



Czujniki ultradźwiękowe UM30, UM30-2

UM30-214118



Nazwa modelu > **UM30-214118**

Numer części > **6036924**



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



Wydajność

Rozdzielczość:	≤ 0,18 mm
Working range, limiting range:	350 mm ... 3.400 mm, 5.000 mm
Odtwarzalność: ¹⁾ :	± 0,15 %
Accuracy ^{2), 3)} :	± 1 %
Czas reakcji:	180 ms
Output rate:	43 ms
Switching frequency:	3 Hz
Ultrasonic frequency (typical):	120 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
Teach-in of analog output
Automatic selection of analog current or voltage output
Kompensacja temperatury
Synchronization 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
Scaling of analog outputs
Invertible analog output
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), 3), 4), 5), 6)} :	1 x PNP (200 mA)
Wyjście analogowe ^{3), 4), 5), 6)} :	1 x 0 V ... 10 V ($\geq 100 \text{ k}\Omega$), 1 x 4 mA ... 20 mA ($\leq 500 \Omega$)
Rozdzielczość, wyjście analogowe:	12 bit
Histereza:	50 mm
Multifunctional input (MF):	1 x MF

1) Wyjście Q zabezpieczone przed zwarciami 2) PNP: HIGH = $V_S - (< 2 \text{ V})$ /LOW = 0 V 3) 5) Automatic selection of analog current or voltage output dependent on load 4) For 4 mA ... 20 mA and $V_S \leq 20 \text{ V}$ max. load $\leq 100 \Omega$ 6) Subsequent smoothing of the analog output, depending on the application, may increase the response time by up to 200 %

Mechanika/elektronika

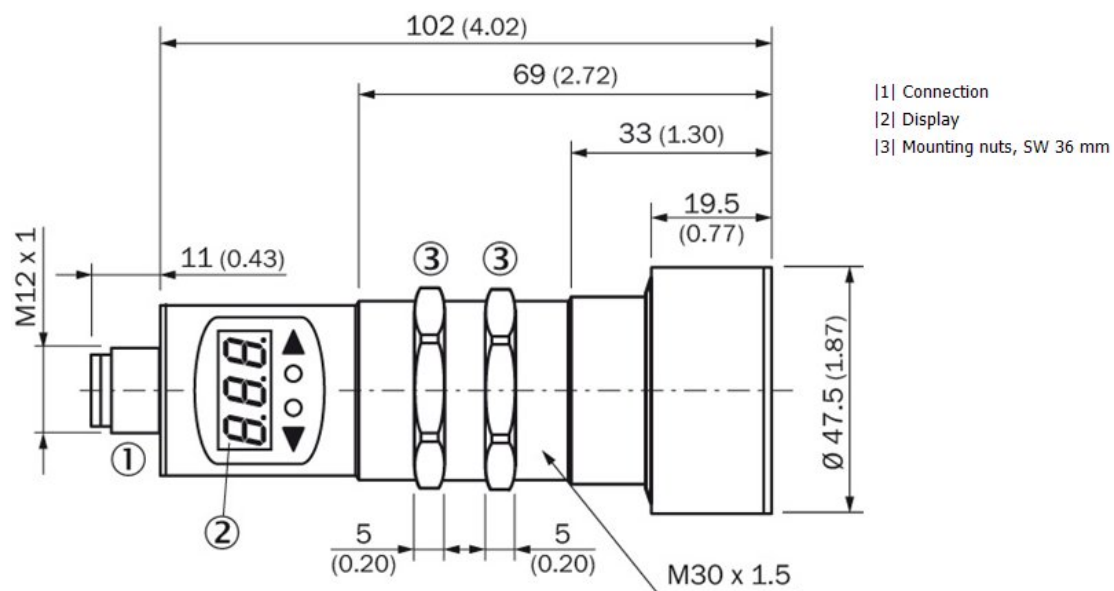
Sending axis:	Prosty
Napięcie zasilania VS ^{1), 2)} :	DC 9 V ... 30 V
Pobór mocy ³⁾ :	$\leq 2,4 \text{ W}$
Initialization time:	< 300 ms
Budowa:	Cylindryczna, M30
Housing material:	Nickel-plated brass, PBT display: TPU ultrasonic transducer: polyurethane foam, glass epoxy resin
Sposób przyłączenia:	Wtyk, M12, 5-pinowe
Indication:	LED display, 2 x LED
Ciężar:	210 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

