



PRODUCT DATASHEET

LoRaWAN 3 AXIS MAGNETIC FIELD 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 LoRaWAN technology.

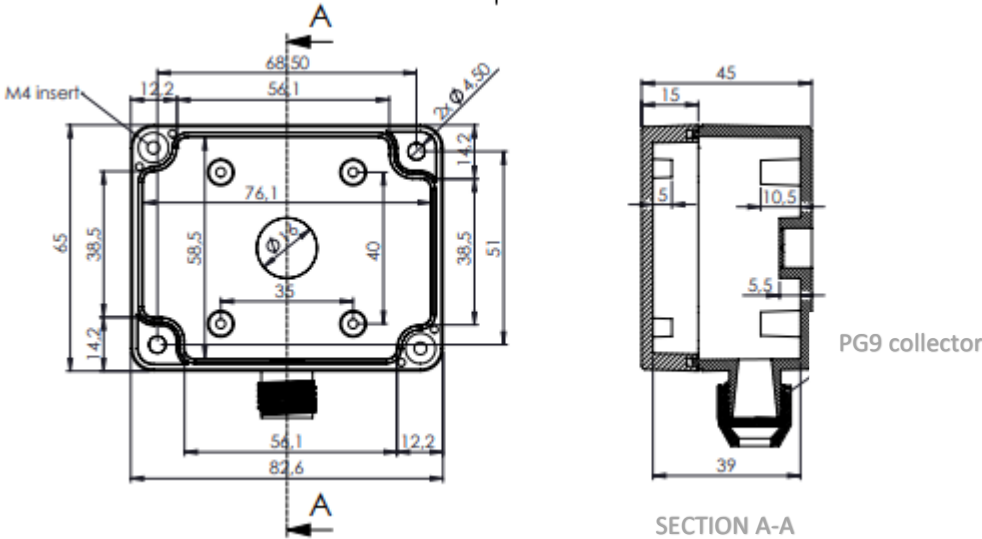




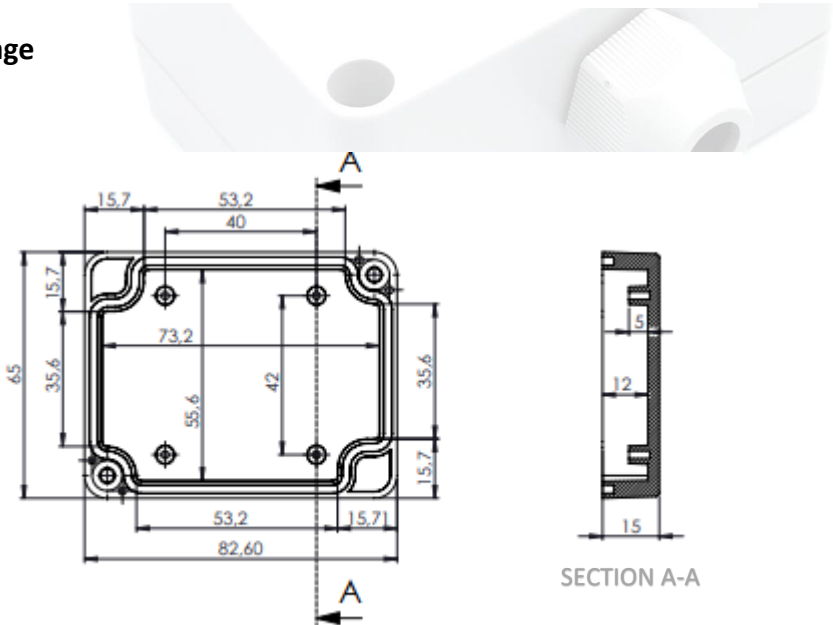
PRODUCT DATASHEET

TECHNICAL DRAWING

Box With Terminal Seal



Cover Page





PRODUCT DATASHEET

KEY FEATURES

Real Plug & Play

Easy to mount & install

Compatible with LoRaWAN™ specification

Maintenance free

Secure communication (AES-128)

Ultra -Low Power Consumption

Certificate: LoRaWAN™

COMMUNICATION SPECS

Compatible with LoRaWAN Specification 1.0.3

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

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

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

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

170 dB maximum link budget

Radio Performance: High RX sensitivity down to -148 dBm

Full ADR, OTAA and ABP support

Long range wireless data transmission





PRODUCT DATASHEET

MECHANICS

Housing: ABS (IP65 or higher)

Dimensions: 82.5 x 65 x 45 mm

Operating Temperature: -40°C to 85°C

POWER SUPPLY

AA Battery 3.6 V Li-SOCl₂-Saft LS 14500

INDICATORS

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





PRODUCT DATASHEET

LoRaWAN FRAME FORMAT

Standard packet size: 24 Bytes

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

1 byte: Connection Type(1->LoRaWAN)

INFORMATION

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





PRODUCT DATASHEET

LoRaWAN 3 AXIS MAGNETIC FIELD 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)





PRODUCT DATASHEET

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.

