sl-1.0p 1.1 VA/PSEN sl-1.0	1000 N
PSEN sl-1.0p 2.1/PSEN sl-1.0	1000 N
PSEN sl-1.0p 2.1/PSEN sl-1.0fm ³⁾	1000 N
PSEN sl-1.0p 2.2/PSEN sl-1.0	1000 N
PSEN sl-1.0p 2.2/PSEN sl-1.0fm ³⁾	1000 N
PSEN sl-1.0p 3.1/PSEN sl-1.0	1000 N
PSEN sl-1.0p 3.1/PSEN sl-1.0fm ³⁾	1000 N
PSEN sl-1.0p 4.1/PSEN sl-1.0	1000 N
PSEN sl-1.0p 4.1/PSEN sl-1.0fm ³⁾	1000 N
PSEN sl-1.0p 4.2/PSEN sl-1.0	1000 N
PSEN sl-1.0p 4.2/PSEN sl-1.0fm ³⁾	1000 N
PSEN sl-1.0p 6.1/PSEN sl-1.0	1000 N
PSEN sl-1.0p 6.1/PSEN sl-1.0fm ³⁾	1000 N

Type of coding	Power consumption ¹⁾	Dimensions (H x W x D) in mm		Connection type (connector)	Certification	Order number (unit) ²⁾
		Safety guard locking device	Actuator			
Coded ⁴⁾	4,8 W	122 x 45 x 44	138 x 52 x 23	M12, 8-pin	EAC, FCC ⁷⁾ , IC ⁷⁾ , TÜV, UL ⁷⁾	570 500
Coded ⁴⁾	4,8 W	122 x 45 x 44	138 x 52 x 23	M12, 8-pin	EAC, FCC ⁷⁾ , IC ⁷⁾ , TÜV, UL ⁷⁾	570 560
Fully coded ⁵⁾	4,8 W	122 x 45 x 44	138 x 52 x 23	M12, 8-pin	EAC, FCC ⁷⁾ , IC ⁷⁾ , TÜV, UL ⁷⁾	570 501
Fully coded ⁵⁾	4,8 W	122 x 45 x 44	138 x 52 x 23	M12, 8-pin	EAC, FCC ⁷⁾ , IC ⁷⁾ , TÜV, UL ⁷⁾	570 561
Unique, fully coded ⁶⁾	4,8 W	122 x 45 x 44	138 x 52 x 23	M12, 8-pin	EAC, FCC ⁷⁾ , IC ⁷⁾ , TÜV, UL ⁷⁾	570 502
Unique, fully coded ⁶⁾	4,8 W	122 x 45 x 44	138 x 52 x 23	M12, 8-pin	EAC, FCC ⁷⁾ , IC ⁷⁾ , TÜV, UL ⁷⁾	570 562
Coded ⁴⁾	4,8 W	122 x 45 x 44	138 x 52 x 23	M12, 8-pin	EAC, FCC ⁷⁾ , IC ⁷⁾ , TÜV, UL ⁷⁾	570 570
Coded ⁴⁾	4,8 W	122 x 45 x 44	138 x 52 x 23	M12, 8-pin	EAC, FCC ⁷⁾ , IC ⁷⁾ , TÜV, UL ⁷⁾	570 573
Fully coded ⁵⁾	4,8 W	122 x 45 x 44	138 x 52 x 23	M12, 8-pin	EAC, FCC ⁷⁾ , IC ⁷⁾ , TÜV, UL ⁷⁾	570 571
Fully coded ⁵⁾	4,8 W	122 x 45 x 44	138 x 52 x 23	M12, 8-pin	EAC, FCC ⁷⁾ , IC ⁷⁾ , TÜV, UL ⁷⁾	570 574
Unique, fully coded ⁶⁾	4,8 W	122 x 45 x 44	138 x 52 x 23	M12, 8-pin	EAC, FCC ⁷⁾ , IC ⁷⁾ , TÜV, UL ⁷⁾	570 572
Unique, fully coded ⁶⁾	4,8 W	122 x 45 x 44	138 x 52 x 23	M12, 8-pin	EAC, FCC ⁷⁾ , IC ⁷⁾ , TÜV, UL ⁷⁾	570 575
Fully coded ⁵⁾	4,8 W	122 x 45 x 44	138 x 52 x 23	M12, 8-pin	EAC, FCC ⁷⁾ , IC ⁷⁾ , TÜV, UL ⁷⁾	570 581
Fully coded ⁵⁾	4,8 W	122 x 45 x 44	138 x 52 x 23	M12, 8-pin	EAC, FCC ⁷⁾ , IC ⁷⁾ , TÜV, UL ⁷⁾	570 584
Coded ⁴⁾	7,2 W	172 x 45 x 44	188 x 52 x 23	M12, 8-pin	EAC, FCC ⁷⁾ , IC ⁷⁾ , TÜV, UL ⁷⁾	570 600
Coded ⁴⁾	7,2 W	172 x 45 x 44	188 x 52 x 23	M12, 8-pin	EAC, FCC ⁷⁾ , IC ⁷⁾ , TÜV, UL ⁷⁾	570 660
Coded ⁴⁾	7,2 W	172 x 45 x 44	188 x 52 x 23	M12, 8-pin	EAC, FCC ⁷⁾ , IC ⁷⁾ , TÜV, UL ⁷⁾	570 630
Fully coded ⁵⁾	7,2 W	172 x 45 x 44	188 x 52 x 23	M12, 8-pin	EAC, FCC ⁷⁾ , IC ⁷⁾ , TÜV, UL ⁷⁾	570 601
Fully coded ⁵⁾	7,2 W	172 x 45 x 44	188 x 52 x 23	M12, 8-pin	EAC, FCC ⁷⁾ , IC ⁷⁾ , TÜV, UL ⁷⁾	570 661
Unique, fully coded ⁶⁾	7,2 W	172 x 45 x 44	188 x 52 x 23	M12, 8-pin	EAC, FCC ⁷⁾ , IC ⁷⁾ , TÜV, UL ⁷⁾	570 602
Unique, fully coded ⁶⁾	7,2 W	172 x 45 x 44	188 x 52 x 23	M12, 8-pin	EAC, FCC ⁷⁾ , IC ⁷⁾ , TÜV, UL ⁷⁾	570 662
Coded ⁴⁾	7,2 W	172 x 45 x 44	188 x 52 x 23	M12, 8-pin	EAC, FCC ⁷⁾ , IC ⁷⁾ , TÜV, UL ⁷⁾	570 670
Coded ⁴⁾	7,2 W	172 x 45 x 44	188 x 52 x 23	M12, 8-pin	EAC, FCC ⁷⁾ , IC ⁷⁾ , TÜV, UL ⁷⁾	570 673
Fully coded ⁵⁾	7,2 W	172 x 45 x 44	188 x 52 x 23	M12, 8-pin	EAC, FCC ⁷⁾ , IC ⁷⁾ , TÜV, UL ⁷⁾	570 671
Fully coded ⁵⁾	7,2 W	172 x 45 x 44	188 x 52 x 23	M12, 8-pin	EAC, FCC ⁷⁾ , IC ⁷⁾ , TÜV, UL ⁷⁾	570 674
Unique, fully coded ⁶⁾	7,2 W	172 x 45 x 44	188 x 52 x 23	M12, 8-pin	EAC, FCC ⁷⁾ , IC ⁷⁾ , TÜV, UL ⁷⁾	570 672
Unique, fully coded ⁶⁾	7,2 W	172 x 45 x 44	188 x 52 x 23	M12, 8-pin	EAC, FCC ⁷⁾ , IC ⁷⁾ , TÜV, UL ⁷⁾	570 675
Fully coded ⁵⁾	7,2 W	172 x 45 x 44	188 x 52 x 23	M12, 8-pin	EAC, FCC ⁷⁾ , IC ⁷⁾ , TÜV, UL ⁷⁾	570 681
Fully coded ⁵⁾	7,2 W	172 x 45 x 44	188 x 52 x 23	M12, 8-pin	EAC, FCC ⁷⁾ , IC ⁷⁾ , TÜV, UL ⁷⁾	570 684

