

# Wireless Gateway

## Connection Guide

WW-5D20

WW-5D2B

(with Redundant Battery)

## NOTED

- \*AUX port cable outside diameter needs to be between 3~7 mm.
- \*When all cable gland fixing head are not wired, the inner cable gland sealing plug rod can be installed first to avoid dust and water infiltration.



## WARNING

### ***To reduce the risk associated with all applicable hazards:***

- \*Read and follow all safety information contained in the installation instructions and Product Safety Guide Prior to installing, using or servicing the wall mount. Retain these instructions for future reference.

### ***To reduce the risk associated with choking:***

- \*Do not allow children access to small parts and / or packaging materials.
- \*Do not modify the physical aspects of the wall mount.
- \*Do not install on a mounting structure or surface that is prone to vibration, movement or chance of being impacted.
- \*Proper installation and servicing must be performed by experienced installers as outlined in the installation instructions.

### ***To reduce the risk associated with impact:***

- \*The EQUIPMENT is required hardware when installing the EQUIPMENT Mount onto concrete block walls and stud walls.
- \*Do not climb on, hang on or place any added weight other than the EQUIPMENT on the fixed or folding wall mount.



A symbol such as ISO 7000-0434 (2004-01) or a combination of this symbol and ISO 7000-1641 (2004-01) to refer to text in an accompanying document. These symbols may be combined.

## Indicator

Status Indicator	Reserved
Power Indicator	Red light stay on: Error status. Green light stay on: Power ready. Green light flashing: NB-IoT connection. Yellow light flashing: Main part entry boot mode. Green + Yellow lights flashing: Entry setup mode. Green + Red lights flashing: AUX2~AUX5 I/O board connection failure.

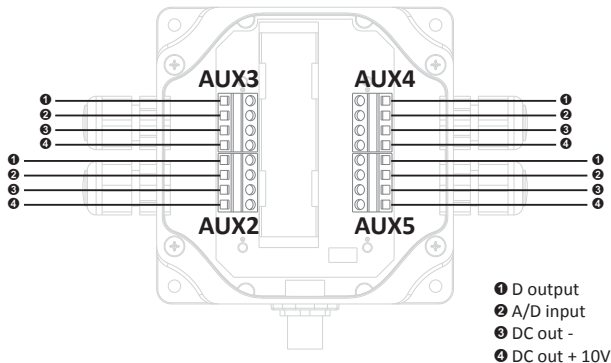
## Interface

### - Main Port



- ❶ DC in+: 12V to 36V DC / 1A
  - ❷ DC in-: GND
  - ❸ DC out+: 10V / 100mA
  - ❹ DC out-: GND
  - ❺ RS-485 A: Non-isolator differential interface, Data-
  - ❻ RS-485 B: Non-isolator differential interface, Data+
  - ❼ A / D input:  
Analog Input Support 0~10 V / 0~20 mA / 4~20 mA / ADC (0~10 V)  
Digital Input support High / Low signal judge
  - ❽ D output: Digital Output support PWM / Latch Mode
- Antenna Connector: RP-SMA-Female

