

ESO-P 200

EnOcean Sensor Outdoor Ultrasonic distance sensor

ESO-P 200 is an ultrasonics sensor reporting the exact distance to the pointed area / surface.

The cone shape of the sensor determines the natures of the observed object / surface. Short or long horn cone shapes are possible.

ESO-P 200 connects to EMOS 200 LH via its sensor ports.

Features

- Measure distance of the Ultrasonic sensor up to 765 cm.
- Energy autarkic operation
- Measurement wake up cycle configurable from 2 – 15 minutes
- Measurement count configurable 1 or 3 ultrasonic sampling per wake up cycle



TYPE
ESO-P 200

ORDERING CODE
H6095-P200

Features changes

Data Channel Distance (IDX:0)	0 – 7,65 m
Sensor Data format	GSI with conversion to GP @ EMOS (NOTE 2)
GSI Sensor Type	Trigger Sensor (not powered constantly)
GP Data Channel Temperature	IDX:0 (16 bit, 1 cm step size)
Sensor Product ID (6 bytes)	E0: Manufacturer ID 0006: Product ID CCCCC: Unique Sensor ID
Incorporated Sensor	Maxbotix MB7040 (NOTE 1)
Protection Level of Housing	Outdoor suitable (IP 67 – excl. sensor opening)
Maximum detection distance	7,65 m
Measurement resolution	1 cm
Speed of sound temperature	23 deg Celsius
Cable length	2000 mm +- 25 mm
Operating Temperature	-20 °C ... +60 °C

NOTE 1:

For installation instruction and other consideration please refer to Maxbotix user Manual
www.maxbotix.com

NOTE 2: For details see Generic Sensor Interface Specification.

Temperature compensation

ESO-P does no temperature compensation of the measurements. When ESO-P is operated in outdoor conditions a temperature compensation of measurements is recommended. Most precise value without compensation is provided at 26 deg Celsius.

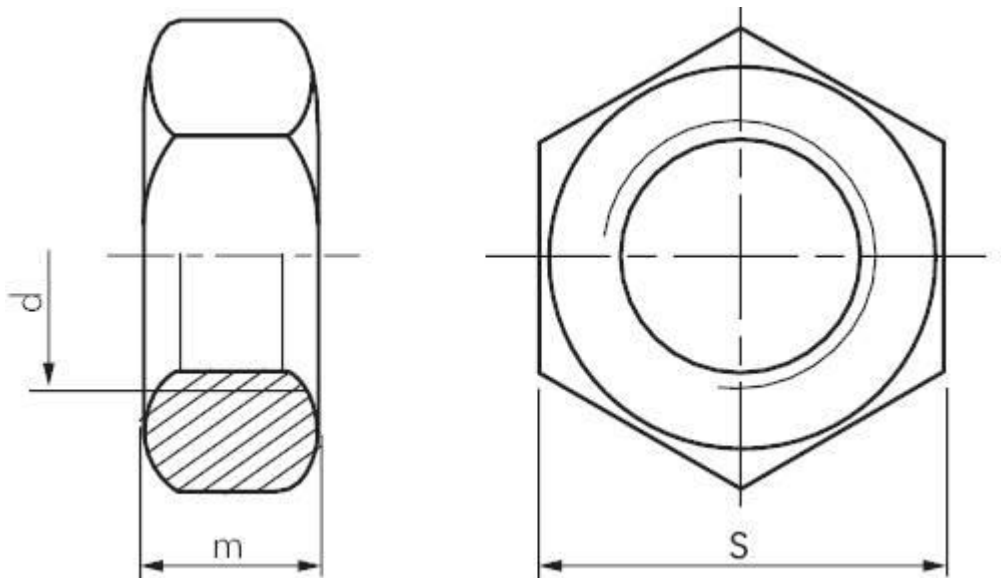
For compensation equation please refer to the sensor manufacturer resources:
https://www.maxbotix.com/documents/Temperature_Compensation.pdf

Following equation applies¹:

$$\text{Compensated Value [m]} = (\text{Measured Value [m]} * 0,0058) * \frac{20,05 * \sqrt{\text{Temp[deg C]} + 273,15}}{2}$$

