



Light Curtains

PILZ
THE SPIRIT OF SAFETY

- ▶ Increased productivity thanks to ergonomic workflow
- ▶ Quick to integrate into your plant
- ▶ Simple operation and maintenance
- ▶ Barrier-free safety
- ▶ Space-saving thanks to compact dimensions
- ▶ Compliant and approved in accordance with EN/IEC 61508, EN/IEC 61496-1

► Light curtains

When the production process requires active intervention, light curtains from the product range PSENOpt provide optimum protection for plant and machinery. PSENOpt provide finger, hand and body protection in accordance with EN/IEC 61496-1/-2, depending on the requirement. A comprehensive range of accessories and light curtains with advanced functionalities such as muting, blanking or cascading support flexible application on any machine.



Access guarding



Body protection



Hand protection



Finger protection



PSEN opII3F...



PSEN op2H-A...



PSEN op2H-SL...

PSENOpt II – new generation

With a high level of robustness of 50 g, light curtains PSENOpt II are ideally suited for rugged industrial environments. In addition to the first Type 3 version, they are also available for Type 4 applications.

PSENOpt Advanced

The light curtains PSENOpt Advanced enable maximum flexibility thanks to their multifunctionality: Depending on the requirement, either muting or blanking is implemented, with or without cascading, using the same light curtain. Their full functionality can be used in conjunction with the configurable safe small controllers PNOZmulti 2.

PSENOpt slim

Light curtains PSENOpt slim can be used above all in applications where space is at a premium thanks to their slimline design.

For safe access to the production process

PSENOpt offer greater productivity, while safeguarding access to the work process.

Save costs:

- ▶ PSENOpt devices have a compact design and therefore save space.
- ▶ They can quickly be incorporated, operated and maintained in your plant.
- ▶ Protected fields and detection capability can be set up to be process-oriented.

Select the appropriate compliant PSENOpt

Carry out a safety assessment and evaluate the risk in accordance with EN/IEC 61496-1/-2. You can then use this information to work out the appropriate light curtain resolution for your application, in accordance with EN ISO 13855.

Select the electrosensitive protective device that best meets your needs. This will mean greater safety for finger, hand and body, compatible with a wide range of applications.

Simple commissioning

As single beams can be shown in the software PSENOpt Configurator, it is much easier to align and monitor the light curtains; reaction times can be reduced to a minimum through rapid diagnostics.

Inspection of safeguards

The independent inspection body of Pilz GmbH & Co. KG, Ostfildern, accredited by the German Accreditation Body DAkkS to EN ISO/IEC 17020:2012, supports you as a partner in conducting the internationally valid safety inspection of your electrosensitive protective equipment.



Keep up-to-date on light curtains PSENOpt:

 Webcode:
web150525

Online information at www.pilz.us

► Selection guide – Light curtains

Selection guide – for every application, the right light curtain, PSENopt



PSENopt II



PSENopt Advanced

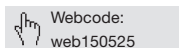


PSENopt slim

Type
Resolution
Approved in accordance with EN/IEC 61496
Can be used in applications in accordance with EN ISO 13849-1
EN/IEC 62061
Resolution
Finger protection
Hand protection
Body protection
Height of protected field
Range
Response time
Protection type
Dimensions
Features/functions
Connection type

PSENopt II – new generation		PSENopt Advanced		PSENopt slim	
Finger, hand, body protection		Finger and hand protection		Finger and hand protection	
Type 3	Type 4	Type 2	Type 4	Type 2	Type 4
PL d	PL e	PL c	PL e	PL c	PL e
SIL CL 2	SIL CL 3	SIL CL 1	SIL CL 3	SIL CL 1	SIL CL 3
14 mm		14 mm		14 mm	
30 mm		30 mm		24 mm	
▶ 170 mm (operating range 0.2 ... 15 m) ▶ 300 mm (operating range 10 ... 55 m)		-		-	
150 ... 1 800 mm		300 ... 1 800 mm		150 ... 1 200 mm	
8/18/55 m		7/20 m		6 m	
6 ... 20 ms (without coding)		13 ... 33 ms		7 ... 17 ms	
IP65		IP65		IP65	
35 x 40 mm		35 x 40.8 mm		15.4 x 32.6 mm	
▶ Diagnostics ▶ High level of robustness ▶ Freedom from dead zones ▶ PDP67 connection compatibility ▶ Coding ▶ Simple wiring		▶ Feedback loop monitoring ▶ Reset ▶ Acknowledgement ▶ Diagnostics and muting ▶ Blanking ▶ Cascading ▶ Manual restart ▶ Configuration via software possible ▶ Freedom from dead zones		▶ Feedback loop monitoring ▶ Diagnostics ▶ Cascading ▶ Slimline design ▶ Freedom from dead zones	
5-pin		12-pin/5-pin		5-pin	

Keep up-to-date
on light curtains
PSENopt:



Online information
at www.pilz.us

► Light curtains PSENopt II – new generation

The new second generation of light curtains PSENopt II is characterized by the high level of robustness and is suitable for all Type 3 and Type 4 applications in accordance with EN/IEC 61496.



PSEN oplI3F...

High level of robustness for reducing downtimes

With a shock resistance of 50 g, PSENopt II are extremely robust with regard to shock, vibration and collision. They are also resistant to dust and cold (down to –10 °C), making them ideal for use in rugged industrial environments. The operator can evaluate the essential causes and system defects responsible for the machine stopping by means of the LEDs. This reduces downtimes.



Shock, vibration, collision



Cold



Dust

Type code for PSENopt II

PSEN oplI3H-s-30-045

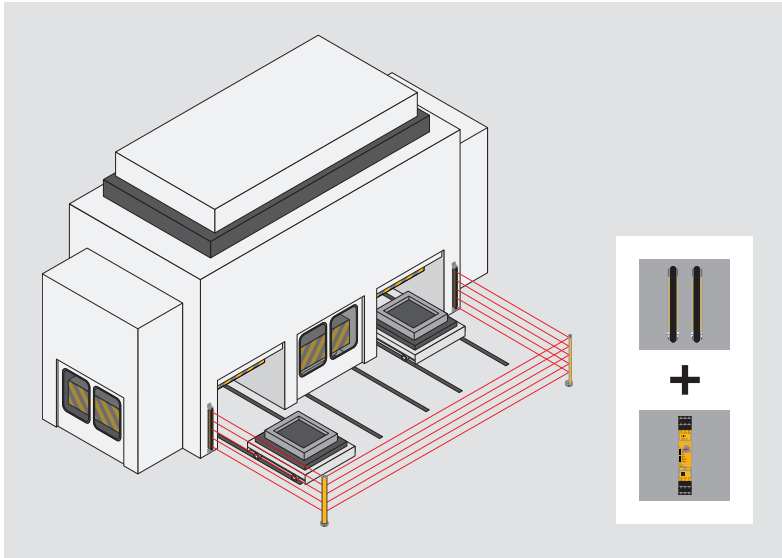
Product area Pilz SENSors	Approval	Resolution	Functions	Resolution	Height of protected field
Product group opII – PSENopt II	3 Type 3 ¹⁾ 4 Type 4 ²⁾	B Body protection H Hand protection F Finger protection	s Standard	14 14 mm 30 30 mm 170 170 mm ³⁾ 300 300 mm ⁴⁾	015 150 mm 030 300 mm 045 450 mm 060 600 mm 075 750 mm 090 900 mm 105 1 050 mm 120 1 200 mm 135 1 350 mm 150 1 500 mm 165 1 650 mm 180 1 800 mm
Operation ► Non-contact, optical, 2D (area monitoring) ► With safe semiconductor outputs					

¹⁾ Approved in accordance with EN/IEC 61496-1

²⁾ Approved in accordance with EN/IEC 61496-1/-2

³⁾ With operating range 0.2 – 15 m

⁴⁾ With operating range 10 – 55 m



Your benefits at a glance

- ▶ Finger, hand and body protection for applications up to PL e
- ▶ Highly robust for protection against shock, collision and vibration
- ▶ User-friendly diagnostics via LEDs to reduce downtimes
- ▶ Rapid and simple assembly, installation and commissioning
- ▶ Flexible use with enhanced safety – thanks to freedom from dead zones
- ▶ One-stop shop – economical all-in-one solution with PDP67 and comprehensive accessories

Components for your safe solution	Order number
Sensor: PSEN opII4H-s-30-150	632 069
Mirror columns: PSEN opII mirror column-165 Set	632 010
Connection: ▶ PSEN op cable M12-5sf 10 m (2x)	630 312
Evaluation device: ▶ PNOZ s3	751 103

The optimum solution: securing several sides of a danger zone with light curtains PSENopt II and compatible mirror columns.

