

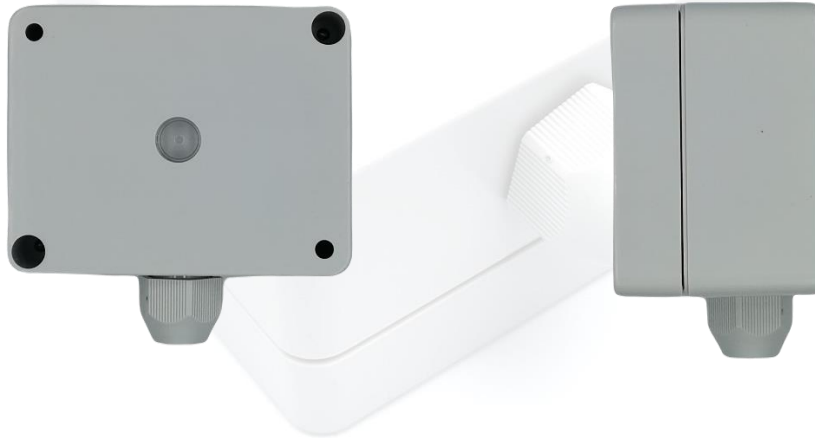


PRODUCT DATASHEET

NB-IoT 3 AXIS MAGNETIC FIELD TILT SENSOR

OVERVIEW

NetOP 3 Axis Magnetic Field Sensor is a long- range wireless sensor which can be used to monitor magnetic field and it gives 3- axis magnetic field values as an output. This sensor is compatible with NB-IoT (Narrowband-IoT).

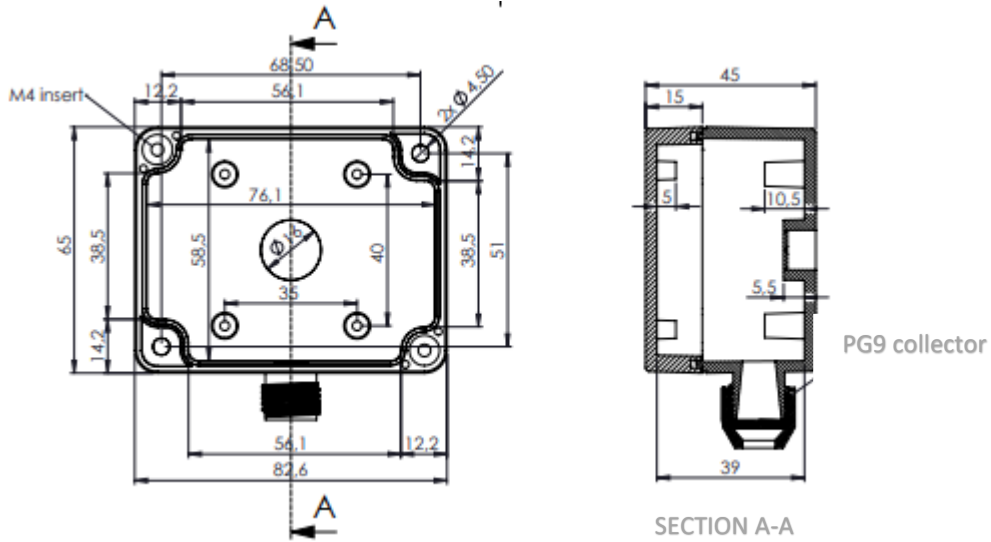




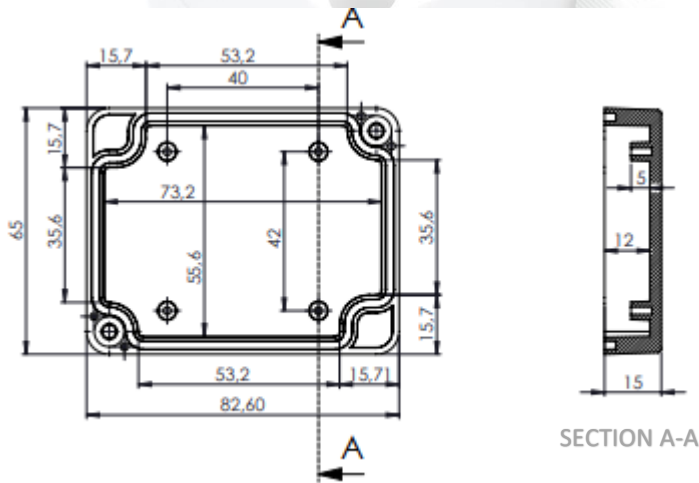
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TECHNICAL DRAWING