Accessory

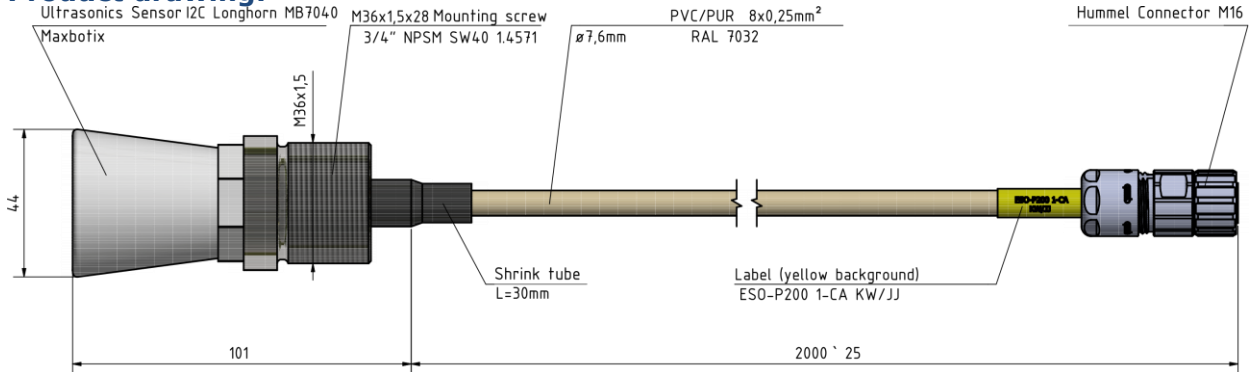
The ESO-P can be mounted on Wall or any surface with appropriate drilling. We provide a hex nut for mounting.



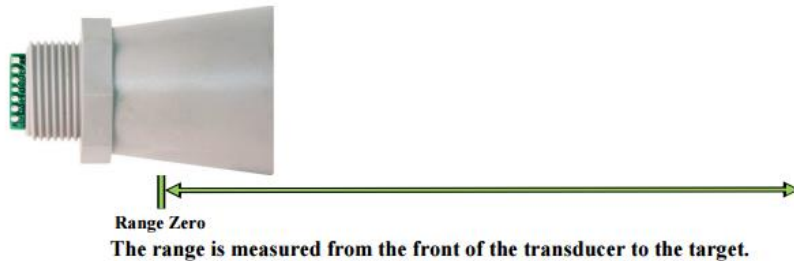
d	M 36
m	15 mm
S	55 mm
Minimum drilling diameter	M 36 + 2
Maximum drilling diameter	44 mm

¹ Source: https://www.maxbotix.com/documents/Temperature_Compensation.pdf visited:30.04.2018

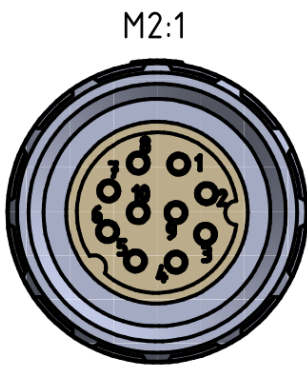
Product drawing:



Point Zero @ Measurements (Source Maxbotix MB 7040 Datasheet):



Connector Pin Assignment




Pin configuration M16:

- Pin 1 = VDD_Switched
- Pin 2 = VDD_Permanent
- Pin 3 = SCL
- Pin 4 = GND
- Pin 5 = Sensor TRQ
- Pin 6 = GND
- Pin 7 = SDA
- Pin 8 = GND
- Pin 9 / 10 = Shortcut in connector

Label on Packaging

ESO-P 200 **DA**
H6095-P200 **-1**



1 Pieces **04/18**

Date Code "KW/JJ": e.g. 04/18
Step Code „YY": e.g. DA
Order Code: H6095-P200

Date code on product refers to production date, date code on packaging refers to packaging date. There can be 1-3 days difference between these process steps.

Packaging Information

Each ESO-P is individually packet in a plastic protection 240x170mm. Sensor cable is rolled and fixed with rubber band.