¹⁾ Gate Locked ²⁾ Unit comprising switch and actuator ³⁾ Free-moving
⁴⁾ Switch accepts any PSENSlock actuator

⁵⁾ Switch accepts only one PSENSlock actuator, teach-in up to 8 times

⁶⁾ Switch accepts only one PSENSlock actuator, no teach-in facility

⁷⁾ FCC, IC and UL certification applies only to individual components contained within the set



Cable selection:

From page 138

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

Webcode: web150408

Online information at www.pilz.com

► Selection guide – PSENSlock

Safety gate system PSENSlock with 5-pin connector

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 with magnetic guard locking for process protection tasks
- ▶ Series connection up to PL e of EN ISO 13849-1:
 - PSENcode, PSENSlock with 5-pin connection for decentralised module PDP67 F8 DI ION
 - PSENSlock and Pilz sensor technology with 8-pin connection for passive junction PDP67 F 4 code or PSEN Y junction (cable separator)
- ▶ Electrical data:
 - Supply voltage: 24 VDC
 - Voltage tolerance: – 15 ... + 10 %
 - Outputs: 2 safety outputs and 1 signal output
- ▶ Mechanical data:
 - Vertical and lateral offset: +/- 3 or +/- 5 mm
 - Protection type: IP67



PSEN sl-0.5



PSEN sl-0.5 ... fm

Type (switch/actuator)	Holding force
PSEN sl-0.5n 1.1/PSEN sl-0.5	500 N
PSEN sl-0.5n 1.1/PSEN sl-0.5fm ³⁾	500 N
PSEN sl-0.5n 2.1/PSEN sl-0.5	500 N
PSEN sl-0.5n 2.1/PSEN sl-0.5fm ³⁾	500 N
PSEN sl-0.5n 2.2/PSEN sl-0.5	500 N
PSEN sl-0.5n 2.2/PSEN sl-0.5fm ³⁾	500 N
PSEN sl-1.0n 1.1/PSEN sl-1.0	1000 N
PSEN sl-1.0n 1.1/PSEN sl-1.0fm ³⁾	1000 N
PSEN sl-1.0n 2.1/PSEN sl-1.0	1000 N
PSEN sl-1.0n 2.1/PSEN sl-1.0fm ³⁾	1000 N
PSEN sl-1.0n 2.2/PSEN sl-1.0	1000 N
PSEN sl-1.0n 2.2/PSEN sl-1.0fm ³⁾	1000 N

