



Mid range distance sensors Dx30, DS30

DS30-P2255



Model Name > [DS30-P2255](#)
Part No. > [1044254](#)



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

Measurement 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
Typ. light spot size (distance):	20 mm x 20 mm (at 2 m)
Laser class:	1 (EN 60825-1)
Laser service life (MTTF at 25 °C):	100,000 h

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

Interfaces

Output type ¹⁾: ²⁾: ³⁾: 3x PNP (100 mA)
Teach input: 1x ext. Teach

¹⁾ Output Q short-circuit protected ²⁾ PNP: HIGH = $V_S - (< 2 V)$ /LOW = 0 V ³⁾ Switching output Q3 binary coded

Mechanics/electronics

Supply voltage V_S ¹⁾: DC 10 V ... 30 V
Ripple ²⁾: ≤ 5 Vpp
Warm-up time: ≤ 5 min
Connection type: Male connector, M12, 5-pin
Indication: 2 x LED
Weight: 120 g

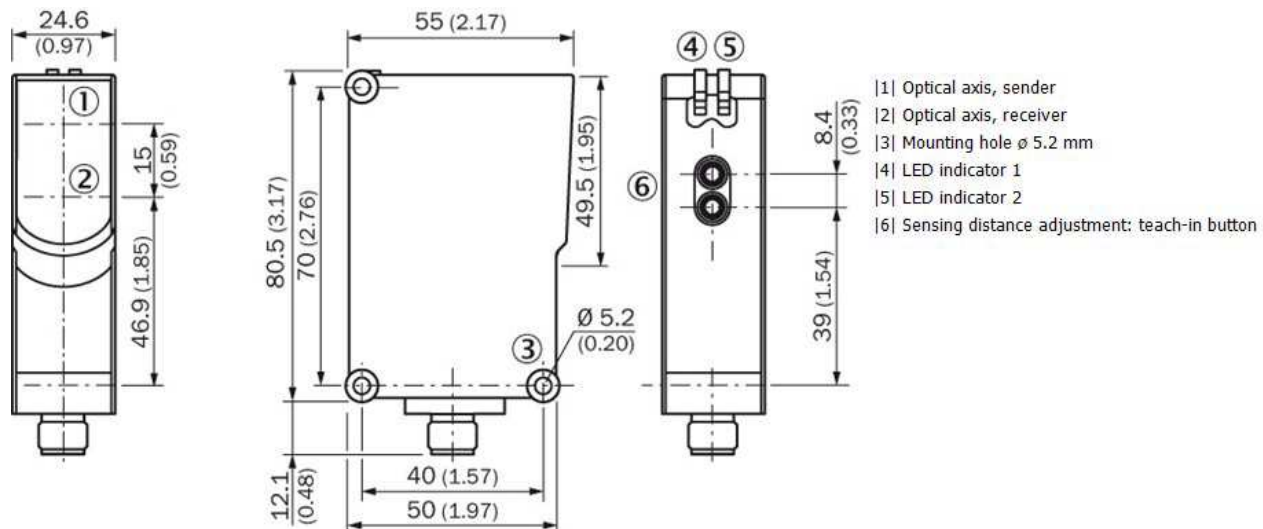
¹⁾ Limit values, reverse-polarity protected, operation in short-circuit protected network: max. 8 A ²⁾ May not fall short of or exceed V_S tolerances

Ambient data

Enclosure rating: IP 65
Protection class ¹⁾: II
Ambient temperature: Operation: -40 ... 55 °C, Storage: -40 ... 75 °C
Electromagnetic compatibility (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

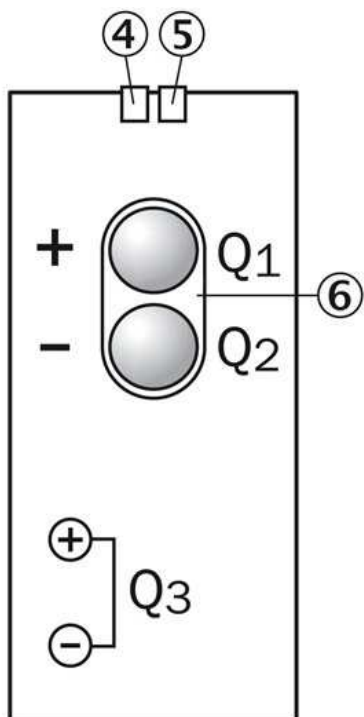
¹⁾ Reference voltage DC 50 V

Dimensional drawing



All dimensions in mm (inch)

Adjustment possible

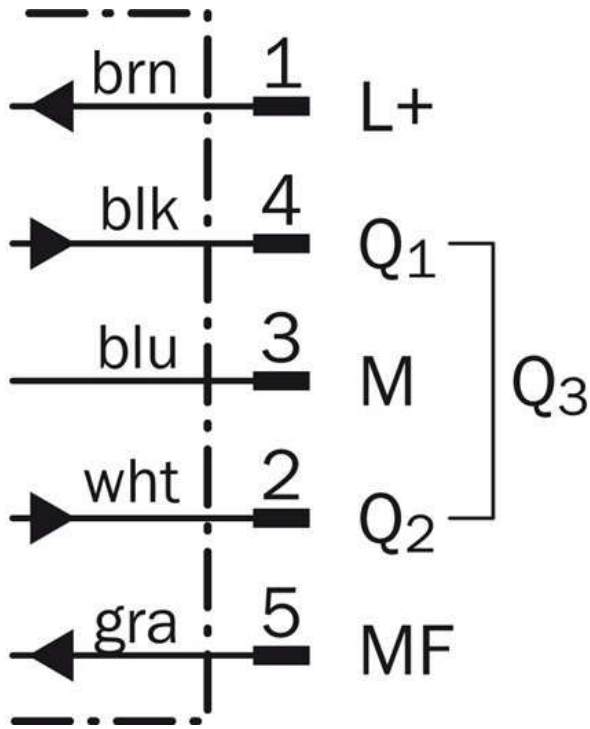


- |4| LED indicator 1
- |5| LED indicator 2
- |6| Sensing distance adjustment: teach-in button

Connection type



Connection diagram



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