PRD/SEN Version 4.0

Din Rail 32 Input Card (8 Pressure inputs)

Installation & Programming

NOTE: A 2mm FLAT BLADE SCREWDRIVER IS REQUIRED FOR THE 13 WAY TERMINALS.

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1. INTRODUCTION

The Sensor card is a 32 input card suitable for temperature, pressure(8 only), humidity, power transducer, gas or contact sensing. The readings are sent over the LON network for Presscon controllers to use.

2. INSTALLATION

The sensor card is housed in a din rail 6 module enclosure and can be clipped onto din rail extrusion for quick and easy installation.

The Sensor card should be located to minimise wiring to its sensors. These wires must not be run near high current or high voltage wires. The sensor card must be connected to the LON network and a Power Supply. The LON network connections are BUS+, BUS- and SHLD. All cards on the network are connected via these terminals in daisy chain fashion. The first and the last cards in the chain should have their terminate jumper (J2) fitted. Shielded twisted cable should be used to connect BUS+ and BUS- and the shield connected to the SHLD terminal. The shield is then connected to earth at one end only for the entire network.

Refer to the **Presscon Network - Wiring Specifications & Start-up** sheet for further details.

12 volt dc power for the Sensor card can be supplied from a Presscon PRD/PB60 that provides a protected and filtered power supply suitable for this and other cards on the network.

Refer to the **Presscon Network: Power Supply Considerations using a PB60** sheet for further details.

Connect the 12V and GND terminals on the Sensor card to the 12V and GND terminals on the PB60 power supply.

Each Sensor card must be given a unique network address (via the Network Cards menu of any display card). The factory default address is 20. It is recommended that numbering starts at 21 so new Sensor cards added to the network will not conflict with existing cards.

2.1 SENSOR TERMINALS

The 32 sensor inputs are available on the 3 x 13 way connectors.

Inputs 1 to 8 on the top row of terminals maybe used for temperature, pressure, humidity, power transducer, gas or contact type inputs.

Inputs 9 to 20 and 21 to 32 on the bottom row of terminals maybe used for temperature or contact type (voltage free) inputs.

Please refer to terminal labelling prior to wiring of inputs.

Each row of 13 terminals is removable to facilitate easy wiring or changeover of cards. Take care to prise the terminals straight out of the socket without twisting or bending. The use of a small screwdriver will be helpful for this.

Ensure the terminals are plugged back into the correct socket when they are replaced.

2.2 TEMPERATURE SENSORS

Temperature sensors used are the Phasefale M, F or H Probes and are wired to the G and 1 terminals for input 1, G and 2 terminals for input 2 etc. The temperature sensors have no polarity. Temperature sensors can be extended up to 100m provided any joins in the cable are securely made, insulated and kept dry.

IT IS REQUIRED THAT SCREENED DATA CABLE BE USED AND THAT THE SCREEN BE EARTHED AT THE SENSOR CARD END ONLY.

Mount the probe and at least 150 mm of the cable in the sensed air.

(Refer to 4. for wiring details)

2.3 PRESSURE SENSORS

Up to 8 pressure sensors inputs are available using inputs 1 to 8. PRD/SEN are shipped from the factory with first 8 inputs set for temperature. To select any of inputs 1 to 8 to accept a pressure sensor the dip switch for that input must be switched to the pressure (ON) position. For example if you are only using 2 pressure sensor inputs (e.g. inputs 1 & 2), set dip switches 1 & 2 to “ON”. Inputs 3 to 8 will then be all types other than pressure.

(Refer to 4. for wiring details)

2.4 CONTACTS

Clean (voltage free) contacts can be sensed by connecting them to inputs (1 – 32) and G terminals, as for temperature sensors.

4. WIRING DETAILS

Connections ---------- Sensor Type	Power supply + Terminal	Power GND or Signal return Terminal	Signal Termina	DIP Switch	Additional Information
Pressure	+ 12VDC (Brown wire)	G (Green wire)	1 to 8 (White)	ON	
Temperature	N/A	G	1 to 32	OFF	Non polarised
Humidity	+ 12VDC (Red wire)	G	1 to 8 (Black)	OFF	Fit 100 Ohm to G and Signal
Gas	+ 5V OUT to S4	G to S	1 to 8 from S1	OFF	Only one Per + 5V OUT
Power Watt Transducer	(240VAC)	G from 16	1 to 8 from 15	OFF	
Contact	N/A	G	1 to 32	OFF	Voltage free

2.5 HUMIDITY, GAS, POWER SENSORS

Humidity, Gas and Power transducer signals must be wired to inputs 1 to 8 in accordance with section 4. wiring details table.

For Gas sensors, only one may be supplied from the +5 V terminal of each Sensor card. Importantly cabling to the Gas sensor from the +5V supply must be of sufficient size to ensure no less than 4.8Vdc is supplied to the Gas sensor.

Humidity sensors require the installation of a 100 Ohm resistor (supplied with the sensor) between the signal input terminal (1-8) and G.

The dip switch for these inputs remains in the temperature (Off) position.

3. OPERATION

3.1 LED INDICATORS

P (green LED) indicates power on.

