



USER GUIDE

Bushing Sensor

TYPE A & TYPE T

Installation of tap sensor with connector, circular bayonet-style. These instructions are applicable to BTT-T-04 and BTT-A-04. This sensor will fit test taps with either a $\frac{3}{4}$ -14 NPSM or $2 \frac{1}{4}$ -12 UNS internal thread.

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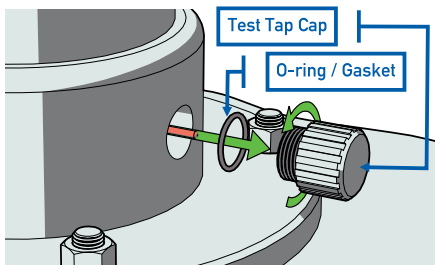
Preparation

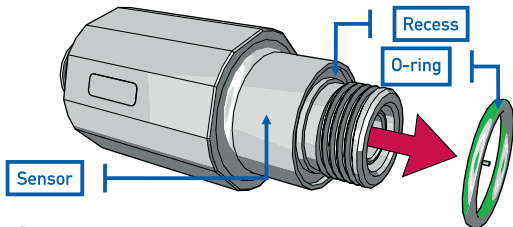
1 Tap cap removal

- Remove test tap cap from the bushing, store this in a safe place.
- Remove test tap gasket or O-ring and, with the Test Tap cap, store it in a safe place.



DO NOT REUSE O-ring/gasket when installing the sensor.



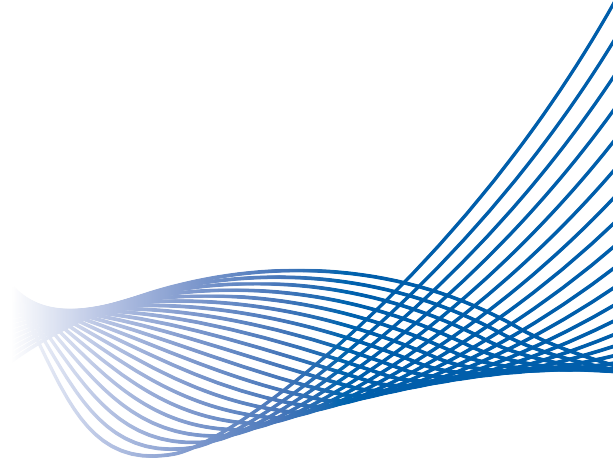


2 Sensor O-ring preparation

- Carefully remove the O-ring from the sensor, lubricate the O-ring with a non-silicone petroleum based lubricant (preferably petroleum jelly).
- Fit the lubricated O-ring over the external threads of the sensor housing and into the recess at the base of the threads.
- The threads of the sensor must remain clean and dry to make grounding contact with the bushing threads.



Tip: To keep the threads clean when fitting the lubricated O-ring, temporarily wrap the threads with masking tape.

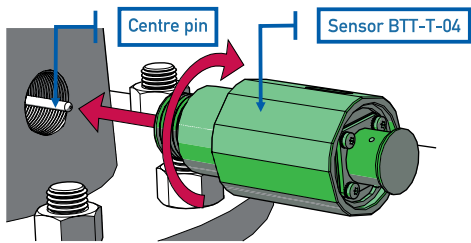


Installation

Installation

3 Install Bushing Sensor

- Verify that the centre pin in the test tap is present, centred and straight.
- The centre pin of the test tap must fit inside the recess in the contact post in the sensor.
- Verify that the threads of the bushing tap and the sensor are clean and dry.
- Thread the sensor into the test tap until the O-ring makes contact with the bushing tap surface.
- As you do this, be careful that the O-ring stays in place in the sensor O-ring nest.

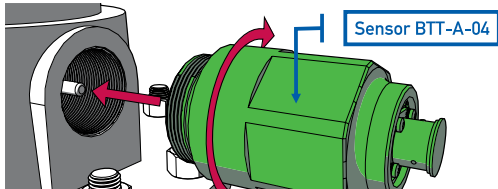


4 Install Bushing Sensor Type T (BTT-T-04)

- The pin in the test tap is spring loaded and gets depressed when it contacts the post inside the sensor.
- After the O-ring makes contact with the test tap surface, tighten an additional $\frac{1}{4}$ turn or until the sensor is snug.
- Verify that the O-ring stays in place in the sensor O-ring nest.
- Verify the sensor metal case makes metal to metal contact with the bushing flange.