### - AUX I / O Ports



## ■ Specification

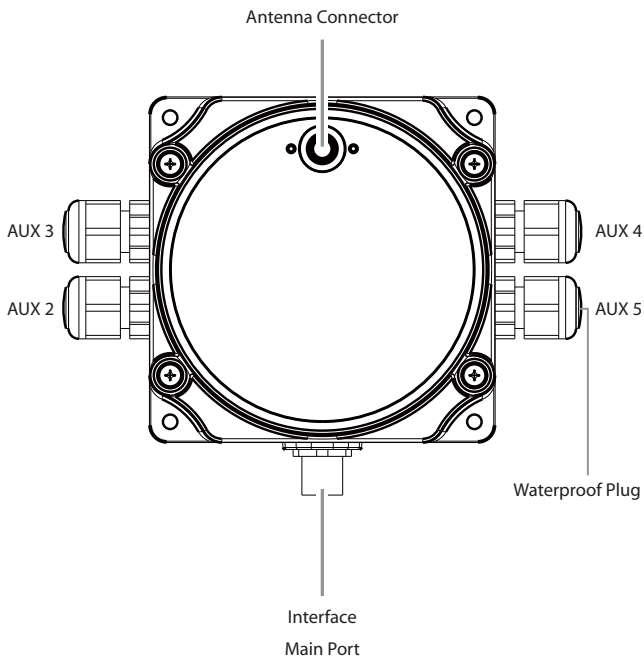
	WW-5D20	WW-5D2B
Product Type	Outdoor	
Air Stream Protocol	NB-IoT (LTE Cat NB1 3GPP Release 13)	
NB-IoT Protocol	TCP / UDP / MQTT / Line Notify / AWS / Google Apps Script	
Operating LTE Bands	Band 1 / Band 3 / Band 5 / Band 8 / Band 20 / Band 28	
Sensitivity	Maximum -116dBm	
Transmit RF Power	Maximum 23 dBm (Class 3)	
Cellular Data Rate	NB1 (26.15 kbit/s DL, 62.5 kbit/s UL)	
Interface	RS-485 x 1 / Analog or Digital Input x 5 / Digital Output x 5	
RS-485 Protocol	Modbus RTU	
Serial Interface	1200bps / 2400bps / 4800bps / 9600bps / 19200bps / 38400bps /	
Baud Rate	57600bps / 115200bps / 230400bps	
Analog Input	Analog Input Support 0~10 V / 0~20 mA / 4~20 mA / ADC (0~10 V)	
Digital Input	Digital Input Support High / Low Signal Judge	
Digital Output	Digital Output Support PWM / Latch Mode	
Operating Temperature	-40°C ~ 85°C	
Main Unit Dimensions	10 x 10 x 4.8 cm (Not include antenna and external connect)	
Weight	245 g	295 g
Waterproof	IP 68	
Redundant Battery	X	18650 / 3.7V / 2500mAh
Input Power Supply	12V ~ 36V DC / 1A	
Output Power Supply	Main Port: 10V DC / 100mA (Max.), AUX 2~ AUX 5: 10V DC / 50mA (Max.)	
Power Consumption	12V 15mA @receive / 12V 200mA @transmit / 12V ≤ 1mA @standby	
	X	12V 230mA @charging
Special Specification	Flame Retardant	

\* Support Setup or firmware update function via RS-485 interface.

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# Introduction



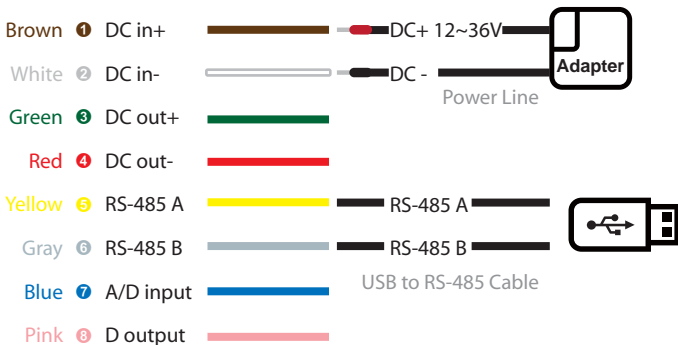
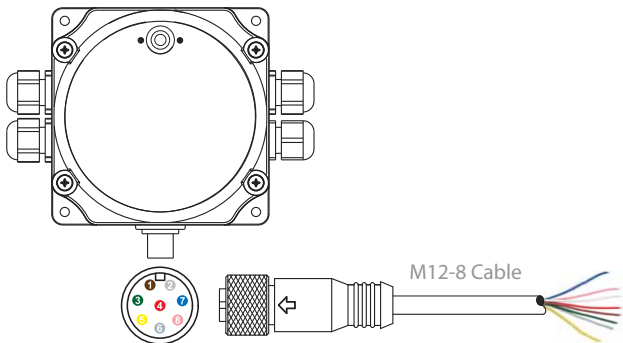
# Cable Define