Accessories – safety gate system PSENSlock



PSEN sl bracket sliding door



PSEN sl restart interlock

Description Type

One-way screw to secure the actuator

PSEN screw M5x20

Mounting bracket for sensors
PSEN sl bracket sliding door

PSEN sl bracket swing door

Reset lock
PSEN sl restart interlock (padlock)

Type of coding	Power consumption ¹⁾	Dimensions (H x W x D) in mm		Connection type (connector)	Certification	Order number (unit) ²⁾
		Safety guard locking device	Actuator			
Coded ⁴⁾	4,8 W	122 x 45 x 44	138 x 52 x 23	M12, 5-pin	EAC, FCC ⁷⁾ , IC ⁷⁾ , TÜV, UL ⁷⁾	570 503
Coded ⁴⁾	4,8 W	122 x 45 x 44	138 x 52 x 23	M12, 5-pin	EAC, FCC ⁷⁾ , IC ⁷⁾ , TÜV, UL ⁷⁾	570 563
Fully coded ⁵⁾	4,8 W	122 x 45 x 44	138 x 52 x 23	M12, 5-pin	EAC, FCC ⁷⁾ , IC ⁷⁾ , TÜV, UL ⁷⁾	570 504
Fully coded ⁵⁾	4,8 W	122 x 45 x 44	138 x 52 x 23	M12, 5-pin	EAC, FCC ⁷⁾ , IC ⁷⁾ , TÜV, UL ⁷⁾	570 564
Unique, fully coded ⁶⁾	4,8 W	122 x 45 x 44	138 x 52 x 23	M12, 5-pin	EAC, FCC ⁷⁾ , IC ⁷⁾ , TÜV, UL ⁷⁾	570 505
Unique, fully coded ⁶⁾	4,8 W	122 x 45 x 44	138 x 52 x 23	M12, 5-pin	EAC, FCC ⁷⁾ , IC ⁷⁾ , TÜV, UL ⁷⁾	570 565
Coded ⁴⁾	7,2 W	172 x 45 x 44	188 x 52 x 23	M12, 5-pin	EAC, FCC ⁷⁾ , IC ⁷⁾ , TÜV, UL ⁷⁾	570 603
Coded ⁴⁾	7,2 W	172 x 45 x 44	188 x 52 x 23	M12, 5-pin	EAC, FCC ⁷⁾ , IC ⁷⁾ , TÜV, UL ⁷⁾	570 663
Fully coded ⁵⁾	7,2 W	172 x 45 x 44	188 x 52 x 23	M12, 5-pin	EAC, FCC ⁷⁾ , IC ⁷⁾ , TÜV, UL ⁷⁾	570 604
Fully coded ⁵⁾	7,2 W	172 x 45 x 44	188 x 52 x 23	M12, 5-pin	EAC, FCC ⁷⁾ , IC ⁷⁾ , TÜV, UL ⁷⁾	570 664
Unique, fully coded ⁶⁾	7,2 W	172 x 45 x 44	188 x 52 x 23	M12, 5-pin	EAC, FCC ⁷⁾ , IC ⁷⁾ , TÜV, UL ⁷⁾	570 605
Unique, fully coded ⁶⁾	7,2 W	172 x 45 x 44	188 x 52 x 23	M12, 5-pin	EAC, FCC ⁷⁾ , IC ⁷⁾ , TÜV, UL ⁷⁾	570 665

¹⁾ Gate locked ²⁾ Unit comprising switch and actuator ³⁾ Free-moving
⁴⁾ Switch accepts any PSENSlock actuator

⁵⁾ Switch accepts only one PSENSlock actuator, teach-in up to 8 times

⁶⁾ Switch accepts only one PSENSlock actuator, no teach-in facility

⁷⁾ FCC, IC and UL certification applies only to individual components contained within the set



Features	Quantity	Order number
<ul style="list-style-type: none"> ▶ Stainless steel ▶ Drive: one-way slot (safety screw) ▶ M5, 20 mm ▶ Suitable for PSEN sl 	10	540312
For sliding gate	2	570551
For swing gate	1	570550
<ul style="list-style-type: none"> ▶ Mechanical add-on module for attachment to PSEN sl-0.5 or PSEN sl-1.0 ▶ Enables up to 2 padlocks or carabiners to be attached to stop the door closing and so prevent the machine from restarting ▶ Certification: TÜV 	1	570552

Cable selection:

From page 138

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

Webcode: web150408

Online information at www.pilz.com

► Safety gate system PSENmlock

The safety gate system PSENmlock provides safe interlocking and safe guard locking for personnel and process protection up to the highest category PL e.