Flexible arrangement

There are no limits to the physical arrangement of your light curtains. Thanks to the coding, the light curtains do not interfere with each other, even in close proximity. This is particularly true if the transmitter of the first pair of light curtains emits beams in the direction of the receiver of the second pair of light curtains. In this case, the pairs of light curtains can be configured with different beam codes.

Securing several sides of a danger zone

In order to secure several sides of a danger zone, the light curtains can be combined with our new PSENopt II mirror columns. Up to three access sides can be monitored with just one pair of light curtains and two mirror columns. This saves wiring work, space and money. The mirror columns are comprised of a post protector and an integrated mirror and can be used with all light curtains PSENopt and PSENopt II. The PSENopt II adjustable base unit is an optional accessory offering additional protection against strong mechanical impact.

Keep up-to-date
on light curtains
PSENopt II:

 Webcode:
web150418

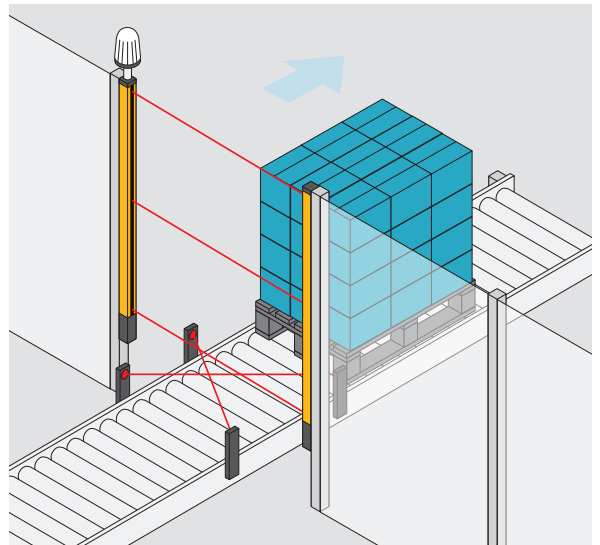
Online information
at www.pilz.us

► Light curtains PSENopt Advanced

The multifunctional light curtains PSENopt Advanced are used for the advanced functions muting, blanking and/or cascading. Configuration is intuitive via the software PSENopt Configurator. Reaction times can be reduced to a minimum through rapid diagnostics.



PSEN op2H-A...



Muting with crossed muting sensors.

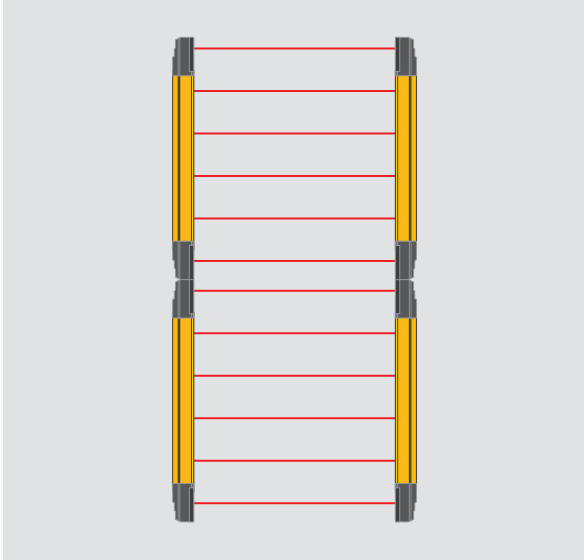
Rapid commissioning

Light curtains PSENopt Advanced are easy to commission using the software PSENopt Configurator. You can also take advantage of short reaction times thanks to rapid diagnostics.

Muting to distinguish between a person and material

PSENopt devices with muting function are suitable for transporting material into and out of a danger zone, when loading or unloading pallets for example.





Continuous single beams during cascading, without dead zones, increase safety.

Your benefits at a glance

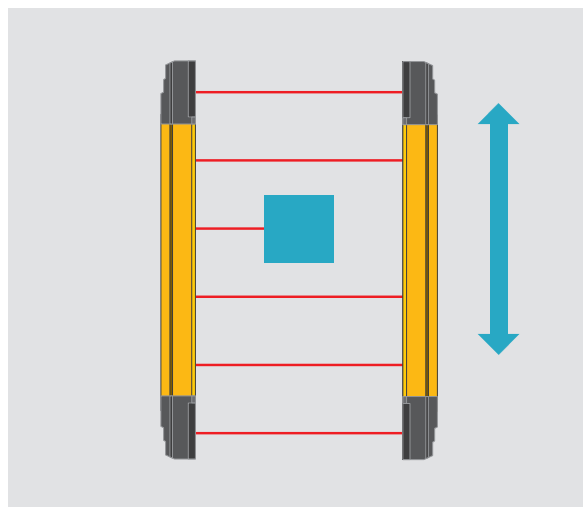
- ▶ Simple operation and commissioning with the new software PSENopt Configurator
- ▶ Short reaction times thanks to rapid diagnostics of fault states
- ▶ High flexibility:
 - 3 functionalities in one light curtain: muting, blanking, cascading
 - Flexible installation thanks to coding
 - Higher level of safety as there are no dead zones

Cascading function without dead zones for effective protection against encroachment into and behind the protected area

Adjacent protected fields can easily be safeguarded using the cascading function. Just connect master and slave quickly and simply using a convenient plug-in connector; also combines finger and hand protection.

Blanking for a flexible, uninterrupted production process

You can use the blanking function to blank out a defined area of the light curtain. The safety function will not be triggered when the material to be processed passes through. Blanking can be implemented in two different ways: fixed blanking and floating blanking.



Floating blanking: One beam is blanked out. Any object that interrupts more than one beam will be detected.

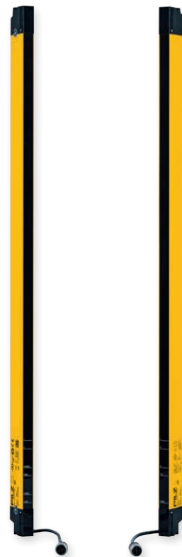
Keep up-to-date
on light curtains
PSENopt
Advanced:

 Webcode:
web150423

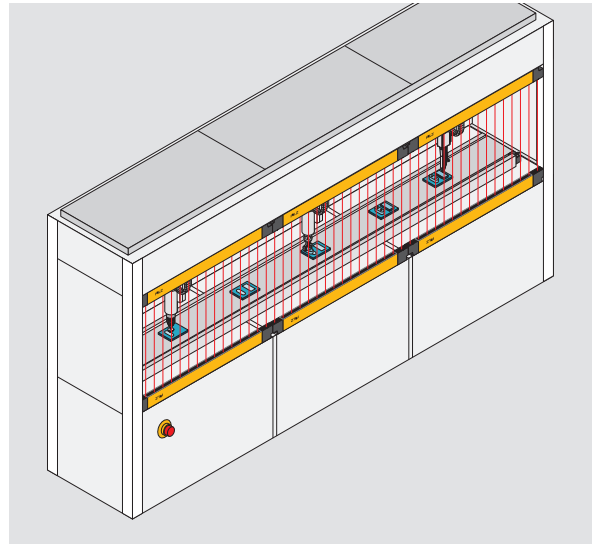
Online information
at www.pilz.us

► Light curtains PSENopt slim

Thanks to their slimline design, light curtains PSENopt slim are perfect for applications where space is at a premium.



PSEN opt2H-SL...