## I M12-8 Cable



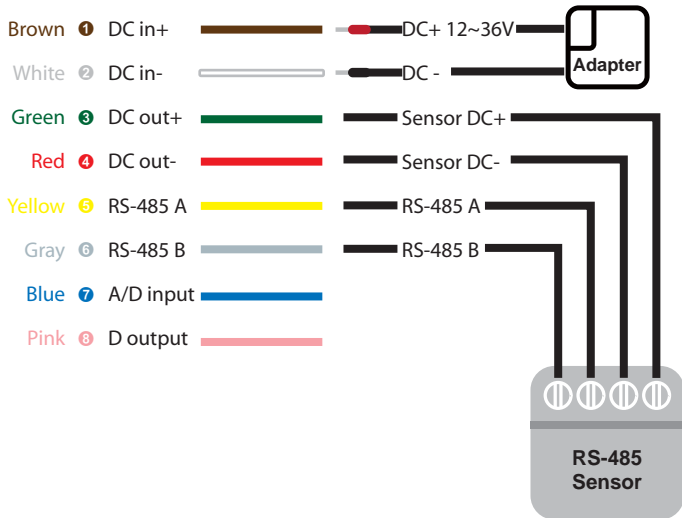
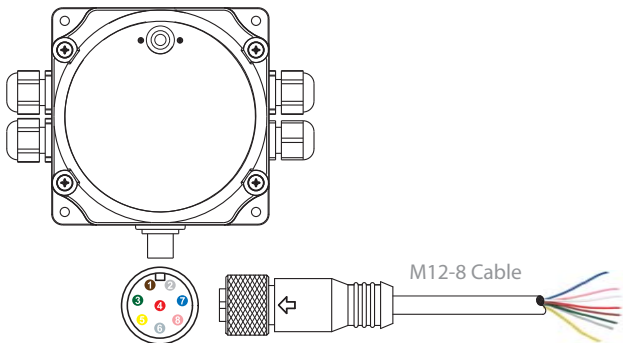
Pin Define	Cord end Terminal Color	Pin Function
1	Brown	DC in+
2	White	DC in-
3	Green	DC out+
4	Red	DC out-
5	Yellow	RS-485 A
6	Gray	RS-485 B
7	Blue	A/D input
8	Pink	D output

# Connect the PC

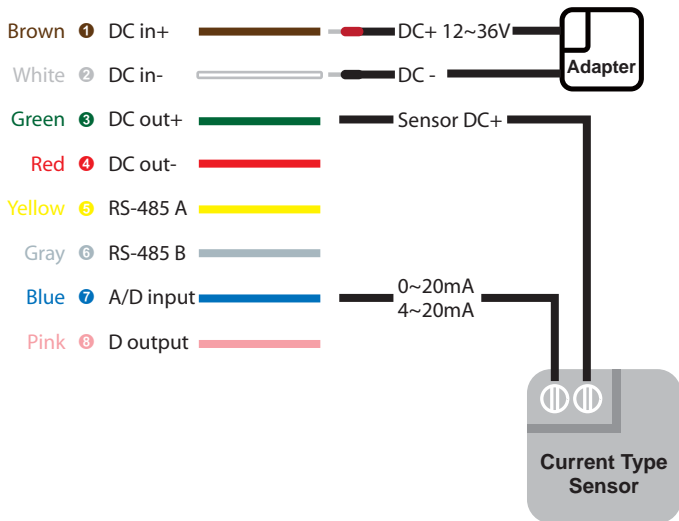
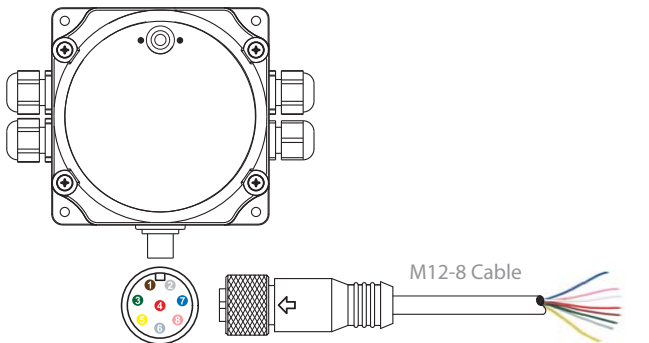