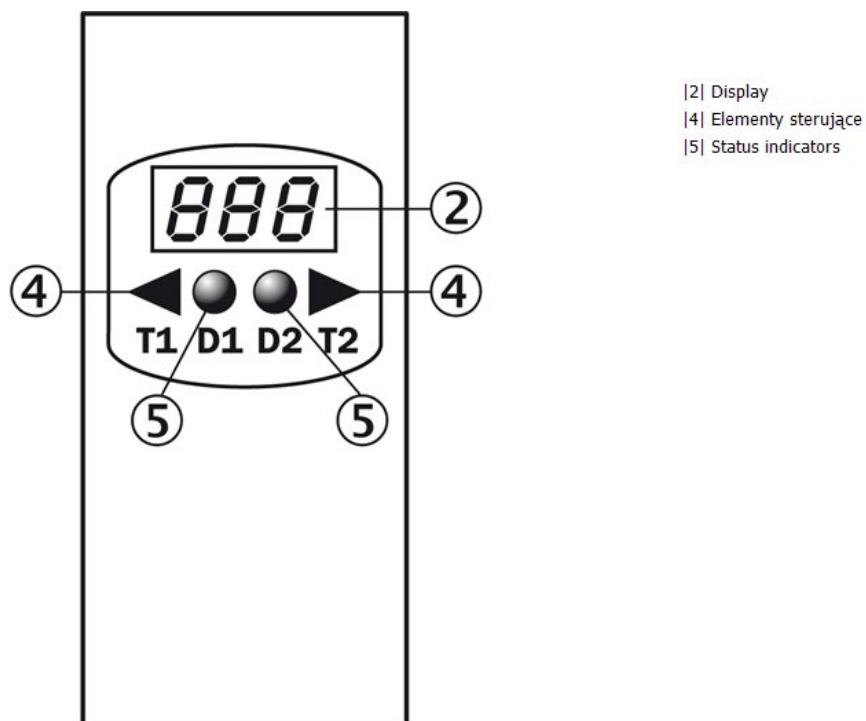
Dane otoczenia

Rodzaj zabezpieczenia:	IP 67
Klasa ochronności:	III
Ambient temperature:	Operation: -25 ... +70 °C Storage: -40 ... +85 °C

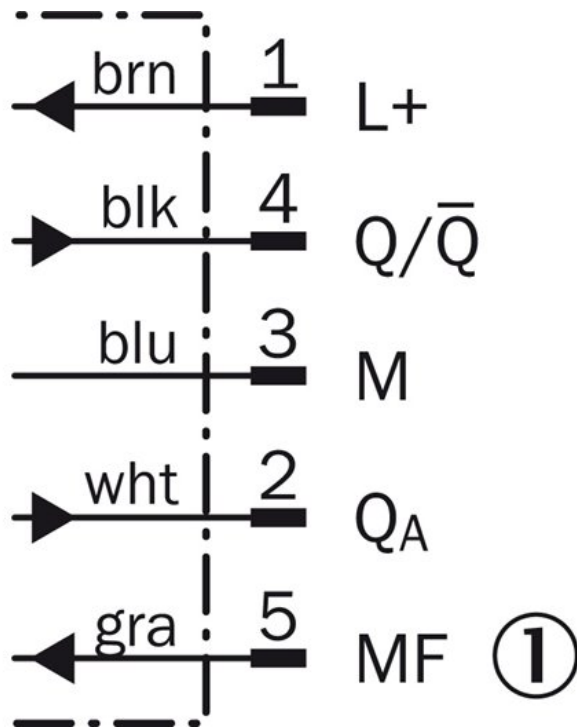
Rysunek techniczny



Adjustments

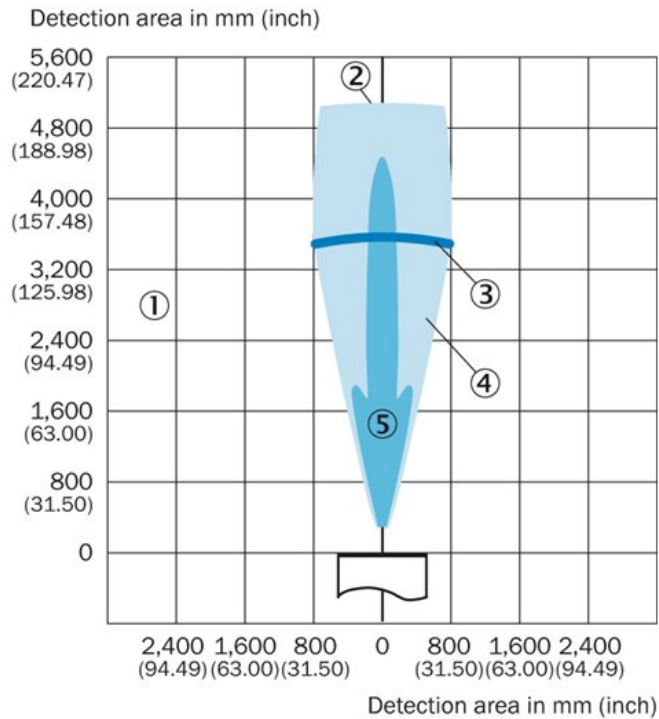


Connection diagram



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

Detection area



[1] Sensing range dependent on reflection
properties, size and orientation of the object

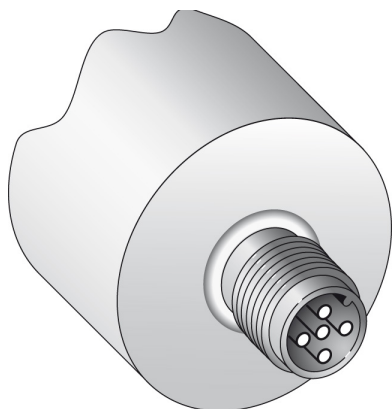
[2] Limiting range

[3] Working 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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