SEC_4901
04.25

Modbus Pressure Sensor

Installation and Programming Guide

SE CONTROLS

Description:

This product utilises Modbus technology to network multiple Pressure Sensors via a 2 & 3 Core cable connected in series to Mechanical Fan Panels.

This air differential pressure transmitter has been designed for ventilation, fan speed control, air pressure monitoring and control system applications.

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Please keep these operating instructions for future reference and maintenance.
Subject to technical modifications. Diagram is not binding.

Contents

1.0 Specification

1.1 Technical Data

Part Number	FYS15070031
Dimensions	220 x 209 x 124 mm (W x H x D)
Supply	24 V dc = ± 10%
Power Consumption	54 mA (1.3W)
Outputs	Modbus RTU RS485
Accuracy (@25°C)	<125 Pa = ± 2 Pa >125 Pa= ± 1 Pa
Operating Temp	0°C to +50°C
Operating Humidity	0.98% non-condensing
Pressure Overload	25K Pa
Enclosure	IP30

2.0 Installation

2.1. Network Connection

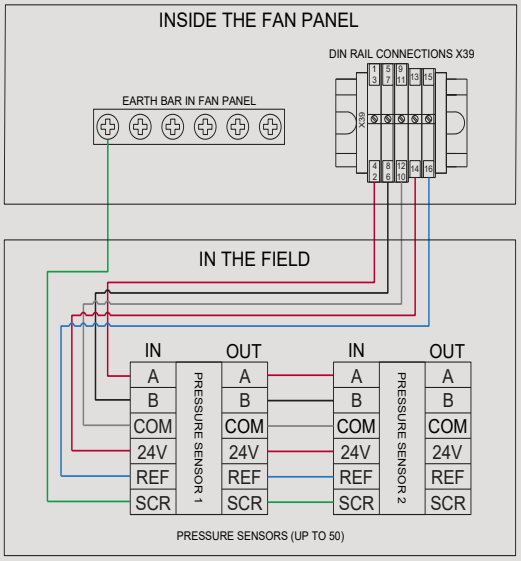
Each Modbus Pressure sensor should be linked via a 2 and 3 core cable The 2 core is connected to the **REF** and **24 V supply**, The 3 core cable goes to the **Network A in/out** , **B in/out** and **Com**.

An **SCR terminal** has been added to run a screen cable between each pressure sensor on site and back to the earth bar on the fan panel to counteract any interference if required.

The image below shows these connections.

2.2. Panel Connection

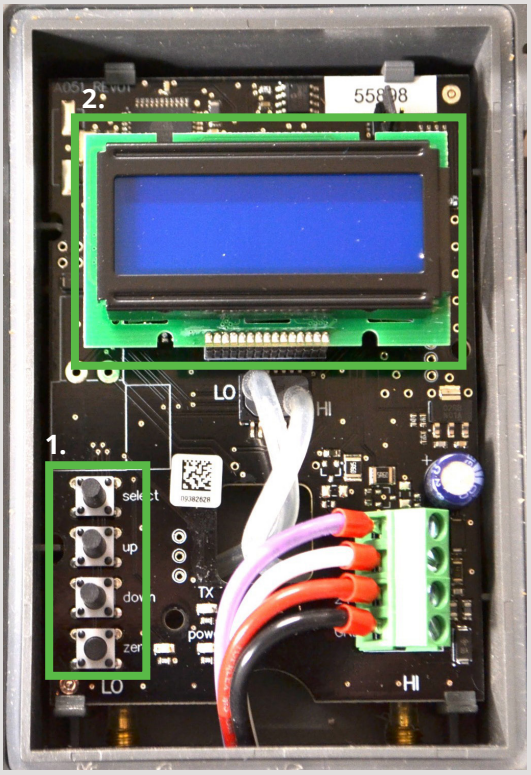
When connecting the network to the Mechanical Fan Panel please note that the network connections are reversed at the panel.



2.3. On Site Programming

Each Pressure sensor delivered to site will need to be addressed and configurated.