5 Install Bushing Sensor Type A (BTT-A-04)

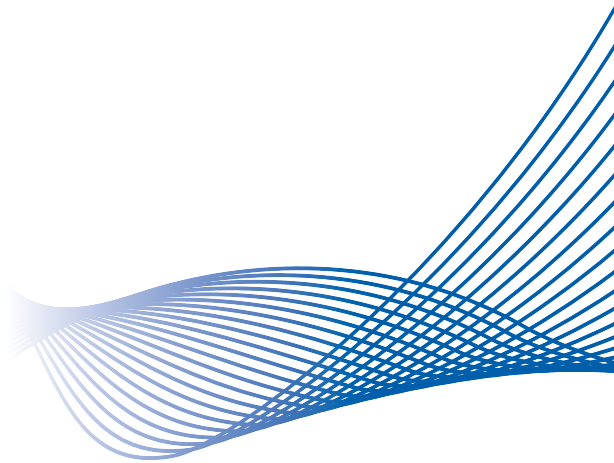
- You might feel some resistance when the contact pin engages the contact clip in the sensor.
- After the O-ring makes contact with the test tap surface, tighten an additional $\frac{1}{4}$ turn or until the sensor is snug.
- Verify that the O-ring stays in place in the sensor O-ring nest and that the sensor metal case makes metal to metal contact with the bushing flange.



Note: Refer to the Sensor/BTA installation instructions for all other sensor/BTA installation details.

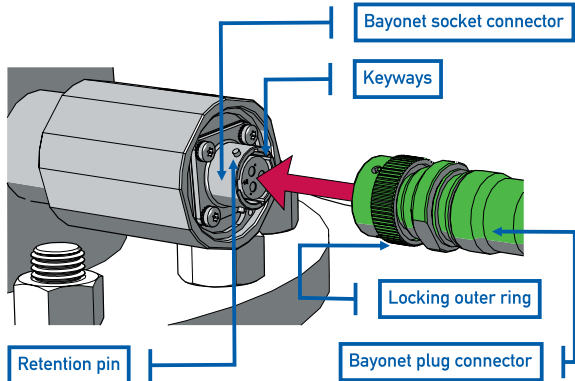


For Illustration Purposes Only - actual bushing and tap adaptor might be different to what is shown. Majority of images show the BTT-T-04 variant, procedure is the same for both unless otherwise specified.



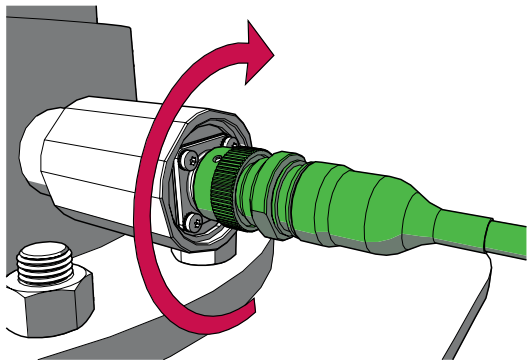
Connection

6 Connect sensor cable (not included with this part)

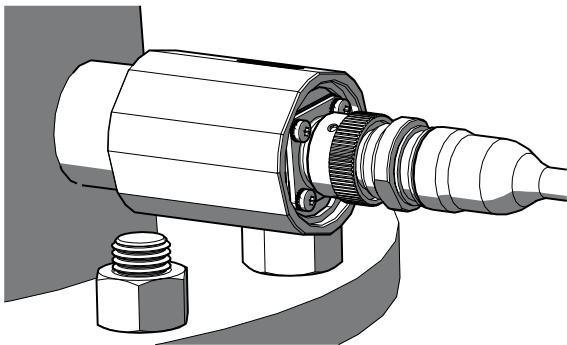


- Align the keying ridges of the plug connector's fixed inner ring with the keyways in the socket connector.
- Push the plug connector onto the socket connector.

- Rotate the plug's outer ring until the slots in the outer ring align with the socket's retention pins.
- Continue to apply light pressure on the plug while turning the locking outer ring clockwise until it locks in place over the retention pins and the ring cannot be turned any more.