PSEN ml b 1.1 unit



PSEN ml escape release cordset



PSEN ml door handle swinging door

Safe interlocking with safe guard locking

PSENmlock provides secure safety gate monitoring and safe guard locking in one product. The latter is enabled by dual-channel operation of the guard locking device. The switch is therefore especially suitable for machines with dangerous run-on, in which safe guard locking is also necessary up to PL d or PL e. Thanks to LEDs on three sides of the housing, diagnostics are easily visible in all three installation positions. The flexibly mounted actuator ensures a high tolerance compensation – even with sagging gates.

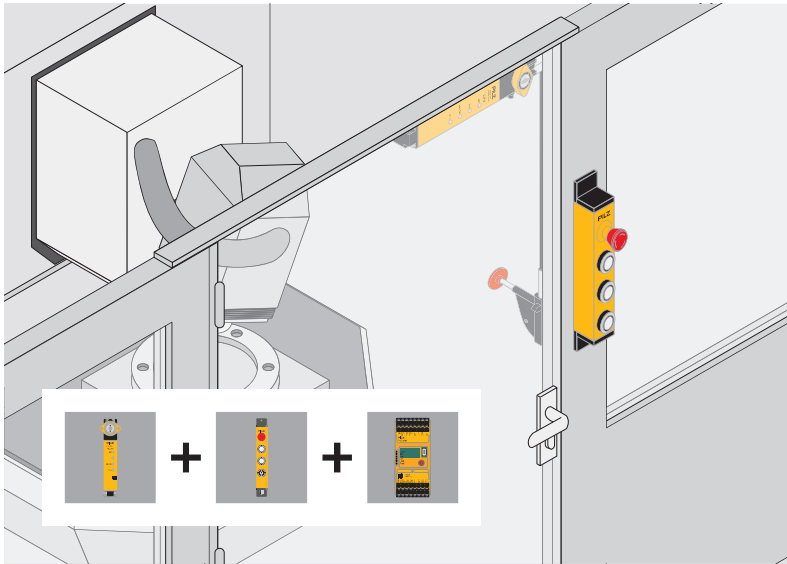
Safety even in the event of danger

Two versions with escape release are available to you as optional accessories. A bar is used to connect the PSEN ml escape release directly to the base unit, while the PSEN ml escape release cordset is mounted on the PSENmlock via a pull-push wire. The latter enables the installation of the safety gate system and escape release to be physically separate. With the right handles, you get an economical, space-saving complete solution for swing and sliding gates.

Type code for PSENmlock

PSEN ml b 1.1

Product area	Version	Coding
Pilz SENsors		
Product group ml – PSENmlock	b Base version	1.1 Coded
Operation	s Series connection	2.1 Fully coded 2.2 Unique, fully coded
<ul style="list-style-type: none"> ► Mechanical, coded ► Transponder (RFID) ► With safe semiconductor outputs 		



Your benefits at a glance

- ▶ Maximum safety:
 - Safe guard locking up to PL e
 - Safe interlocking up to PL e
- ▶ High holding force of 7 500 N
- ▶ Easily visible diagnostics: LEDs on 3 sides of the housing
- ▶ Compact design: suitable for all 40 mm profiles, among others
- ▶ Flexible actuator: for high tolerance compensation – even with sagging gates
- ▶ No inadvertent activation of the guard locking due to the integral restart interlock
- ▶ Long service life: robust housing and mechanically robust
- ▶ Energy efficient: reduced power consumption during operation
- ▶ SDD-capable

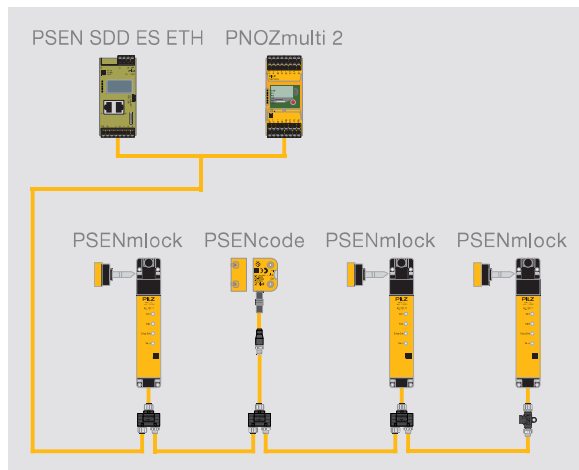


Components for your safe solution	Order number
Sensor: PSEN ml s 1,1 unit	570 406
PSEN ml escape release cordset 1.5 m	570 470
Pushbutton unit: PIT gb LLLLE	G1000001
PSENmlock connection: PSEN cable axial, M12, 8-pin, 10 m	540 321
PITgatebox connection: PSEN cable axial, M12, 12-pin, 10 m	631 082
Evaluation device: PNOZ m B0	772 100
- Spring loaded terminals (1 set)	751 008

The optimum solution: the safety gate system PSENmlock in combination with the remote escape release, the pushbutton unit PITgatebox and the configurable safe small controllers PNOZmulti 2.

