

ESO-I 200

Environmental Sensor Outdoor - Illumination

ESO-I 200 from EnOcean enables measurements of the ambient light level. It is designed for use with the EMOS 200LH Transceiver Module.



ESO-I 200 implements dedicated sensor functionality capable of measuring the ambient light level in Lux. ESO-I 200 is connected to the EMOS 200LH via one of its Sensor Interfaces.

The combination of a high sensitivity sensor with adaptive coding ensures a wide measurement range of 10.000 : 1. Each ESO-I is calibrated individually on two measurement points.

TYPE
ESO-I 200

ORDERING CODE
H6095-I200

Features overview

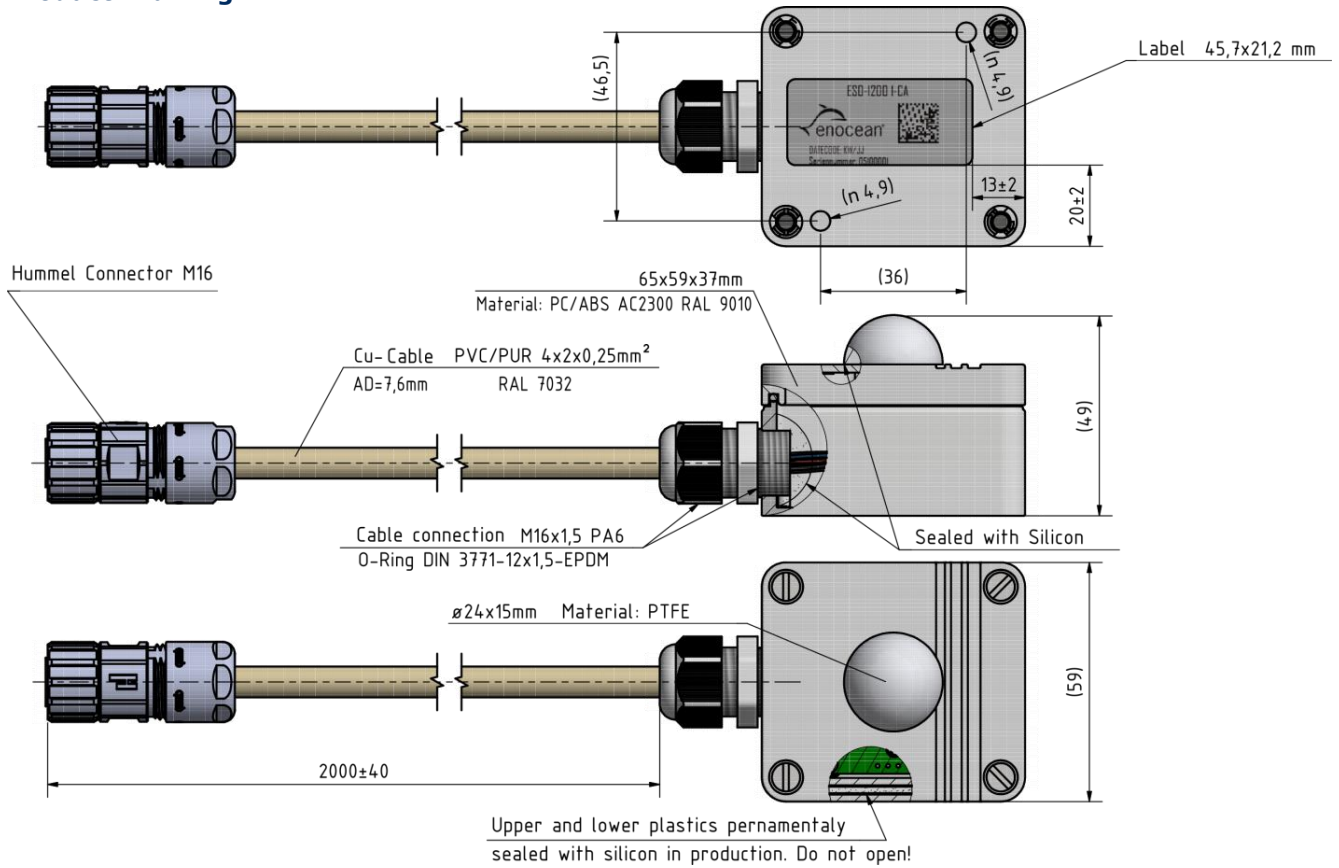
Used internal Sensor	MAXIM MAX44009EDT+
Illumination Measurement Range	10 Lux ... 100.000 Lux
Illumination Measurement Resolution	0.5 % with adaptive step size (NOTE 1)
Illumination Measurement Accuracy	+ - 5 % for incandescent light sources (NOTE 2)
Sensor Data format	GSI with conversion to GP @ EMOS (NOTE 3)
GSI Sensor Type	Trigger Sensor (not powered constantly)
GP Data Channel Illumination	IDX:0 (12 bit, ~1.5 lx step size)
Sensor Product ID (6 bytes)	E0: Manufacturer ID 0002: Product ID CCCCC: Unique Sensor ID
Protection Level of Housing	IP 67
Cable length	2000 mm +- 25 mm
Operating Temperature	-20 °C ... +65 °C
Operating Humidity	0 % r.h ... 93 % r.h

