

## WSN-DPM Wireless Sensor

Power Ratings: 120-277VAC;

Operating Temperature: -40 to +70 C / Operating Humidity: 0 to 95%, non-condensing



### WARNINGS AND CAUTIONS:

- **TO AVOID FIRE, SHOCK, OR DEATH; TURN OFF POWER AT CIRCUIT BREAKER OR FUSE AND TEST THAT POWER IS OFF BEFORE WIRING!**
- **Risk of Electric Shock** - Local codes may require more than one disconnect switch. De-energize all disconnect switches before servicing the equipment.
- Use this device with copper or copper clad wire only.
- To be installed and/or used in accordance with appropriate electrical codes and regulations.

### WARNINGS AND CAUTIONS:

- Disconnect power at circuit breaker or fuse when servicing, installing or removing fixture or changing lamps.
- Metal conduit and connector must be grounded.
- If you are unsure about any part of these instructions, consult an electrician.

## INSTALLATION GUIDE

### SPECIFICATIONS

**Dimensions:** 5.32" x 5.74" x 4.32" (135mm x 146mm x 110mm)

**Input Power :** 120-277VAC-50/60Hz, 10mA

**Operating Temperature :** -40°C to +70°C

**Radio :** SNAP 2.4GHz 802.15.4

### CAUTION

- The Wireless Sensor must be installed in accordance with national, state, and local electrical codes and requirements
- For outdoor applications, do not install sensor facing upward toward direct sunlight.
- All work must be performed by qualified personnel
- Disconnect all power before installation or service
- Metal conduit and connector must be grounded
- Do not twist or turn the sensor

### INCLUDED MATERIALS

- (2) mounting brackets
- (8) 8-32 screws
- (16) washers
- (8) split washers
- (4) wing nuts
- (1) lens mask

### NEEDED MATERIALS

**Mounting Hardware:** Using hardware appropriate for the installation.

- 2 or more number 8 screws **OR** 2 steel tie wraps 1/2" wide or smaller

**Screwdriver:** A Phillips screwdriver is required to mount the sensor to the mounting bracket.

**Conduit:** The installer must provide a watertight connection to the 1/2" hub on the unit to maintain the IP66 rating of the unit after installation

### INSTALLATION INSTRUCTIONS

There are multiple ways to install the wireless sensor.

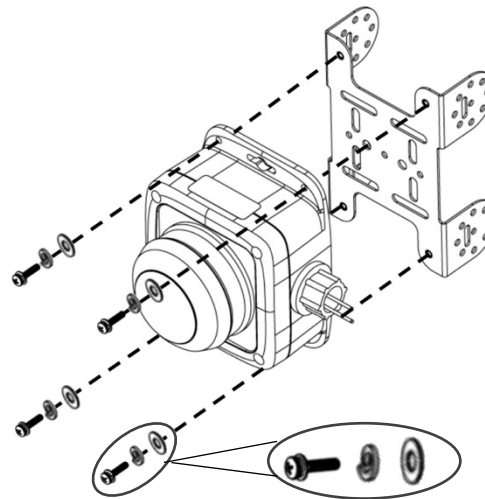
- The installer is expected to select the correct hardware for mounting to the type of material they are working with.
- The installer is expected to select the appropriate conduit and conduit connector necessary to meet electrical code and the needs of the application.

**Note:** To maintain IP rating of the unit, it **must** be installed with a IP66/NEMA 4X fitting at the power entry point.

### MOUNTING INSTRUCTIONS

#### STEP 1:

Using 4 8-32 screws, 4 split washers, and 4 washers attach the sensor to one of the included mounting brackets.



#### STEP 2:

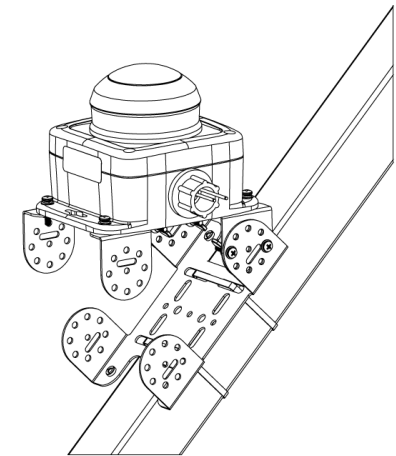
Select a location to install the sensor.

