

# INCA

**CONTROL PTY LTD**  
**UNIT14/62 OWEN ST**  
**GLENDENNING NSW 2761**  
**A.B.N 54 131 353 636**

Design & Manufacture of:  
Custom-built switchboards  
Electronic control equipment  
AC/DC pumping controls  
Installation & service

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## INCA MODEL

### PVS1

# VARIABLE SPEED DRIVE CONSTANT PRESSURE CONTROLLER

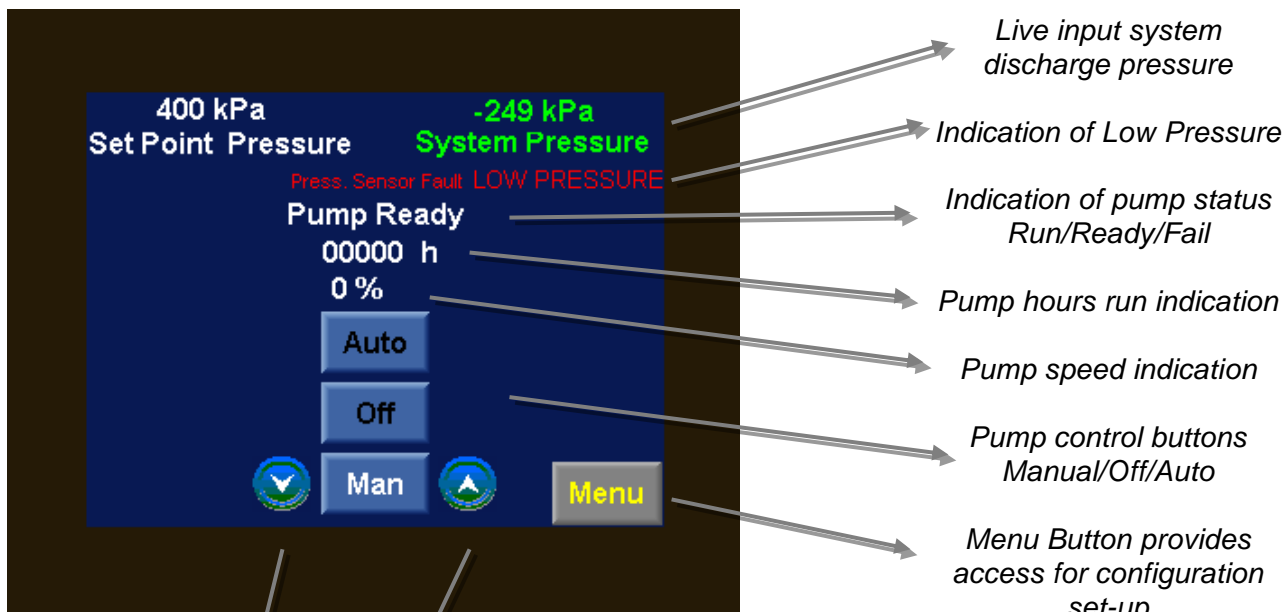
## SETUP MANUAL Inca Reference PVS1

### Software Version 1.0

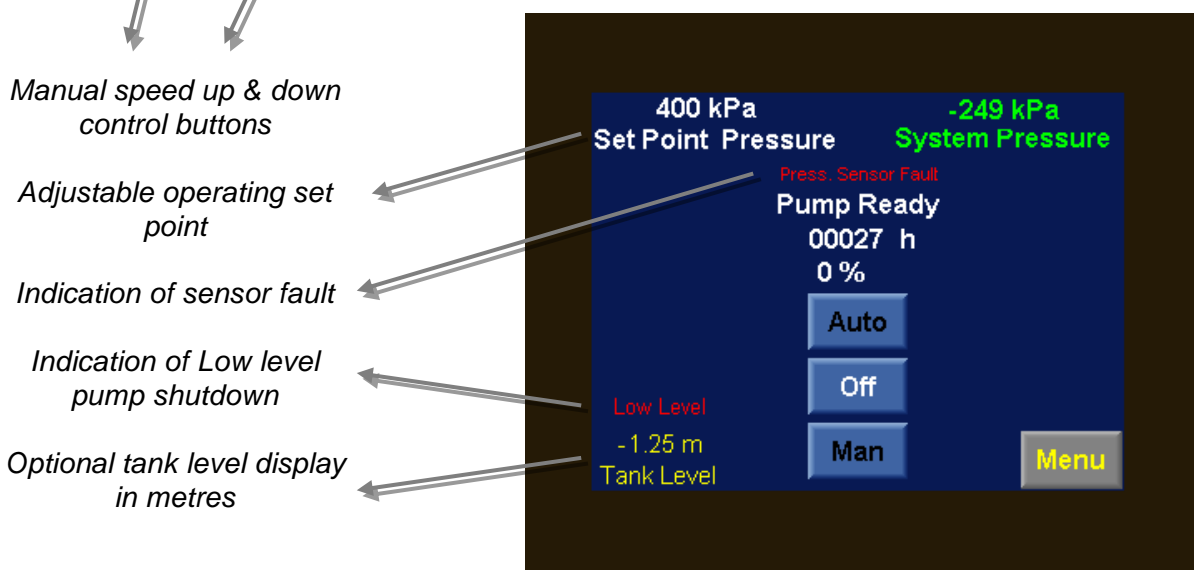
Technical Support  
Electrical & Controls – Inca Control Pty Ltd  
Phone 02 9675 1381

# 1. PVS1 MAIN SCREEN OVERVIEW

## Standard Panel Screen



## Screen with Optional Tank Level Display



## 