



ULTRASONIC SENSORS

Powerful sensors to meet growing demands

Ultrasonic Sensors UFP / UPA / UPT



Features

- ▶ Measurement ranges from 200 to 6000 mm
- ▶ Ultrasonic distance sensor or proximity switch
- ▶ Linearity up to 0.3 %
- ▶ Operating temperature -20 bis +70 °C
- ▶ Measurement is independent of the targets material, surface, colour or transparency
- ▶ Protection class up to IP67
- ▶ Works under dust , dirt, fog and light
- ▶ Synchronization input (UPT)

Introduction

The three UFP, UPA, UPT series ultrasonic sensors primarily vary in shape. Whilst the UFP series has a fully cylindrical housing (M12, M18, M30), the sensors on the UPA and UPT series are rectangular. All devices are generally available as classic distance meters with analogue output or as proximity switches with up to 2 switching points.

Technical data

| GROUP ► CHARACTERISTICS ▼ | UFP | UPA | UPT |
|------------------------------|--|---------|--|
| Measuring range | 200 / 400 / 800 / 1600 / 2000 3500 mm | 6000 mm | 400 / 500 / 800 / 1600 / 2000 / 3500 mm |
| Linearity max. ¹⁾ | ±0.3 % | ±0.5 % | ±0.5 % |
| Resolution max. | 0.125 mm | 1.5 mm | 0.125 mm |
| Measuring rate max. | 40 ms | 700 ms | 60 ms |
| Output analogue | 0...10 V / 4...20 mA | | |
| Switching output | PNP | | |
| Protection class max. | IP67 | | |
| Temperature range | -20...+70 °C | | |
| Angle of the sound cone | 8 ° | | |
| Setting | Teach in mode | | |
| Housing | Plastics | | |

¹⁾ based on the measurement range

Ultrasonic Sensors UFA / UPR-A



Features

- ▶ Measurement range 150/200 mm or 1500 mm.
- ▶ Distance sensor or 1-point proximity switch
- ▶ Linearity <1% from measuring range
- ▶ Operating temperature -25 to +70 °C
- ▶ Measuring range teachable
- ▶ Protection class IP67
- ▶ Resolution max. 0.3 mm
- ▶ UPR-A ATEX option Zone 2, Zone 22
- ▶ High grade steel

Introduction

A variety of applications have special requirements for ultrasonic sensors, whether it's a very narrow sound beam, a chemically aggressive environment, a limited installation space which can only fit a radial measurement sensor, or use in explosive areas which require ATEX approved equipment. The WayCon UFA and UPR-A series are the optimal solution for a variety of „complex“ applications.

Technical data

| GROUP ► CHARACTERISTICS ▼ | UFA-150, UFA-200 | UFA-1500 | UPR-A ATEX |
|------------------------------|--|-----------------|------------|
| Measuring range | 150 / 200 mm | 1500 mm | |
| Linearity max. ¹⁾ | ±1 % | | |
| Resolution max. | 0.3 mm | 0.5 mm | |
| Output analogue | 4...20 mA / 0...10 V | | |
| Switching output | PNP | | |
| Protection class max. | IP67 | | |
| Operating temperature | -25...+75 °C | 0...+60 °C | |
| Operating frequency | approx. 400 kHz | approx. 180 kHz | |
| Electrical connection | M12 connector, 4-pole | | |
| Weight | approx. 25 g | approx. 65 g | |
| Housing | Nickel-plated bras / optional high grade steel | | |

¹⁾ based on the measurement range

Ultrasonic Sensors UX / UN / UBA



Features

- ▶ Measurement ranges up to 5000 mm
- ▶ Output signal 0...10 V / 4...20 mA
- ▶ Switching output
- ▶ Synchronization input
- ▶ Operating temperature -20...+70 °C
- ▶ Protection class IP67
- ▶ Housing Polyamid, Aluminum
- ▶ Weight 50 to 400 g

Introduction

Monitoring fluid levels or counting goods on conveyor belts are some of the classic applications of ultrasonic sensors. The UX and UN sensors with switching outputs were developed specifically for these purposes. Both series have a very compact housing and are also available with synchronisation input to allow several sensors to be used within close proximity.

Technical data

| GROUP ► CHARACTERISTICS ▼ | UX | UN | UBA |
|-------------------------------|-------------|---------------------|-----------|
| Measuring range max. | 500 mm | 5000 mm | 8 / 13 mm |
| Linearity max. ¹⁾ | ±1 % | ±0.5 % | ±1 % |
| Output signal | - | 0...10 V, 4...20 mA | 0...10 V |
| Switching output | PNP / NPN | PNP / NPN | - |
| Protection class max. | IP67 | | |
| Operating temperature | -20...70 °C | | 0...60 °C |
| Resolution max. ¹⁾ | ≤1.5 mm | 0.5 mm | 0.1 mm |
| Housing | Polyamid | | Aluminum |

¹⁾ based on the measurement range

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