Linear cascading

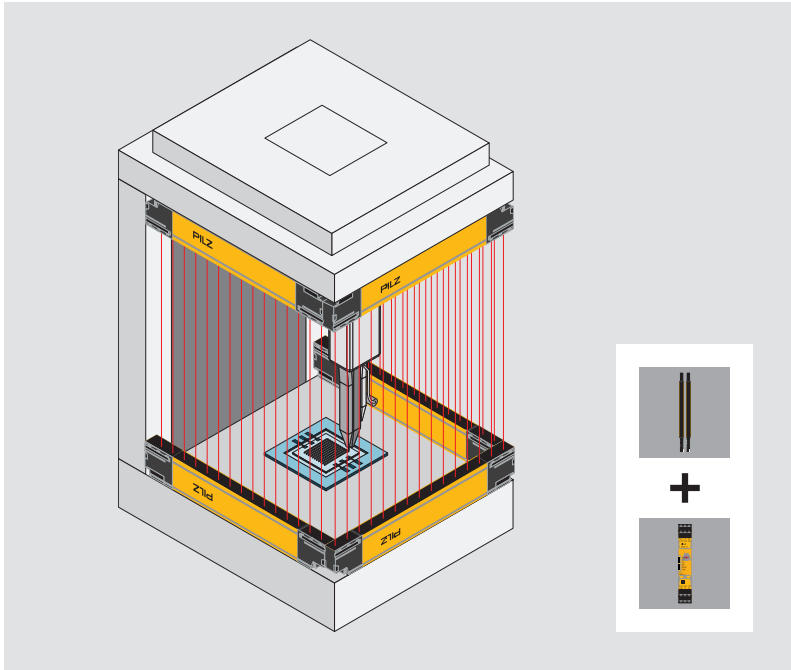
Small light curtain, high level of safety

With their slimline design, PSENopt slim can be used above all in applications where space is at a premium. In this case, the Type 2 and Type 4 light curtains provide finger and hand protection, depending on the requirement. The operator can evaluate the essential causes and system defects responsible for the machine stopping by means of the LEDs. This reduces downtimes.

Linear cascading without dead zones

Thanks to the cascading function with no dead zones, PSENopt slim provide effective protection against encroachment into and behind the protected area. Adjacent protected fields can easily be safeguarded using the cascading function.





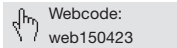
Your benefits at a glance

- ▶ Finger and hand protection for applications up to PL c and PL e
- ▶ Narrow design saves space and costs
- ▶ Cascading function without dead zones for effective protection against encroachment into and behind the protected area
- ▶ User-friendly diagnostics via LEDs to reduce downtimes
- ▶ Rapid and simple assembly, installation and commissioning
- ▶ Safe and economical one-stop solution e.g. with PNOZsigma or PNOZmulti

Components for your safe solution	Order number
Sensor: 3 x PSEN op4F-SL-14-105/1	631 157
Connection: ▶ PSEN cable M12-5sf 5m ▶ 2 x PSEN op SL cascading 0.1 m	630 311 631 183
Evaluation device: ▶ PNOZ s3	750 103
Test rod for ESPE: PSEN op Testpiece F 14m	630 345

The optimum solution: monitoring of space-critical applications with cascaded light curtains PSENOpt slim and safety relay PNOZsigma/ configurable safe small controllers PNOZmulti 2.

Keep up-to-date
on light curtains
PSENOpt slim:



Online information
at www.pilz.us

► Selection guide – PSENopt II

Body protection: Type 3 – light curtain PSEN opII3B

Common features

- Compliant and approved in accordance with:
 - EN/IEC 61508
 - EN/IEC 61496-1: Type 3
- For use in applications up to:
 - PL d of EN ISO 13849-1
 - SIL CL 2 of EN/IEC 62061
- No dead zones (except with protected field height 150 mm)
- Supply voltage: 24 VDC
- Connection:
 - Receiver: 1 x pigtail, M12, 5-pin
 - Transmitter: 1 x pigtail, M12, 5-pin
- Dimensions: 35 x 40 mm
- For response times see data sheet
- Coding "Code A", "Code B", "not coded"
- Simple wiring



PSEN opII3B-s-...

Type	Resolution
► Body protection	
PSEN opII3B-s-170-045	170 mm
PSEN opII3B-s-170-060	170 mm
PSEN opII3B-s-170-075	170 mm
PSEN opII3B-s-170-090	170 mm
PSEN opII3B-s-170-120	170 mm
PSEN opII3B-s-170-150	170 mm
PSEN opII3B-s-300-045	300 mm
PSEN opII3B-s-300-060	300 mm
PSEN opII3B-s-300-075	300 mm
PSEN opII3B-s-300-090	300 mm
PSEN opII3B-s-300-120	300 mm
PSEN opII3B-s-300-150	300 mm

Body protection: Type 4 – light curtain PSEN opII4B

Common features

- Compliant and approved in accordance with:
 - EN/IEC 61508
 - EN/IEC 61496-1/-2: Type 4
- For use in applications up to:
 - PL e of EN ISO 13849-1
 - SIL CL 3 of EN/IEC 62061
- No dead zones (except with protected field height 150 mm)
- Supply voltage: 24 VDC
- Connection:
 - Receiver: 1 x pigtail, M12, 5-pin
 - Transmitter: 1 x pigtail, M12, 5-pin
- Dimensions: 35 x 40 mm
- For response times see data sheet
- Coding "Code A", "Code B", "not coded"
- Simple wiring



PSEN opII4B-s-...

Type	Resolution
► Body protection	
PSEN opII4B-s-170-045	170 mm
PSEN opII4B-s-170-060	170 mm
PSEN opII4B-s-170-075	170 mm
PSEN opII4B-s-170-090	170 mm
PSEN opII4B-s-170-120	170 mm
PSEN opII4B-s-170-150	170 mm
PSEN opII4B-s-300-045	300 mm
PSEN opII4B-s-300-060	300 mm
PSEN opII4B-s-300-075	300 mm
PSEN opII4B-s-300-090	300 mm
PSEN opII4B-s-300-120	300 mm
PSEN opII4B-s-300-150	300 mm

Height of protected field	Range	Certification	Order number ¹⁾
450 mm	0.2 ... 15 m	EAC, TÜV	632 100
600 mm	0.2 ... 15 m	EAC, TÜV	632 101
750 mm	0.2 ... 15 m	EAC, TÜV	632 102
900 mm	0.2 ... 15 m	EAC, TÜV	632 103
1 200 mm	0.2 ... 15 m	EAC, TÜV	632 104
1 500 mm	0.2 ... 15 m	EAC, TÜV	632 105
450 mm	10 ... 55 m	EAC, TÜV	632 110
600 mm	10 ... 55 m	EAC, TÜV	632 111
750 mm	10 ... 55 m	EAC, TÜV	632 112
900 mm	10 ... 55 m	EAC, TÜV	632 113
1 200 mm	10 ... 55 m	EAC, TÜV	632 114
1 500 mm	10 ... 55 m	EAC, TÜV	632 115

¹⁾ Order number for transmitter, receiver and mounting bracket respectively (one unit)

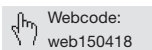


Height of protected field	Range	Certification	Order number ¹⁾
450 mm	0.2 ... 15 m	EAC, TÜV, UL ²⁾	632 120
600 mm	0.2 ... 15 m	EAC, TÜV, UL ²⁾	632 121
750 mm	0.2 ... 15 m	EAC, TÜV, UL ²⁾	632 122
900 mm	0.2 ... 15 m	EAC, TÜV, UL ²⁾	632 123
1 200 mm	0.2 ... 15 m	EAC, TÜV, UL ²⁾	632 124
1 500 mm	0.2 ... 15 m	EAC, TÜV, UL ²⁾	632 125
450 mm	10 ... 55 m	EAC, TÜV, UL ²⁾	632 130
600 mm	10 ... 55 m	EAC, TÜV, UL ²⁾	632 131
750 mm	10 ... 55 m	EAC, TÜV, UL ²⁾	632 132
900 mm	10 ... 55 m	EAC, TÜV, UL ²⁾	632 133
1 200 mm	10 ... 55 m	EAC, TÜV, UL ²⁾	632 134
1 500 mm	10 ... 55 m	EAC, TÜV, UL ²⁾	632 135

¹⁾ Order number for transmitter, receiver and mounting bracket respectively (one unit)

²⁾ UL certification applies only to individual components contained within the set

Keep up-to-date
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PSENopt II:



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► Selection guide – PSENopt II

Hand protection: Type 3 – light curtain PSEN opII3H

Common features

- Compliant and approved in accordance with:
 - EN/IEC 61508
 - EN/IEC 61496-1: Type 3
- For use in applications up to:
 - PL d of EN ISO 13849-1
 - SIL CL 2 of EN/IEC 62061
- No dead zones (except with protected field height 150 mm)
- Supply voltage: 24 VDC
- Connection:
 - Receiver: 1 x pigtail, M12, 5-pin
 - Transmitter: 1 x pigtail, M12, 5-pin
- Dimensions: 35 x 40 mm
- For response times see data sheet
- Coding "Code A", "Code B", "not coded"
- Simple wiring