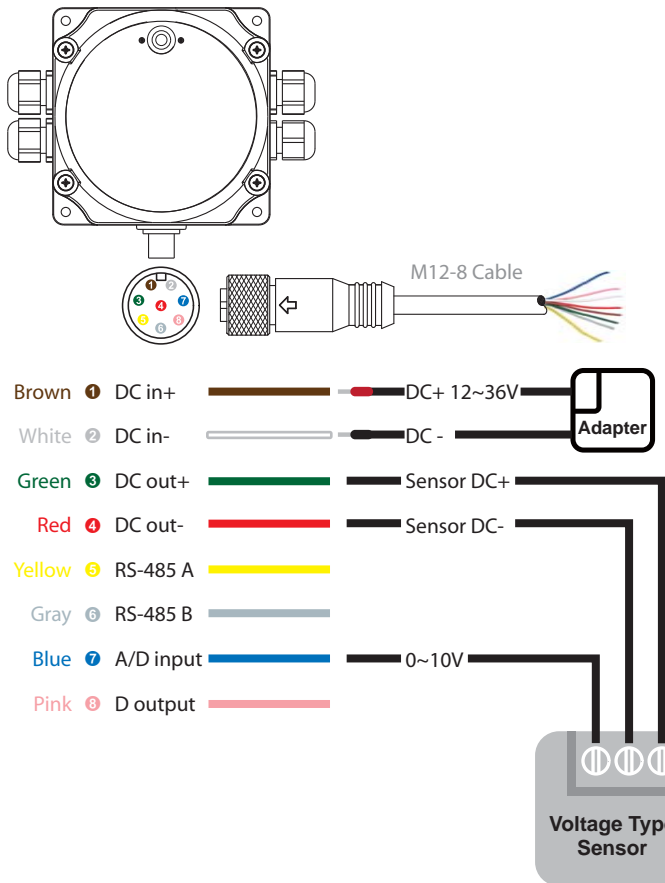
# Connect the RS-485 Sensor



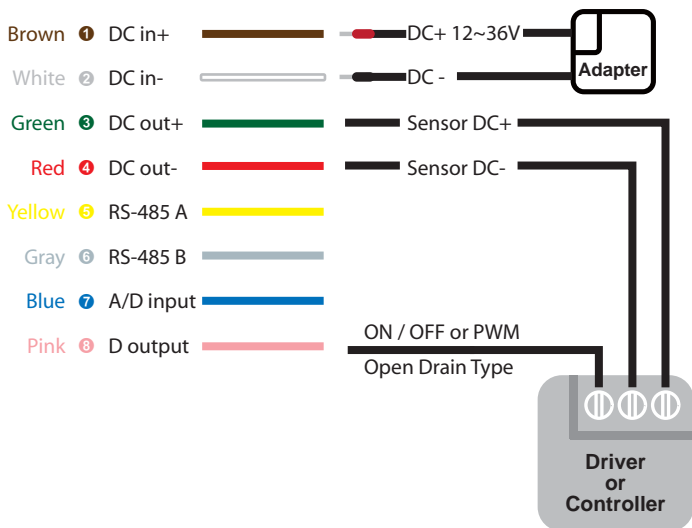
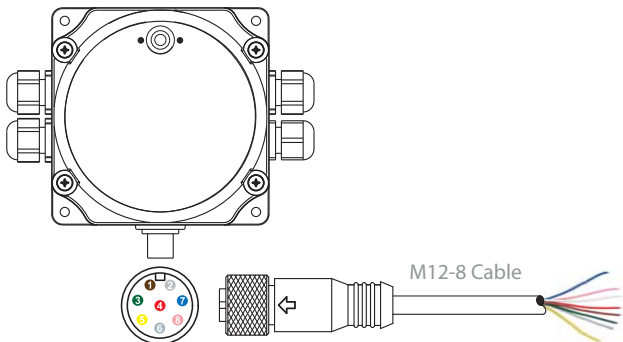
# Connect the 0~20mA / 4~20mA Sensor



