

SICK.COM



DATA SHEET

WS/WE170-P132

Photoelectric sensors

SICK

Sensor Intelligence



Illustration may differ

PHOTOELECTRIC SENSORS

WS/WE170-P132

ORDERING INFORMATION

Type	part no.
WS/WE170-P132	6010181

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

DETAILED TECHNICAL DATA

FEATURES

Functional principle	Through-beam photoelectric 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 m
Sensing range	0 m ... 7 m
Type of light	Visible red light
Light source	LED

MECHANICS/ELECTRONICS

Supply voltage	10 V DC ... 30 V DC
Ripple	± 10 %
Current consumption	30 mA ¹⁾
Switching output	PNP
Switching mode	Light/dark switching
Switching mode selector	Selectable via L/D control cable
Response time	≤ 1 ms ²⁾
Connection type	Cable, 2 m ³⁾
Cable material	PVC
Conductor cross section	0.18 mm²
Housing material	Stainless steel, Stainless steel/ABS
Optics material	Plastic, PC
Enclosure rating	IP67

¹⁾ Without load.
²⁾ Signal transit time with resistive load.
³⁾ Do not bend below 0 °C.

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.

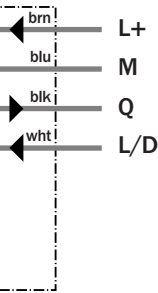
SAFETY-RELATED PARAMETERS

MTTF _D	1,330 years
DC _{avg}	0 %

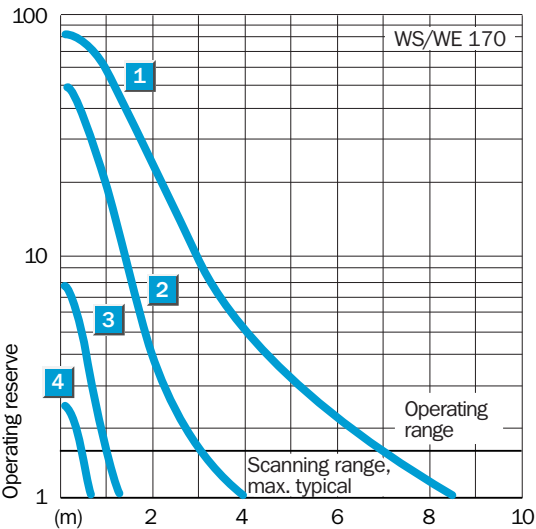
CONNECTION TYPE



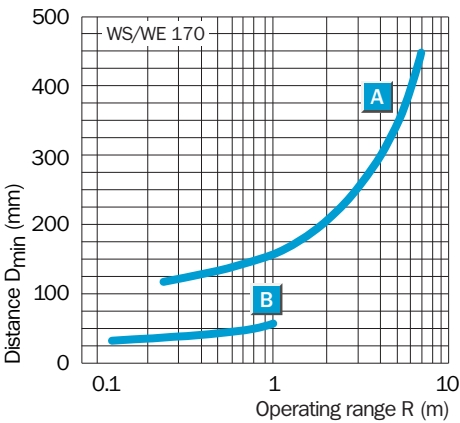
CONNECTION DIAGRAM



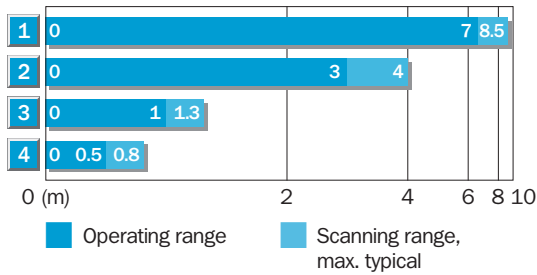
CHARACTERISTIC CURVE



CHARACTERISTIC CURVE

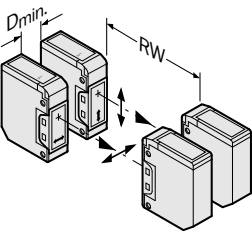


SENSING RANGE DIAGRAM

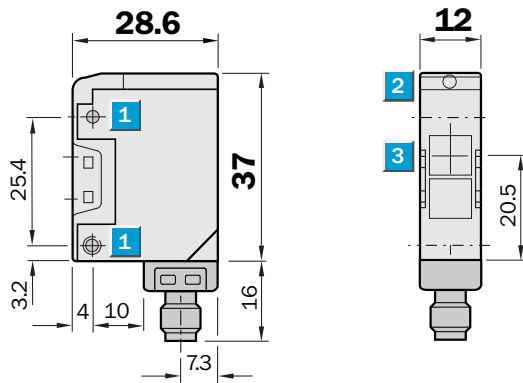


1	Without attachments
2	With polarising filter attachment
3	With slotted mask, 1 mm
4	With polarising filter and slotted mask, 1 mm

FUNCTIONAL PRINCIPLE



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 $\geq$ switching threshold
- ③ Center of optical axis, sender (WS) and receiver (WE)

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/6010181



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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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