IoT monitoring

Wireless Analog Sensor Node, LoRaWAN, NB-IoT or LTE-M

Model DW-IO

Battery-powered wireless node that powers a sensor with a 4–20 mA or 0–30 V output, such as a pressure or level transmitter, and sends its reading over LoRaWAN, NB-IoT or LTE-M, running on an 8500 mAh lithium battery or, in the LoRaWAN version, on solar power.



Communication mode
LoRaWAN, NB-IoT or LTE-M

Input standard signal
0–20 mA and 0–30 V

Power supply
8500 mAh battery or solar

Features

- One 0–20 mA input and one 0–30 V input
- Controllable 5 V and 12 V outputs to power the external sensor
- LoRaWAN 1.0.3 Class A, or NB-IoT and LTE-M (Cat-M1)
- 8500 mAh Li-SOCl2 battery; LoRaWAN version also with solar panel and Li-ion battery
- Bluetooth 5.1 configuration and wireless firmware update
- Cellular uplink via MQTT, MQTTs, UDP, TCP or CoAP

Applications

Pressure and level transmitters, Flow meters, Temperature probes, Water quality analysers, Smart agriculture, Smart cities

Specifications

Wireless

Communication mode	LoRaWAN (LoRaWAN version); NB-IoT and LTE-M Cat-M1 (cellular version)
Working frequency band (LoRaWAN)	CN470 / EU433 / KR920 / US915 / EU868 / AS923 / AU915 / IN865
Maximum RF output power	+22 dBm (LoRaWAN)
Receiver sensitivity	Down to −139 dBm (LoRaWAN)

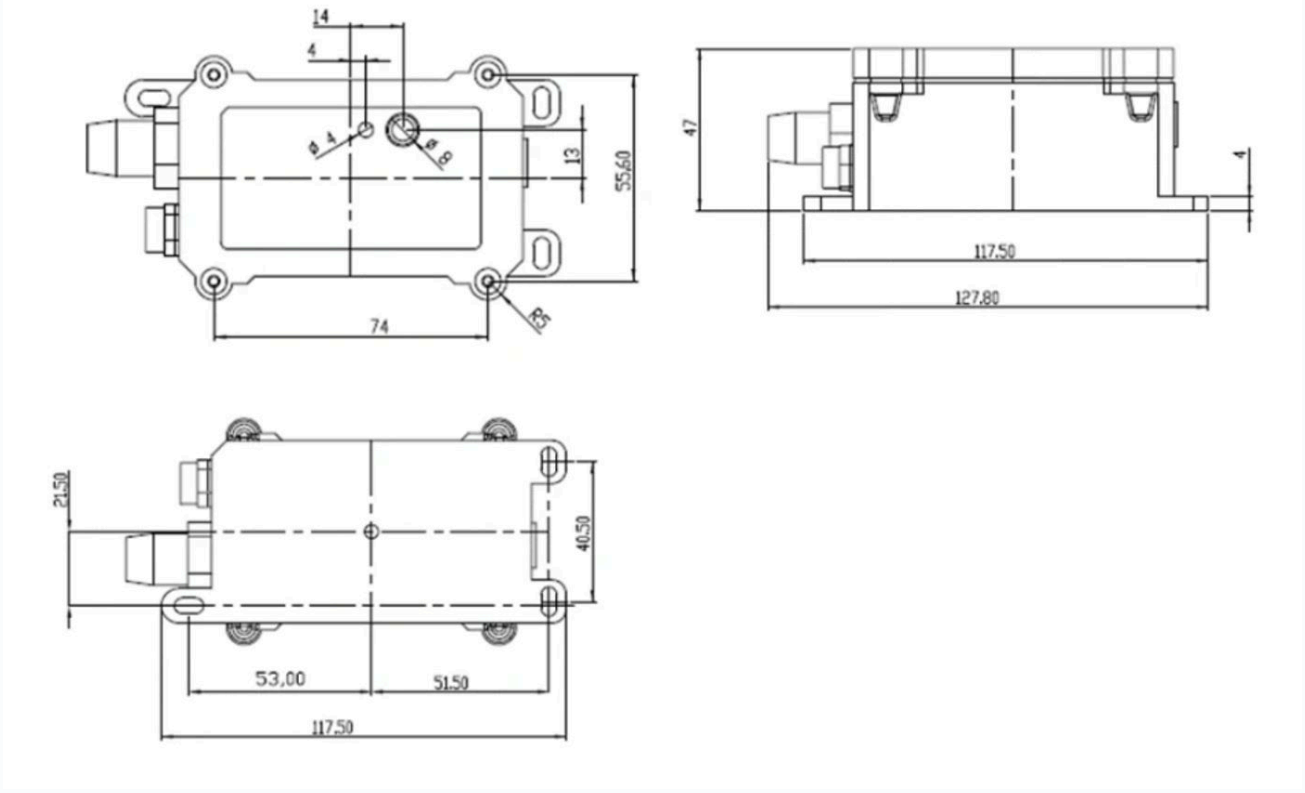
Working frequency band (NB-IoT)	B1/B2/B3/B4/B5/B8/B12/B13/B18/B19/B20/B25/B28/B66/B71/B85
Wireless bands (CAT-M1)	B1/B2/B3/B4/B5/B8/B12/B13/B18/B19/B20/B25/B26/B27/B28/B66/B85
Network protocol	LoRaWAN 1.0.3 Class A, OTAA (LoRaWAN); MQTT, MQTTs, UDP, TCP or CoAP (cellular)
Antenna	External antenna
Performance	
Input standard signal	1 × 0–20 mA, 1 × 0–30 V
Measurement accuracy	0.02 mA (current input); 0.02 V (voltage input)
Resolution	0.001 mA (current input); 0.001 V (voltage input)
Output	
Sensor power output	Controllable 5 V and 12 V outputs; external sensor current < 1 A
Electrical	
Power supply	8500 mAh Li-SOCl2 battery (non-rechargeable); LoRaWAN solar version: solar panel + 3000 mAh Li-ion battery
Sleep current	5 µA at 3.3 V (LoRaWAN); 10 µA at 3.3 V (cellular, stop mode)
Maximum working current (LoRaWAN)	125 mA at 20 dBm; 82 mA at 14 dBm
Maximum working current (NB-IoT)	350 mA at 3.3 V (maximum transmit power)
Wireless	
Configuration	Bluetooth 5.1 and AT commands; LoRaWAN downlink; wireless firmware update
Mechanical	
Cable entry	M12, M16 or M20 cable gland hole (to order)
Environmental	
Operating temperature	−40 to +85 °C
Ingress protection	IP66 (NB-IoT/LTE-M version)

Ordering and support

Pricing, samples, lead time and custom versions: xyx@gzdwin.com, +86 181 0280 8901.

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Dimensions and wiring



Drawings are for reference. Dimensions in millimetres unless stated.