

Technical Information

FAU40 alignment unit

Installation accessory for ultrasonic or microwave sensors with cable connection



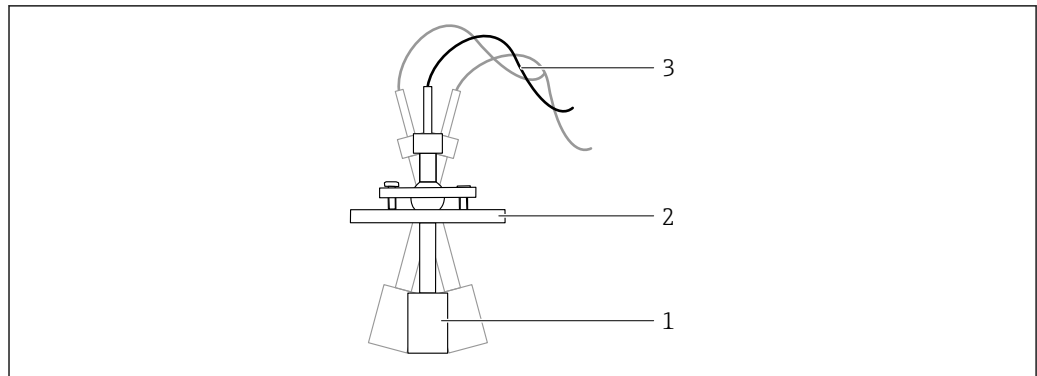
Application

- Installation of an ultrasonic or microwave sensor on a silo or tank
- Only suitable for unpressurized applications, IP65
- Optimum alignment of the sensor to a liquid surface or a bulk solid cone
- Can be used for all rear sensor connections G1" or MNPT1, male thread, and connecting cable max. Ø10 mm (0.43 in), minimum length 600 mm (23.6 in).

Your benefits

- Easy installation, even with slanted nozzles
- Ideal reflection conditions thanks to simple alignment
- Avoidance of interference reflections, e.g. in mounting nozzle
- Reduction of interference echoes, e.g. from fittings within the silo