Sensor/BTA and cable fully mated
circular bayonet style connectors

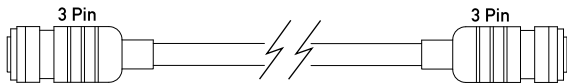


DO NOT apply any sealants or sealing
tape to these connectors or cables



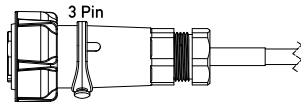
Optional Sensor Cables & Notes

Optional Sensor Cables



Cable : sensor, circular socket to circular socket.
stainless steel protective sleeving

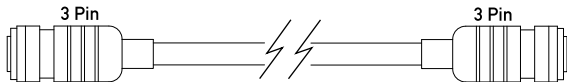
05B-1021-01	3.05m / 10ft
05B-1021-02	6.10m / 20ft
05B-1021-03	12.19m / 40ft
05B-1021-04	18.29m / 60ft



Kit : Conversion Hirshmann
 to Circular adaptor

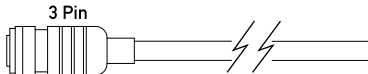
Rodent protection only

030-2257-01	0.40m / 1ft 4in
030-2257-02	1.00m / 3ft 4in
030-2257-03	2.00m / 6ft 7in



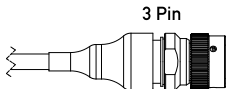
Cable : sensor, circular socket to circular socket.
No protective sleeving / high temp

05X-0022-01	1.52m / 5ft
05X-0022-02	3.05m / 10ft
05X-0022-03	6.10m / 20ft



Cable : sensor, circular socket to open end.
No protective sleeving / standard temp

05B-1329-01	15.24m / 50ft
05B-1329-02	30.48m / 100ft
05B-1329-03	60.96m / 200ft
05B-1329-04	91.44m / 300ft
05B-1329-05	4.57m / 15ft
05B-1329-06	1.52m / 5ft



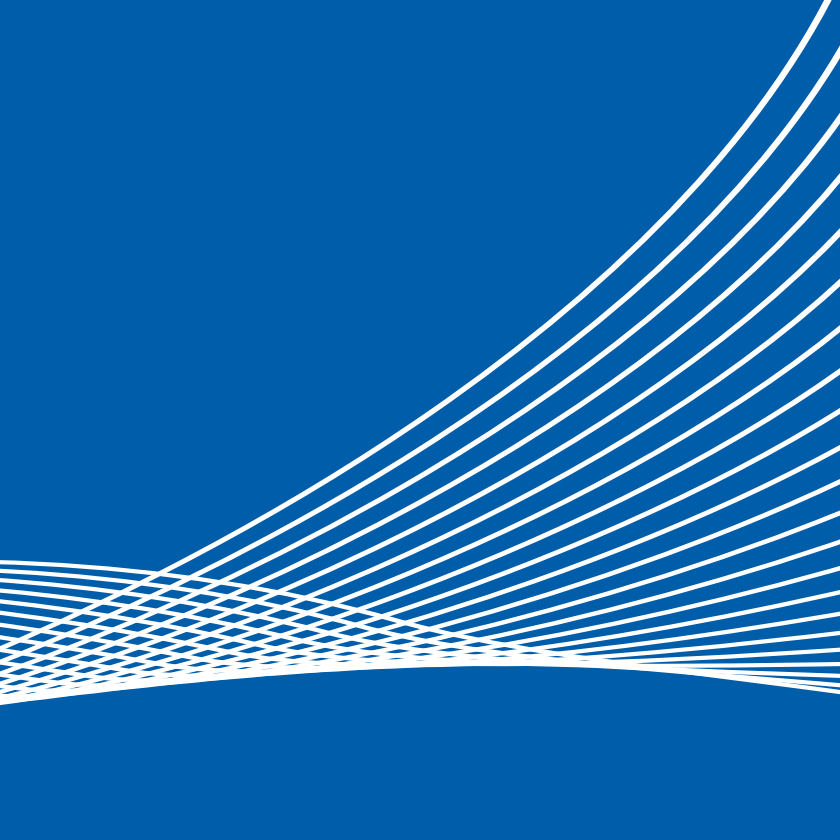
Cable : sensor, circular socket to open .
No protective sleeving / high temp

05B-1321-01	15.24m / 50 ft
05B-1321-02	30.48m / 100 ft
05B-1321-03	60.96m / 200 ft
05B-1321-04	91.44m / 300 ft
05B-1321-05	4.57m / 15 ft

Notes

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