# Connect the 0~10V Sensor

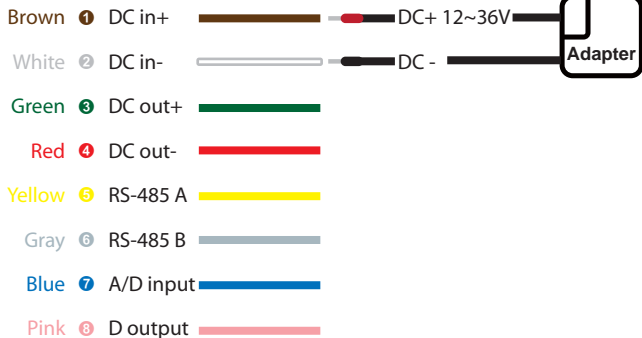
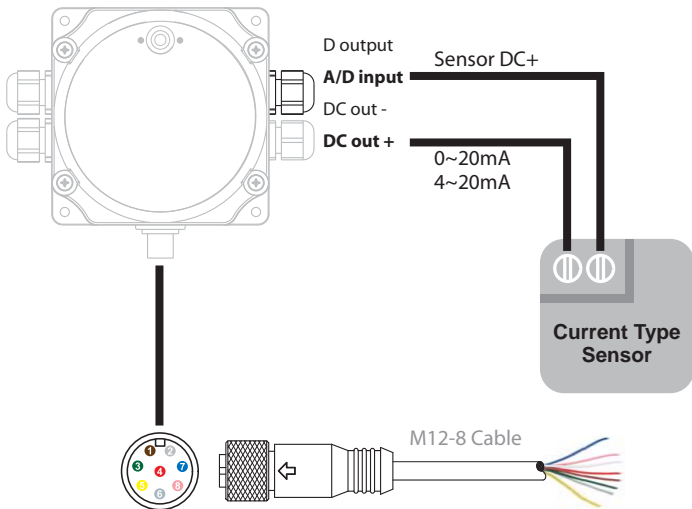


# Connect the Driver / Controller



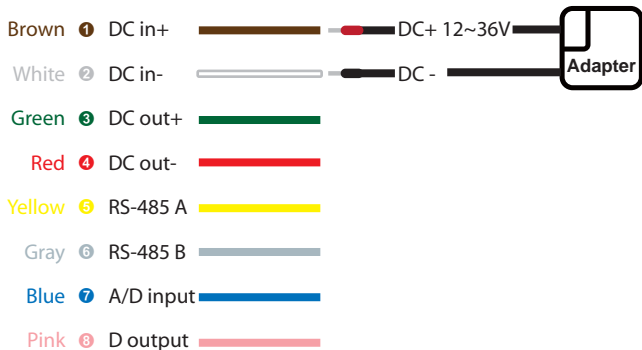
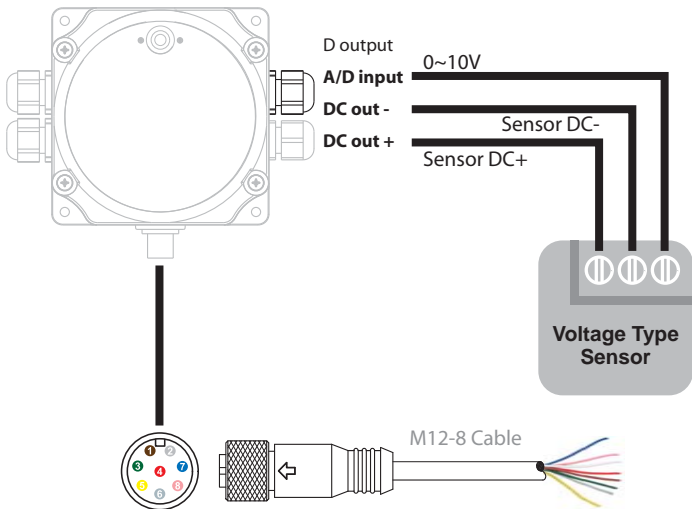
# External I/O

## Connect the 0~20mA / 4~20mA Sensor



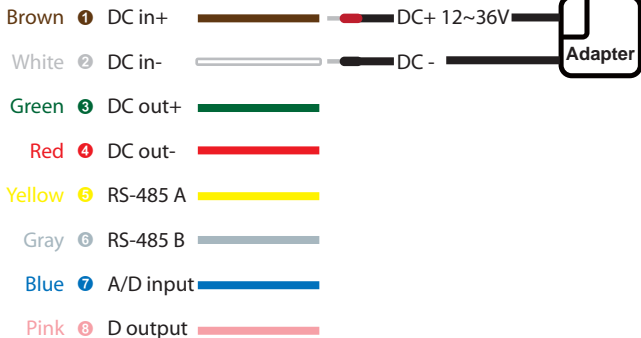
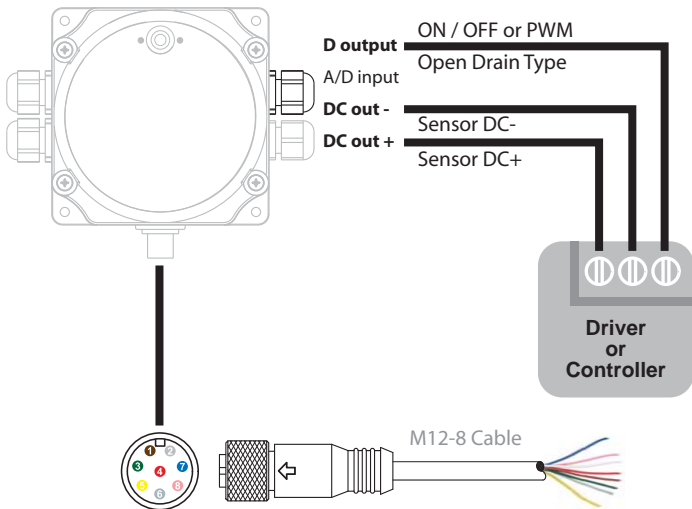
# External I/O

