innTOUCH2

Smart Sensor

Models:

SS-(1)-(2)-(3)	Smart Sensor – Communication option – Optional Sensors – Colour option
(1)	I = ISS, M = MS/TP
(2)	All devices have temperature and humidity as standard. Available options: (none), LC, OLV, OLVC O = Room Occupancy, L = Lux, V = VOC, C = CO_2
(3)	B = Black, W = White

DS 13.06
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Overview

The Innotech innTOUCH2 Smart Sensor is a wall mounted Human Machine Interface (HMI) with integrated environmental sensors. All versions include an integrated temperature and humidity sensor with user configurable setpoints.

The innTOUCH2 Smart Sensor can interface with any supported Innotech Omni or Skia Controller using the ISS interface, or any BACnet MS/TP network.

Features

- Includes the following integrated sensor types:
  - Temperature
  - Humidity
  - Room Occupancy (optional)
  - Lux (optional)
  - Volatile Organic Compounds (optional)
  - Carbon Dioxide (optional)
- Accessible via Bluetooth using dedicated Smart Phone App
- Front panel glass with capacitive touch display
- Custom user interface themes
- Real Time Clock with super capacitor backup for 48 hours
- Isolated BACnet MS/TP or isolated ISS communication port
- USB Mini-B service port
- Low profile modern design.
- Two device colour options, black or white.

Applications

The innTOUCH2 Smart Sensor provides a convenient user interface with integrated sensors to expand the capabilities of existing BACnet controller networks (MS/TP option only) or as a direct interface to any supported Innotech Controller with ISS port (ISS option only).

Typical applications include:

- Air conditioning and heating systems
- Lighting control
- Monitoring device
- Residential and industrial temperature and lighting control

Installation

The innTOUCH2 Smart Sensor should be installed in an environment that does not exceed the maximum operating parameters of the device. It should be mounted in a clean and dry environment free of vibration, and properly ventilated.

The innTOUCH2 Smart Sensor should be mounted vertically on the mounting bracket on a wall with the appropriate ventilation to measure the room temperature.

Wiring should be implemented in accordance with Innotech connection diagrams and installation instructions as well as local bylaws. Refer to your local distributor for more information.

Connect the 24VAC or 24VDC supply to the correct terminals on the controller. Maximum terminal cable entry is 1.5mm².

Model Specifications

Smart Sensor Model	SS-M-B	SS-M-W	SS-I-B	SS-I-W	SS-M-LC-B	SS-M-LC-W	SS-I-LC-B	SS-I-LC-W	SS-M-OLV-B	SS-M-OLV-W	SS-I-OLV-B	SS-I-OLV-W	SS-M-OLVC-B	SS-M-OLVC-W	SS-I-OLVC-B	SS-I-OLVC-W
Temperature Sensor	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Humidity Sensor	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Room Occupancy Sensor									✓	✓	✓	✓	✓	✓	✓	✓
Lux Sensor					✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
VOC Sensor									✓	✓	✓	✓	✓	✓	✓	✓
CO_2 Sensor					✓	✓	✓	✓					✓	✓	✓	✓
USB-Mini B (PC Link)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
RS485 Comms	✓	✓			✓	✓			✓	✓			✓	✓		
ISS Comms			✓	✓			✓	✓			✓	✓			✓	✓
Black Enclosure/Screen	✓		✓		✓		✓		✓		✓		✓		✓	
White Enclosure/Screen		✓		✓		✓		✓		✓		✓		✓		✓

General Specifications

PROCESSOR	
CPU	ARM Cortex M7
Processor Speed	260MHz

POWER SUPPLY REQUIREMENTS	
Power Input	24VAC or 24VDC ±10%
Recommended Transformer Ratings	5VA min.
Power Consumption	2.5W (max)

The operating voltage must meet the requirements of Safety Extra Low Voltage (SELV) to EN60730. The transformer used must be a class 2 safety transformer in compliance with EN60742 and be designed for 100% duty. It must also be sized and fused in compliance with local safety regulations.