PSENmlock with series connection

With the series connection versions, you benefit from an economical installation thanks to reduced wiring work and series connection of the safe input and output signals. In combination with Safety Device Diagnostics (SDD), guard locking of individual sensors in the chain can be activated in a targeted manner – and all this without expensive individual wiring in the control cabinet. The SDD also enables simple and comprehensive diagnostics of the safety switches, reducing downtimes.



Targeted activation of individual sensors with series connection with the SDD (adapter, page 61 in Accessories).

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

Webcode: web150409

Online information at www.pilz.com

▶ Selection guide – PSENmlock

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
- ▶ Electrical data:
 - Supply voltage: 24 VDC
 - 2 outputs: semiconductor, max. 100 mA each
 - Signal output: 100 mA
 - 2 inputs: 0,5 A, 150 ms
 - Voltage tolerance: - 15 ... + 20 %
- ▶ Mechanical data:
 - Max. vertical offset: +/- 3 mm
 - Max. lateral offset: +/- 3 mm
 - Max. angular offset: +/- 1,5°
 - Max. angular offset about the x-axis: +/- 2°
 - Max. angular offset about the y-axis: +/- 2,5°
 - Max. angular offset about the z-axis: +/- 7,5°
 - Max. offset in the closing direction: +/- 2 mm
 - Integral latching force: 30 N
 - Protection type: IP67
- ▶ Type of coding:
 - Coded (Version 1.1)
 - Fully coded (Version 2.1)
 - Unique, fully coded (Version 2.2)

Safety gate system PSENmlock – Base version



PSEN ml b 1.1 unit



PSEN ml b 1.1 switch



PSEN ml b 2.1 actuator

Type (switch/actuator)	Holding force
▶ Unit	
PSEN ml b 1.1 unit	7 500 N
PSEN ml b 2.1 unit	7 500 N
PSEN ml b 2.2 unit	7 500 N
▶ Switch	
PSEN ml b 1.1 switch	7 500 N
PSEN ml b 2.1 switch	7 500 N
▶ Actuator	
PSEN ml b 1.1 actuator	7 500 N
PSEN ml b 2.1 actuator	7 500 N
PSEN ml 1.1 round actuator	7 500 N
PSEN ml 2.1 round actuator	7 500 N

Safety gate system PSENmlock – Series connection



PSEN ml s 1.1 unit



PSEN ml s 1.1 switch

Type	Holding force
▶ Unit	
PSEN ml s 1.1 unit	7 500 N
PSEN ml s 2.1 unit	7 500 N
PSEN ml s 2.2 unit	7 500 N
▶ Switch	
PSEN ml s 1.1 switch	7 500 N
PSEN ml s 2.1 switch	7 500 N
PSEN ml s 2.2 switch	7 500 N

Type of coding	Dimensions (H x W x D) in mm	Certification	Connection type (connector)	Order number
Coded	217.2 x 40 x 40	FCC ²⁾ , IC ²⁾ , TÜV, UL ²⁾	M12, 8-pin, pigtail	570 400 ¹⁾
Fully coded	217.2 x 40 x 40	FCC ²⁾ , IC ²⁾ , TÜV, UL ²⁾	M12, 8-pin, pigtail	570 402 ¹⁾
Unique, fully coded	217.2 x 40 x 40	FCC ²⁾ , IC ²⁾ , TÜV, UL ²⁾	M12, 8-pin, pigtail	570 404 ¹⁾
Coded	217.2 x 40 x 40	FCC ²⁾ , IC ²⁾ , TÜV, UL ²⁾	M12, 8-pin, pigtail	570 401
Fully coded	217.2 x 40 x 40	FCC ²⁾ , IC ²⁾ , TÜV, UL ²⁾	M12, 8-pin, pigtail	570 403
Coded	63.5 x 40 x 67.2	FCC ²⁾ , IC ²⁾ , TÜV, UL ²⁾	-	570 480
Fully coded	63.5 x 40 x 67.2	FCC ²⁾ , IC ²⁾ , TÜV, UL ²⁾	-	570 481
Coded	63.5 x 40 x 61.5	FCC ²⁾ , IC ²⁾ , TÜV, UL ²⁾	-	570 482
Fully coded	63.5 x 40 x 61.5	FCC ²⁾ , IC ²⁾ , TÜV, UL ²⁾	-	570 483

¹⁾ Set comprising switch and actuator


²⁾ FCC, IC and UL certification applies only to individual components contained within the set