## Connect the 0~10V Sensor



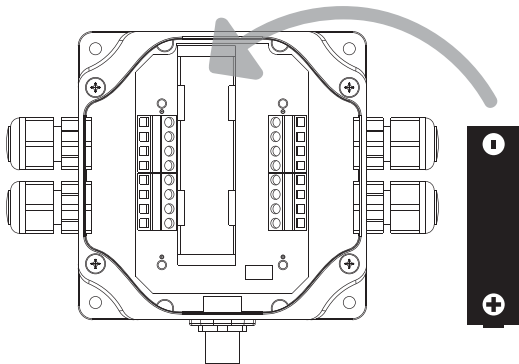
# External I/O

## Connect the Driver / Controller

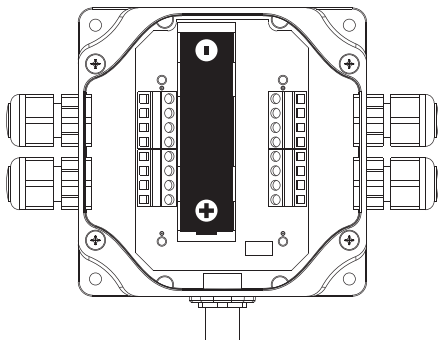


# Battery Installation (WW-5D2B only)

Open the top cover and put the 18650 Li-ion Recharging Battery provided in the box into the battery holder.

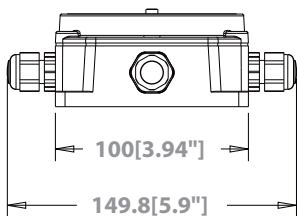
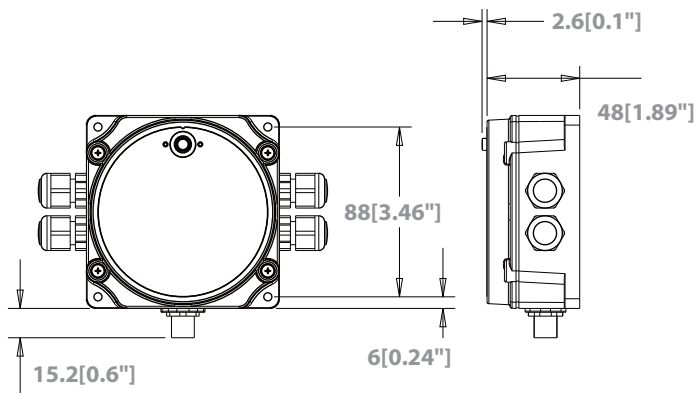