Type	Resolution
► Hand protection	
PSEN opII3H-s-30-015	30 mm
PSEN opII3H-s-30-030	30 mm
PSEN opII3H-s-30-045	30 mm
PSEN opII3H-s-30-060	30 mm
PSEN opII3H-s-30-075	30 mm
PSEN opII3H-s-30-090	30 mm
PSEN opII3H-s-30-105	30 mm
PSEN opII3H-s-30-120	30 mm
PSEN opII3H-s-30-135	30 mm
PSEN opII3H-s-30-150	30 mm
PSEN opII3H-s-30-165	30 mm
PSEN opII3H-s-30-180	30 mm

Hand protection: Type 4 – light curtain PSEN opII4H

Common features

- Compliant and approved in accordance with:
 - EN/IEC 61508
 - EN/IEC 61496-1/-2: Type 4
- For use in applications up to:
 - PL e of EN ISO 13849-1
 - SIL CL 3 of EN/IEC 62061
- No dead zones (except with protected field height 150 mm)
- Supply voltage: 24 VDC
- Connection:
 - Receiver: 1 x pigtail, M12, 5-pin
 - Transmitter: 1 x pigtail, M12, 5-pin
- Dimensions: 35 x 40 mm
- For response times see data sheet
- Coding "Code A", "Code B", "not coded"
- Simple wiring



Type	Resolution
► Hand protection	
PSEN opII4H-s-30-015	30 mm
PSEN opII4H-s-30-030	30 mm
PSEN opII4H-s-30-045	30 mm
PSEN opII4H-s-30-060	30 mm
PSEN opII4H-s-30-075	30 mm
PSEN opII4H-s-30-090	30 mm
PSEN opII4H-s-30-105	30 mm
PSEN opII4H-s-30-120	30 mm
PSEN opII4H-s-30-135	30 mm
PSEN opII4H-s-30-150	30 mm
PSEN opII4H-s-30-165	30 mm
PSEN opII4H-s-30-180	30 mm

Height of protected field	Range	Certification	Order number ¹⁾
150 mm	0.2 ... 18 m	EAC, KOSHA, TÜV	632 020
300 mm	0.2 ... 18 m	EAC, KOSHA, TÜV	632 021
450 mm	0.2 ... 18 m	EAC, KOSHA, TÜV	632 022
600 mm	0.2 ... 18 m	EAC, KOSHA, TÜV	632 023
750 mm	0.2 ... 18 m	EAC, KOSHA, TÜV	632 024
900 mm	0.2 ... 18 m	EAC, KOSHA, TÜV	632 025
1 050 mm	0.2 ... 18 m	EAC, KOSHA, TÜV	632 026
1 200 mm	0.2 ... 18 m	EAC, KOSHA, TÜV	632 027
1 350 mm	0.2 ... 18 m	EAC, KOSHA, TÜV	632 028
1 500 mm	0.2 ... 18 m	EAC, KOSHA, TÜV	632 029
1 650 mm	0.2 ... 18 m	EAC, KOSHA, TÜV	632 030
1 800 mm	0.2 ... 18 m	EAC, KOSHA, TÜV	632 031

¹⁾ Order number for transmitter, receiver and mounting bracket respectively (one unit)

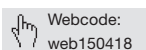


Height of protected field	Range	Certification	Order number ¹⁾
150 mm	0.2 ... 18 m	EAC, KOSHA, TÜV, UL ²⁾	632 060
300 mm	0.2 ... 18 m	EAC, KOSHA, TÜV, UL ²⁾	632 061
450 mm	0.2 ... 18 m	EAC, KOSHA, TÜV, UL ²⁾	632 062
600 mm	0.2 ... 18 m	EAC, KOSHA, TÜV, UL ²⁾	632 063
750 mm	0.2 ... 18 m	EAC, KOSHA, TÜV, UL ²⁾	632 064
900 mm	0.2 ... 18 m	EAC, KOSHA, TÜV, UL ²⁾	632 065
1 050 mm	0.2 ... 18 m	EAC, KOSHA, TÜV, UL ²⁾	632 066
1 200 mm	0.2 ... 18 m	EAC, KOSHA, TÜV, UL ²⁾	632 067
1 350 mm	0.2 ... 18 m	EAC, KOSHA, TÜV, UL ²⁾	632 068
1 500 mm	0.2 ... 18 m	EAC, KOSHA, TÜV, UL ²⁾	632 069
1 650 mm	0.2 ... 18 m	EAC, KOSHA, TÜV, UL ²⁾	632 070
1 800 mm	0.2 ... 18 m	EAC, KOSHA, TÜV, UL ²⁾	632 071

¹⁾ Order number for transmitter, receiver and mounting bracket respectively (one unit)

²⁾ UL certification applies only to individual components contained within the set

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PSENopt II:



Online information
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► Selection guide – PSENopt II

Finger protection: Type 3 – light curtain PSEN oplI3F

Common features

- Compliant and approved in accordance with:
 - EN/IEC 61508
 - EN/IEC 61496-1: Type 3
- For use in applications up to:
 - PL d of EN ISO 13849-1
 - SIL CL 2 of EN/IEC 62061
- No dead zones (except with protected field height 150 mm)
- Supply voltage: 24 VDC
- Connection:
 - Receiver: 1 x pigtail, M12, 5-pin
 - Transmitter: 1 x pigtail, M12, 5-pin
- Dimensions: 35 x 40 mm
- For response times see data sheet
- Coding "Code A", "Code B", "not coded"
- Simple wiring



Type	Resolution
► Finger protection	
PSEN oplI3F-s-14-015	14 mm
PSEN oplI3F-s-14-030	14 mm
PSEN oplI3F-s-14-045	14 mm
PSEN oplI3F-s-14-060	14 mm
PSEN oplI3F-s-14-075	14 mm
PSEN oplI3F-s-14-090	14 mm
PSEN oplI3F-s-14-105	14 mm
PSEN oplI3F-s-14-120	14 mm
PSEN oplI3F-s-14-135	14 mm
PSEN oplI3F-s-14-150	14 mm
PSEN oplI3F-s-14-165	14 mm
PSEN oplI3F-s-14-180	14 mm

Finger protection: Type 4 – light curtain PSEN oplI4F

Common features

- Compliant and approved in accordance with:
 - EN/IEC 61508
 - EN/IEC 61496-1/-2: Type 4
- For use in applications up to:
 - PL e of EN ISO 13849-1
 - SIL CL 3 of EN/IEC 62061
- No dead zones (except with protected field height 150 mm)
- Supply voltage: 24 VDC
- Connection:
 - Receiver: 1 x pigtail, M12, 5-pin
 - Transmitter: 1 x pigtail, M12, 5-pin
- Dimensions: 35 x 40 mm
- For response times see data sheet
- Coding "Code A", "Code B", "not coded"
- Simple wiring



Type	Resolution
► Finger protection	
PSEN oplI4F-s-14-015	14 mm
PSEN oplI4F-s-14-030	14 mm
PSEN oplI4F-s-14-045	14 mm
PSEN oplI4F-s-14-060	14 mm
PSEN oplI4F-s-14-075	14 mm
PSEN oplI4F-s-14-090	14 mm
PSEN oplI4F-s-14-105	14 mm
PSEN oplI4F-s-14-120	14 mm
PSEN oplI4F-s-14-135	14 mm
PSEN oplI4F-s-14-150	14 mm
PSEN oplI4F-s-14-165	14 mm
PSEN oplI4F-s-14-180	14 mm

Height of protected field	Range	Certification	Order number ¹⁾
150 mm	0.2 ... 8 m	EAC, KOSHA, TÜV	632 040
300 mm	0.2 ... 8 m	EAC, KOSHA, TÜV	632 041
450 mm	0.2 ... 8 m	EAC, KOSHA, TÜV	632 042
600 mm	0.2 ... 8 m	EAC, KOSHA, TÜV	632 043
750 mm	0.2 ... 8 m	EAC, KOSHA, TÜV	632 044
900 mm	0.2 ... 8 m	EAC, KOSHA, TÜV	632 045
1 050 mm	0.2 ... 8 m	EAC, KOSHA, TÜV	632 046
1 200 mm	0.2 ... 8 m	EAC, KOSHA, TÜV	632 047
1 350 mm	0.2 ... 8 m	EAC, KOSHA, TÜV	632 048
1 500 mm	0.2 ... 8 m	EAC, KOSHA, TÜV	632 049
1 650 mm	0.2 ... 8 m	EAC, KOSHA, TÜV	632 050
1 800 mm	0.2 ... 8 m	EAC, KOSHA, TÜV	632 051