2. DATA LOGGER

### Data Logger Page



Touching on the Menu touch point on the main screen transfers you to the Data Logger & Configuration page

Touch on the DATA LOGGER touch button will take you to the Fault Data logger Page

Touch on the Exit button will take you back to the main screen

Logged fault start at 1 as earliest & move on from there to 1000. At this point logging will write over stored logs starting from 1

Move through logs using up & down Button

Logged fault Number

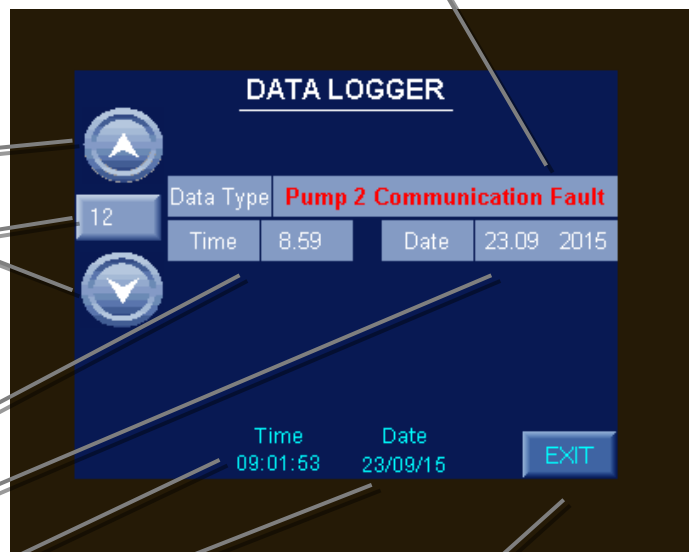
Time of day fault occurred

Date including year fault occurred

Actual time of day

Actual date

Logged fault type  
Pump fail/Communication Fault/Low pressure/Low level/Sensor fault



