iSN-301-E/iSN-301-BLE/iSN-301-WF

Illuminance, Temperature and Humidity Sensor Module

Features

- Illuminance Measurement Range: 0 to 20,000 Lux
- Temperature Measurement Range: -20 to +60°C
- Humidity Measurement Range: 0 to 100% RH
- Suitable as either Temperature Measurement or Fire Alarm
- Supports the DCON, Modbus RTU, Modbus TCP and MQTT Protocols
- Includes RS-485/Ethernet Communication Interfaces
- Includes redundant power inputs: PoE (IEEE 802.3af, Class 1) and DC input
- Supports Web Configuration and Firmware Update via Ethernet
- Compatible with IEEE802.11b/g/n standards (iSN-301-WF only)
- Support infrastructure and limit-AP modes for wireless networks (iSN-301-WF only)
- Ceiling Mounting

Introduction

The iSN-301 series modules can be used for measuring indoor illumination, temperature and humidity. A wide range of interface connections can be selected to suit individual needs, including RS-485/ Ethernet/ Bluetooth/ Wi-Fi models. The various models provide support for the DCON and Modbus RTU/TCP protocols, and can be easily integrated into existing HMI/SCADA/ central control systems.

The screw-free quick-connect connector and the DIP and rotary switches make the modules easy to install, repair, and maintain. The casing of each module is made from UL94-V2 rated fireproof material, and the white minimalist exterior design ensures that it easy to match with interior decoration.

Specifications

Model	iSN-301-E	iSN-301-BLE	iSN-301-WF
Illuminance Measurement			
Range	0 to 20,000 Lux		
Resolution	1 Lux		
Accuracy	±5%		
Temperature Measurement			
Measurement Range	-40 to +120°C		
Fire Alarm	65°C (Programmable)		
Resolution	0.1°C		
Accuracy	Typical: ±0.5°C; refer to figure 2		
Relative Humidity Measurement			
Range	0 to 100% RH		
Resolution	0.1% RH		
Accuracy	Typical: ±3% RH @ 20 ~ 80% RH; refer to figure 1		
Relay Output			
Channels	1		
Type	Power Relay, Form C		
Max. Load Current	NO: 10 A @ 250 VAC NC: 6 A @ 250 VAC		
Load Wattage	Incandescent Bulb: 1500 W Max.; Fluorescent Lamp: 300 W Max.		
Communication			
Node Address	Hardware: 96 to 127 / Software: 1 to 255		
Protocol	DCON, Modbus RTU, Modbus TCP, MQTT		
Wired Interface	Yes, RS-485 X 1 and Ethernet/PoE X1		
Wireless Interface	-	Bluetooth	Wi-Fi
Supported Standard	-	BT 4.0	IEEE 802.11 b/g/n
Wireless Mode	-	Slave	Infrastructure/Limited AP
Wireless Security	-	AES 128	WEP, WPA ,WPA2
Transmission Range	-	20 m(LOS)	50 m(LOS)