Type of coding	Dimensions (H x W x D) in mm	Certification	Connection type (connector)	Order number
Coded	217.2 x 40 x 40	FCC ²⁾ , IC ²⁾ , TÜV, UL ²⁾	M12, 12-pin, pigtail	570 406
Fully coded	217.2 x 40 x 40	FCC ²⁾ , IC ²⁾ , TÜV, UL ²⁾	M12, 12-pin, pigtail	570 408
Unique, fully coded	217.2 x 40 x 40	FCC ²⁾ , IC ²⁾ , TÜV, UL ²⁾	M12, 12-pin, pigtail	570 410
Coded	217.2 x 40 x 40	FCC ²⁾ , IC ²⁾ , TÜV, UL ²⁾	M12, 12-pin, pigtail	570 407
Fully coded	217.2 x 40 x 40	FCC ²⁾ , IC ²⁾ , TÜV, UL ²⁾	M12, 12-pin, pigtail	570 409
Unique, fully coded	217.2 x 40 x 40	FCC ²⁾ , IC ²⁾ , TÜV, UL ²⁾	M12, 12-pin, pigtail	570 411


²⁾ FCC, IC and UL certification applies only to individual components contained within the set



Cable selection:

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

 Webcode: web150409

Online information at www.pilz.com



► Selection guide – PSENmlock

Selection guide installation accessory

Type of gate	Handle	Use of the mounting plate for standard profiles (570 490)		Order number
Swinging door	No	No		PSEN ml bracket swinging door 70 _____ 570 493 ¹⁾
		Yes		PSEN ml bracket swinging door 80 _____ 570 494 ¹⁾
	Yes	No		PSEN ml door handle swinging door 70 _____ 570 496 ¹⁾
		Yes		PSEN ml door handle swinging door 80 _____ 570 497 ¹⁾
Sliding gates	No	No		PSEN ml bracket sliding door _____ 570 492 ¹⁾
	Yes	No		PSEN ml door handle sliding door _____ 570 495 ¹⁾

¹⁾ Actuators are not supplied with the device

Accessories – safety gate system PSENmlock

	Description Type	Features	Quantity	Order number
	Mounting plate PSEN ml mounting plate	For assembly on the standard profile	1	570 490
PSEN ml bracket sliding door	Mounting bracket PSEN ml bracket sliding door	For sliding gate	1	570 492
	PSEN ml bracket swinging door 70	For swing gate	1	570 493
	PSEN ml bracket swinging door 80	For swing gate when using mounting plate 570 490	1	570 494
	Handle PSEN ml door handle sliding door	For sliding gate	1	570 495
PSEN ml door handle swinging door	PSEN ml door handle swinging door 70	For swing gate	1	570 496
	PSEN ml door handle swinging door 80	For swing gate when using mounting plate 570 490	1	570 497
	Screw set PSEN screw set bracket swinging door	For swing door mounting bracket	1	570 498
	PSEN screw set bracket sliding door	For sliding door mounting bracket	1	570 499
	PSEN screw M5x10	For PSENmlock actuator	10	540 311
	PSEN screw M5x20	For PSENmlock actuator	10	540 312

Accessories – safety gate system PSENmlock



PSEN ml escape release



PSEN ml escape release cordset 2,0m

Description Type	Features	Quantity	Order number
Series connection PSEN ml escape release	Suitable for PSEN ml b, PSEN ml s	1	570460
PSEN ml escape release extension	Suitable for PSEN ml b, PSEN ml s	1	570462
PSEN ml escape release cordset 0.5 m	Suitable for PSEN ml b, PSEN ml s, length: 0.5 m	1	570466
PSEN ml escape release cordset 0.75m	Suitable for PSEN ml b, PSEN ml s, length: 0.75 m	1	570467
PSEN ml escape release cordset 1.0m	Suitable for PSEN ml b, PSEN ml s, length: 1.0 m	1	570468
PSEN ml escape release cordset 1.25m	Suitable for PSEN ml b, PSEN ml s, length: 1.25 m	1	570469
PSEN ml escape release cordset 1.5m	Suitable for PSEN ml b, PSEN ml s, length: 1.5 m	1	570470
PSEN ml escape release cordset 2.0m	Suitable for PSEN ml b, PSEN ml s, length: 2.0 m	1	570471
PSEN ml escape release cordset 2.5m	Suitable for PSEN ml b, PSEN ml s, length: 2.5 m	1	570472
PSEN ml escape release cordset 3.0m	Suitable for PSEN ml b, PSEN ml s, length: 3.0 m	1	570473
PSEN ml escape release cordset 3.5m	Suitable for PSEN ml b, PSEN ml s, length: 3.5 m	1	570474
PSEN ml escape release cordset 4.0m	Suitable for PSEN ml b, PSEN ml s, length: 4.0 m	1	570475
Actuator PSEN ml actuator 10° adapter	Adapter for aligning the PSENmlock actuator for small gates, radius: 300 – 500 mm.	1	570484
PSEN ml actuator centre ring	5 centring rings for PSENmlock actuator, especially suited for small gates.	1	570485

Cable selection:

From page 138

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

Webcode: web150409

Online information at www.pilz.com

► Safety gate system PSENsgate

PSENsgate provides secure safety gate monitoring, protecting personnel and plant to the highest category PL e in one system.



PSEN sg2c-3LPE

PSEN sg2c-5LPLLE

Save time and components

You benefit from a high savings potential: use just one turnkey system and all your safety functions and control elements are integrated.

A number of new system types are available to select, with optional integratable control and operator elements such as pushbuttons, key switches, illuminated buttons, section stop, emergency stop or escape release.