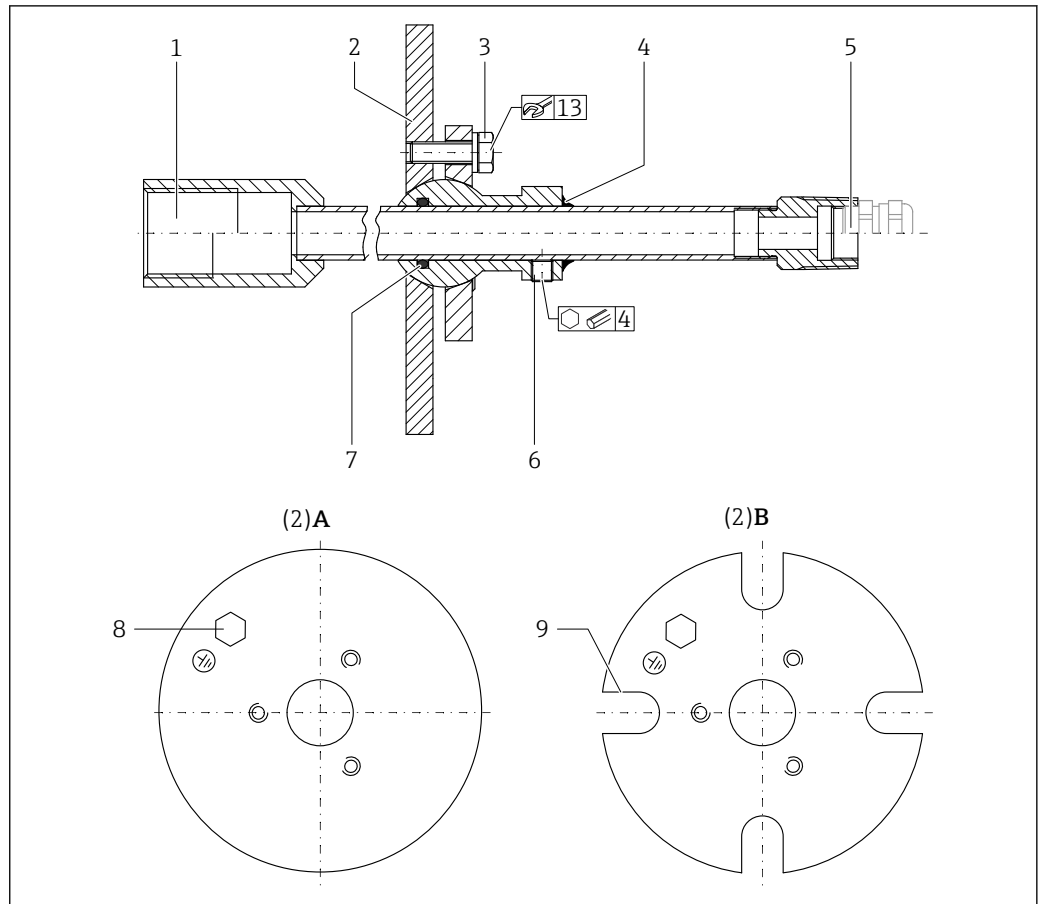
Function and system design



- 1 Sensor
- 2 Alignment unit
- 3 Sensor cables

The alignment unit is an installation tool for mounting cable-connected ultrasonic or microwave sensors on a silo or tank. The swivel function ($\pm 15^\circ$) optimally aligns the sensor to the reflection surface of the medium. As the height can be adjusted and locked in position, interference reflections, e.g. in the mounting nozzle, can be avoided by altering the installation depth in the vessel.

Product design



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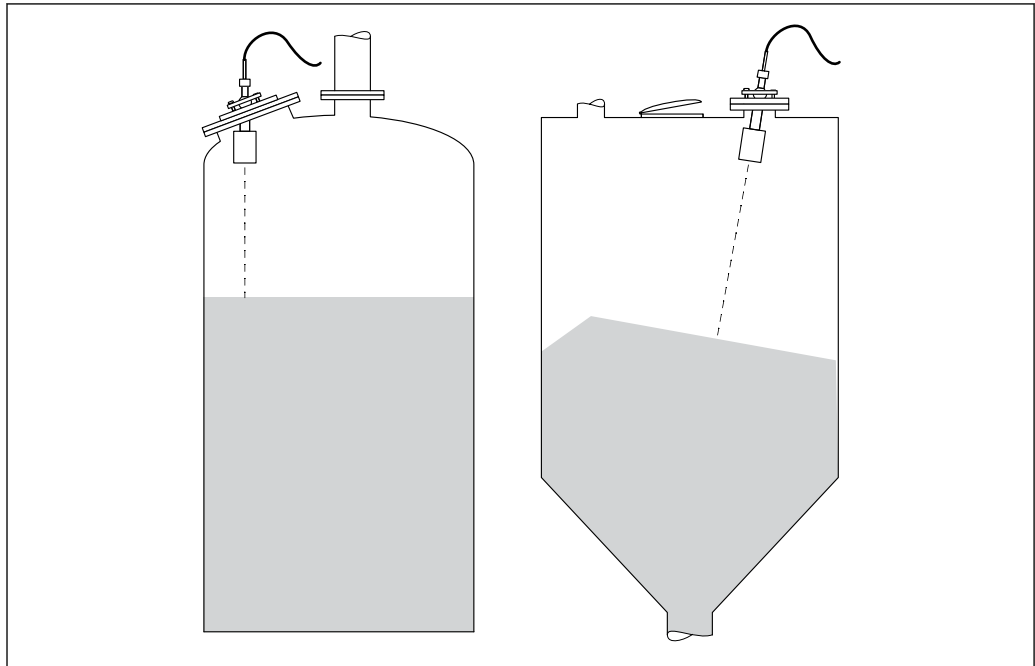
- 1 Sensor connection
- 2 Process connection
- A Welding flange
- B UNI flange
- 3 Screw to lock the swivel position
- 4 Area for customer's sealant
- 5 Entry $\frac{3}{4}$; cable gland M20×1.5
- 6 2 × Allen screws to lock the height adjustment in position
- 7 O-ring
- 8 Ground connection
- 9 Mounting groove on UNI flange

Installation

Installation conditions

- To mount the device directly, the diameter of the mounting nozzle must be larger than the sensor diameter.
- In the case of easily accessible vessels (e.g. with a manhole), the sensor can also be mounted from the inside and therefore a smaller mounting nozzle diameter can be selected.
- An intermediate flange is required for mounting nozzle diameters > DN50 / 2".

