# ESO-O 200

## Environmental Sensor Outdoor – Occupany

**ESO-O 200 from EnOcean enables measurements of person presence. It incorporates the Generic Sensor Interface (GSI) for communication with EMOS.**

**It is designed for use with EMOS 200 LH Transceiver Module. Connection is done via one of the sensor interfaces.**

ESO-O 200 uses for movement detection the Optex VXI-R Sensor. The sensor is connected to EMOS with a GIS interface board. VXI-R is based evaluates the signal of two PIR sensors and provides a digital output to the GIS board.

The VXI-R sensor executes smart detection of person / larger animals. Smaller animals, moving vegetation or other noise is filtered out and thus detection rate is highly improved compared to conventional PIR sensors.

| TYPE | ORDERING CODE |
|---|---|
| **ESO-O 200** | **H6095-O200** |

The ESO-O 200 is fully supplied by the attached EMOS unit. It does not use back-up battery.

Once there is movement detected the ESO-O 200 triggers and immediate transmission of the status change.

### Features overview

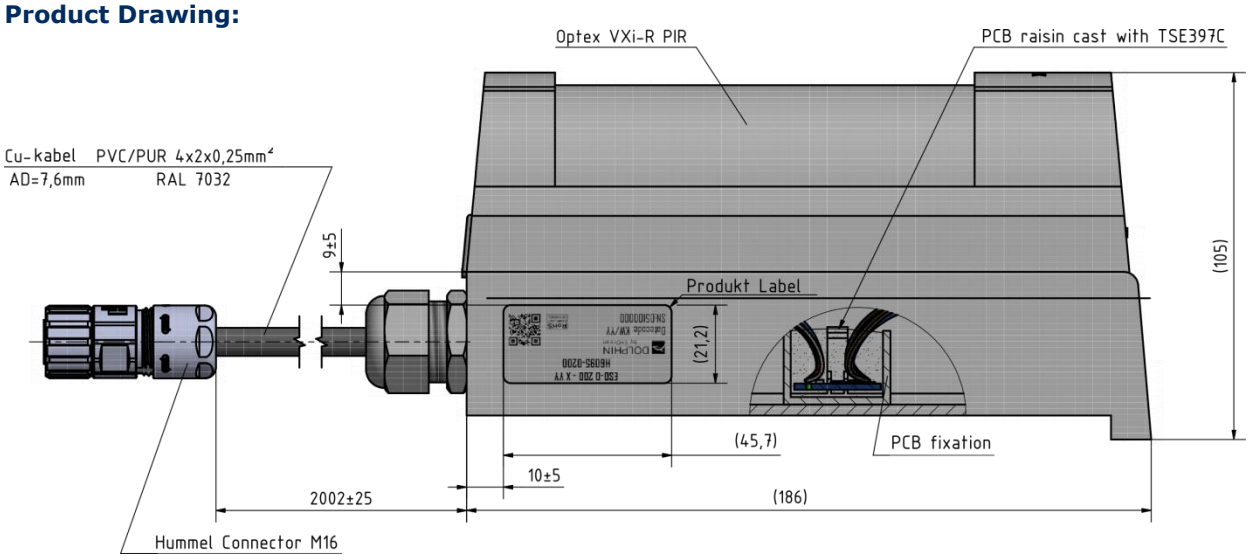
| | |
|---|---|
| **Data Channel Occupancy** (IDX: 0x0) | Unoccupied – 0b0, Occupied - 0b1 |
| **Data Channel Trouble** (IDX: 0x1) | LID closed – 0b0, LID Open - 0b1 |
| **TX Interval when Unoccupied** | 15 minutes |
| **TX Interval when Occupies** | 4 minutes |
| **Sensing interval** | 2 minutes |
| **GIS Sensor category** | Sleeping sensor – sensor is continuous powered |
| **Sensor Product ID (6 bytes)** | E0: Manufacturer ID<br>0005: Product ID<br>CCCCCC: Unique Sensor ID |
| **Protection Level of Housing** | Outdoor suitable (IP 55) |
| **Cable length** | 2000 mm +- 25 mm |
| **Incorporated Sensor** | Optex – VXI-R (NOTE 1) |
| **Operating Temperature** | -20 °C … +60 °C |
| **Operating Humidity** | 0 % r.h … 95 % r.h. |
| **Firmware update** | Avaivable – via sensor connector. |

NOTE 1:
For installation instruction and other consideration please refer to Optex user Manual at web location or at printed copy included. (http://www.optex.net/oc/en/sec/product/motion_detector/vxi_r/index.html)

**Important considerations:**

1. When connecting ESO-O 200 to the VXI-R units shall be already properly installed on final place.
2. For installation a TEST-WALK process to check mounting and detection area might be required. We recommend to use an battery powered VXI-R unit for test or keep test process short – EMOS will be discharged.
3. When the LID of the VXI-R unit is not properly closed or removed VXI-R unit is in "installation" mode. Consumption in "installation" is more than 10x higher than in normal mode.
4. After complete discharge of EMOS unit with ESO-O 200 starting time is longer then with conventional/trigger sensors due to character of sensor (sleeping sensor). Start-up threshold is moved to 2,7 V instead typical 2.5V. Once threshold 2,7 V is reached operation also under 2,7 V is enabled.

**Product Drawing:**



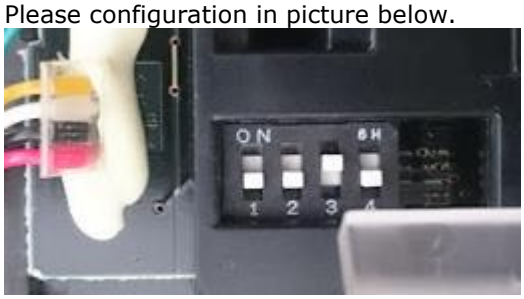

**PIN Configuration**

The VXI-R Sensor provides input slide pins for base configuration. During ESO-O 200 assembly the pins are set for operation mode. No additional changes are required. If changes are performed please make sure to set the correct PIN assigmend back again otherwise malfunction of the sensor will ocure.

Default configuration is:

PIN 1 OFF PIN 2 OFF PIN 3 **ON** PIN 4 OFF

Please configuration in picture below.



**Product Label:**


Date Code "KW/JJ": e.g. 35/15
Step Code „YY": e.g. DA
Order code: H3095—O200
Serial number e.g. 50000500001

**Product Box Label:**

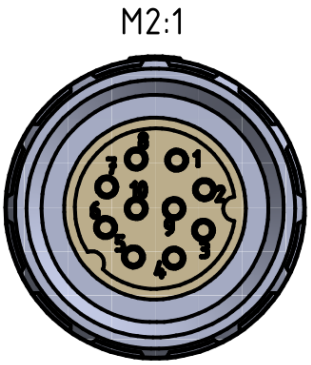

Date Code "22/16": CW/YY
Step Code „DA": YY

**Product mounting**

The product needs to be mounted towards detection area. Professional installation required for successful operation mode. Please consider Optex VXI-R Manual for correct mounting instructions of Occupancy sensor.

**Pin Assignment**

Hummel connector 7810400000B with 10-pin assignment used. 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-O 200 is individually packet in a card box. The sensor is fixed to avoid movement. Please see picture below for reference.