Box With Terminal Seal



Cover Page





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KEY FEATURES

Real Plug & Play

Easy to mount & install

Maintenance free

Excellent Extended Range in Buildings

Easy deployment utilizing cellular system

Micro SIM (default)

Ultra-Low Power Consumption

Certificate: RoHS

COMMUNICATION SPECS

Narrow Band IoT (NB-IoT) for connectivity

Supported bands including B1/B2/B3/B4/B5/B8/B12/B13/B14/B18/B19/B20/B25/B26/B27/B28/B66/B72/B73/B85

Internet Protocol Feature: Support MQTT

Extended Coverage: 10-15km with 164 dB maximum coupling loss (MCL)

Antenna Types: Internal (default) or External (depend on request) Antenna

MECHANICS

Housing: ABS (IP65 or higher)

Dimensions: 82.5 x 65 x 45 mm

Operating Temperature: -40°C to +85°C

POWER SUPPLY

USB/ LIPO Charge / Non-Chargeable Battery



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INDICATORS

Green Red Status LED (on board)

3 AXIS MAGNETIC FIELD SENSOR SPECIFICATIONS

Magnetic dynamic range: Up to ± 50 gauss

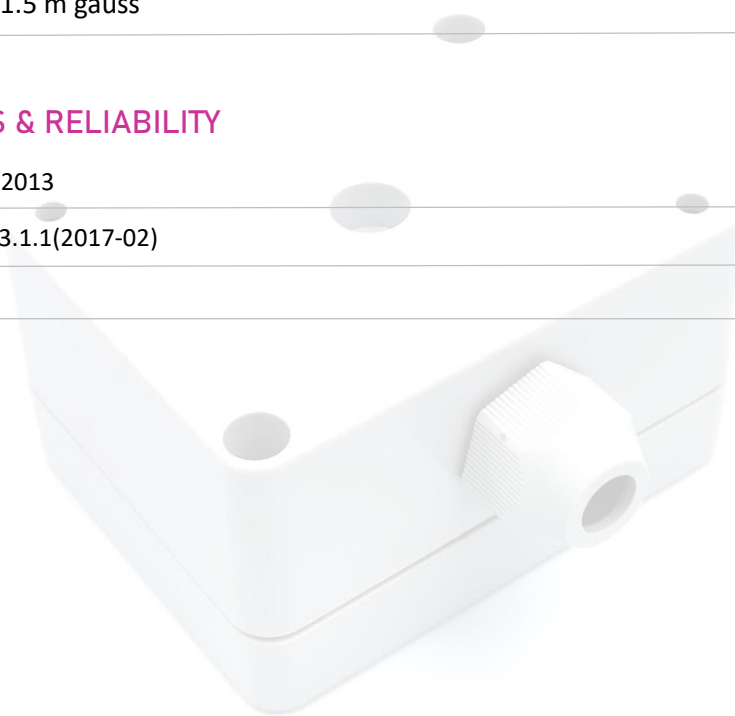
Sensitivity: Typical 1.5 m gauss

CERTIFICATIONS & RELIABILITY

EN 60950-1;2006/A2:2013

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

EN 55032:2015





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NB-IoT FRAME FORMAT

Packet Size: 60 Byte

012345678|1|000102030405060708091011121314151617181920212223

012345678 bytes: Device ID

1 byte: Connection Type(1->NB-IoT)

INFORMATION

012345678: Device ID

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





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NB-IoT 3 AXIS MAGNETIC FIELD SENSOR PROTOCOL

01-11-01-05-01-06-01-07-YY-YY-YY-YY-YY-YY-YY-YY-YY-01-2C-25-01-12-BB-BB

01: Selected Slot (1 byte)

11: 3 Axis Magnetic Field Sensor Board ID (1 byte)

0105: 0x0105H -> 261D -> 261 X Axis mG (2 bytes)

0106: 0x0106H -> 262D -> 262 Y Axis mG (2 bytes)

0107: 0x0107H -> 263D -> 263 Z Axis mG (2 bytes)

YY-YY: Empty Data (9 bytes)

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

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





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INFORMATION

01: Selected slot

11: This slot determines the sensor type.

0105: Indicates the x-axis value 261 mG.

(The value 0105H is converted to decimal. The result 261D. This value returns the result in mG for the X-Axis.)

0106: Indicates the y-axis value 262 mG.

(The value 0106H is converted to decimal. The result 262D. This value returns the result in mG for the Y-Axis.)

0107: Indicates the z-axis value 263 mG.

(The value 0107H is converted to decimal. The result 263D. This value returns the result in mG for the Z-Axis.)

YY-YY: Dummy Data

012C: Sleep interval along 300S.

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