Economical solution

When combined with safe control technology from Pilz, what you get is a complete safety gate monitoring solution that's safe and economical. It is also easy to connect in series with many other sensors PSENcode and PSENSlock. The robust design is another impressive feature of the PSENsgate.

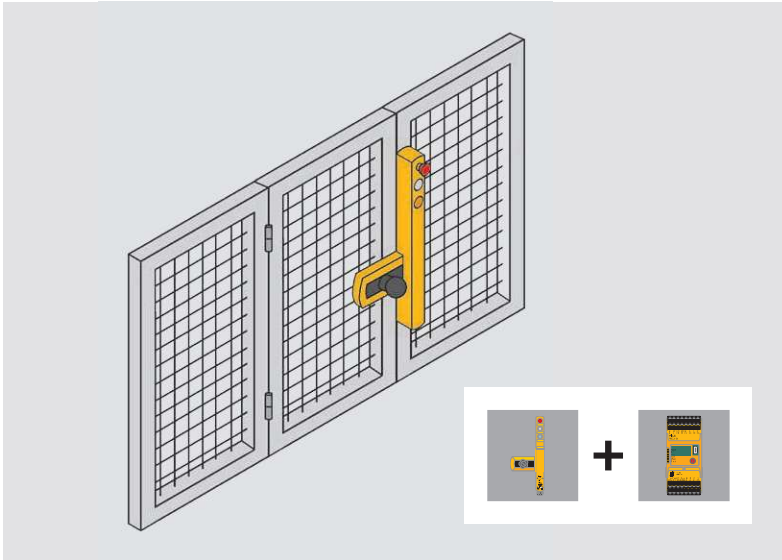
Type code PSENsgate

PSEN sg2c-5LPKLE-M12/5

Product area Pilz SENSors	Generation	Connection via	Design/elements	Operator elements/ emergency stop ¹⁾	Connection type ²⁾
Product group sg – PSENsgate Operation ▶ Mechanical, coded ▶ Transponder (RFID) ▶ With safe guard locking and safety gate monitoring	1 2	c Spring-loaded terminal, plug in	3 Short design, 3 elements 5 Long design, 5 elements	– Not present P Pushbutton L Illuminated pushbutton K Key switch B Key button S Section stop C Blind cover E E-STOP	– Not present M12/5 Connector, M12, 5-pin

¹⁾ Sequence: Key assignment from bottom to top

²⁾ Connection only for large design



Your benefits at a glance


- ▶ Greater flexibility: large selection of different control and operating elements, e.g. key switches, emergency stops, plus the ability to connect enabling switches
- ▶ Maximum safety: just one switch per safety gate for personnel and plant protection up to PL e
- ▶ Engineering and costs are minimised: one product rather than several individual components
- ▶ Time saving: reduced installation and wiring effort thanks to a turnkey system with integratable control elements and emergency stop (optional)
- ▶ Simple assembly: for right and left-hinged gates
- ▶ For universal use: suitable for all 45 mm profiles
- ▶ Energy efficient: reduced current consumption (gate lock max. 2 W)

Components for your safe solution	Order number
Sensor: PSEN sg2c-3LPE	570800
Connection: Cable, depending on function, e.g. 16 x 0,25 mm ²	-
Evaluation device: PNOZ m B0	772 100
- Spring loaded terminals (1 set)	751 008

The optimum solution: monitoring a safety gate using the safety gate system PSENsgate and the configurable safe small controllers PNOZmulti 2.



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

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Online information at www.pilz.com

► Selection guide – PSENsgate

Safety gate system PSENsgate

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
- ▶ Series connection in combination with PSENsgate, PSENcode, PSENslock up to PL e of EN ISO 13849-1, SIL CL 3 of EN/IEC 62061:
 - With 8-pin connector via Y junction (cable separator) or PDP67 F 4 code
- ▶ Electrical data:
 - Supply voltage: 24 VDC
 - Outputs: 2 (semiconductor, each max. 500 mA)
 - Signal output: 500 mA
 - “Safe range” input (solenoid pin): 1.5 A, 150 ms
 - Power consumption depends on configuration (door locked): max. 2 W
 - Voltage tolerance: – 15/+ 10 %
- ▶ Mechanical data:
 - Vertical and lateral offset: +/- 5 or +/- 5 mm
 - Holding force, swing gate: 2 000 N
 - Connection type: plug-in spring-loaded terminals
 - Protection type: IP65/54
- ▶ Type of coding:
 - Coded
 - Unique, fully coded (Version 2.2)
- ▶ PSENsgate must be used in conjunction with the auxiliary release; the escape release is optional
- ▶ Scope: sensing device with pushbuttons including coloured caps and escape release bar as well as actuator (bolt) for left or right-hinged doors



