

APPLICATION NOTE

FLEXIBLE SENSOR CABLE SOLUTION

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1. SCOPE

This document provides a short explanation about SolidAT's Flexible Sensor Cable Solution and ways to connect them to SolidAT products.

2. OBJECTIVES

- Familiarize the user with SolidAT's Flexible Sensor Cable Solution.
- Familiarize the user with a special IP68 "junction" connector solution for Flexible Sensor Cables.

3. FLEXIBLE CABLES (UNCLASSIFIED)

SolidAT has two types of sensors, the 25 KHz sensor compatible for the **SmartScan**[®] 25 and **SmartLite**[™], and 50 KHz sensor compatible for the **SmartScan**[®] 50.

The use of a Flexible Sensor Cable, allows the user to extend the sensor's cable to the exact length needed without wasting spare cable. However, buying long cable from SolidAT will increase shipping expenses due to the cable's heavy weight.

The user can use the Flexible Sensor Cable Solution in order to decrease the total cost of the sensor. Suitable cables can be found in local markets for less cost, allowing the customer to save expensive shipping costs of the cable.

Flexible sensor cables are supplied with a 5m/16.4ft loose-end cable. However, they can be modified to fit longer lengths than 5m/16.4ft. The modifications in the cable lengths can be done according to the following tables:

Table #1: Flexible cable ranges for 25 KHz sensors

Can be changed to a range of
5m/16.4ft to 50m/164ft
50m/164ft to 100m/328ft
100m/328ft to 150m/492ft
150m/492ft to 200m/656ft

Table #2: Flexible cable ranges for 50 KHz sensors

Can be changed to a range of
Up to 100m/328t
100m/328ft to 200m/656ft

Note:

When buying a Flexible Sensor Cable, it comes assembled with a male side connector.

The sensor extension cable should be compatible with the following specifications: 4 wires, 0.75 mm² overall shielded. Sensor cable should be compatible with HELUKABEL P.N.16028 (www.helukabel.com).

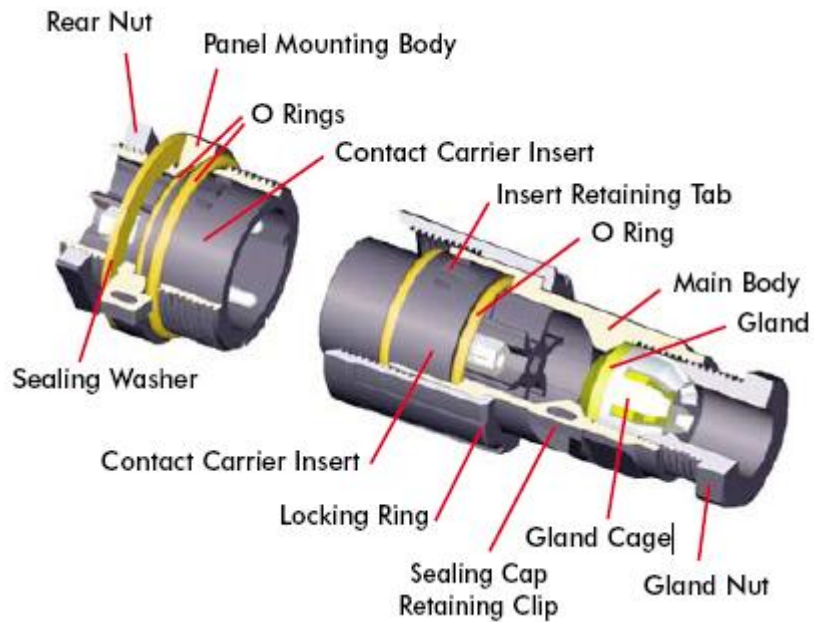
4. BULGIN MINI BUCCANEER IP68 FLEX CONNECTOR

Solid AT has tested the Bulgin Mini Buccaneer IP68 PX0800 male & PX0801female Flex connector and found it to be the ideal solution for Flexible Sensor Cable extension cable connections.