Touch on the Exit button will take you back to the main screen

### 3. CONFIGURATION

#### 3.1 Data Logger Page



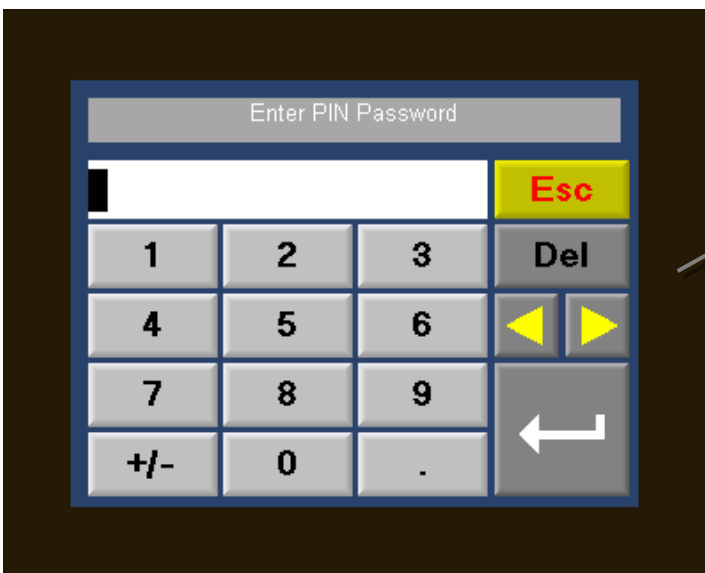
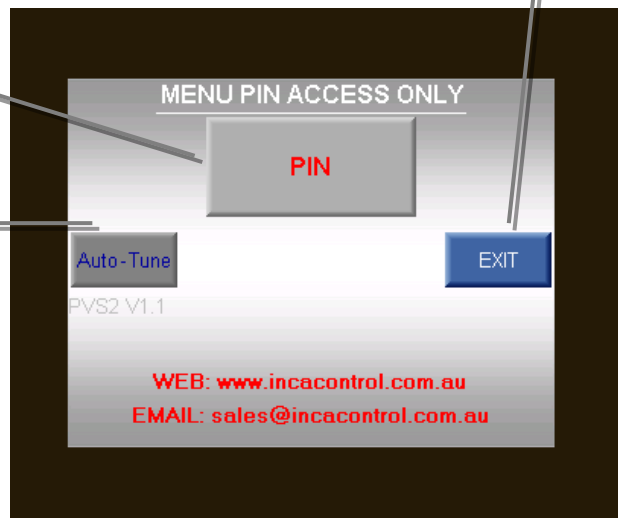
Touching on the Menu touch point on the main screen transfers you to the Data Logger & Configuration page

Touch on the CONFIGURATION touch button will take you to the Menu PIN Access only Page

Touch in on the Exit button will take you back to the main screen

Touch on the PIN touch button to bring up the virtual key pad, see below

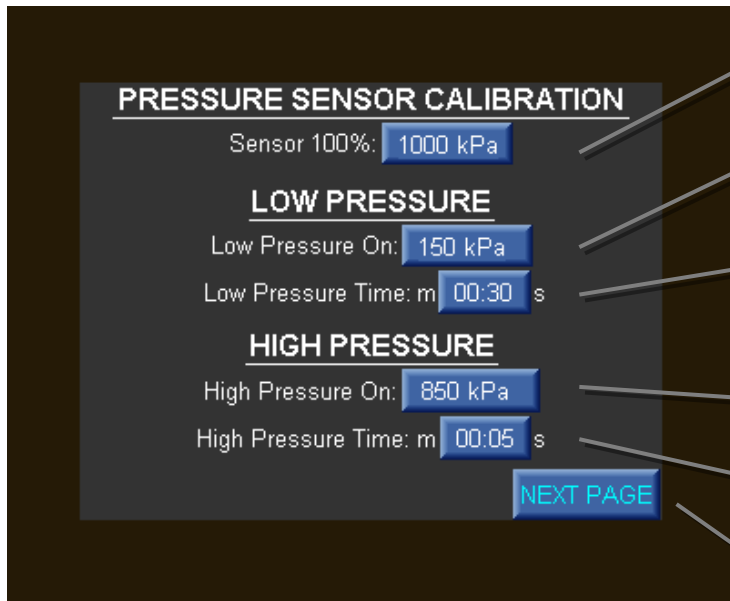
If auto tune is required, which allows the controller to see the response of the pumps in relation to flow & put PID control parameter in the OPLC back ground. To activate press & hold AUTO TUNE button until the page returns to the main screen. Auto tune should take about 5-10 seconds



Enter the 4 digit Pin No & press the enter key (return arrow) to move onto the parameter set up pages

The Virtual keypad will appear each time you need to enter a value as you move through the menu. Simply key in your value & press the enter key (return arrow) to accept the entry

### 3.2 Pressure Sensor Calibration



**Sensor 100%,**  
This is the 20mA output reading (sensor maximum) & is displayed in kpa

**Low pressure On**  
Enter the pressure at which you want the pumps to shut down at

Enter the time delay at which pressure must be below Low pressure on before pumps shutdown

