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DATA SHEET

PLG3-120F431

PLG
Automation light grids

SICK Sensor Intelligence



Illustration may differ

AUTOMATION LIGHT GRIDS

PLG3-120F431

ORDERING INFORMATION

Type	part no.
PLG3-120F431	1028953

Further device versions and accessories at www.sick.com/PLG

DETAILED TECHNICAL DATA

FEATURES

Sensor principle	Photoelectric retro-reflective sensor
Minimum detectable object (MDO)	35 mm [1]
Beam separation	30 mm
Number of beams	5
Detection height	120 mm

[1] See characteristic curve.

MECHANICS/ELECTRONICS

Wave length	650 nm
Supply voltage V_s	DC 15 V ... 30 V [1]
Power consumption sender	< 45 mA
Ripple	< 5 V_{pp}
Output current $I_{max.}$	≤ 100 mA
Output load, capacitive	100 nF
Output load, Inductive	1 H
Initialization time	0.6 s
Switching output	PNP [2]
Output mode	Q dark switching [3]
Current consumption job LED	10 mA [1]
Dimensions (W x H x D)	19.2 mm x 199.8 mm x 36.6 mm
Connection type	Cable with plug, M12, 4-pin, 280 mm

[1] Typical value.

[2] Q.

[3] Q = active, if at least one beam is interrupted, /Q = active, if all of the beams are free.

Housing material	Aluminum
Display	LED
Enclosure rating	IP54
Circuit protection	U_V connections, reverse polarity protected Output Q short-circuit protected Interference pulse suppression
Protection class	III
Weight	200 g
Front screen	PMMA

[1] Typical value.

[2] Q.

[3] Q = active, if at least one beam is interrupted, /Q = active, if all of the beams are free.

PERFORMANCE

Maximum range	2 m
Minimum range	≥ 110 mm
Operating range	1.3 m
Response time	< 80 ms [1]

[1] With resistive load.

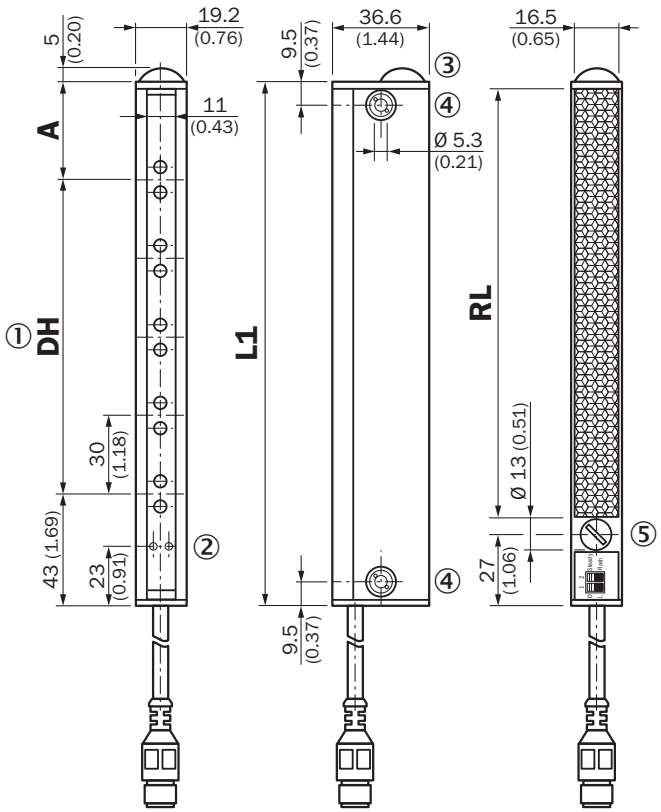
AMBIENT DATA

Shock resistance	10 g / DIN EN 60068-2-29 / 16 ms
Vibration resistance	5 g, 10 Hz ... 55 Hz (IEC 68-2-6)
EMC	EN 60947-5-2
Ambient operating temperature	–10 °C ... +55 °C
Ambient temperature, storage	–40 °C ... +70 °C

CERTIFICATES

EU declaration of conformity	✓
UK declaration of conformity	✓
ACMA declaration of conformity	✓
Moroccan declaration of conformity	✓
China RoHS	✓
Photobiological safety (IEC EN 62471)	✓