¹⁾ Order number for transmitter, receiver and mounting bracket respectively (one unit)

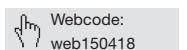


Height of protected field	Range	Certification	Order number ¹⁾
150 mm	0.2 ... 8 m	EAC, KOSHA, TÜV, UL ²⁾	632 080
300 mm	0.2 ... 8 m	EAC, KOSHA, TÜV, UL ²⁾	632 081
450 mm	0.2 ... 8 m	EAC, KOSHA, TÜV, UL ²⁾	632 082
600 mm	0.2 ... 8 m	EAC, KOSHA, TÜV, UL ²⁾	632 083
750 mm	0.2 ... 8 m	EAC, KOSHA, TÜV, UL ²⁾	632 084
900 mm	0.2 ... 8 m	EAC, KOSHA, TÜV, UL ²⁾	632 085
1 050 mm	0.2 ... 8 m	EAC, KOSHA, TÜV, UL ²⁾	632 086
1 200 mm	0.2 ... 8 m	EAC, KOSHA, TÜV, UL ²⁾	632 087
1 350 mm	0.2 ... 8 m	EAC, KOSHA, TÜV, UL ²⁾	632 088
1 500 mm	0.2 ... 8 m	EAC, KOSHA, TÜV, UL ²⁾	632 089
1 650 mm	0.2 ... 8 m	EAC, KOSHA, TÜV, UL ²⁾	632 090
1 800 mm	0.2 ... 8 m	EAC, KOSHA, TÜV, UL ²⁾	632 091

¹⁾ Order number for transmitter, receiver and mounting bracket respectively (one unit)

²⁾ UL certification applies only to individual components contained within the set

Keep up-to-date
on light curtains
PSENopt II:



Online information
at www.pilz.us

► Selection guide – PSENopt Advanced

Hand protection, muting: Type 2 – light curtain PSEN op2H-A

Common features

- Compliant and approved in accordance with:
 - EN/IEC 61508
 - EN/IEC 61496-1/-2: Type 2
- For use in applications up to:
 - PL c of EN ISO 13849-1
 - SIL CL 1 of EN/IEC 62061
- Function selection:
 - Manual/automatic restart
 - Muting (total/partial) via soft keys
 - Feedback loop monitoring (EDM)
 - Override function
 - Operating range reduction
- Semiconductor outputs: 2 pieces
- No dead zones
- Supply voltage: 24 VDC
- Connection:
 - Receiver Rx:
 - 1 x connector, M12, 12-pin;
 - 1 x connector, M12, 5-pin
 - Transmitter Tx:
 - 1 x connector, M12, 5-pin
- Dimensions: 35 x 40.8 mm
- For response times see data sheet



PSEN op2H-A-30-...

Type	Resolution
► Hand protection, muting	
PSEN op2H-A-30-030/1	30 mm
PSEN op2H-A-30-045/1	30 mm
PSEN op2H-A-30-060/1	30 mm
PSEN op2H-A-30-075/1	30 mm
PSEN op2H-A-30-090/1	30 mm
PSEN op2H-A-30-105/1	30 mm
PSEN op2H-A-30-120/1	30 mm
PSEN op2H-A-30-135/1	30 mm
PSEN op2H-A-30-150/1	30 mm
PSEN op2H-A-30-165/1	30 mm
PSEN op2H-A-30-180/1	30 mm

Hand protection, muting, blanking, cascading: Type 4 – light curtain PSEN op4H-A

Common features

- Compliant and approved in accordance with:
 - EN/IEC 61508
 - EN/IEC 61496-1/-2: Type 4
- For use in applications up to:
 - PL e of EN ISO 13849-1
 - SIL CL 3 of EN/IEC 62061
- Function selection:
 - Manual/automatic restart
 - Muting (total/partial) via soft keys/software
 - Fixed/floating blanking via soft keys/software
 - Cascading
 - Feedback loop monitoring (EDM)
 - Beam coding
 - Override function
 - Operating range reduction
 - Programming software (online/offline) and monitoring
- Semiconductor outputs: 2 pieces
- No dead zones
- Supply voltage: 24 VDC
- Connection:
 - Receiver Rx:
 - 1 x connector, M12, 12-pin;
 - 1 x connector, M12, 5-pin (for muting only)
 - Transmitter Tx:
 - 1 x connector, M12, 5-pin
- Dimensions: 35 x 40.8 mm
- For response times see data sheet



PSEN op4H-A-30-...

Type	Resolution
► Hand protection, muting, blanking, cascading	
PSEN op4H-A-30-030/1	30 mm
PSEN op4H-A-30-045/1	30 mm
PSEN op4H-A-30-060/1	30 mm
PSEN op4H-A-30-075/1	30 mm
PSEN op4H-A-30-090/1	30 mm
PSEN op4H-A-30-105/1	30 mm
PSEN op4H-A-30-120/1	30 mm
PSEN op4H-A-30-135/1	30 mm
PSEN op4H-A-30-150/1	30 mm
PSEN op4H-A-30-165/1	30 mm
PSEN op4H-A-30-180/1	30 mm

Height of protected field	Range	Certification	Order number ¹⁾
300 mm	0.2 ... 20 m	EAC, TÜV, UL ²⁾	631 040
450 mm	0.2 ... 20 m	EAC, TÜV, UL ²⁾	631 041
600 mm	0.2 ... 20 m	EAC, TÜV, UL ²⁾	631 042
750 mm	0.2 ... 20 m	EAC, TÜV, UL ²⁾	631 043
900 mm	0.2 ... 20 m	EAC, TÜV, UL ²⁾	631 044
1 050 mm	0.2 ... 20 m	EAC, TÜV, UL ²⁾	631 045
1 200 mm	0.2 ... 20 m	EAC, TÜV, UL ²⁾	631 046
1 350 mm	0.2 ... 20 m	EAC, TÜV, UL ²⁾	631 047
1 500 mm	0.2 ... 20 m	EAC, TÜV, UL ²⁾	631 048
1 650 mm	0.2 ... 20 m	EAC, TÜV, UL ²⁾	631 049
1 800 mm	0.2 ... 20 m	EAC, TÜV, UL ²⁾	631 050

¹⁾ Order number for transmitter, receiver and mounting bracket respectively (one unit)

²⁾ UL certification applies only to individual components contained within the set



Height of protected field	Range	Certification	Order number ¹⁾
300 mm	0.2 ... 20 m	EAC, TÜV, UL ²⁾	631 020
450 mm	0.2 ... 20 m	EAC, TÜV, UL ²⁾	631 021
600 mm	0.2 ... 20 m	EAC, TÜV, UL ²⁾	631 022
750 mm	0.2 ... 20 m	EAC, TÜV, UL ²⁾	631 023
900 mm	0.2 ... 20 m	EAC, TÜV, UL ²⁾	631 024
1 050 mm	0.2 ... 20 m	EAC, TÜV, UL ²⁾	631 025
1 200 mm	0.2 ... 20 m	EAC, TÜV, UL ²⁾	631 026
1 350 mm	0.2 ... 20 m	EAC, TÜV, UL ²⁾	631 027
1 500 mm	0.2 ... 20 m	EAC, TÜV, UL ²⁾	631 028
1 650 mm	0.2 ... 20 m	EAC, TÜV, UL ²⁾	631 029
1 800 mm	0.2 ... 20 m	EAC, TÜV, UL ²⁾	631 030

¹⁾ Order number for transmitter, receiver and mounting bracket respectively (one unit); pigtail cables are not supplied with the device.

²⁾ UL certification applies only to individual components contained within the set

Keep up-to-date
on light curtains
PSENopt
Advanced:



Online information
at www.pilz.us

► Selection guide – PSENopt Advanced

Finger protection, muting, blanking, cascading: Type 4 – light curtain PSEN op4F-A

Common features

- Compliant and approved in accordance with:
 - EN/IEC 61508
 - EN/IEC 61496-1/-2: Type 4
- For use in applications up to:
 - PL e of EN ISO 13849-1
 - SIL CL 3 of EN/IEC 62061
- Function selection:
 - Manual/automatic restart
 - Muting (total/partial) via soft keys/software
 - Fixed/floating blanking via soft keys/software
 - Cascading
 - Feedback loop monitoring (EDM)
 - Beam coding
 - Override function
 - Operating range reduction
 - Programming software (online/offline) and monitoring
- Semiconductor outputs: 2 pieces
- No dead zones
- Supply voltage: 24 VDC
- Connection:
 - Receiver Rx:
 - 1 x connector, M12, 12-pin;
 - 1 x connector, M12, 5-pin (for muting only)
 - Transmitter Tx:
 - 1 x connector, M12, 5-pin
- Dimensions: 35 x 40.8 mm
- For response times see data sheet



PSEN op4F-A-14-...

