



Mid range distance sensors Dx30, DS30

DS30-N2255



Model Name > **DS30-N2255**
Part No. > **1047067**

At a glance

- Measuring range up to 2,000 mm on black and white
- Measuring range up to 3,000 mm on gray and white
- Time-of-flight technology provides best suppression of any object in the background (up to 150 m)
- Minimal black/white shift ensures precise and reliable switching
- Models with 1, 2 and 3 switching outputs available for maximum flexibility
- Operating temperature from -40 °C to +55 °C

Your benefits

- Precise, reliable detection of objects - regardless of color - ensures a reliable process
- Small housing enables fast, easy integration into any system
- Reliable background suppression and high ambient light immunity increase productivity by eliminating false trips and machine down times
- Cost-efficient design and high sensor performance offer low initial costs and ensures exceptional economic benefits over the sensor lifetime
- Wide temperature range makes sensor suitable for several applications – even cold storage warehouses
- State-of-the-art VCESL laser offers an extended lifetime of 100,000 h, increasing the overall sensor service life
- Multiple switching points enable up to three tasks for the price of one sensor



Performance

Measuring range:	200 mm ... 2,000 mm, 6 % remission 200 mm ... 3,000 mm, 18 % remission 200 mm ... 3,000 mm, 90 % remission
Resolution ¹⁾ :	10 mm , Teach resolution
Response time:	33 ms
Switching frequency:	15 Hz
Light source ²⁾ :	Laser, infrared
Laser protection class:	1 (EN 60825-1)
Typ. light spot size (distance):	20 mm x 20 mm (at 2 m)
Service life:	100,000 h

¹⁾ 6 % ... 90 % remission ²⁾ Wave length: 850 nm

Interfaces

Output type::	3x NPN (100 mA) ^{1) 2) 3)}
Teach input:	1x ext. Teach

¹⁾ Output Q short-circuit protected ²⁾ NPN: HIGH = $\leq 2\text{ V}$ /LOW = V_S ³⁾ Switching output Q3 binary coded

Mechanics/electronics

Supply voltage V_S ¹⁾ :	DC 10 V ... 30 V
Ripple ²⁾ :	$\leq 5\text{ Vpp}$
Warm-up time:	$\leq 5\text{ min}$
Connection type:	Connector M12, 5-pin
Indication:	2 x LED
Weight:	120 g

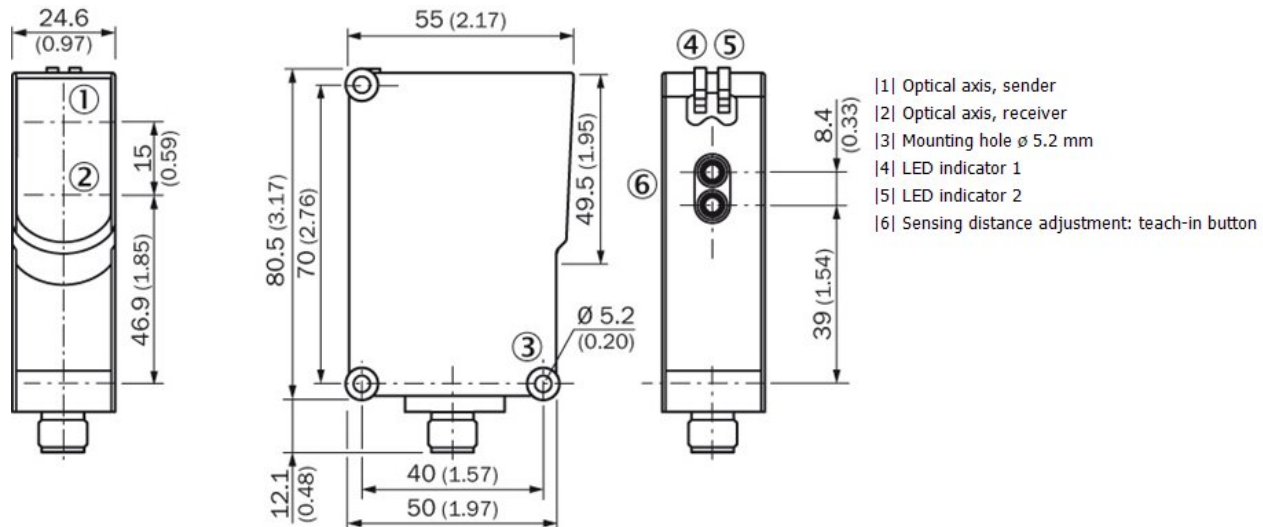
¹⁾ Limit values, reverse-polarity protected, operation in short-circuit protected network, max. 8 A ²⁾ May not fall short of or exceed V_S tolerances