4.1 BULGIN MINI BUCCANEER IP68 FLEX CONNECTOR SPECIFICATIONS

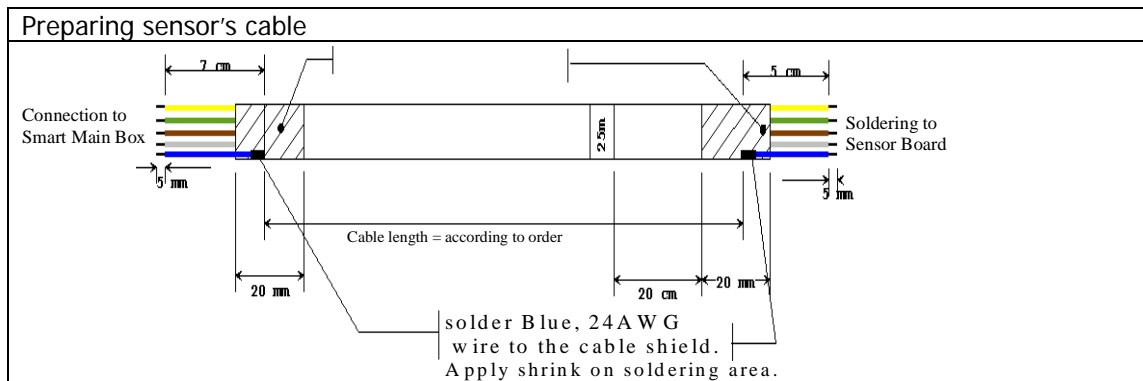
- Water and dustproof to IP68 when mated.
- IP68 rating tested at 1.054Kg/sq cm (15lb/sq in) 10m depth for 3 weeks.
- 3A, 250VAC 6 way screw terminal.
- Positive locating keyways – cannot be mis-mated.
- Sealing caps available to maintain IP68 rating of unmated connectors.
- Flammability rating UL94V-0 material.
- Easy assembly – no special tools required on screw terminal design.
- UL approval.

4.2 MECHANICAL DESIGN

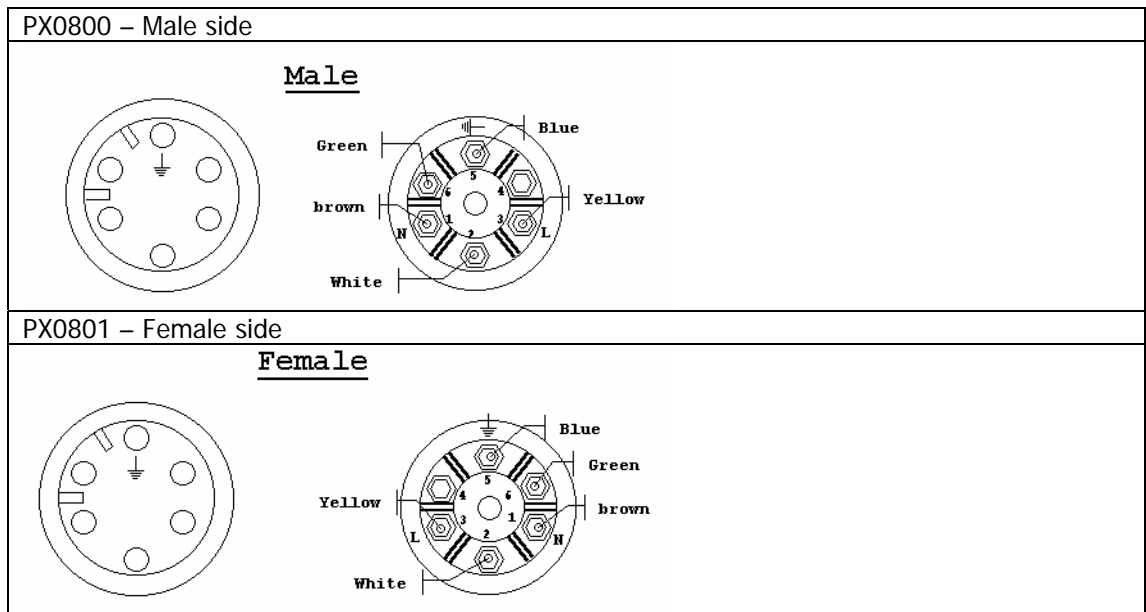


4.3 ASSEMBLY INSTRUCTIONS

When using a PX0800 and PX0801 connector, user must follow manufacturer's instructions describing how to connect the cable to the connector. Please follow the wiring diagram below.



Connect the wires as described in the below drawing.



Please contact SolidAT's customer support team whenever you are not sure whether your cable is suitable.

Note:

When ordering the Flexible Sensor cable connector, Solid AT supplies the following:

- PX0800 Male side is attached to the sensor.
- Connector comes unassembled and will be assembled by the user.