



## PRODUCT DATASHEET

## LoRaWAN DOOR COUNTER SENSOR

### OVERVIEW

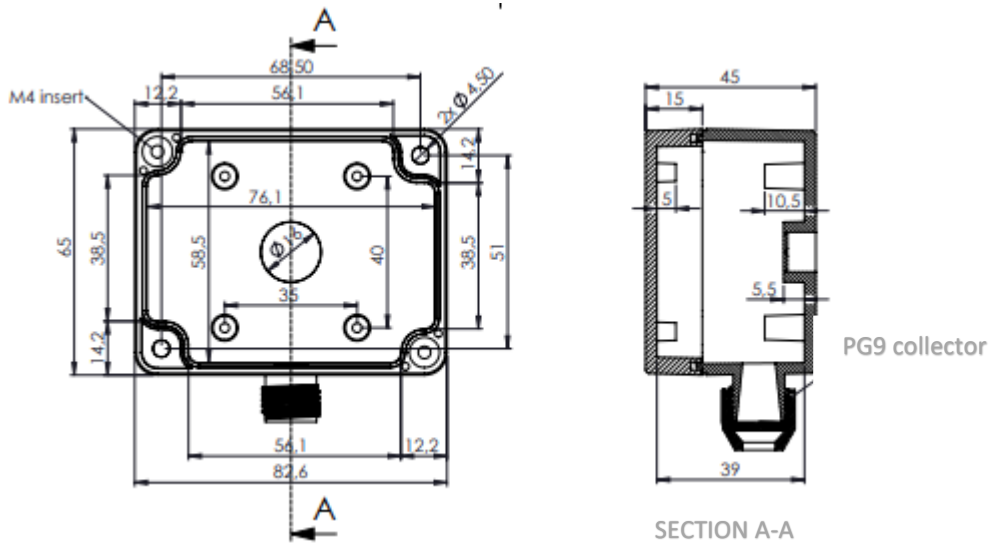
NetOP Door Counter sensor is a long-range wireless sensor which counts door opening-closing each opening and closing is detected and recorded in the system separately. It gives 2 outputs, which one of them is how many times the door was opened and the other one is how many times it was closed, in every hour(unchangeable). This sensor is fully compatible with LPWAN technology by using LoRaWAN.



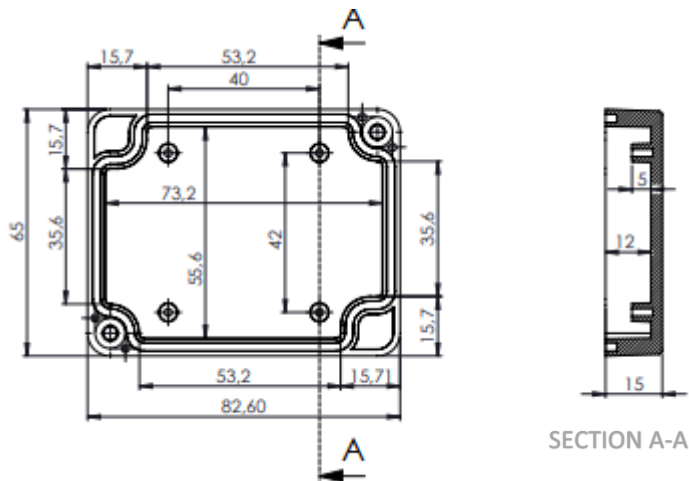
PRODUCT DATASHEET

TECHNICAL DRAWING

Box With Terminal Seal



Cover Page





## PRODUCT DATASHEET

### KEY FEATURES

Real Plug & Play

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Easy to mount & install

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Compatible with LoRaWAN™ specification

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Maintenance free

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Secure communication (AES-128)

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Ultra -Low Power Consumption

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Certificate: LoRaWAN™

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### COMMUNICATION SPECS

Compatible with LoRaWAN Specification 1.0.3

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The sensor uses Low Power Wide Area Network-LPWAN technology (LoRa) for connectivity

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Compliant with Low and High Frequencies (AS923, AU915, CN470, CN779, EU433, EU868, IN865, KR920, RU864, US915 MHz ISM bands)

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Supports High power and Low power LoRa RF applications: - Up to +22 dBm at US915 and AU915, - Up to +14 dBm elsewhere

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Ultra -low power consumption. Excellent long-term stability.

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170 dB maximum link budget

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Radio Performance: High RX sensitivity down to -148 dBm

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Full ADR, OTAA and ABP support

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Long range wireless data transmission

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PRODUCT DATASHEET

## MECHANICS

Housing: ABS (IP65 or higher)

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Dimensions: 82.5 x 65 x 45 mm

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Operating Temperature: 0°C to 40°C

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## POWER SUPPLY

AA Battery 3.6 V Li-SOCI2-Saft LS 14500

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## INDICATORS

Status LED (on board)

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## DOOR COUNTER SENSOR SPECIFICATIONS

Output: Opened / Closed

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## CERTIFICATIONS & RELIABILITY

EN 60950-1;2006/A2:2013

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ETSI EN 301 489-17 V3.1.1(2017-02)

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EN 55032:2015

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## LoRaWAN FRAME FORMAT

Standard packet size: 24 Bytes

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00-01-02-03-04-05-06-07-08-09-10-11-12-13-14-15-16-17-18-19-20-21-22-23

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1 byte: Connection Type(1->LoRaWAN)

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## INFORMATION

012345678: Device ID

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|1|: Indicates the type of connection the device uses.

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## PRODUCT DATASHEET

## LoRaWAN DOOR COUNTER SENSOR PROTOCOL

01-1C-00-01-00-02-YY-YY-YY-YY-YY-YY-YY-YY-YY-YY-YY-YY-01-2C-25-01-12-0D-EF

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01: Selected Slot (1 byte)

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1C: Magnetic Door Counter Sensor Board ID (1 byte)

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0001: 0x0001H -> 1D -> Open Counter (2 bytes)

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0002: 0x0002H -> 2D -> Close Counter (2 bytes)

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YY-YY: Empty Data (11 bytes)

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012C: Sleeping Period 0x012CH -> 300D Seconds (2 bytes)

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25: Payload Counter 0x25H -> 37D (1 byte)

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01: Sensor Message Type Periodic (02->Sensor Message Type Interrupt) (1 byte)

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12: Sensor FW Version (1 byte)

i.Main Version 1

ii.Sub Version 2

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0DEF: 0x0DEFH -> 3567D -> 3567 mV -> 3.567 V (2 bytes)

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## PRODUCT DATASHEET

### INFORMATION

01: Selected slot.

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1C: This slot determines the sensor type.

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0001: Counter Opened

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0002: Counter Closed

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YYYY: Dummy data (11 bytes)

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012C: Sleep interval along 300S.

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25: Data is live or not. Each measurement is incremented by degree.

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01: When the sensor message 02 comes, it enters the interrupt.

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12: Sensor firmware version 1.2

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0DEF: Outputs the measurement in Volt (3.567V).

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