Open the lid and you will see 4 buttons (**1**) and an LCD display (**2**).



- Holding the **SELECT** button will open the menu options.
- Using **UP** and **DOWN** will scroll through the menu options.
- Pressing the **SELECT** again will open that menu selection and **UP** and **DOWN** will change the value/selection.
- Pressing **SELECT** again will save your selection.

Please ensure the following values are inputted into each menu option:

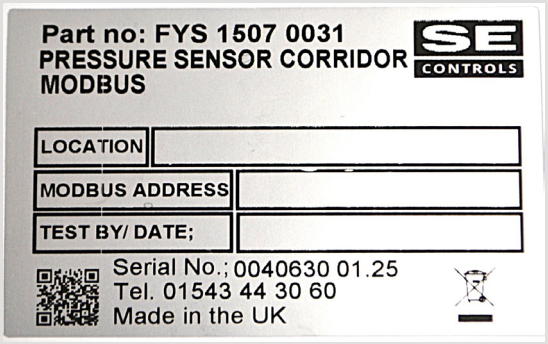
Manufacture	Insert manufacturers setings
K-Value	1,000
Pressure Unit	Pa
Flow Unit	None
Response Time	1 s
Address	Address number for the pressure sensor being set up. Make sure to follow these addresses on the Wiring Schematic provided with the engineers pack.
Baud Rate	38400
Parity Bit	Even

Once these menu options are changed scroll to the **EXIT MENU** and press **SELECT**. The LCD screen should now show the current pressure value.

When connecting the tubes make sure the **positive is connected to the Hi Port** and the **negative to the Lo Port**.

2.3. On Site Programming, continued

Once programming is complete please complete the identifier label attached to the lid with the relevant information, see below:

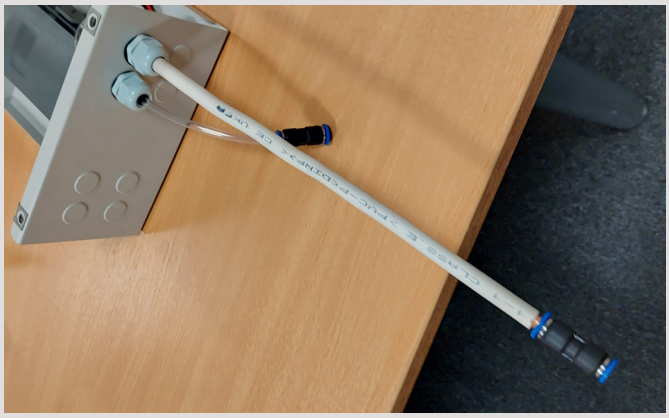


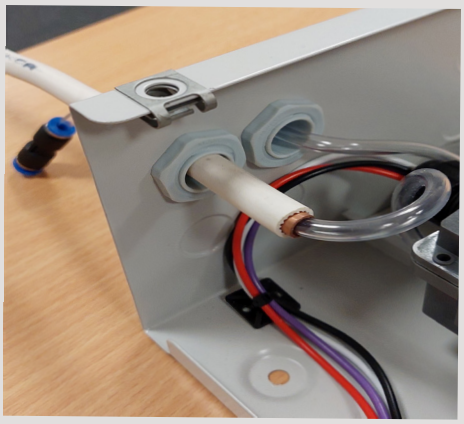
2.4. Copper Tubing

The copper tubing used for connecting to the Pressure Sensor should be the Plastic Coated 8mm Copper Tubing. **FYS15040191 Ø8MM PLASTIC COATED COPPER TUBING 25MTR.**

The copper tube is supplied only in a 25-metre roll, SE Controls is unable to fulfill requests for custom lengths to suit specific installation layouts.

A finishing port is available to enclose any exposed copper tubing. **FCS00200083 PRESSURE SENSOR PORT ENCLOSURE C/W CONNECTION ADAPTER**





The images above depict the copper pipe that leads from the Pressure Sensor, contained within the white port enclosure.

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Creating a healthier & safer environment

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