



Ultrasonic sensors
UM30

UM30-215113



Model Name > [UM30-215113](#)
Part No. > [6036920](#)



At a glance

- Integrated time-of-flight technology detects objects such as glass, liquids and transparent foils, independent of color
- Display enables fast and flexible sensor adjustment
- Immune to dust, dirt and fog
- Available with combined analog and digital outputs
- Operating range up to 6,000 mm
- Synchronization and multiplexing
- Adjustable range and detection area
- 3 operation modes: energetic, window, reflection

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
- Reflection mode enables detection of any object between the sensor and a taught background



Performance

Working range:	600 mm ... 6,000 mm
Limiting range:	8,000 mm
Resolution:	0.18 mm
Repeatability ¹⁾ :	± 0.15 %
Accuracy ²⁾ :	≤ 2 %
Response time:	240 ms
Output rate:	60 ms
Typ. ultrasonic frequency:	80 kHz
Typ. detection area:	See diagrams

Additional features:

Switch off display, Invertable analog output, Automatic selection of analog current or voltage output, Teach-in of analog output, Set measurement filters: Value filter, filter strength, foreground suppression and detection area, Multiplexing: No cross talk of up to 10 Sensors, Scaling of analog outputs, Synchronization of up to 10 sensors, Temperature compensation, Reset to factory default

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

Interfaces

Switching hysteresis:	100 mm
Analog current outputs (max. load) ^{1), 2)} :	-/1x 4 ... 20 mA ($\leq 500 \Omega$)
Resolution analog outputs:	12 bit
Analog voltage outputs (min. load) ³⁾ :	-/1x 0 ... 10 V ($\geq 100 \text{ k}\Omega$)

1) For $V_s \leq 20 \text{ V}$ max. load = 100Ω 2) 3) Automatic selection of analog current or voltage output dependent on load

Mechanics/electronics

Supply voltage VS ^{1), 2)} :	DC 9 V ... 30 V
Initialization time:	< 300 ms
Housing material ³⁾ :	Nickel-plated brass, PBT, TPU
Connection type:	Connector M12, 5-pin
Indication:	2 x LED, LED-display
Typ. weight without cable:	270 g

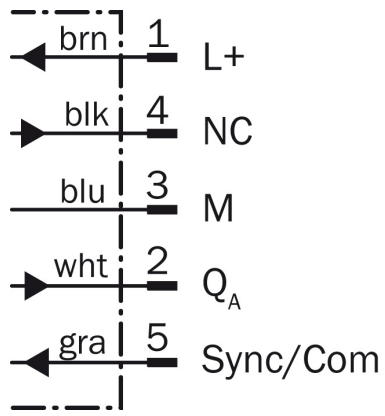
Without load;

1) Limit values, reverse-polarity protected, operation in short circuit protected network, max. 8 A 2) 15 ... 30 V when using analog voltage output 3) Ultrasonic transducer: polyurethan foam, glass epoxy resin

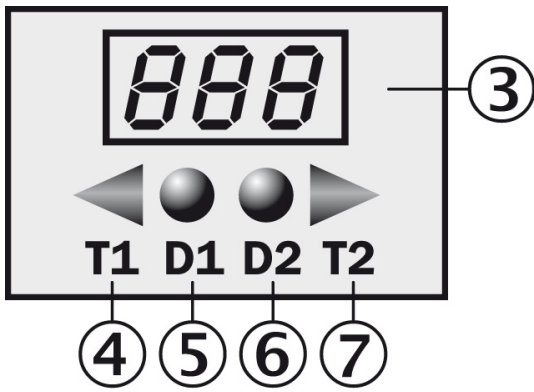
Ambient data

Enclosure rating:	IP 67
Protection class:	III
Ambient temperature:	Operation: -25 ... 70 °C Storage: -40 ... 85 °C

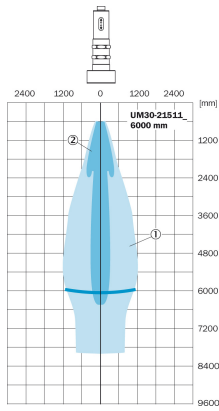
Connection diagram



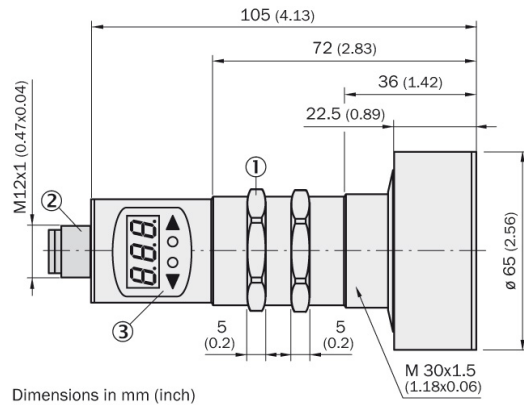
Adjustment possible



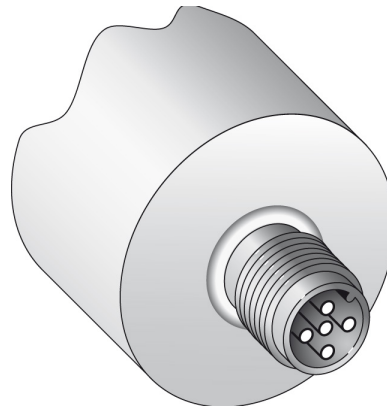
Characteristic curve



Dimensional drawing



Connection type



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