

FlexNet SmartPoint

Installation Instructions for Model 520M - Pit Set Unit

IMPORTANT

The following information contains installation instructions for the Sensus Model 520M SmartPoint.

Note: This installation sheet is only for installation of the Sensus Model 520M. For instructions on installing other AMR/AMI devices, please request and refer to the individual installation instruction for those devices.

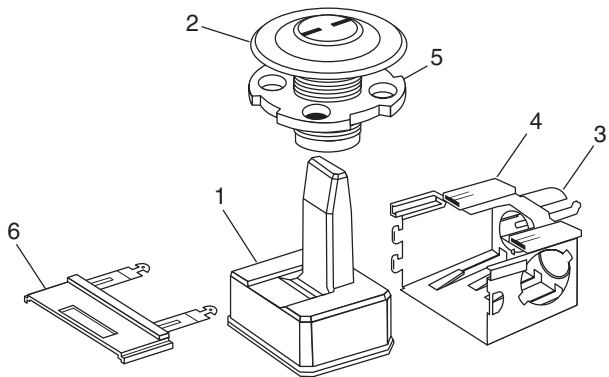
GENERAL INFORMATION

The Model 520M is designed for pit set environments and is available for both a single port and dual port operation. The Model 520M is designed to maximize performance in a fixed base environment. In order to achieve maximum performance, the Model 520M must be installed through the pit lid. The unit can be installed with either a TouchCoupler connection or wire connection.

TYPE	COMPATIBILITY
TouchCoupler and Wired Version	Sensus ECR11 and ICE water registers
Wired Version Only	Badger ADE, Elster Encoder (Sensus protocol), Neptune ARB VI (ProRead)

Please refer to AMI-495 for programming instructions.

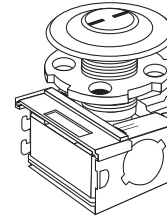
DEFINITIONS



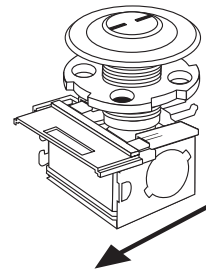
1. HDPE Radio
2. Pit Lid Housing
3. TouchCoupler TR/PL Adaptor (TouchCoupler enabled units only)
4. Boot
5. Pit Locking Nut
6. Boot Locking Clip

TOUCHCOUPLER - INSTALLATION INSTRUCTIONS

STEP 1. DISASSEMBLE 520 UNIT

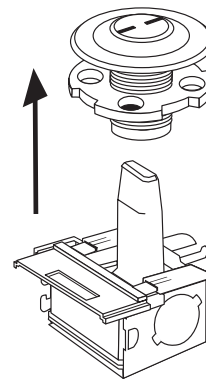


1. Disassemble the Model 520 SmartPoint unit to begin the installation procedure. Unlock the radio device by pressing down on the two tabs on the Boot Locking Clip facing the port side connections. Once the tabs are depressed, slide the Boot Locking Clip out until the Pit Lid Housing is released from the Boot.



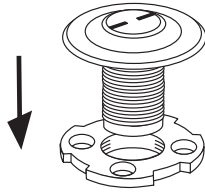
Boot Locking Clip - Push Down and Out

2. Slide the Pit Lid Housing off of the Boot and Boot Locking Clip assembly.



Pit Lid Housing slides off of HDPE Radio

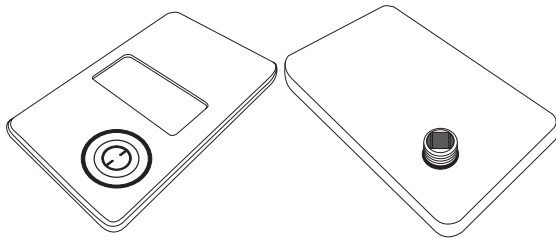
3. Remove the Pit Locking Nut from the underneath of the Pit Lid Housing by turning the nut counter clockwise.



Pit Locking Nut Screws off of Pit Lid Housing

STEP 2. INSERTING THE PIT LID HOUSING

Place the Pit Lid Housing thru the pre-drilled hole in the top of the Pit Lid.

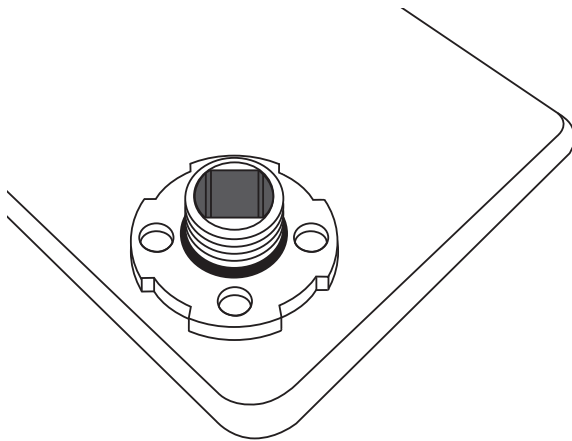


Pit Lid Housing Inserted Through Pit Lid (Top View)

Pit Lid Housing Inserted Through Pit Lid (Bottom View)

STEP 3. SECURING THE PIT LID HOUSING

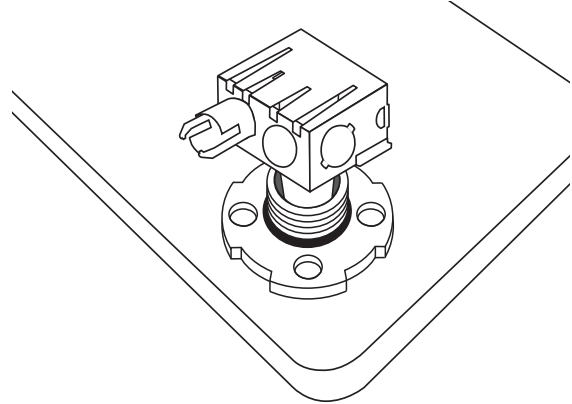
Place the Pit Locking Nut at the bottom of the Pit Lid Housing aligning the Pit Locking Nut with the shaft of the Pit Lid Housing. Tighten the Pit Locking Nut by turning clockwise until the unit is firmly secured against the bottom of the Pit Lid (see picture below).