Mounting location



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1 Mounting example for tank and silo installation

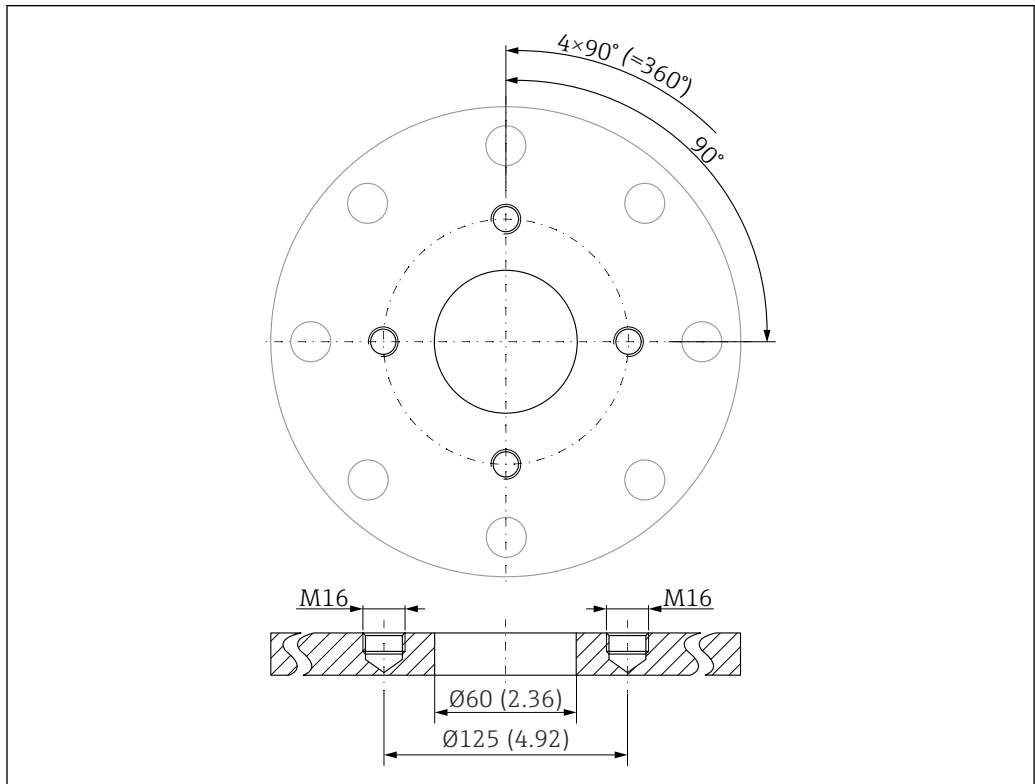
Installation instructions

- **Welding flange**
Can be welded directly onto a suitable counterflange/mounting nozzle or intermediate flange
- **Universal flange**
Can be mounted directly onto a DN50 or 2" counterflange or intermediate flange

Special mounting instructions

An intermediate flange is required for mounting nozzle diameters > DN50 / 2".

The intermediate flange must be supplied by the customer on site.



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2 Required machining of intermediate flange. Unit of measurement mm (in)

Sensor mounting**Mounting the sensor in the alignment unit**

Sensor with rear connection G1" or MNPT1, male thread, and connecting cable max. Ø 10 mm (0.43 in), minimum length 600 mm (23.6 in).


1. Guide the sensor cable through the alignment unit from the sensor connection side
2. Screw the sensor and alignment unit together
3. Mount the alignment unit
4. Connect the sensor as specified in the Operating Instructions


Sensor alignment**Lateral adjustment (swiveling) of the sensor**

1. Loosen the hexagonal-headed bolt,  13, in the flange ring.
2. Swivel the sensor to align it correctly.
3. Tighten the hexagonal-headed bolt,  13, again.

Sensor height adjustment

In some cases it may be necessary to adjust the height of the sensor.

1. Loosen both Allen screws,  4, on the pipe.
2. Slide the sensor down or pull it up.
 - ↳ The lower edge of the sensor must be located below the silo or tank cover.
The distance between the maximum level and the lower edge of the sensor must be at least the blocking distance of the sensor.
3. Tighten the screws again once the sensor has been correctly aligned.