#### STEP 3:

Secure the remaining mounting bracket to the selected location using either 2 or more number 8 screws **OR** 2 steel tie wraps 1/2" wide or smaller. Use the following guidelines to determine which mounting hardware is suitable for your application.

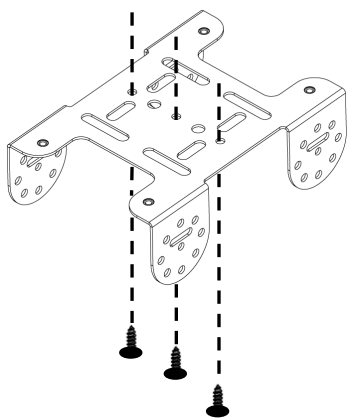
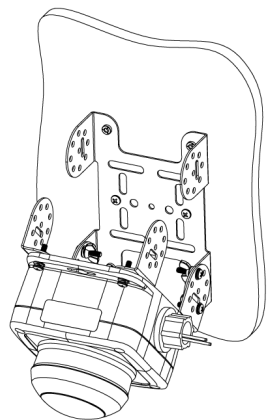
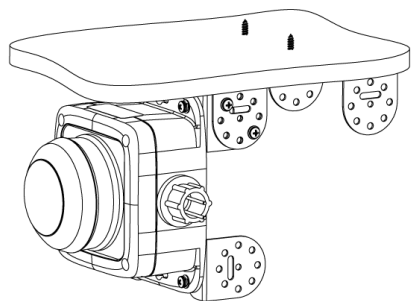
#### Securing Sensor to Mounting Surface with Tie Wraps

- Recommended for mounting which **cannot** be screwed such as trusses and polls
- Required Mounting Hardware: 2 steel tie wraps 1/2" wide or smaller



## Securing Sensor to Mounting Surface with Screws

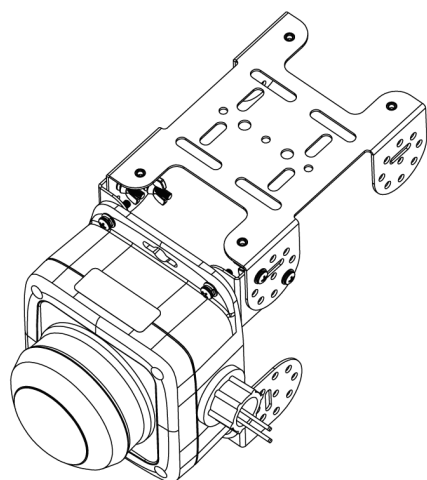
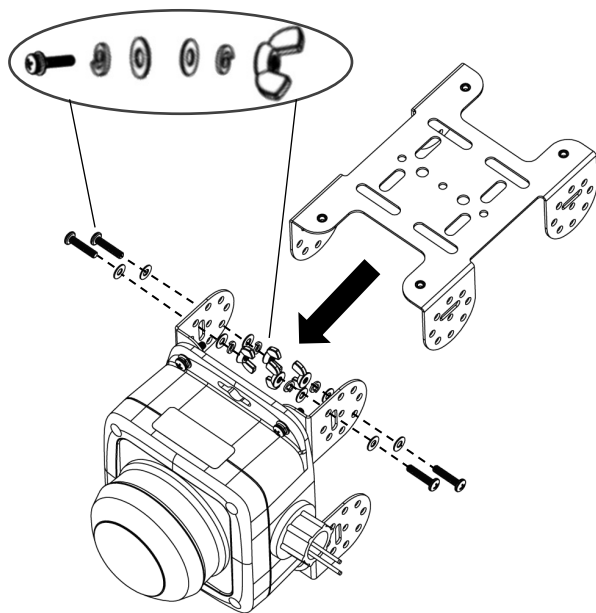
- Recommended for mounting to flat surfaces which can be screwed such as ceilings or walls
- Required Mounting Hardware: 2 or more number 8 screws appropriate for the mounting medium



## STEP 4:

Use the remaining included hardware to attach the brackets together at the desired angle. The sensor can be positioned at 0°, 45°, or 90° relative to the mounting surface.

