



Czujniki ultradźwiękowe UM30, UM30-2

UM30-212112



Nazwa modelu > **UM30-212112**

Numer cz ci > **6037665**

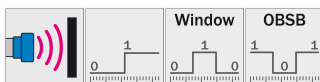


At a glance

- Integrated time-of-flight technology detects objects such as glass, liquids and transparent foils, independent of color
- Range up to 8,000 mm
- Display enables fast and flexible sensor adjustment
- Immune to dust, dirt and fog
- Available with combined analog and digital outputs
- Synchronization and multiplexing
- Adjustable sensitivity
- Three operation modes: Distance to Object (DtO), Window (Wnd) or Object between sensor and background (ObSB)

Your benefits

- Easy machine integration due to compact size
- Various setup options ensure flexible adaptation to applications
- Multiplex mode eliminates crosstalk interference for consistent and reliable detection and high measurement reliability
- Synchronization mode allows multiple sensors to work as one large sensor, providing a low-cost solution for area detection
- Display enables setup prior to installation, reducing on-site installation time
- Integrated temperature compensation and time-of-flight technology ensure high measurement accuracy
- ObSB-mode enables detection of any object between the sensor and a taught background



Wydajno

| | |
|---------------------------------|--------------------------|
| Rozdzielczość: | ≤ 0,18 mm |
| Working range, limiting range: | 65 mm ... 350 mm, 600 mm |
| Odtwarzalność: ¹⁾ : | ± 0,15 % |
| Accuracy ^{2), 3)} : | ± 1 % |
| Czas reakcji: | 70 ms |
| Output rate: | 16 ms |
| Switching frequency: | 8 Hz |
| Ultrasonic frequency (typical): | 400 kHz |
| Detection area (typical): | See diagrams |
| Kompensacja temperatury: | ✓ |

Additional function: Set switching mode: Distance to object (DtO)/Window (Wnd)/Object between sensor and background (ObSB)
 Teach-in of switching output
 Set levels of switching outputs
 Set on delay switching output
 Kompensacja temperatury
 Synchronizacja of up to 10 sensors
 Multiplexing: no cross talk of up to 10 sensors
 Set measurement filters: value filter, filter strength, adjustable sensitivity, foreground suppression and detection area
 Reset to factory default
 Switch-off display
 Switching output invertible

1) 2) Referring to current measurement value 3) Temperature compensation can be switched off, without temperature compensation: 0.17 %/K

Interfejsy

| | |
|---|------------------|
| Wyjście przełączające ^{1), 2)} : | 2 x PNP (200 mA) |
| Histereza: | 5 mm |
| Multifunctional input (MF): | 1 x MF |

1) Wyjście Q zabezpieczone przed zwarciami 2) PNP: HIGH = $V_S - (< 2 V)$ /LOW = 0 V