# Indicates the card address as described in para3.2

1 to 8 indicate input status as follows:

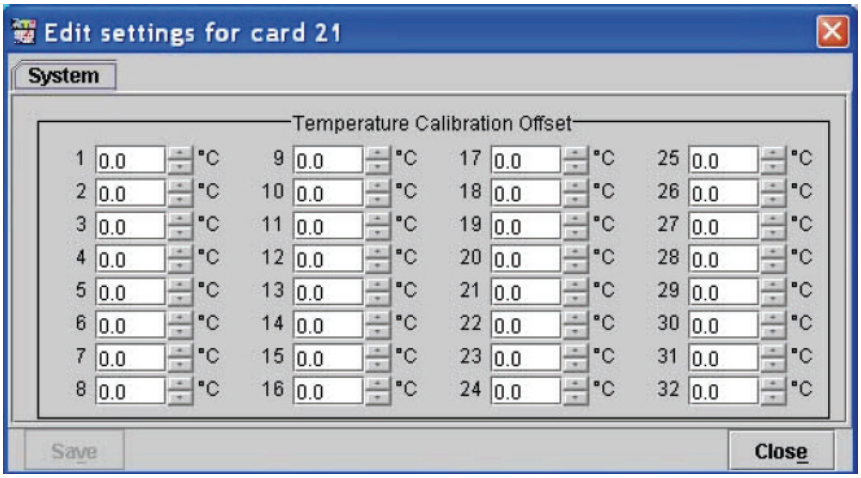
LED "off" means open circuit input.

LED "on" means closed circuit input.

LED flashing "on & off" means analogue input.

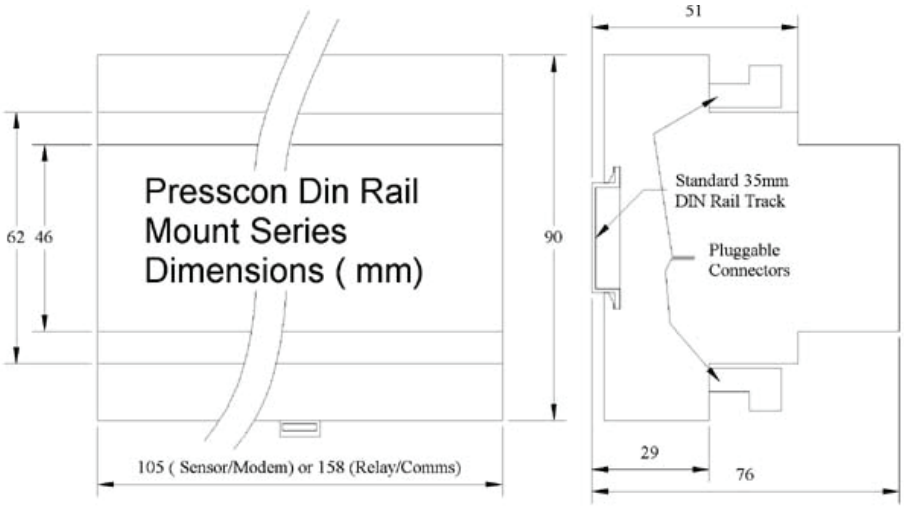
3.2 ADDRESS INDICATOR

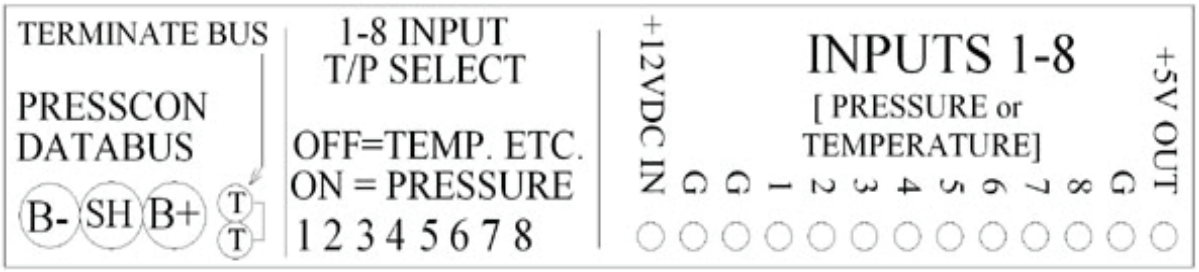
When the card is being addressed the Address indicator (window # of decal) will be steady ON, it will flash during normal operation to show the address number of the card. The address is determined by counting the number of long flashes and the number of short flashes. Each long flash counts as ten and each short flash counts as one. For example, two long flashes followed by three short flashes indicates the card is number twenty-three. If a fault has occurred on the card or power is off the indicator will be off.

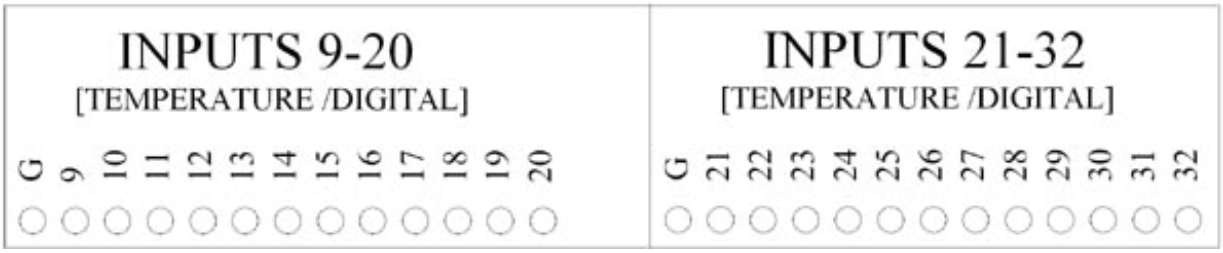


Above: Sensor 32 inputs can be calibrated in ºC using Pressnet Software

Below: Dimensions of The Din Rail mounting input card enclosure







Phasefale Pty. Ltd.
Ph. +61 3 9553 0800
Fax. +61 3 9553 3993
Web phasefale.com.au
Email sales@phasefale.com.au