NOTE 1:
Adaptive step size is used to improve resolution over the entire illumination measurement range

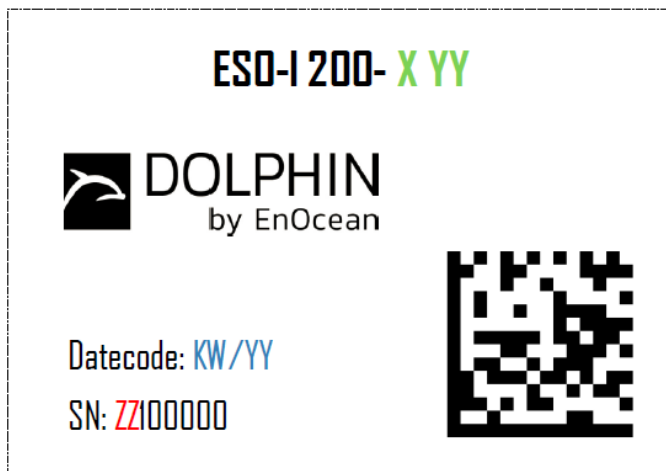
NOTE 2:
Accuracy based on incandescent lighting.
Use of different light sources (e.g. fluorescent lamp) might result in lower accuracy.

NOTE 3: For details see Generic Sensor Interface Specification.

Product Drawing:



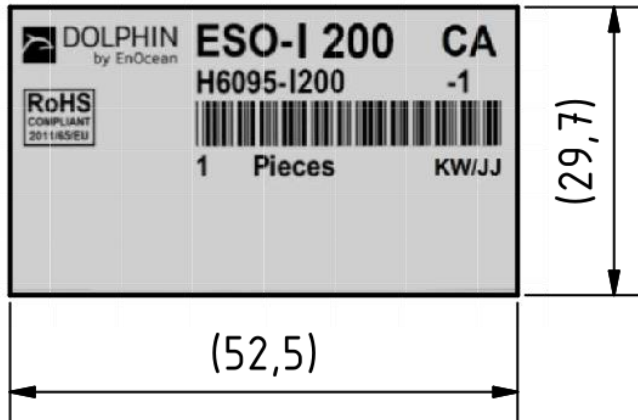
Product Label:



Date Code "KW/JJ": e.g. 35/15
 Step Code „YY“: e.g. DA
 Serial number e.g. 05100001

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.

Product Box Label:



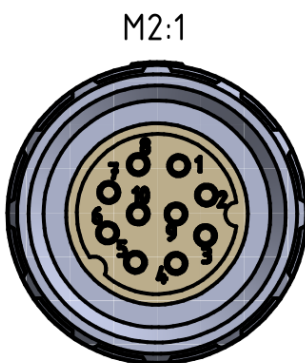
Date Code "22/16": KW/JJ
 Step Code „DA“: YY
 Order Code: H6095-I200

Product mounting

The product needs to be mounted directly facing the light source. In outdoor conditions it should face directly to the sky. For mounting two holes on bottom side can be used. Please see product drawing.

Pin Assignment

See generic interface specification for details. Overview below.



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

Product packaging

ESO-I is individually packet in a card box. Box dimensions are 20 cm x 14 cm x 5,3 cm. The sensor is fixed to avoid movement.