PSEN sg2c-3LPE



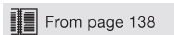
PSEN sg2c-5LPLLE

Type	No. of pushbuttons Emergency stop
▶ Short unit type	
PSEN sg2c-3LPE	1
PSEN sg2c-3LBE	1
PSEN sg2c-3LPS	-
PSEN sg2c-3LBS	-
PSEN sg2c-3LPC	-
PSEN sg2c-3LBC	-
PSEN sg2c-3LPE 2.2	1
▶ Long unit type	
PSEN sg2c-5LPLLE	1
PSEN sg2c-5LBLLLE	1
PSEN sg2c-5LPLLS	-
PSEN sg2c-5LBLLS	-
PSEN sg2c-5LPLLC	-
PSEN sg2c-5LBLLC	-
PSEN sg2c-5LPLLE 2.2	1
▶ Long unit type: connection type M12, 5-pin	
PSEN sg2c-5LPKLE-M12/5	1
PSEN sg2c-5LBKLE-M12/5	1
PSEN sg2c-5LPKLS-M12/5	-
PSEN sg2c-5LBKLS-M12/5	-
PSEN sg2c-5LPKLC-M12/5	-
PSEN sg2c-5LBKLC-M12/5	-
PSEN sg2c-5LPKLE-M12/5 2.2	1
▶ Freely configurable unit type (2 freely assignable buttons)	
PSEN sg2c-5CCLLE	1

Section stop	Push-button	Key-operated pushbutton	Key switch	Dimensions (H x W x D) in mm	Type of coding	Certification	Order number
-	2	-	-	445 x 200 x 105	Coded	FCC ¹⁾ , TÜV, UL ¹⁾	570800
-	1	1	-	445 x 200 x 105	Coded	FCC ¹⁾ , TÜV, UL ¹⁾	570802
1	2	-	-	445 x 200 x 105	Coded	FCC ¹⁾ , TÜV, UL ¹⁾	570804
1	1	1	-	445 x 200 x 105	Coded	FCC ¹⁾ , TÜV, UL ¹⁾	570806
-	2	-	-	445 x 200 x 105	Coded	FCC ¹⁾ , TÜV, UL ¹⁾	570808
-	1	1	-	445 x 200 x 105	Coded	FCC ¹⁾ , TÜV, UL ¹⁾	570810
-	2	-	-	445 x 200 x 105	Unique, fully coded	FCC ¹⁾ , TÜV, UL ¹⁾	570880
-	4	-	-	546 x 200 x 105	Coded	FCC ¹⁾ , TÜV, UL ¹⁾	570812
-	3	1	-	546 x 200 x 105	Coded	FCC ¹⁾ , TÜV, UL ¹⁾	570814
1	4	-	-	546 x 200 x 105	Coded	FCC ¹⁾ , TÜV, UL ¹⁾	570816
1	3	1	-	546 x 200 x 105	Coded	FCC ¹⁾ , TÜV, UL ¹⁾	570818
-	4	-	-	546 x 200 x 105	Coded	FCC ¹⁾ , TÜV, UL ¹⁾	570820
-	3	1	-	546 x 200 x 105	Coded	FCC ¹⁾ , TÜV, UL ¹⁾	570822
-	4	-	-	546 x 200 x 105	Unique, fully coded	FCC ¹⁾ , TÜV, UL ¹⁾	570882
-	3	-	1	558,5 x 200 x 105	Coded	FCC ¹⁾ , TÜV, UL ¹⁾	570824
-	2	1	1	558,5 x 200 x 105	Coded	FCC ¹⁾ , TÜV, UL ¹⁾	570826
1	3	-	1	558,5 x 200 x 105	Coded	FCC ¹⁾ , TÜV, UL ¹⁾	570828
1	2	1	1	558,5 x 200 x 105	Coded	FCC ¹⁾ , TÜV, UL ¹⁾	570830
-	3	-	1	558,5 x 200 x 105	Coded	FCC ¹⁾ , TÜV, UL ¹⁾	570832
-	2	1	1	558,5 x 200 x 105	Coded	FCC ¹⁾ , TÜV, UL ¹⁾	570834
-	3	-	1	558,5 x 200 x 105	Unique, fully coded	FCC ¹⁾ , TÜV, UL ¹⁾	570884
-	-	-	-	555 x 200 x 108	Coded	FCC ¹⁾ , TÜV, UL	570836



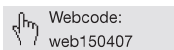
Cable selection:



From page 138

¹⁾ FCC and UL certification applies only to individual components contained within the set

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



Webcode: web150407

Online information at www.pilz.com

▶ Selection guide – PSENsgate

Accessories – safety gate system PSENsgate



PSEN sg escape
release pin



PSEN sg auxiliary
release pin



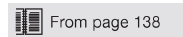
PSEN sg color covers
(pushbutton)

Description
Type
Escape release PSEN sg escape release pin
Auxiliary release PSEN sg auxiliary release pin
Cover PSEN sg2 cover
Colour control elements PSEN sg colour covers (pushbutton)
Connection cable 200 m PSEN cable 200 m-8x0.25 mm²

Features	Quantity	Order number
Certification: TÜV	1	570870
Certification: TÜV	1	570871
Certification: TÜV	1	570773
Certification: TÜV	6	570875
-	1	570793

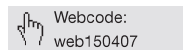


Cable selection:



From page 138

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



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