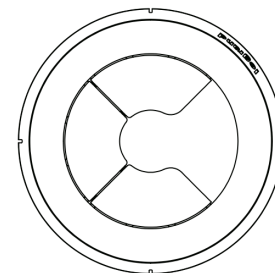
The drawings below demonstrate how to assemble the bracket so that the sensor is positioned at 90° relative to the mounting surface.



## LENS MASK INSTRUCTIONS (OPTIONAL)

### STEP 5:

The optional lens mask provides the ability to limit coverage areas for example, in hallways or multi-use environments. The mask has three 90° sections. One or two of the sections can be removed, to provide different coverage patterns. Snap the mask onto the lens and rotate to the desired position.



## CONDUIT INSTRUCTIONS

### Notes:

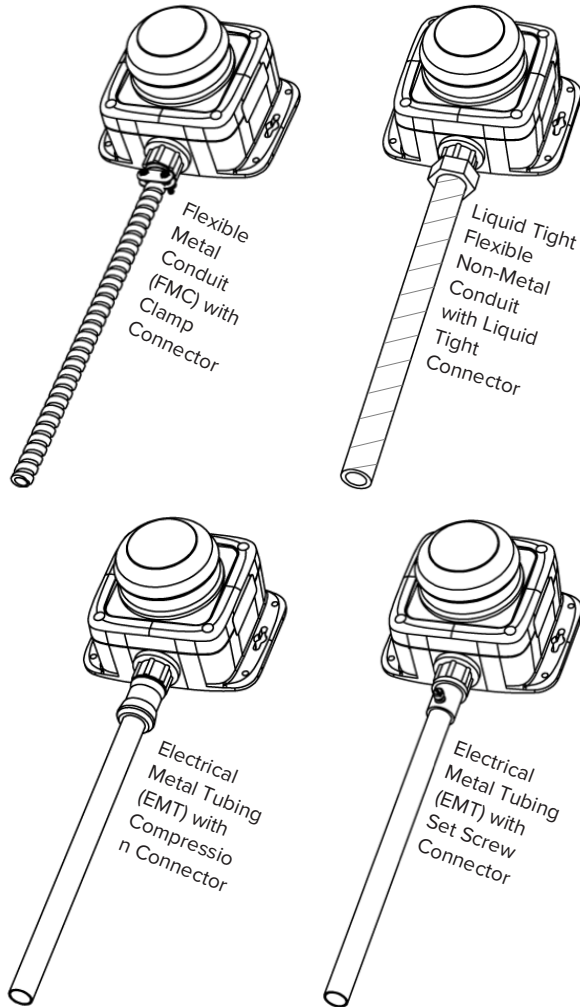
- The installer is expected to select the appropriate conduit and conduit connector necessary to meet electrical code and the needs of the application.
- To maintain IP rating of the unit, it **must** be installed with a IP66/NEMA 4X fitting at the power entry point.
- When possible, it is recommended to use flexible conduit so the unit can be easily adjusted after installation.
- Be sure to install the conduit such that it does not block the sensor's ability to detect light.

### STEP 6:

Run conduit to the ½" hub built into the sensor unit. ½" rigid metal conduit (RMC) or intermediate metal conduit (IMC) can be threaded directly on to the hub. Flexible metal conduit (FMC, liquid tight flexible metal conduit (LFMC), or electrical metal tubing (EMT) can be connected to the hub, when paired with a compatible connector.

The drawings on the following page show a few of the conduit/connector options possible. Not all configurations shown are watertight.

## Conduit/Connector Options



## WIRING INSTRUCTIONS

### STEP 7:

Once the Wireless Sensor is mounted, you must have a licensed electrician connect power according to the national, state, and local electrical codes and requirements.

The two connection points are as follows:

**Black is Line**

**White is Neutral**

Refer to the SimplySNAP User's Manual for information on provisioning the WSN-DPM.

## 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 présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de la class B prescrites dans le Règlement sur le brouillage radioélectrique édicté par le ministère 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 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: (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 circuit different from that to which the receiver is connected; (4) Consult the 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 "Wireless Sensor" 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

<b>Model</b>	: WSN-DPM
<b>Contains FCC ID</b>	: U90-SM220
<b>Contains IC</b>	: 7084A-SM220
<b>UL File No</b>	: E509618
<b>ROHS</b>	: 3:2011/65/EU(2015/863)

**Contact Synapse for Support-** (877) 982-7888