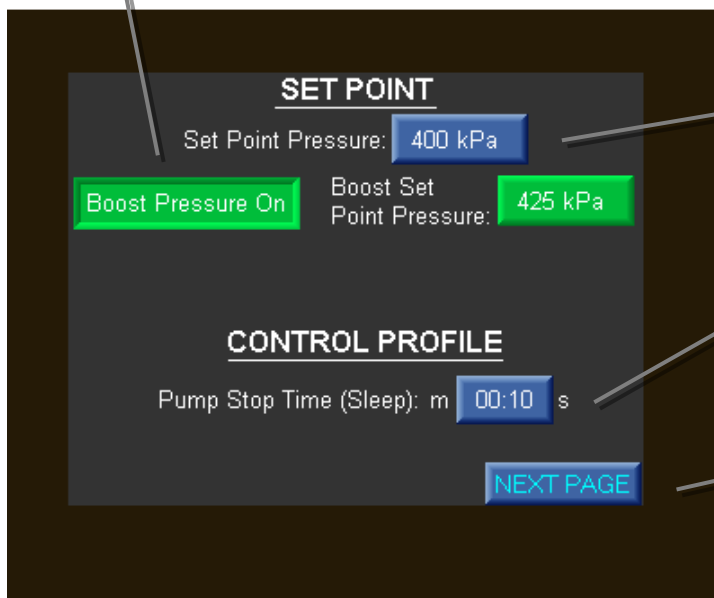
**High pressure On**  
Enter the pressure at which you want the pumps to shut down at

Enter the time delay at which pressure must be above Low pressure on before pumps shutdown

Touch on the Next Page button will take you to the next screen

### 3.3 Set Point

**Boost pressure On/Off**  
Enter a boost pressure higher than set point pressure say +10 to 20kpa. When selected on will make the controller boost the pressure higher every minute to force a pump shutdown on low flow

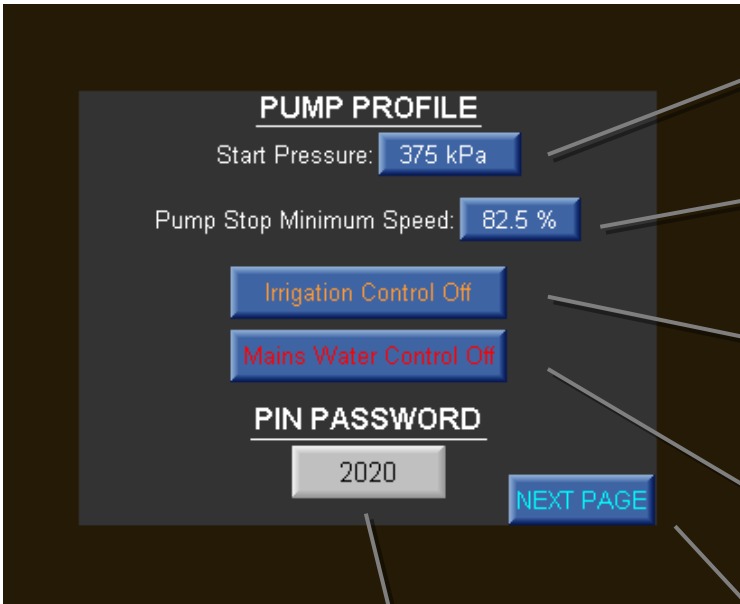


**Set Point Pressure**  
Enter the pressure at which you want the system to maintain

**Duty Pump Stop Time**  
Enter the time delay you want for the pump set to go to sleep once the pump is down to pump stop minimum speed & maintaining pressure

Touch on the Next Page button will take you to the next screen

### 3.4 Pump Profile



**Start Pressure**  
Enter the pressure at which you want the system to start at after being in sleep mode

**Pump Stop Minimum Speed**  
Enter the speed in % of pump when run up against a closed head maintaining set point

**Irrigation Control On/Off**  
Touching on this button will operate the system as a pressure system or as a pressure system with a input command to turn the system on & off. (This is an option)

