

WARNING AND CAUTIONS:

- **TO AVOID FIRE, SHOCK, OR DEATH: TURN OFF POWER AT CIRCUIT BREAKER OR FUSE AND TEST THAT POWER IS OFF BEFORE INSTALLING!**
- **PROPER GROUNDING REQUIRED TO AVOID STATIC DISCHARGE WHICH CAN DAMAGE CONTROLLERS DURING INSTALLATION.**

WARNING AND CAUTIONS:

- If you are unsure about any part of these instructions, consult an electrician; all work should be performed by qualified personnel.

INSTALLATION GUIDE

PART NUMBER: WSI-4-20-101

DESCRIPTION

The Sense 4-20 provides an interface from 4-20 mA standard sensors to the SimplySNAP mesh network.

FEATURES

- Standard 4-20 mA, 75Ω 2-wire sensor interface
- Battery Operated (x4 AA) or external supply
- Powers sensor via 4-20mA loop
- 2 open/short relay inputs
- 1.2 W Max
- 4-24 DC IN
- 24V DC OUT

INSTALLATION

Needed Materials

Screw Driver: A #2 Phillips is required to connect the 4-20mA cables to the terminals.

Mounting: Mounting brackets are included. Mounting hole fits #10 screw

4 AA Alkaline Batteries: The SNAP Sense 4-20 is powered by 4 AA alkaline batteries or an external source. We recommend that the alkaline batteries be Energizer Max.

SENSE 4-20 INSTALLATION INSTRUCTIONS

1. Mount Sense 4-20 (brackets included)
2. Open the cover
3. Thread the 4-20 mA 2-wire (or relay) cable through the cable gland (Sense 4-20 powers the sensor via the 4-20 mA loop interface). **Note: If multiple conductors pass through the cable gland, they must be in a single sheath in order to maintain the IP65 rating.**
4. Attach 4-20 mA leads to labeled screw terminals
5. Install 4 AA Alkaline batteries
Note: The battery holder wiring should be disconnected when using external power.
6. The Sense 4-20 will automatically search for a gateway, indicated by a series of very short blinks. Once connected to the gateway the Sense 4-20 will go into low power mode (LED will be off) and begin sampling the sensor. **Note: In some cases, firmware upgrades may occur once connected to the gateway – Do Not remove power.**
7. Call Synapse for Support- (877) 982-7888 to configure the dashboard for new sensor data.

CONNECTING A SENSOR

The Sense 4-20 may be connected to any 4-20 mA sensor as shown in the diagrams to the right.

CAUTION: The Sense 4-20 must be installed in accordance with national, state, and local electrical codes and requirements

Figure 1 –Sensor powered by Sense 4-20

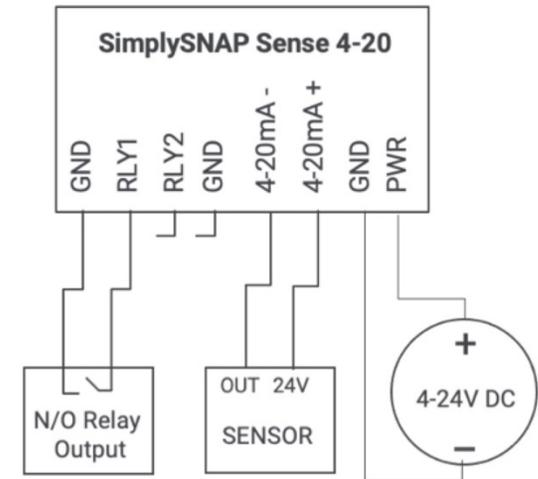
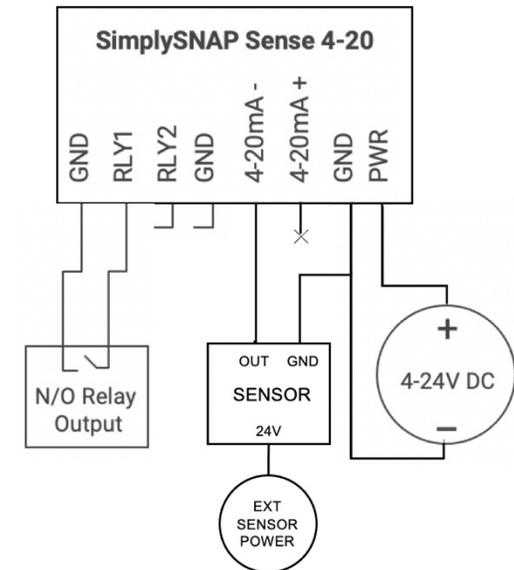


Figure 2 –Sensor powered by External Power



UL- HARDWARE SPECIFICATIONS

- Purpose of control: Operating Control
- Construction of control: Independently Mounted
- Type 1 Action
- Pollution Degree 2 (internal of enclosure)
- Impulse Voltage: 330

RATINGS

Voltage Input: 4 to 24V DC

Power Consumption (Max): 1.2W

Temperature Range: -40°C to +70°C

Humidity Range (Non Condensing): 10% to 98%

Enclosure: IP65 rated; UL94-5VA compliant

REGULATORY INFORMATION AND CERTIFICATIONS

RF Exposure Statement: This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance of 20cm between the radiator and your body. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Industry Canada (IC) certifications: This digital apparatus does not exceed the Class B limits for radio noise emissions from digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications.

Le present appareil numerique n'emet pas de bruits radioelectriques dépassant les limites applicable aux appareils numeriques de la class B prescrites dans le Reglement sur le brouillage radioelectrique edicte par le ministere des Communications du Canada.

FCC certifications and regulatory information (USA only)

FCC Part 15 Class B: This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions: (1) These devices may not cause harmful interference, and (2) These devices must accept any interference received, including interference that may cause harmful operation.

RADIO FREQUENCY INTERFERENCE (RFI) (FCC 15.105): 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 to correct the interference by one or more of the following measures: (1) Re-orient or relocate the receiving antenna; (2) Increase the separation between the equipment and the receiver; (3) Connect the equipment into an outlet on a dealer or an experienced radio/TV technician for help.

Declaration of Conformity (FCC 96-208 & 95-19):

Synapse Wireless, Inc. declares that the product name "WSI-4-20-101" to which this declaration relates, meet the requirements specified by the Federal Communications Commission as detailed in the following specifications:

- Part 15, Subpart B, for Class B equipment
- FCC 96-208 as it applies to Class B personal computers and peripherals
- This product has been tested at an External Test Laboratory certified per FCC rules and has been found to meet the FCC, Part 15, Emission Limits. Documentation is on file and available from Synapse Wireless, Inc. If the FCC ID for the module inside this product enclosure is not visible when installed inside another device, then the outside of the device into which this product is installed must also display a label referring to the enclosed module FCC ID. Modifications (FCC 15.21): Changes or modifications to this equipment not expressly approved by Synapse Wireless, Inc., may void the user's authority to operate this equipment.

CERTIFICATIONS

MODEL	: WSI-4-20-101
IC	: 7084A-SM220
FCC ID	: U90-SM220
UL File No	: E515105

Contact Synapse for Support- (877) 982-7888