Mechanika/elektronika

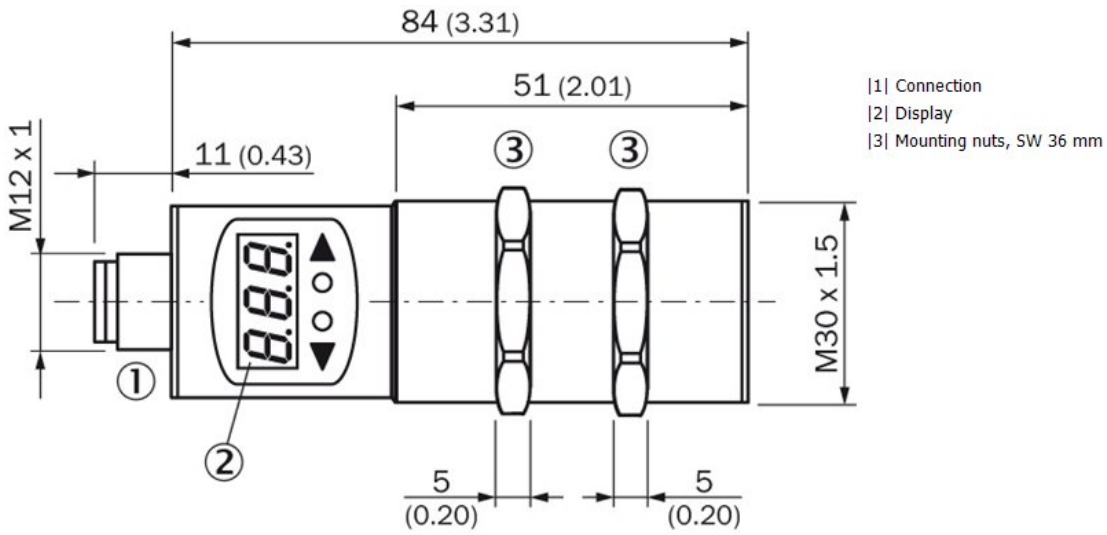
| | |
|---|---|
| Sending axis: | Prosty |
| Napięcie zasilania VS ^{1), 2)} : | DC 9 V ... 30 V |
| Pobór mocy ³⁾ : | ≤ 2,4 W |
| Initialization time: | < 300 ms |
| Housing material: | Nickel-plated brass, PBT display: TPU ultrasonic transducer: polyurethane foam, glass epoxy resin |
| Sposób przyłączenia: | Wtyk, M12, 5-pinowe |
| Indication: | LED display, 2 x LED |
| Ciężar: | 150 g |

1) Limit values, reverse-polarity protected, operation in short-circuit protected network: max. 8 A 2) 15 V ... 30 V when using analog voltage output 3) Bez obciążenia

Dane otoczenia

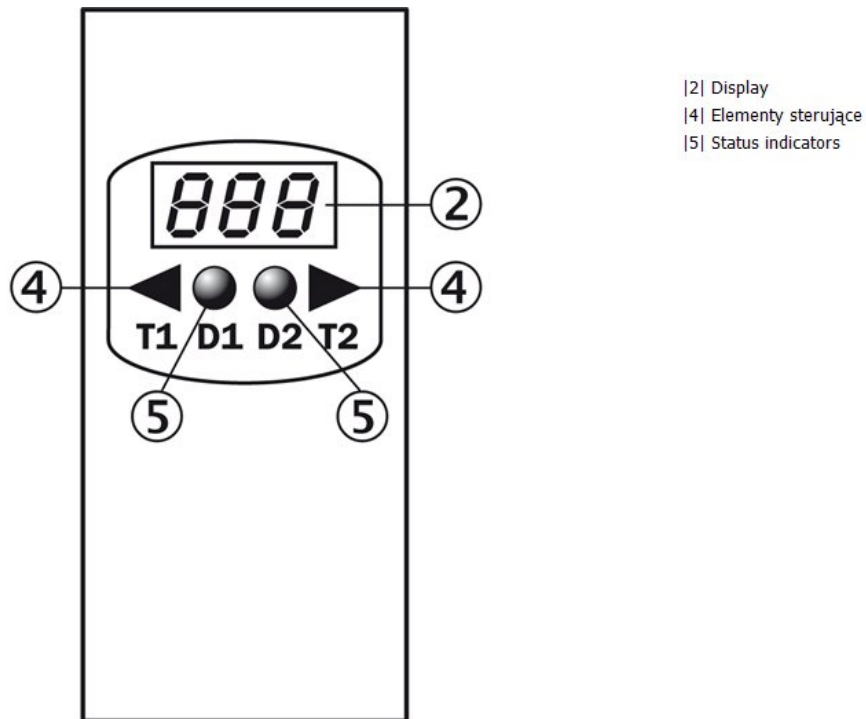
| | |
|----------------------|--|
| Enclosure rating: | IP 67 |
| Klasa ochronności: | III |
| Ambient temperature: | Operation: -25 ... 70 °C Storage: -40 ... 85 °C |

