

**Overview**

- SmartReflect - Safe barrier principle without reflector
- Reliable also on very dark and shiny objects
- Manipulation-proof, simple teach-in via qTeach
- Longest distances thanks to time of flight principle
- Laser performance for an accurate switching behavior
- Compact, miniaturized housing format



Picture similar



**Technical data**

**General data**

Type	Light barrier
Version	Time of Flight
Light source	Pulsed red laser diode
Sensing distance Tw	400 mm ... 1800 mm
Scanning range Sa	85% ... 80% Sde
Power on indication	LED green
Output indicator	LED yellow
Sensing distance adjustment	qTeach
Laser class	1
Distance to focus	700 mm
Wave length	680 nm
Suppression of reciprocal influence	Yes
Beam type	Point
Alignment optical axis	< 2°

**Electrical data**

Response time / release time	< 8 ms
Voltage supply range +Vs	12 ... 30 VDC
Current consumption max. (no load)	60 mA
Voltage drop Vd	< 2 VDC

**Electrical data**

Output function	Dark operate, complementary
Output circuit	PNP
Output current	< 50 mA, sum of all outputs
Short circuit protection	Yes
Reverse polarity protection	Yes

**Mechanical data**

Width / diameter	12.9 mm
Height / length	32.3 mm
Depth	23 mm
Type	Rectangular
Housing material	Plastic (ASA, PMMA)
Front (optics)	PMMA
Connection types	Connector M8 4 pin

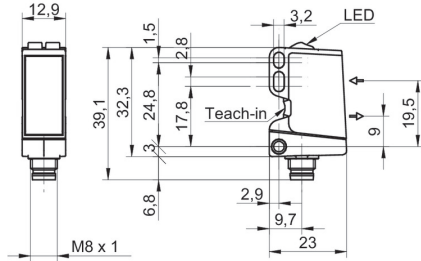
**Ambient conditions**

Protection class	IP 67
Operating temperature	-20 ... +50 °C
Storage temperature	-40 ... +70 °C
Vibration (sinusoidal)	IEC 60068-2-6:2008 10 g at f = 10 - 2000 Hz, duration 150 min per axis
Shock (semi-sinusoidal)	IEC 60068-2-27:2009 50 g / 11 ms, 10 impulses per axis and direction

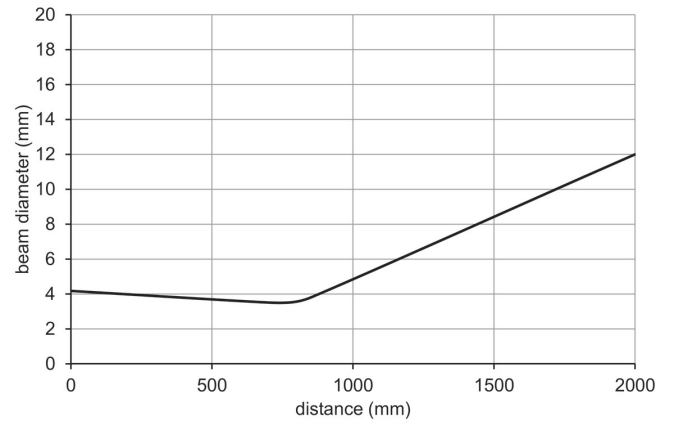
**Remarks**

- Measurement on 90% remission (white)

**Dimension drawing**



**Beam characteristic (typically)**



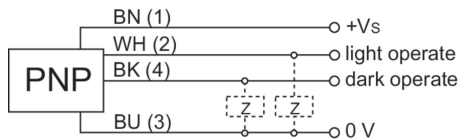
**Laser warning**

**CLASS 1 LASER  
PRODUCT**

IEC 60825-1/2014

Complies with 21 CFR 1040.10 and 1040.11 except for conformance with IEC 60825-1 Ed. 3., as described in Laser Notice No. 56, dated May 8, 2019

**Connection diagram**



**Pin assignment**

