

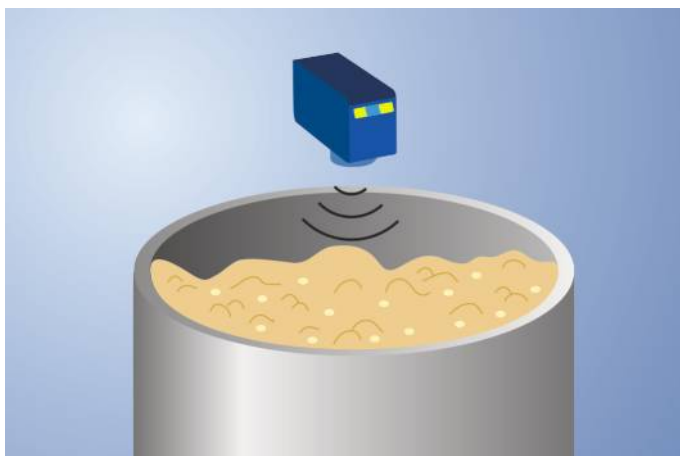
Distance Sensor

U1KT004



- Antivalent switching output
- Miniature design
- Ready for Industrie 4.0 with IO-Link version 1.1
- Reflex and through-beam operation mode are possible

These ultrasonic sensors evaluate the sound reflected from the object. They are capable of detecting almost any object, regardless of material and condition. As such, they are especially well suited for monitoring fill levels of liquids and bulk goods and for detecting transparent objects. The measured value can be read out via IO-Link, and the sensor can be adapted as needed to the application. The sensor can be used in reflex mode operation and as an ultrasonic through-beam sensor.



Ultrasonic Data

| | |
|------------------------------------|-------------|
| Working range, reflex sensor | 30...400 mm |
| Working range, through-beam sensor | 30...800 mm |
| Setting Range | 30...400 mm |
| Reproducibility maximum | 4 mm |
| Linearity Deviation | 4 mm |
| Resolution | 0,5 mm |
| Ultrasonic Frequency | 325 kHz |
| Opening Angle | < 12 ° |
| Service Life (T = +25 °C) | 100000 h |
| Switching Hysteresis | 1 % * |

Electrical Data

| | |
|---|------------------|
| Supply Voltage | 18...30 V DC |
| Current Consumption (U _b = 24 V) | < 20 mA |
| Switching frequency, reflex sensor | 30 Hz |
| Switching frequency, through-beam sensor | 70 Hz |
| Response time, reflex sensor | 17 ms |
| Response time, through-beam sensor | 8 ms |
| Temperature Range | -30...60 °C |
| Number of Switching Outputs | 2 |
| Switching Output Voltage Drop | < 2,5 V |
| Switching Output/Switching Current | 100 mA |
| Synchronous Mode | up to 40 sensors |
| Short Circuit Protection | yes |
| Reverse Polarity Protection | yes |
| Overload Protection | yes |
| Lockable | yes |
| Interface | IO-Link V1.1 |
| Data Storage | yes |
| Protection Class | III |

Mechanical Data

| | |
|----------------------|----------------------------------|
| Setting Method | IO-Link |
| Setting Method | Teach-in (for switching output) |
| Housing Material | Plastic, PC |
| Housing Material | Plastic, PC+ABS |
| Sensing face | Epoxy resin/glass bubble mixture |
| Sensing face | Plastic, PC+ABS |
| Sensing face | Plastic, PU |
| Degree of Protection | IP68 |
| Connection | M8 × 1; 4-pin |

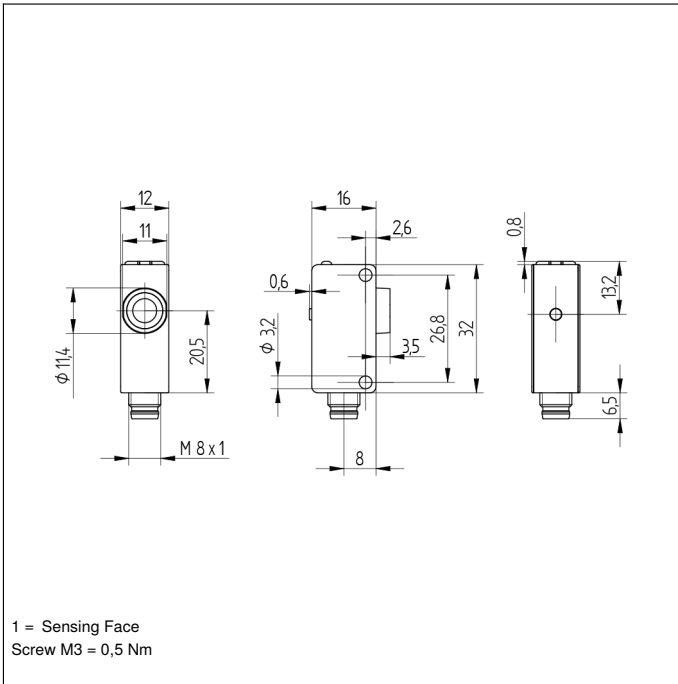
Safety-relevant Data

| | |
|-----------------------------------|------------|
| MTTFd (EN ISO 13849-1) | 1106,71 a |
| PNP NO | ● |
| Programmable error output | ● |
| IO-Link | ● |
| Connection Diagram No. | 373 |
| Control Panel No. | A23 |
| Suitable Connection Equipment No. | 7 |
| Suitable Mounting Technology No. | 400 |

* Referring to the switching distance, at least 2 mm.

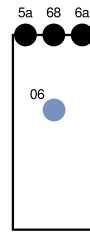
Complementary Products

| | |
|-------------------------|--|
| IO-Link Master Software | |
|-------------------------|--|

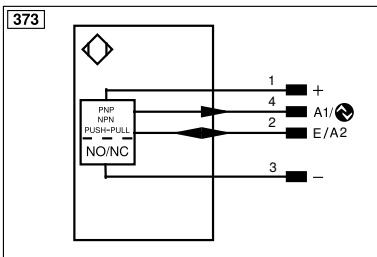


Ctrl. Panel

A 23



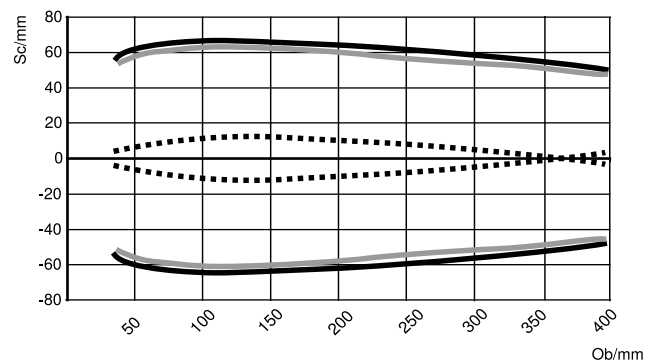
- 06 = Teach Button
- 5a = Switching Status Indicator, A1
- 68 = Power LED
- 6a = Switching Status Indicator, A2



Characteristic response curve

Characteristic curves show the position of the center or the front edge of the measured object (100 x 100 mm plate) at the time of switching.

U1KT



Ob = Object
Sc = Sonic cone width

- Standard sonic cone (center of the measured object)
- - - Narrow sonic cone (center of the measured object)
- · · Standard sonic cone (front edge of the measured object)