**The positive and negative directions are as shown below:**

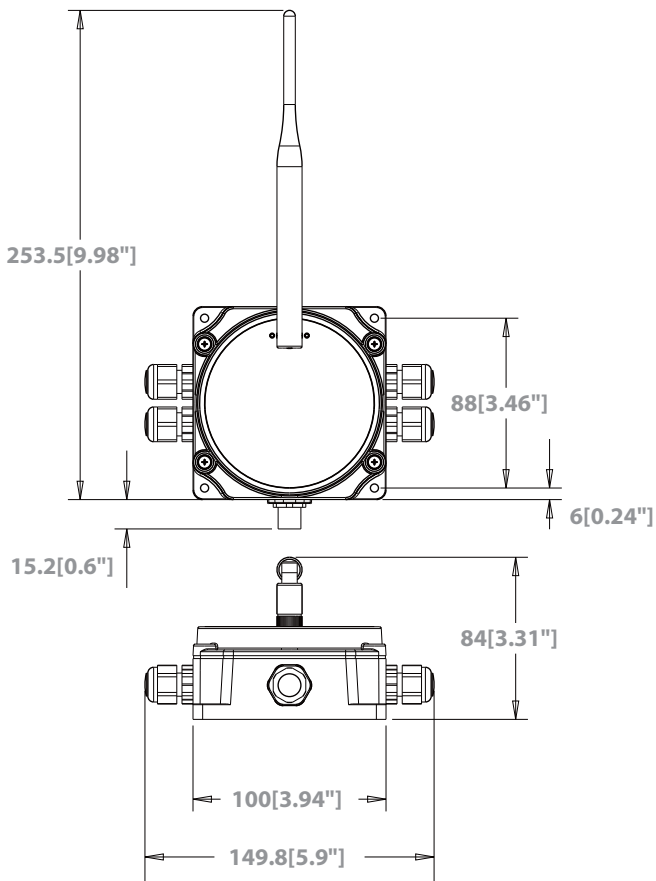




# Dimensions





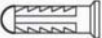
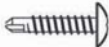


# Dimensions



# Installation Guide




## ■ Screw List

Item	Description	Spec	Units
① 	Phillips Mechanical Stainless Steel Metal Screw	M4*20mm	4
② 	Spring Washer	M4	4
③ 	Hex Nut	M4	4
④ 	Phillips Self Tapping Stainless Steel Metal Screw	M4	4
⑤ 	Nylon Hammer Drive Anchor	1/4*1	4
⑥ 	Self-Drilling Screw	8#3/4	4

## ■ Installation Guide


To install the lock screw sequence, it is recommended to use the upper right → upper left → lower left → lower right mode to avoid falling.

The following parts can be used when installed on a device that has been drilled first.



Item	Description	Spec	Units
① 	Phillips Mechanical Stainless Steel Metal Screw	M4*20mm	4
② 	Spring Washer	M4	4
③ 	Hex Nut	M4	4

After piercing the screw, put on the spring washer and nut and lock it.

The following parts can be used when installed on a wooden wall.

Item	Description	Spec	Units
④ 	Phillips Self Tapping Stainless Steel Metal Screw	M4	4

The following parts can be used when installed on a concrete wall.

Item	Description	Spec	Units
④ 	Phillips Self Tapping Stainless Steel Metal Screw	M4	4
⑤ 	Nylon Hammer Drive Anchor	1/4*1	4

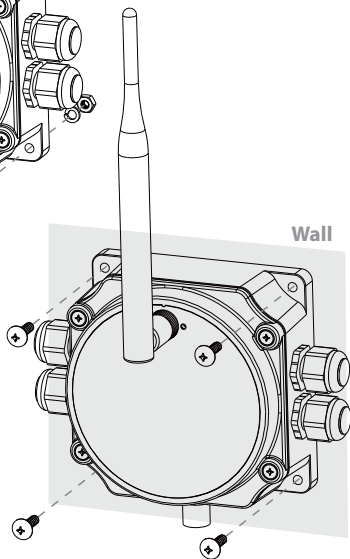
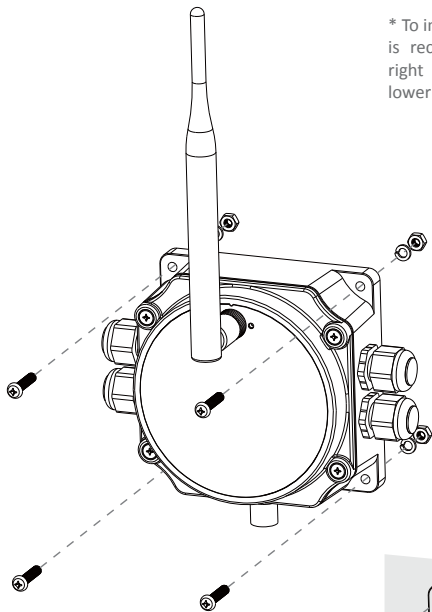
Please drill first (aperture 6mm depth 20mm), put it into the nylon hammer drive anchor, then lock the screw.

The following parts can be used when installed on a metal wall.

Item	Description	Spec	Units
⑥ 	Self-Drilling Screw	8#3/4	4

# Assembling

\* To install the lock screw sequence, it is recommended to use the upper right → upper left → lower left → lower right mode to avoid falling.



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