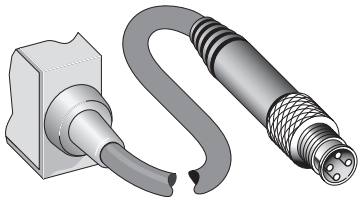
DIMENSIONAL DRAWING PLG3

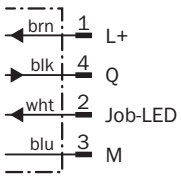


DH	A	L1	RL
120 (4.72)	36 (1.42)	199.8 (7.87)	162 (6.38)
210 (8.27)	26 (1.02)	279.8 (11.02)	242 (9.53)
270 (10.63)	36 (1.42)	349.8 (13.77)	312 (12.28)
360 (14.17)	26 (1.02)	429.8 (16.92)	392 (15.43)
420 (16.54)	36 (1.42)	499.8 (19.68)	462 (18.19)

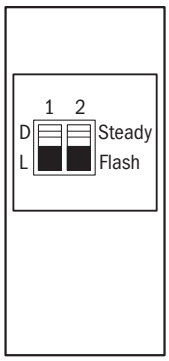
Dimensions in mm (inch)
① Detection height (DH)
② Indicator Power on: green; beam status: yellow
③ job LED, green
④ Mounting hole, Ø 5.3 mm
⑤ Configuration switches

CONNECTION TYPE AND DIAGRAM





ADJUSTMENTS PLG3



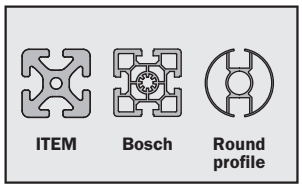
Configuration over switches

Switch 1	D	Output active, in case of blocked beams
	L	Output inactive, in case of blocked beams
Switch 2	Steady	Job-LED steady
	Flash	Job-LED flashes, 3 Hz

SPECIFIC FEATURES

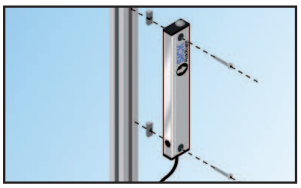
Easy installation

1. Easy mounting on to different profiles



The light grid can be mounted on different profiles, e.g. ITEM, Bosch, round profile.

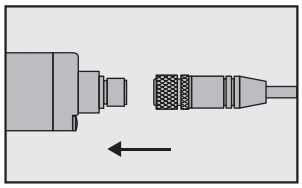
2. Easy installation with slot nuts



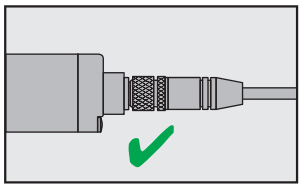
The PLG can easily be mounted on the profile with slot nuts.

Plug & play

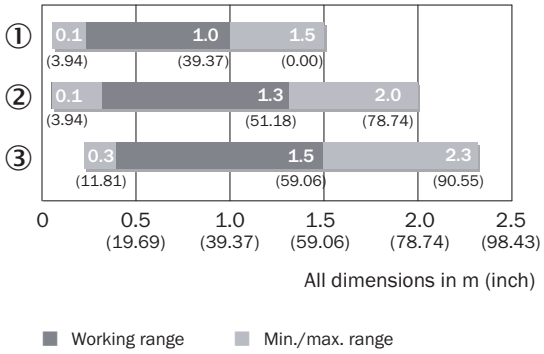
1. Plug in and tighten the ring of the connector



2. Device is ready for use

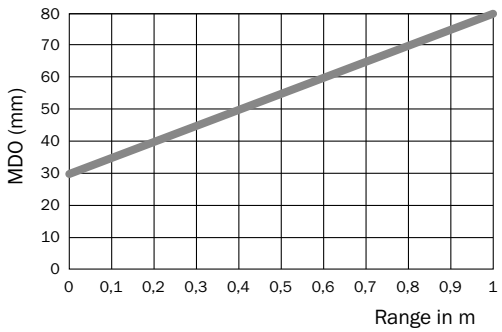


CHARACTERISTIC CURVE: RANGE



① REF-PLG
② Reflector PL150
③ Reflector PL180

DETECTION CAPABILITY PLG3



Further information as well as suitable accessories, example applications and downloads such as CAD dimensional models, operating instructions and software can be found at www.sick.com/1028953

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