SICK.COM

DATA SHEET

WL170-N122

Photoelectric sensors

SICK Sensor Intelligence

Illustration may differ

PHOTOELECTRIC SENSORS

WL170-N122

ORDERING INFORMATION

Type	part no.
WL170-N122	6010187

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

DETAILED TECHNICAL DATA

FEATURES

Functional principle	Photoelectric retro-reflective sensor
Dimensions (W x H x D)	12 mm x 37 mm x 28.6 mm
Housing design (light emission)	Rectangular
Sensing range max.	0.1 m ... 0.8 m [1]
Sensing range	0.1 m ... 0.6 m [2]
Type of light	Visible red light
Light source	LED

[1] Reflector PL80A.

[2] Reflector P250.

MECHANICS/ELECTRONICS

Supply voltage	10 V DC ... 30 V DC
Ripple	± 10 %
Current consumption	30 mA [1]
Switching output	NPN
Switching mode	Light/dark switching
Switching mode selector	Selectable via L/D control cable
Response time	≤ 0.7 ms [2]
Attenuation along light beam	≥ 20 %
Connection type	Cable, 2 m [3]
Cable material	PVC

[1] Without load.

[2] Signal transit time with resistive load.

[3] Do not bend below 0 °C.

Conductor cross section	0.18 mm²
Housing material	Stainless steel, Stainless steel/ABS
Optics material	Plastic, PC
Enclosure rating	IP67
Ambient operating temperature	–25 °C ... +55 °C
Ambient temperature, storage	–40 °C ... +70 °C
UL File No.	NRNT2.E128350 & NRNT8.E128350

[1] Without load.

[2] Signal transit time with resistive load.

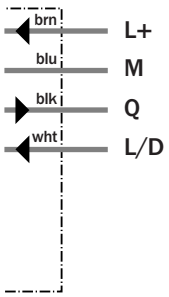
[3] Do not bend below 0 °C.

SAFETY-RELATED PARAMETERS

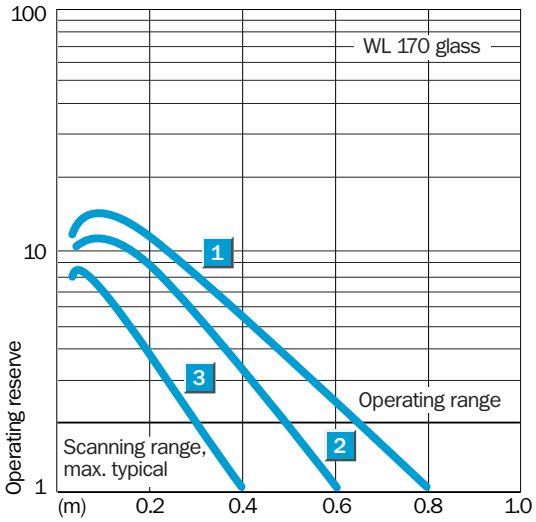
$MTTF_D$	1,562 years
DC_{avg}	0 %

CONNECTION TYPE

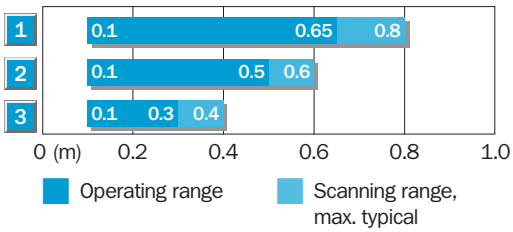
CONNECTION DIAGRAM



CHARACTERISTIC CURVE

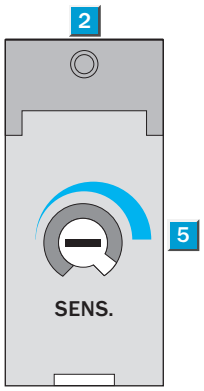


SENSING RANGE DIAGRAM



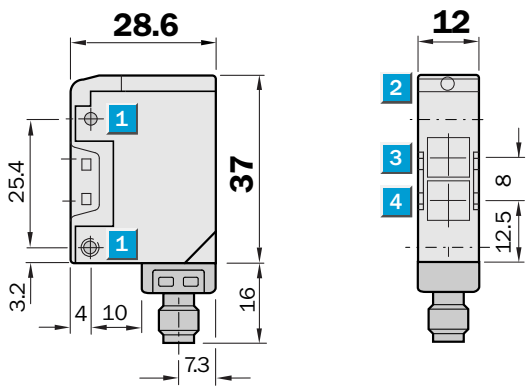
	Reflector type	Operating range
1	PL 80 A	0.1 ... 0.65 m
2	P 250	0.1 ... 0.5 m
3	PL 20 A	0.1 ... 0.3 m

ADJUSTMENTS



② Mounting hole, Ø 3 mm with integrated M3 thread
⑤ Sensitivity control (potentiometer, 270°)

DIMENSIONAL DRAWING



Dimensions in mm (inch)
① Mounting hole, Ø 3 mm with integrated M3 thread
② LED signal strength indicator, red:
② light received>=switching threshold
③ Center of optical axis, receiver
④ Center of optical axis, sender

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/6010187

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SICK AT A GLANCE

SICK is a leading global technology company for intelligent sensors and integrated solutions in industrial automation. Our technologies set benchmarks, making your industrial processes more efficient, safer and more sustainable – both in logistics and manufacturing operations.

SICK combines sensor intelligence with industry expertise and certified consulting services. We provide the ideal foundation for scalable as well as tailor-made automation solutions and create added value along the entire value chain. Our close partnerships with our customers are more than just a promise: Together, we optimize productivity, improve quality, protect health and safety, and help build a sustainable future. All with empathy and trust.

Since 1946, we have been developing innovative technologies with passion and a pioneering spirit. With a global network in around 40 countries, SICK has a global presence and is always close by. The company's headquarters are located in Waldkirch near Freiburg, Germany. Our customers benefit from our understanding of both local and global requirements, which enables us to deliver tailor-made solutions

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