Dimensional drawing

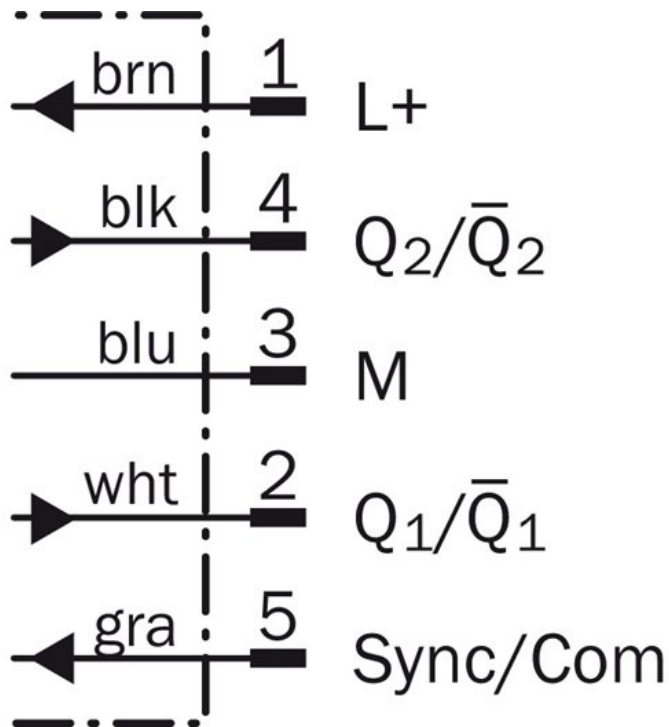


All dimensions in mm (inch)

Adjustments

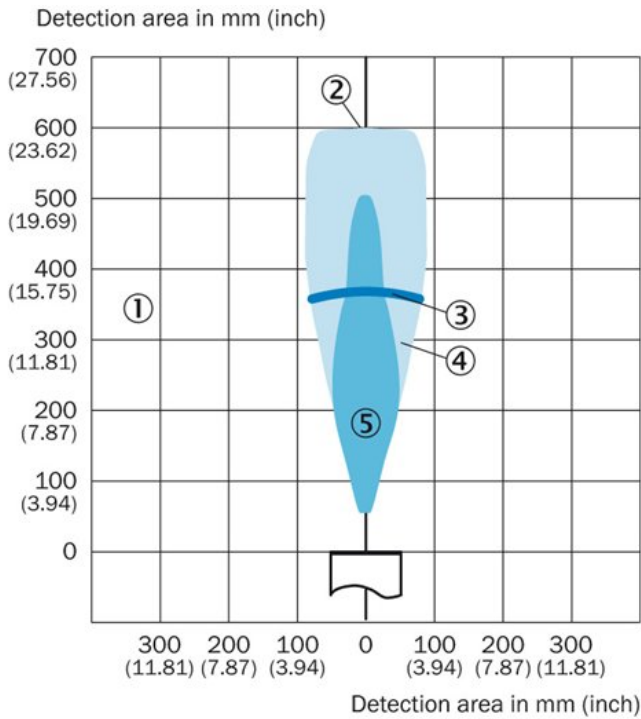


Connection diagram



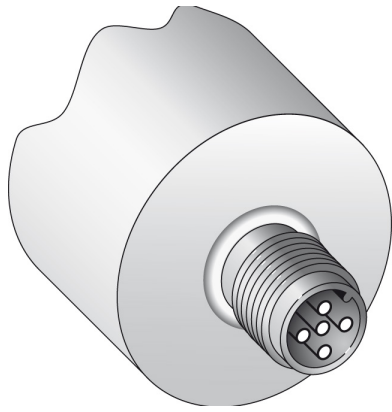
[1] multifunctional input/synchronization and multiplex operation/communication Connect+

Detection area



- [1] Sensing range dependent on reflection properties, size and orientation of the object
- [2] Working range
- [3] Limiting range
- [4] example object: aligned plate 500 mm x 500 mm
- [5] example object: pipe with 27 mm diameter

Connection type



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