Type	Resolution
► Finger protection, muting, blanking, cascading	
PSEN op4F-A-14-030/1	14 mm
PSEN op4F-A-14-045/1	14 mm
PSEN op4F-A-14-060/1	14 mm
PSEN op4F-A-14-075/1	14 mm
PSEN op4F-A-14-090/1	14 mm
PSEN op4F-A-14-105/1	14 mm
PSEN op4F-A-14-120/1	14 mm
PSEN op4F-A-14-135/1	14 mm
PSEN op4F-A-14-150/1	14 mm
PSEN op4F-A-14-165/1	14 mm
PSEN op4F-A-14-180/1	14 mm

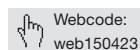
Height of protected field	Range	Certification	Order number ¹⁾
300 mm	0.2 ... 7 m	EAC, TÜV, UL ²⁾	631 000
450 mm	0.2 ... 7 m	EAC, TÜV, UL ²⁾	631 001
600 mm	0.2 ... 7 m	EAC, TÜV, UL ²⁾	631 002
750 mm	0.2 ... 7 m	EAC, TÜV, UL ²⁾	631 003
900 mm	0.2 ... 7 m	EAC, TÜV, UL ²⁾	631 004
1 050 mm	0.2 ... 7 m	EAC, TÜV, UL ²⁾	631 005
1 200 mm	0.2 ... 7 m	EAC, TÜV, UL ²⁾	631 006
1 350 mm	0.2 ... 7 m	EAC, TÜV, UL ²⁾	631 007
1 500 mm	0.2 ... 7 m	EAC, TÜV, UL ²⁾	631 008
1 650 mm	0.2 ... 7 m	EAC, TÜV, UL ²⁾	631 009
1 800 mm	0.2 ... 7 m	EAC, TÜV, UL ²⁾	631 010



¹⁾ Order number for transmitter, receiver and mounting bracket respectively (one unit); pigtail cables are not supplied with the device.

²⁾ UL certification applies only to individual components contained within the set

Keep up-to-date
on light curtains
PSENopt
Advanced:



Online information
at www.pilz.us

► Selection guide – PSENopt slim

Hand protection: Type 2 – light curtain PSEN op2H-SL

Common features

- Compliant and approved in accordance with:
 - EN/IEC 61508
 - EN/IEC 61496-1/-2: Type 2
- For use in applications up to:
 - PL c of EN ISO 13849-1
 - SIL CL 1 of EN/IEC 62061
- Function selection:
 - Manual/automatic restart
 - Feedback loop monitoring (EDM)
 - Cascading
- No dead zones
- Supply voltage: 24 VDC
- Connection:
 - Receiver: 1 x pigtail, M12, 5-pin
 - Transmitter: 1 x pigtail, M12, 5-pin
- Dimensions: 15.4 x 32.6 mm
- For response times see data sheet



PSEN op2H-SL-24-...

Type	Resolution
PSEN op2H-SL-24-015/1	24 mm
PSEN op2H-SL-24-030/1	24 mm
PSEN op2H-SL-24-045/1	24 mm
PSEN op2H-SL-24-060/1	24 mm
PSEN op2H-SL-24-075/1	24 mm
PSEN op2H-SL-24-090/1	24 mm
PSEN op2H-SL-24-105/1	24 mm
PSEN op2H-SL-24-120/1	24 mm

Hand protection: Type 4 – light curtain PSEN op4H-SL

Common features

- Compliant and approved in accordance with:
 - EN/IEC 61508
 - EN/IEC 61496-1/-2: Type 4
- For use in applications up to:
 - PL e of EN ISO 13849-1
 - SIL CL 3 of EN/IEC 62061
- Function selection:
 - Manual/automatic restart
 - Feedback loop monitoring (EDM)
 - Cascading
- No dead zones
- Supply voltage: 24 VDC
- Connection:
 - Receiver: 1 x pigtail, M12, 5-pin
 - Transmitter: 1 x pigtail, M12, 5-pin
- Dimensions: 15.4 x 32.6 mm
- For response times see data sheet



PSEN op4H-SL-24-...

Type	Resolution
PSEN op4H-SL-24-015/1	24 mm
PSEN op4H-SL-24-030/1	24 mm
PSEN op4H-SL-24-045/1	24 mm
PSEN op4H-SL-24-060/1	24 mm
PSEN op4H-SL-24-075/1	24 mm
PSEN op4H-SL-24-090/1	24 mm
PSEN op4H-SL-24-105/1	24 mm
PSEN op4H-SL-24-120/1	24 mm

Height of protected field	Range	Certification	Order number ¹⁾
150 mm	0.2 ... 6 m	TÜV, UL ²⁾	631 100
300 mm	0.2 ... 6 m	TÜV, UL ²⁾	631 101
450 mm	0.2 ... 6 m	TÜV, UL ²⁾	631 102
600 mm	0.2 ... 6 m	TÜV, UL ²⁾	631 103
750 mm	0.2 ... 6 m	TÜV, UL ²⁾	631 104
900 mm	0.2 ... 6 m	TÜV, UL ²⁾	631 105
1 050 mm	0.2 ... 6 m	TÜV, UL ²⁾	631 106
1 200 mm	0.2 ... 6 m	TÜV, UL ²⁾	631 107



¹⁾ Order number for transmitter, receiver and mounting bracket respectively (one unit)

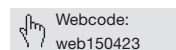
²⁾ UL certification applies only to individual components contained within the set

Height of protected field	Range	Certification	Order number ¹⁾
150 mm	0.2 ... 6 m	TÜV, UL ²⁾	631 120
300 mm	0.2 ... 6 m	TÜV, UL ²⁾	631 121
450 mm	0.2 ... 6 m	TÜV, UL ²⁾	631 122
600 mm	0.2 ... 6 m	TÜV, UL ²⁾	631 123
750 mm	0.2 ... 6 m	TÜV, UL ²⁾	631 124
900 mm	0.2 ... 6 m	TÜV, UL ²⁾	631 125
1 050 mm	0.2 ... 6 m	TÜV, UL ²⁾	631 126
1 200 mm	0.2 ... 6 m	TÜV, UL ²⁾	631 127

¹⁾ Order number for transmitter, receiver and mounting bracket respectively (one unit)

²⁾ UL certification applies only to individual components contained within the set

Keep up-to-date
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PSENOpt slim:



Online information
at www.pilz.us

► Selection guide – PSENopt slim, PSENopt single-

Finger protection: Type 4 – light curtain PSEN op4F-SL

Common features

- Compliant and approved in accordance with:
 - EN/IEC 61508
 - EN/IEC 61496-1/-2: Type 4
- For use in applications up to:
 - PL e of EN ISO 13849-1
 - SIL CL 3 of EN/IEC 62061
- Function selection:
 - Manual/automatic restart
 - Feedback loop monitoring (EDM)
 - Cascading
- No dead zones
- Supply voltage: 24 VDC
- Connection:
 - Receiver: 1 x pigtail, M12, 5-pin
 - Transmitter: 1 x pigtail, M12, 5-pin
- Dimensions: 15.4 x 32.6 mm
- For response times see data sheet



Type	Resolution
PSEN op4F-SL-14-015/1	14 mm
PSEN op4F-SL-14-021/1	14 mm
PSEN op4F-SL-14-030/1	14 mm
PSEN op4F-SL-14-036/1	14 mm
PSEN op4F-SL-14-042/1	14 mm
PSEN op4F-SL-14-045/1	14 mm
PSEN op4F-SL-14-048/1	14 mm
PSEN op4F-SL-14-054/1	14 mm
PSEN op4F-SL-14-060/1	14 mm
PSEN op4F-SL-14-066/1	14 mm
PSEN op4F-SL-14-072/1	14 mm
PSEN op4F-SL-14-075/1	14 mm
PSEN op4F-SL-14-078/1	14 mm
PSEN op4F-SL-14-084/1	14 mm
PSEN op4F-SL-14-090/1	14 mm
PSEN op4F-SL-14-096/1	14 mm
PSEN op4F-SL-14-102/1	14 mm
PSEN op4F-SL-14-105/1	14 mm
PSEN op4F-SL-14-108/1	14 mm
PSEN op4F-SL-14-114/1	14 mm
PSEN op4F-SL-14-120/1	14 mm