Securing the Pit Lid Housing to the Pit Lid

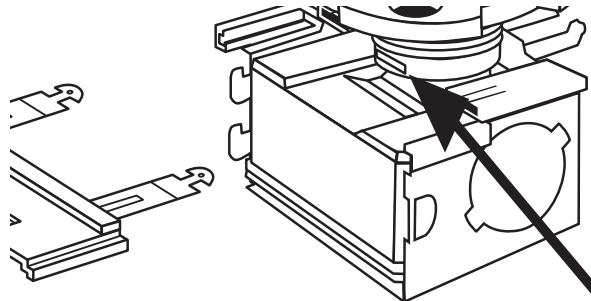
STEP 4. INSERTING THE RADIO DEVICE

1. Insert the HDPE Radio with Boot attached into the cavity of the Pit Lid Housing (see picture below).

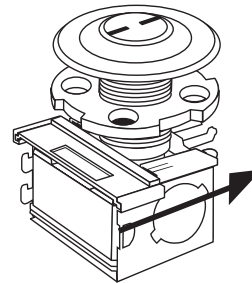


Insertion of the HDPE Radio and Boot into the Pit Lid Housing

2. Slide the Boot Locking Clip into the Boot while assuring alignment between the slot located on the bottom of the Pit Lid Housing and the Boot Locking Clip is achieved.

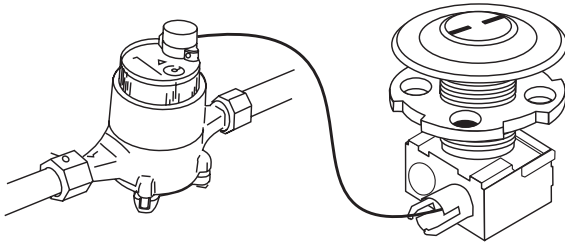


3. To secure the unit, slide the Boot Locking Clip into the Boot until the Boot Locking Clip rests in the slot located on the bottom of the Pit Lid Housing and the Boot Locking Clip is engaged and locked.



TOUCHCOUPLER INSTALLATION INSTRUCTIONS

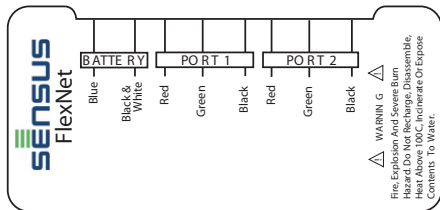
1. Perform a TouchRead on TR/PL sensor to insure TouchRead to the encoder works.
2. Grasp the TR/PL sensor and place into Port 1 of the TouchCoupler TR/PL Adaptor until secured (see picture below).
3. Repeat process into Port 2 if needed.



SINGLE AND DUAL PORT WIRED INSTALLATION

Recommended Tools and Materials:

- 3M Scotchlok®UY-2 butt connector “gel-caps”
- 3M Scotchlock®E-9Y stepped jaw crimping tool with wire cutter
- Wire stripping tool
- Three conductor solid wire (Sensus specification)



1. Strip approximately 2” off the outer jacket of the encoder wire cable. The wire colors for each unit should be green, red and black.
2. The red, green and black wires must be gel-capped individually. Insert the corresponding wires, as indicated in the encoder wiring reference below, into the gel-cap with the color button of the gel-cap facing away. (This provides a better view of wire positions inside the clear plastic gel-cap enabling the installer to see the wires are completely and properly inserted).

Encoder wiring reference:				
SmartPoint Terminal	Sensus Register	Badger ADE	Neptune ProRead	Elster Encoder
Black	Black	Black	Green	Black
Red	Red	Red	Black	Green
Green	Green	Green	Red	Red

3. Using gel-cap pliers, squeeze the gel-cap. This will splice the two wires and release the waterproof gel to seal the connection. The splice can be checked by pulling gently on the gel-cap while holding the wires to be sure they are tight and secure. Repeat this process for the remaining two wire connections.

Note: If any of the wire connections are not being used they should be capped at the end with a gel-cap. This is to prevent wire damage due to water intrusion via wicking through the exposed wire ends.

Badger, Neptune and Elster registers must be wired directly to a 520M port and not through a MultiRead module connected to the 520M.

4. Coil and secure excess cable to the body of the meter or service line in a presentable manner.

FCC COMPLIANCE

This equipment has been tested and found to comply with the limitations 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 these 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 and 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 device
- 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/TC technician



Warning!

No party shall make any modifications or changes to the Sensus Model 520M transmitter (the equipment) without express written consent of Sensus. Doing so could result in the equipment becoming non-compliant with the requirements of the Federal Communications Commission Rules CFR47 part 15 and could void the user's authority to operate the equipment.



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