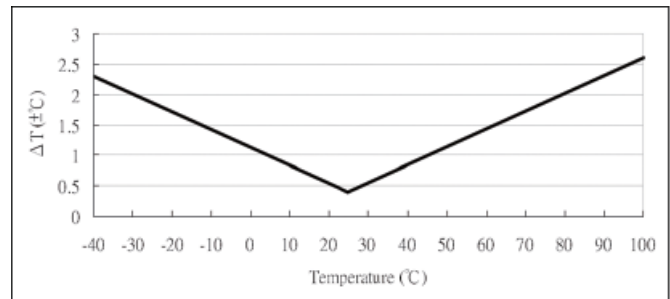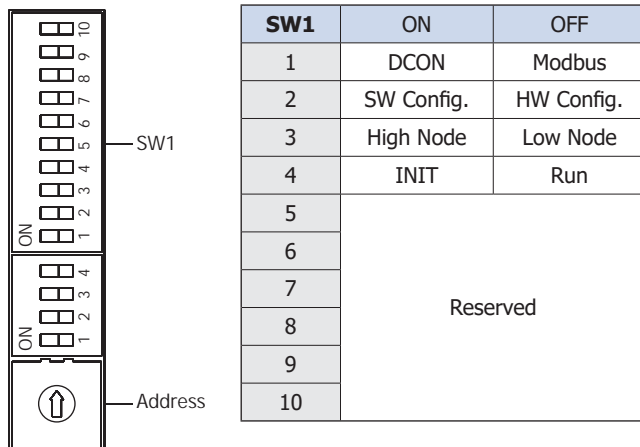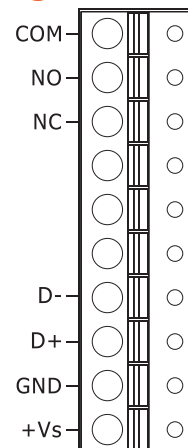| Model	iSN-301-E	iSN-301-BLE	iSN-301-WF
LED Indicators			
LED Indicators	Yes,1 as Power, 1 as Alarm Indicator. 1 as Communication Indicator.		
EMS Protection			
ESD (IEC 61000-4-2)	±4 kV Contact for each Terminal, ±8 kV Air for Random Point		
EFT (IEC 61000-4-4)	±4 kV for Power Line		
Power Requirements			
Power Supply	10 to 48 VDC, PoE		
Reverse Polarity Protection	Yes		
Power Consumption	2 W	2.3 W	2.3 W
Mechanical			
Installation	Ceiling /surface mounted		
Protection Class	IP20		
Dimensions(D x H)	Ø 150 mm x 53 mm		
Environment			
Operating Temperature	0 to +75°C		
Storage Temperature	-30 to +80°C		
Humidity	10 to 90% RH, Non-condensing		
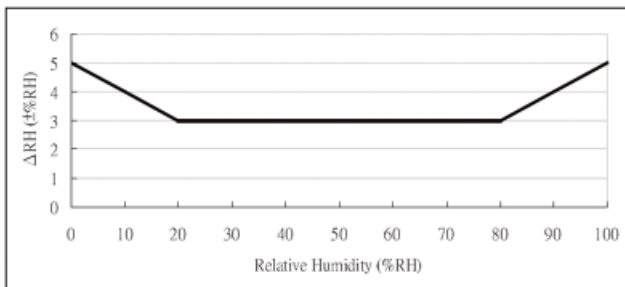
Figure 1: Maximum RH-tolerance at 25°C per sensor
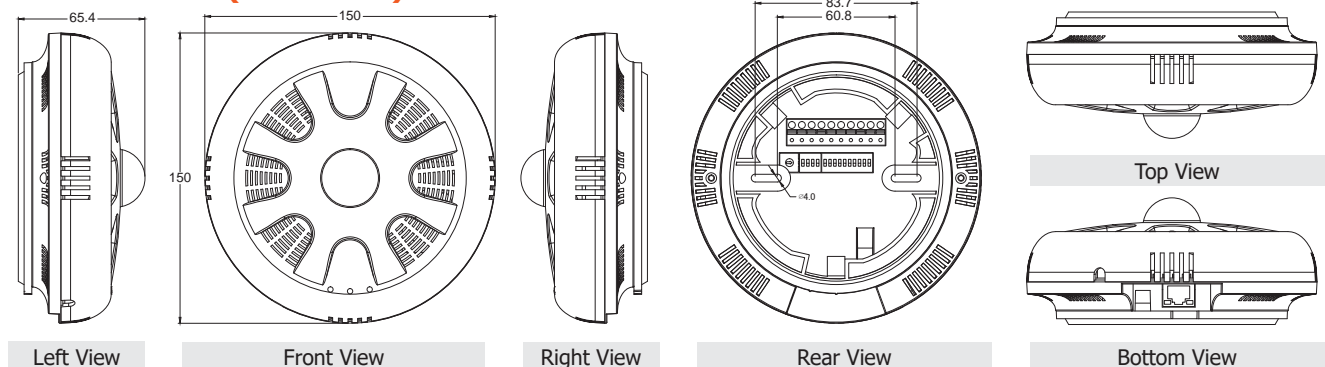

Figure 2: Maximum T-tolerance per sensor

▉ DIP Switch Settings

SW1	ON	OFF
1	DCON	Modbus
2	SW Config.	HW Config.
3	High Node	Low Node
4	INIT	Run
5	Reserved	
6		
7		
8		
9		
10		

▉ Pin Assignments

COM
NO
NC

D-
D+
GND
+Vs

▉ Dimensions (Units: mm)

| Left View | Front View | Right View | Rear View | Bottom View |

Top View
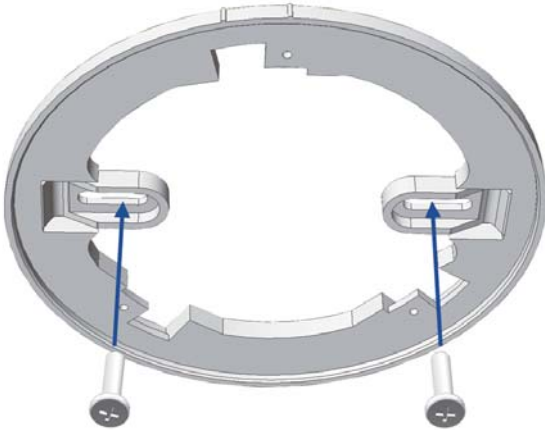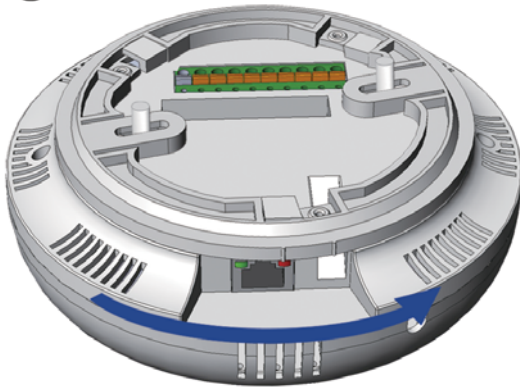
📁 Mounting

① Align the locking guides

② Attach the mounting plate

③ Turn the cover clockwise

④ Lock the cover in place

📁 Ordering Information

iSN-301-E	Illuminance, Temperature and Humidity Sensor Module (Ethernet)
iSN-301-BLE	Illuminance, Temperature and Humidity Sensor Module (Bluetooth)
iSN-301-WF	Illuminance, Temperature and Humidity Sensor Module (Wi-Fi)

📁 Accessories

EWB-C150		External Wall Box for the iSN-301 series
CA-RJ45-04		RJ45 Cable, Male-Female, 30 cm (90º)