Single-beam safety light barriers PSEN op2S/4S

Common features

- PL e/SIL CL 3 in conjunction with:
 - Safety relay PNOZ e7p
 - Configurable safe small controllers PNOZmulti 2: PNOZ m0p, PNOZ m1p, PNOZ m2p
 - Programmable control system PSS: PSS DI20 T
- Supply voltage: 20 ... 30 VDC
- Design: M18
- Connection: connector, M12, 4-pin
- For response times see data sheet



Type	Resolution/ No. of beams
PSEN op2S-1-1	Access guarding (1 beam)
PSEN op4S-1-1	Access guarding (1 beam)
PSEN op4S-1-2	Access guarding (1 beam)

beam safety light barriers

Height of protected field	Range	Certification	Order number ¹⁾
150 mm	0.2 ... 6 m	TÜV, UL ²⁾	631 140
210 mm	0.2 ... 6 m	TÜV, UL ²⁾	631 141
300 mm	0.2 ... 6 m	TÜV, UL ²⁾	631 142
360 mm	0.2 ... 6 m	TÜV, UL ²⁾	631 143
420 mm	0.2 ... 6 m	TÜV, UL ²⁾	631 144
450 mm	0.2 ... 6 m	TÜV, UL ²⁾	631 145
480 mm	0.2 ... 6 m	TÜV, UL ²⁾	631 146
540 mm	0.2 ... 6 m	TÜV, UL ²⁾	631 147
600 mm	0.2 ... 6 m	TÜV, UL ²⁾	631 148
660 mm	0.2 ... 6 m	TÜV, UL ²⁾	631 149
720 mm	0.2 ... 6 m	TÜV, UL ²⁾	631 150
750 mm	0.2 ... 6 m	TÜV, UL ²⁾	631 151
780 mm	0.2 ... 6 m	TÜV, UL ²⁾	631 152
840 mm	0.2 ... 6 m	TÜV, UL ²⁾	631 153
900 mm	0.2 ... 6 m	TÜV, UL ²⁾	631 154
960 mm	0.2 ... 6 m	TÜV, UL ²⁾	631 155
1 020 mm	0.2 ... 6 m	TÜV, UL ²⁾	631 156
1 050 mm	0.2 ... 6 m	TÜV, UL ²⁾	631 157
1 080 mm	0.2 ... 6 m	TÜV, UL ²⁾	631 158
1 140 mm	0.2 ... 6 m	TÜV, UL ²⁾	631 159
1 200 mm	0.2 ... 6 m	TÜV, UL ²⁾	631 160

¹⁾ Order number for transmitter, receiver and mounting bracket respectively (one unit)

²⁾ UL certification applies only to individual components contained within the set



Approved in accordance with EN/IEC 61496-1/-2	Features	Range	Certification	Order number ¹⁾
Type 2	Infrared	0 ... 8 m	EAC, TÜV, UL ²⁾	630380
Type 4	Infrared	0 ... 8 m	EAC, TÜV, UL ²⁾	630381
Type 4	Laser	0 ... 40 m	EAC, TÜV, UL ²⁾	630382

¹⁾ Order number for transmitter, receiver and mounting bracket respectively (one unit)

²⁾ UL certification applies only to individual components contained within the set

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PSENopt slim and
PSENopt:

 Webcode:
web150423

Online information
at www.pilz.us

► Selection guide – Accessories PSENopt

Accessories PSENopt II – Hand and finger protection



PSEN opII
Adv Bracket Kit-3

Type	Features	Quantity	Order number
PSEN opII Laserpointer	► Laser pointer ► Certification: CE	1	632 014
PSEN opII Bracket Kit	Flexible bracket	2	632 015
PSEN opII Adv Bracket Kit-2	Dead-zone-free attachment with degrees of freedom in 3 axes, 4 mounting plates	4	632 016
PSEN opII Adv Bracket Kit-3	Dead-zone-free attachment with degrees of freedom in 3 axes, 6 mounting plates	6	632 017
PSEN opII Testpiece F 14 mm	Test rod for finger resolution	1	632 018
PSEN opII Testpiece H 30 mm	Test rod for hand resolution	1	632 019

Accessories PSENopt, PSENopt II – Mirror columns



PSEN opII mirror
column-060



PSEN opII adjustable
base unit

Type	Features	Protection field height to max.	Order number
PSEN opII mirror column-060	► Mirror column for protection against shock, collision and vibration ► Mirror column consisting of a post protector and an integrated mirror ► Can be used with light curtains PSENopt and PSENopt II ► Optional accessories: PSENopt II adjustable base unit	60 mm	632 032
PSEN opII mirror column-090		90 mm	632 033
PSEN opII mirror column-120		120 mm	632 034
PSEN opII mirror column-165		165 mm	632 035
PSEN opII mirror column-195		195 mm	632 036
PSEN opII adjustable base unit		-	632 037

Accessories PSENopt Advanced – hand and finger protection

PSEN op Advanced
Programming Adapter

Description Type	Features	Quantity	Order number
Mounting bracket PSEN op cascading bracket	► Corner fixture for 2 light curtains	1	631 061
Adapter PSEN op Advanced Programming Adapter	► Programming adapter for PSENopt Configurator ¹⁾ , use with PSEN op Ethernet cable	1	631 070

¹⁾ To use the software, the adapter must be ordered.

Accessories PSENopt slim – hand and finger protection



PSEN op SL Bracket O

Type	Features	Quantity	Order number
PSEN op SL Bracket C	Fastening kit PSENopt slim C-shape	1	631 180
PSEN op SL Bracket L	Fastening kit PSENopt slim L-shape	1	631 181
PSEN op SL Bracket O	Fastening kit PSENopt slim O-shape	1	631 182
PSEN op SL Testpiece F 24 mm	Test rod, diameter 24 mm	1	631 186

Accessories PSENopt (1st generation) – single-beam safety light device

Description Type	Features	Quantity	Order number
Deviating mirror PSEN 2S/4S mirror	Suitable for light barriers PSEN op2S/4S	1	630 711
Mounting bracket PSEN 2S/4S bracket	Suitable for light barriers PSEN op2S/4S	2	630 712

► Selection guide – Cable for PSENopt and PSENopt II



PSENopt



PSENopt



PSENopt II



PSEN op cable M12-4sf



PSEN op cable M12-5af

PSENopt and PSENopt II – cable selection for connection to any evaluation device

Type	Description	Cable drag chain capability
5 PSEN op cable M12-4sf	Cable for Type 2 and Type 4 light curtain and single-beam safety light barrier for connection to any evaluation device	-
5 PSEN op cable M12-4af		-
3 PSEN op cable M12-5sf	Cable for Type 2, Type 3 and Type 4 light curtains for connection to any evaluation device	-
3 PSEN op cable M12-5af		-
2 PSEN op cable M12-8sf	Cable for Type 2 (body protection) and Type 4 light curtains for connection to any evaluation device	◆
2 PSEN op cable M12-8af		◆
PSEN op cable M12-4sf shielded	Cable for Type 2 and Type 4 light curtains for connection to any evaluation device	-
PSEN op cable M12-4af shielded		-
PSEN op cable M12-8sf shielded	Cable for Type 4 light curtain, for connection to any evaluation device	-
PSEN op cable M12-8af shielded		-

Features	Certification	Order number (by length)					
		3 m	5 m	10 m	20 m	30 m	50 m
▶ Connection 1: unshielded, straight, M12, 4-pin, socket ▶ Connection 2: open cable	UL	630 300	630 301	630 302	-	630 296	630 362
▶ Connection 1: unshielded, angled, M12, 4-pin, socket ▶ Connection 2: open cable	UL	630 341	630 342	630 343	-	630 344	630 363
▶ Connection 1: unshielded, straight, M12, 5-pin, socket ▶ Connection 2: open cable	UL	630 310	630 311	630 312	630 298	630 297	630 364
▶ Connection 1: unshielded, angled, M12, 5-pin, socket ▶ Connection 2: open cable	UL	630 347	630 348	630 349	-	630 350	630 365
▶ Connection 1: unshielded, straight, M12, 8-pin, socket ▶ Connection 2: open cable	UL	540 319	540 320	540 321	540 333	540 326	-
▶ Connection 1: unshielded, angled, M12, 8-pin, socket ▶ Connection 2: open cable	UL	540 322	540 323	540 324	-	540 325	-
▶ Connection 1: shielded, straight, M12, 4-pin, socket ▶ Connection 2: open cable	UL	630 303	630 304	630 305	-	630 309	630 366
▶ Connection 1: shielded, angled, M12, 4-pin, socket ▶ Connection 2: open cable	UL	630 306	630 307	630 308	-	630 319	630 367
▶ Connection 1: shielded, straight, M12, 8-pin, socket ▶ Connection 2: open cable	UL	630 313	630 314	630 315	-	630 328	630 368
▶ Connection 1: shielded, angled, M12, 8-pin, socket ▶ Connection 2: open cable	UL	630 316	630 317	630 318	-	630 329	630 369



