

# ULTRASONICS

## UT 20 Cubic miniature sensor with teach-in



**Ideal for the recognition of transparent and highly reflective objects.**

Whether in electronic industry or packing industry: Ultrasonic sensors even detect critical objects such as transparent foils and printed circuit boards in a reliable way.

They even may be used in applications where **compact dimensions** are of particular importance, because with their size of only approx. 32 x 20 x 12 mm, our ultrasonic sensors of the UT 20 line fit into the smallest gap.

Our UT 20 sensors are also available with **analogue output**. It's up to you whether you prefer to evaluate a distance-dependent current signal or rather a voltage signal. And thanks to the simple teach-in operation, nothing stands in the way of an uncomplicated start-up.

### Features

- Working range according to the version: 20 ... 150 mm, 50 ... 240 mm or 120 ... 700 mm
- Small, compatible housing
- Synchronization input
- Simple teach-in concept
- 4 output versions: PNP, NPN, analogue current output or voltage output
- Resolution 0.2 mm

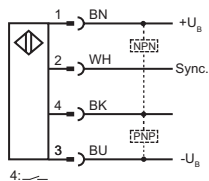
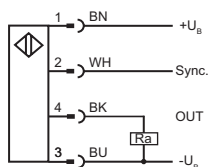
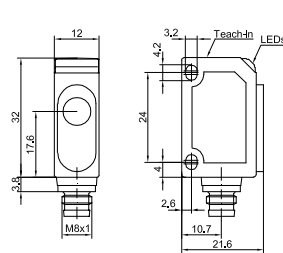
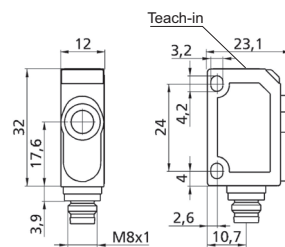
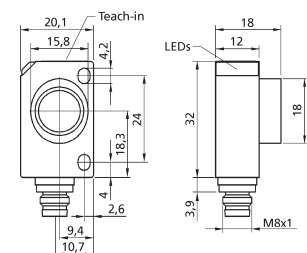
### Accessories

Benefit from the wide choice of accessories for our F20 line, e.g. the MSP F20 mounting bracket for a safe mounting and perfect protection against mechanical influences.



| Technical data                | Ultrasonic distance sensor with signal output  | Ultrasonic distance sensor with analogue output   |
|-------------------------------|--|---|
| <b>Sensor data</b>            |  |   |
| Working range                 | 20 ... 150 mm (UT 20-150)<br>50 ... 240 mm (UT 20-240)<br>120 ... 700 mm (UT 20-700) | 20 ... 150 mm (UT 20-150-A...)<br>50 ... 240 mm (UT 20-240-A...)<br>120 ... 700 mm (UT 20-700-A...) |
| Resolution                    | 0.2 mm   | 0.2 mm  |
| Switching hysteresis          | 2 mm   | -   |
| Switching frequency           | 25 Hz  | -   |
| Response time                 | 24 or 30 ms (depending on type)  | 24 or 30 ms (depending on type)   |
| <b>Electrical data</b>        |  |   |
| Operating voltage             | 20 ... 30V DC  | 20 ... 30V DC   |
| Connection                    | plug M8 4-pin  | plug M8 4-pin   |
| Current consumption (no load) | ≤ 25 mA  | ≤ 25 mA   |
| Signal outputs                | PNP N.O./NPN N.O.  | -   |
| Analogue output               | -  | 0 ... 10V (UT 20-...AU...)<br>4 ... 20 mA (UT 20-...AI...)  |
| Power-on delay                | ≤ 300 ms   | ≤ 300 ms  |
| Protection class              | □  | □   |
| <b>Mechanical data</b>        |  |   |
| Casing material               | ABS  | ABS   |
| Protection standard           | IP67   | IP67  |
| Ambient temperature range     | -20 ... +70 °C   | 20 ... +70 °C   |

| Versions                     | 20 ... 150 mm  | 50 ... 240 mm  | 120 ... 700 mm |
|------------------------------|----------------|----------------|----------------|
| with PNP signal output       | UT 20-150-PSM4 | UT 20-240-PSM4 | UT 20-700-PSM4 |
| with NPN signal output       | UT 20-150-NSM4 | UT 20-240-NSM4 | UT 20-700-NSM4 |
| with analogue voltage output | UT 20-150-AUM4 | UT 20-240-AUM4 | UT 20-700-AUM4 |
| with analogue current output | UT 20-150-AIM4 | UT 20-240-AIM4 | UT 20-700-AIM4 |

**Wiring diagram**
**with signal output**

**with analogue output**

**Dimensional drawing (UT 20-150 ...)**

**Dimensional drawing (UT 20-240 ...)**

**Dimensional drawing (UT 20-700 ...)**


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