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# DATASENSING UQ1 ULTRASONIC SENSORS

UQ1C/G6-0E
Hybrid housing 60-800 mm, analogue 4-20 mA+ PNP NO/NC, conn. M12

- 300-1200mm sensing range
- Plastic housing models and stainless steel models
- PNP, NPN, Analogue (current or voltage), IO-Link outputs, double digital or mixed outputs
- IP67 protection
- M12 plug and cable output

### PRODUCT DESCRIPTION

The **UQ1 series of ultrasonic sensors** from Datasensing offers an advanced range of hybrid M18 barrel and cubic sensors designed to meet the needs of a variety of demanding applications. Combining the benefits of both M18 barrel and cubic designs, the UQ1 series provides flexibility in installation, allowing you to choose the optimal sensor form factor for your specific environment. These sensors deliver precise and reliable distance measurement and object detection, making them ideal for industries such as robotics, automotive, industrial automation, and healthcare.
The UQ1 sensors feature both digital and analogue outputs, providing versatile connectivity options to integrate seamlessly with a variety of control systems and automation networks. Additionally, the sensors are IO-Link compatible, enabling efficient data communication and enhanced monitoring capabilities within industrial automation setups. This makes the UQ1 series a powerful tool for real-time data tracking and performance optimization in complex systems.
Operating based on the principle of sound wave reflection, the UQ1 ultrasonic sensors emit high-frequency sound waves (typically above 20 kHz) and measure the time it takes for the waves to reflect off an object and return. This allows the sensor to accurately determine distances and detect the presence of objects, even in challenging environments with dust, dirt, or noise. The UQ1 series is particularly valuable in applications requiring non-contact measurements where traditional sensors may not be suitable.

**Technical features:**

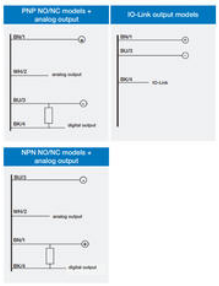
- Hybrid M18 Barrel/Cubic Design: Combines the compactness of a cubic design with the versatility of an M18 barrel
- Digital and Analog Outputs: Available with both digital and analogue outputs
- IO-Link Compatibility: Supports IO-Link communication for enhanced data exchange and integration into advanced industrial automation systems
- Ultrasonic Technology: Utilizes high-frequency sound waves (typically above 20 kHz) to measure distance and detect objects with high accuracy.
- Distance Measurement via Sound Wave Reflection: Operates by emitting ultrasonic waves and calculating the time it takes for the waves to reflect off an object
- Wide Operating Range: Capable of detecting objects over a broad range of distances
- Temperature Compensation: Ensures stable and reliable performance over a wide range of environmental temperatures
- Fast Response Time: Offers quick measurements for dynamic and real-time detection
- High Protection Rating (IP67): Features an IP67 protection rating, making it resistant to dust, dirt, and moisture
- Versatile Application Use: Suitable for a wide range of applications, including robotics, automotive systems, industrial automation, material handling, and healthcare.
- Flexible Mounting Options: The hybrid design allows for easy mounting in various configurations and tight spaces

# TECHNICAL DATA

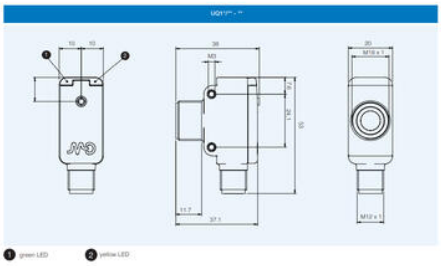
| | |
|---|---|
| **Distance max** | 800 mm |
| **Distance min** | 60 mm |
| **Electrical connection** | M12 plug cable exit |
| **Housing** | M18 |

| | |
|---|---|
| **IP class** | IP67 |
| **LED indication** | Yes |
| **Material of body** | PA12, PBT |
| **Output** | 4-20 mA, PNP NO+NC |
| **Supply voltage dc max** | 30 V DC |
| **Supply voltage dc min** | 10 V DC |
| **Temperature operational max** | 70 °C |
| **Temperature operational min** | -20 °C |

electrical diagrams of the connections



dimensions (mm)



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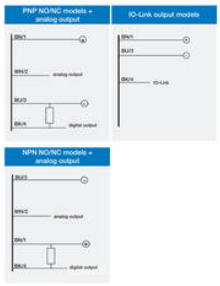


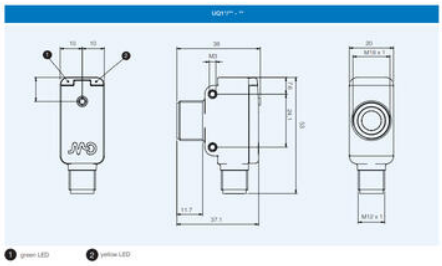
connectors


dimensions (mm)

included accessories


connectors


dimensions (mm)



dimensions (mm)

included accessories