 To guarantee the degree of protection, the pipe insertion point (area for customer sealant) can be sealed with a suitable sealant (e.g. putty, casting resin, varnish) after a height adjustment.

Environment

Degree of protection

IP65

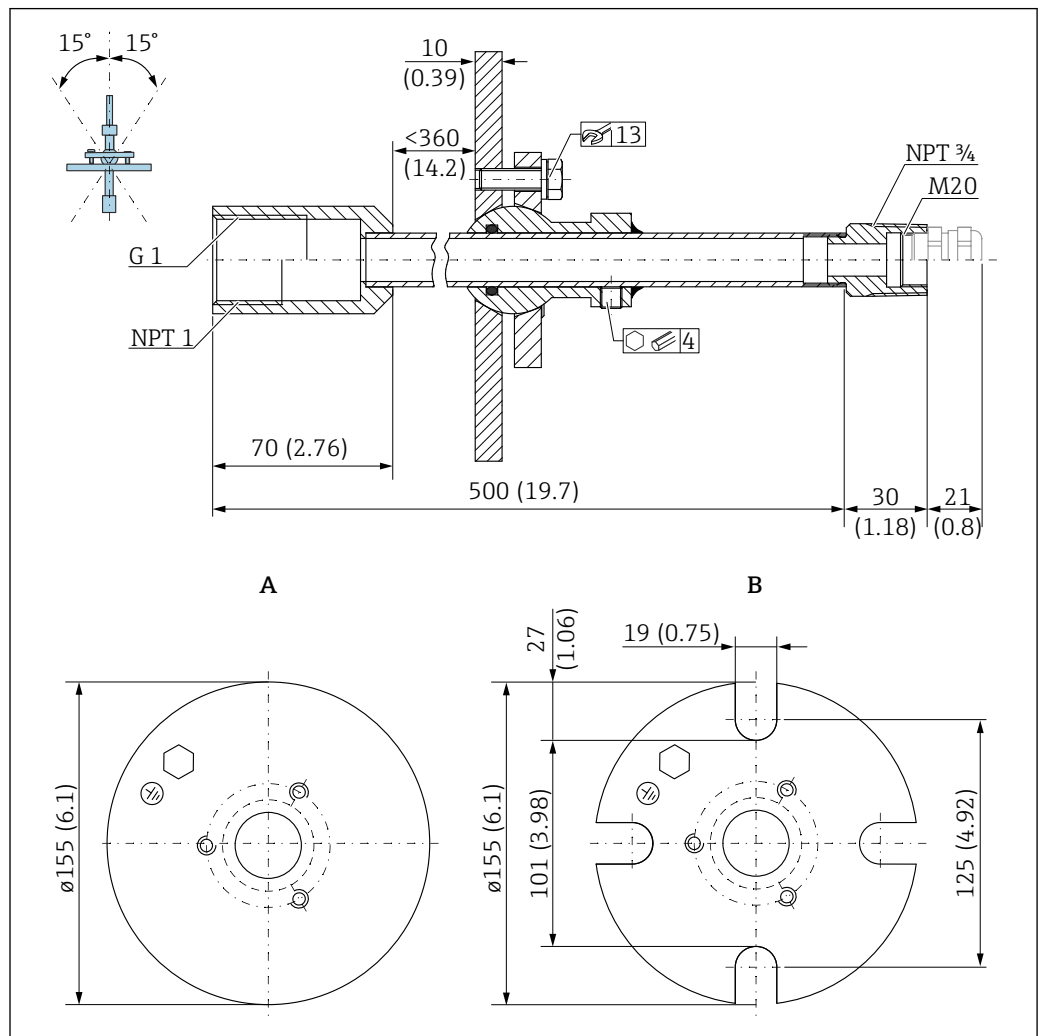
Process

Process pressure range

Only for unpressurized applications

Mechanical construction

Dimensions



3 Dimensions. Unit of measurement mm (in)

A Welding flange

B UNI flange

Weight

Approx. 2.5 kg (5.5 lb)

Materials

Flange

304

Pipe

Steel, galvanized

Cable gland

304 or steel, galvanized





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