ENVIRONMENTAL	
Operating Temperature	0° to 50°C non-condensing 32° to 122°F non-condensing
Storage Temperature [1]	-30° to 80°C non-condensing -22° to 176°F non-condensing

[1] Short term storage refers to temporary conditions during, e.g., transport.

INSTALLATION ORIENTATION
Vertically mounted Mounting Bracket on a vertical surface. *Allow a minimum 20mm (40mm recommended) gap between the end of the terminal plug and cable ducts.*

ENCLOSURE	
Housing moulded from flame retardant plastics recognised by UL as UL94-V0.	
Colour	Black or White

DIMENSIONS AND WEIGHT
W 155mm x H 95mm x D 45mm (6.1” x 3.75” x 1.8”)
Smart Sensor. 200g (0.44lbs)

DIGITAL CLOCK	
Internal Real Time Clock	Super capacitor backup (2 days)
BACnet Time Sync	Receive Only
ISS Time Sync	For Stand-alone Applications

APPROVALS AND LISTINGS
EN 61326:2021 (IEC 61326:2020) Class B for CE and RCM Labelling
Title 47 CFR, Part 15, Subpart B, Class B and ISED, ICES-001, Class B for FCC and ICES Marking
UL & C-UL Listed to UL916, File Numbers PAZX.E242628, PAZX7.E242628
RoHS3
Ingress Protection Rating – IP2X

COMMUNICATIONS	
ISS Comms	Innotech Smart Sensor Comms
RS-485 Comms [2]	Up to 115kbps

[2] Maximum network speeds are dependent on the number of devices connected and cable type used due to capacitance of cable and RS485 port characteristics. A repeater is recommended for every 32 devices connected on a network.

PROTOCOLS	
ISS	Innotech ISS
RS-485	BACnet MS/TP

DEFAULT ADDRESS	
ISS	N/A
BACnet MS/TP	2200

CONFIGURING / MONITORING / COMMUNICATIONS	
USB Device (Mini-B Type)	Innotech Net Comms Fixed #1 Address
Data Logging	Not Supported

DISPLAY	
Size	3.5” diagonal
Resolution	320 x 480 pixels
Colour	16 bit
Touch Control	Single Point - Capacitive

Sensors

SENSOR SPECIFICATION	
Temperature	
Accuracy [1] (15°C - 30°C)	±0.5°C (±0.9°F)
Accuracy [1] (0°C - 50°C)	±1.0°C (±1.8°F)
Resolution	0.1°C (0.18°F)
Response time	5s
[1] *within humidity range 20% to 80%*	

Relative Humidity	
Accuracy [2] (20% - 80%)	±1.8%
Range	0% - 100% (non-condensing)
Resolution	0.1%
Response time	10s
Hysteresis	±1%
[2] *typical at 25°C (77°F)*	

Occupancy *(Sensor option – O)*	
Detection Range	Up to 7m
Response time	1s

Lux *(Sensor option – L)*	
Accuracy [3,4]	*TBD*
Range	1 lux – 10k lux
Response time	1s
Resolution	16 bit
[3] *location of light sources and reflection can affect reading*	
[4] *automatic 50/60 Hz lighting flicker rejection*	

Volatile Organic Compounds (VOC) *(Sensor option – V)*	
Accuracy [5]	±50 ppb or 10% (whichever is larger)
Range (ethanol in clean air)	500 ppb – 10,000 ppb
Response time	10s
[5] *typical at 25°C (77°F) and 50% RH*	

Carbon Dioxide (CO_2) *(Sensor option – C)*	
Accuracy [6] (400 ppm – 2000 ppm)	±50 ppm + 5%
Range	0 ppm – 40,000 ppm
Response time	60s
[6] *typical at 25°C (77°F) and 50% RH*	

FCC CLASS B & ISED NOTICE

This device complies with Part 15 of the FCC Rules and with the ISED Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions:

(1) This device may not cause harmful interference.
(2) This device must accept any interference received, including interference that may cause undesired operation.