Ambient data

Enclosure rating:	IP 65
Protection class ¹⁾ :	II
EMC:	EN 61000-6-2:2005-08, EN 61000-6-3:2001-10 + A11:2004-07 EN 60947-5-2:1998-10 + A1:1999-08 + A2:2004-02
Ambient temperature:	Operation: $-40 \dots 55\text{ }^\circ\text{C}$, Storage: $-40 \dots 75\text{ }^\circ\text{C}$

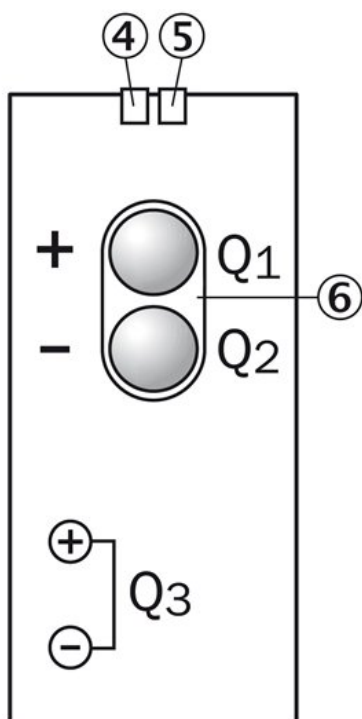
¹⁾ Reference voltage DC 50 V

Dimensional drawing



All dimensions in mm (inch)

Adjustment possible

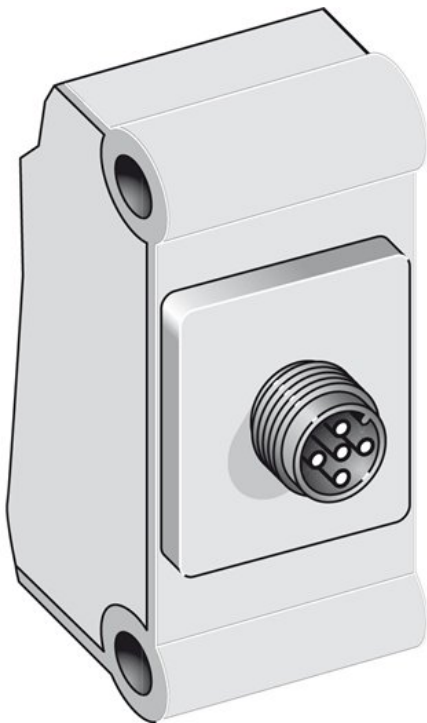


|4| LED indicator 1

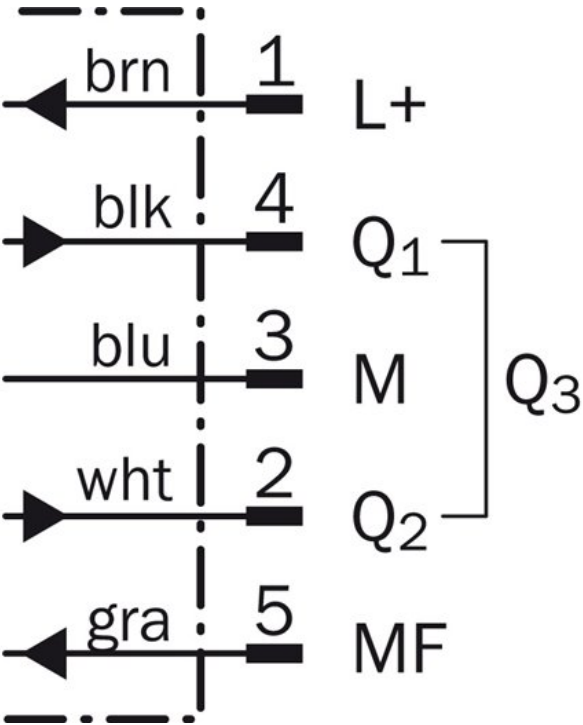
|5| LED indicator 2

|6| Sensing distance adjustment: teach-in button

Connection type



Connection diagram



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