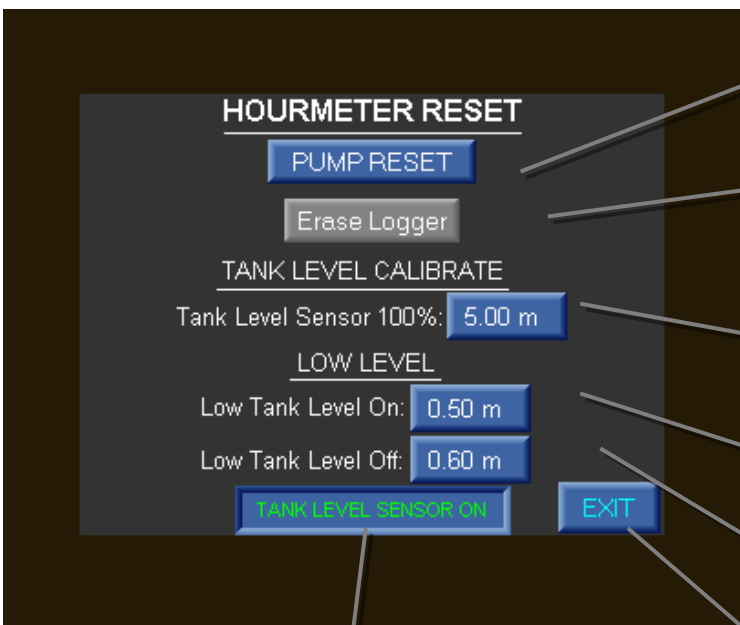
**Mains Water Control On**  
Touching on this button provide output to operate a Mains water Bypass solenoid (This is an Option)

**PIN Password**

You can change the PIN access number of the controller. If you are at this point you obviously have access, enter the new 4 digit PIN Number as required

Touch on the Next Page button will take you to the next screen

### 3.5 Hour Meter Reset



**Hour Meter Reset**  
Touch on the Pump reset Button to Reset hour meter

**Erase Data Logger**  
Touch & hold the erase logger button until Logger erased is displayed

**Tank Level Calibration (Option) Sensor 100%,**  
This is the 20mA output reading (sensor maximum) & is displayed in metres)

**Low Level On**  
Enter the value at which you want low level shutdown to operate at

**Low Level Off**  
Enter the value at which you want low level shutdown to Reset at

Touch on the Exit button will take you to the main screen

**Tank Level Sensor On (Optional)**

Touching on this button will alter the controller to accept a 4-20mA tank level transducer. Enter values as explained on the right

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## **Warranty Statement**

The products manufactured by Inca Control Pty Ltd are guaranteed against faulty workmanship for a period of 12 months from the date of delivery.

Our obligation assumed under this guarantee is limited to the replacement of parts which, by our examination, are proved to be defective & have not been misused, carelessly handled, defaced or damaged. This guarantee is VOID where the product has been modified or repairs have been made or attempted by anyone except an authorised representative of Inca Control Pty Ltd.

Products for attention under guarantee (unless otherwise agreed) **must be returned to the factory at your expense** and, if accepted for free repair, will be returned to the customers address in Australia free of charge.

In addition to the above, equipment manufactured by Inca Control Pty Ltd and installed within the Sydney Metropolitan Area includes onsite replacement.

Equipment supplied by Inca Control Pty Ltd but manufactured by others is covered by their manufactures warranty only.

When returning the product for service or repair a full description of the fault must be given and the mode of operation used when the product failed. Also, the Inca reference must be supplied so we are able to determine if warranty is possible. If the Inca reference is not supplied the warranty claim will not be processed. A return form can be supplied on request when you have a product you want to return for warranty assessment.

Once a panel has been supplied, either off our standard product list or specially quoted, you accept the operating function as provided. Inca Control Pty Ltd will take NO responsibility for damage or incorrect operation once in service & it is up to you the customer to make sure operation is correct during your commissioning.

Any requests for modifications must be forwarded in writing and when agreed to by Inca Control Pty Ltd & installed, then become the responsibility of you the customer to confirm that operation is correct. Inca Control Pty Ltd will not accept responsibility for any damage or incorrect operation once commissioning has been carried out.

In any event, Inca Control Pty Ltd has no other obligation or liability beyond replacement or repair of this product.