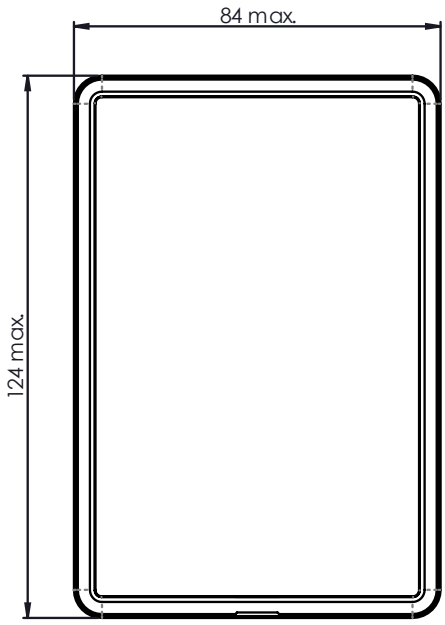
L'émetteur/récepteur exempt de licence contenu dans le présent appareil est conforme aux CNR d'Innovation, Sciences et Développement économique Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes :

(1) L'appareil ne doit pas produire de brouillage;
(2) L'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

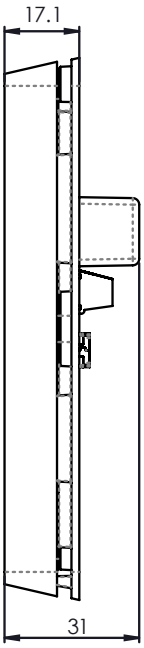
Note – *This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:*
- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Warning: (Refer to Section 15.21 of 47 CFR)
Any changes or modifications not expressively approved by Innotech could void the user's authority to operate this equipment.

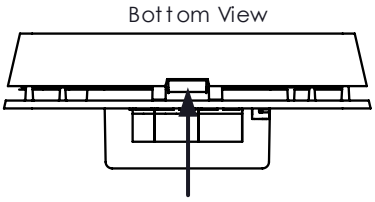
Innotech Smart Sensor Dimensions & Parts Identification

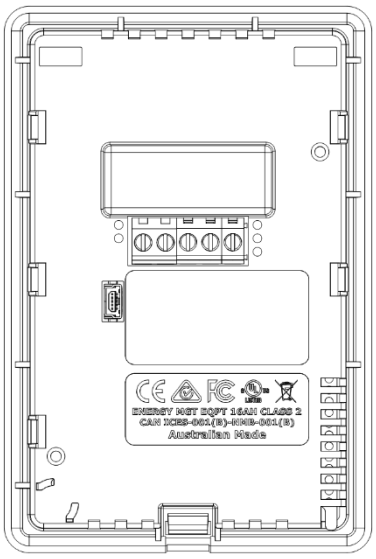


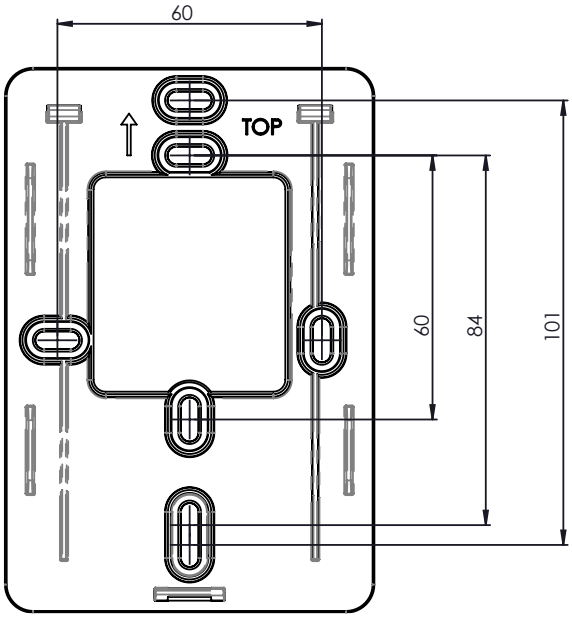
Front View



Side View




Back View



Wall Plate

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