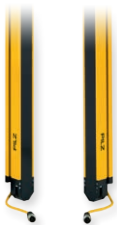
► Selection guide – Cable for PSENopt and PSENopt II



PSENopt



PSENopt



PSENopt II



PSS67/PDP67 cable M12-5sf



PDP67 F 8DI ION PT

PSENopt and PSENopt II – cable selection for connection to PDP67 F 8DI ION/PSS67

Type	Description	Cable drag chain capability
8 PSS67/PDP67 cable M12-5sf M12-5sm	► Cable for connection to PDP67 F 8DI ION/PSS67	-
8 PSS67/PDP67 cable M12-5af M12-5am	► An additional adapter is required for 8-pin receiver (380 326)	-

Type	Description
PSEN op 4F/H Receiver adapter	Adapter for connecting the receivers of the basic light curtains PSENop4F.../1 and PSENop4H.../1 to PDP67, cable length 0.1 m

Type	Description
PDP67 F 8DI ION PT	Sensor junction box for decentralized periphery PNOZmulti
PDP67 F 8DI ION HP	Decentralized input module for PNOZmulti

PSENopt – accessory selection for cascable light curtains



PSEN op cable M12-4sf shielded



PSEN op cableset M12-4sf shielded

Type	Description	Cable drag chain capability
PSEN op cable axial M12-5sf shielded	Cable for cascading	-
PSEN op cable M12-4sf shielded	Cable for L-muting	-
PSEN op cableset M12-4sf shielded	Y-cable for T-muting	-

Features	Certification	Order number (by length)				
		3 m	5 m	10 m	20 m	30 m
▶ Connection 1: straight, M12, 5-pin, socket ▶ Connection 2: straight, M12, 5-pin, plug	UL	380 208	380 209	380 210	380 220	380 211
▶ Connection 1: angled, M12, 5-pin, socket ▶ Connection 2: angled, M12, 5-pin, plug	UL	380 212	380 213	380 214	-	380 215



Features	Certification	Order number
▶ Connection 1: straight, M12, 8-pin, socket ▶ Connection 2: straight, M12, 5-pin, plug	UL	380 326

Features	Certification	Order number
Multiple interface PDP67, protection type IP67, PL e of EN ISO 13849-1, SIL CL 3 of EN/IEC 62061	DGVV, TÜV, UL	773 616
Multiple interface PDP67, protection type IP67, PL e of EN ISO 13849-1, SIL CL 3 of EN/IEC 62061, High Power: additional supply voltage	DGVV, TÜV, UL	773 601

Features	Order number (by length)		
	0.5 m	0.75 m	1 m
▶ Connection 1: shielded, straight, M12, 5-pin, socket ▶ Connection 2: shielded, straight, M12, 5-pin, socket	630 280	-	630 281
▶ Connection 1: shielded, straight, M12, 4-pin, socket ▶ Connection 2: shielded, angled, M12, 4-pin, socket	-	630 282	-
▶ Connection 1: shielded, straight, M12, 4-pin, socket ▶ Connection 2: 2 x shielded, angled, M12, 4-pin, socket	630 295	-	-

► Selection guide – Cable for PSENopt Advanced



PSENopt Advanced



PSEN op cable axial M12 12-pole

PSENopt Advanced – cable selection for connection to any evaluation device

Type	Description	Cable drag chain capability
PSEN op cable axial M12 12-pin	Cable for light curtains PSENopt Advanced for connection to any evaluation device	◆
PSEN op cable M12-5sf	Cable for light curtains PSENopt Advanced for connection to any evaluation device	-

Note: The PSENmlock cables can also be used to connect PSENopt Advanced.

PSENopt Advanced – cable selection for muting, blanking and cascading

Type	Description
PSEN op Ethernet cable	Ethernet cable for PSEN op Advanced Programming adapter (see page 93)



PSEN op cascading

Type	Description
PSEN op cascading	Cable for cascading



PSEN op pigtail receiver blanking

Type	Description
PSEN op pigtail emitter	Connection cable, transmitter
PSEN op pigtail receiver blanking	Connection cable, receiver, blanking
PSEN op pigtail receiver muting	Connection cable, receiver, muting

Features	Certification	Order number (by length)					
		3 m	5 m	10 m	20 m	30 m	50 m
▶ Connection 1: unshielded, straight, M12, 12-pin, socket ▶ Connection 2: open cable	UL	631 080	631 081	631 082	631 083	631 084	631 085
▶ Connection 1: unshielded, straight, M12, 5-pin, socket ▶ Connection 2: open cable	UL	630 310	630 311	630 312	630 298	630 297	630 364



Features	Order number (by length)		
	1 m	3 m	10 m
▶ Connection 1: RJ45, 4-pin ▶ Connection 2: M12, 4-pin, plug, D-coded	631 071	631 072	631 073

Features	Order number (by length)		
	0.05 m	0.5 m	1 m
▶ Connection 1: 18-pin, system connector ▶ Connection 2: 18-pin, system connector	631 058	631 059	631 060

Features	Order number	
	0.2 m	
▶ Connection 1: 18-pin, system connector ▶ Connection 2: M12, 5-pin, plug	631 055	
▶ Connection 1: 18-pin, system connector ▶ Connection 2: M12, 12-pin, plug	631 056	
▶ Connection 1: 18-pin, system connector ▶ Connection 2: M12, 12 and 5-pin, plug	631 057	

► Selection guide – Cable for PSENOpt slim



PSENOpt slim

PSENOpt slim – cable selection and adapter



PSEN op SL cascading

Type	Description
PSEN op SL cascading	Cable for cascading



PSEN op SL adapter

Type	Description
PSEN op SL adapter	2 adapters for connecting PSENOpt slim to PDP67 (transmitter/receiver)



PSEN op cable M12-5sf

Type	Description	Cable drag chain capability
PSEN op cable M12-5sf	Unshielded, straight, M12, 5-pin, socket	-

Features	Certification	Order number (by length)		
		0.1 m	0.5 m	1 m
▶ Connection 1: system connector, 5-pin ▶ Connection 2: straight, M12, 5-pin, socket	-	631 183	631 184	631 185



Features	Certification	Order number
		0.1 m
▶ Connection 1: straight, M12, 5-pin, socket ▶ Connection 2: straight, M12, 5-pin, plug	-	631 187

Features	Certification	Order number (by length)			
		3 m	5 m	10 m	20 m
Open cable	UL	630 310	630 311	630 312	630 298

► Support

Technical support is available from Pilz round the clock.

Americas

Brazil

+55 11 97569-2804

Canada

+1 888-315-PILZ (315-7459)

Mexico

+52 55 5572 1300

USA (toll-free)

+1 877-PILZUSA (745-9872)

Asia

China

+86 21 60880878-216

Japan

+81 45 471-2281

South Korea

+82 31 778 3300

Australia

+61 3 95600621

Europe

Austria

+43 1 7986263-0

Belgium, Luxembourg

+32 9 3217575

France

+33 3 88104003

Germany

+49 711 3409-444

Ireland

+353 21 4804983

Italy, Malta

+39 0362 1826711

Scandinavia

+45 74436332

Spain

+34 938497433

Switzerland

+41 62 88979-32

The Netherlands

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Turkey

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United Kingdom

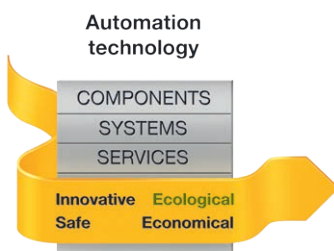
+44 1536 462203

**You can reach our
international hotline on:**

+49 711 3409-444

support@pilz.com

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Presented by:

Pilz Automation Safety, L.P.
7150 Commerce Blvd.
Canton, MI 48187
Tel.: +1 (734) 354-0272
Fax: +1 (734) 354-3355
info@pilzusa.com
www.pilz.us

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