

# INCA

## CONTROL PTY LTD

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ELECTRICAL ENGINEERS

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

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## INCA MODEL

### SPC2

## DUAL PUMP-OUT CONTROL PANEL

### USER MANUAL

Inca Reference SP2

Technical Support  
Pumps & Mechanicals – Pump Supplier  
Controls – Inca Control Pty Ltd  
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## Control Panel Overview

The dual Pumps-out Control panel controls the operation of 2-off mains powered submersible pumps with the use of control float switches within the wet well. The panel is manufacture to comply with Australian Standards & for the pumping & float control to be housed in Class 1 Zone 2 Hazardous areas as long as the field equipment is approved for that area

### *Panel Connections:*

#### Isolator Terminals

A & N - 240VAC Supply

L1, L2, L3 & N – 415VAC Supply

#### Field Terminals

Pump 1 – Overload 1, Terminals P1 & N or T1, T2, T3 & N for 415V Supply

Pump 2 – Overload 2, Terminals P2 & N or T1, T2, T3 & N for 415V Supply

Terminals 10 & 11 – Duty Float Switch. Float switch up pump on, float switch down pump off. (Close on Rise)

Terminals 10 & 12 – Standby Float Switch. Float switch up pump on, float switch down pump off. (Close on Rise)

Terminals 10 & 13 – High Level Float switch. Float switch up alarm on, float switch down alarm off. (Close on Rise)

### *Panel Facia:*

The front of the control panel housed switches & indicating lights allowing the operator to see what is happening within the pit in regards to pump operation & alarm conditions.

### *Indicating light:*

The indicating light when on continuously will indicate Pit High Level

The Indicating light when on flashing will indicated either pump has failed via overload

### *Control Switches:*

Pump No1	Manual/off/auto controls the operation of Pump No1. Manual, the pump will run continuously & is not under the control of float switches. Off, the pump will not operate. Auto, the pump will run when told to start via the float switch in the pit.
Pump No2	Manual/off/auto controls the operation of Pump No2. Manual, the pump will run continuously & is not under the control of float switches. Off, the pump will not operate. Auto, the pump will run when told to start via the float switch in the pit.

### *Audible alarm:*

The panel has an audible alarm that sound when a fault condition has been registered, Pump 1 fail/Pump 2 fail/High level. Once an alarm sounds it can be silenced by pressing the alarm mute pushbutton. If a second fault condition is registered during this period the alarm will once again sound to warn of this fault.

The audible alarm has a time feature to comply with noise regulation, once the alarm sounds it will sound for 5minutes & then silence itself for a further 15minutes before sounding again. This cycle will continue until the fault is rectified or the mute pushbutton pressed.

### *Float Switch Operation:*

The pumps are controlled via float switches in the collection pit of which there are 3. Duty float switch or the lowest float switch controls the duty selected pump. The pump will start when the float rises & stop when the float falls.

Standby float switch or the middle float switch controls the standby selected pump. The pump will start when the float rises & stop when the float falls.

High Level float switch or the top float switch operates the high level alarm. The alarm will start when the float rises & stop when the float falls.

Note: for a 2 float system bridge terminals 12 & 13.

If the duty pump is turned off the standby pump will be operated when the water level rises to the standby float switch level.

#### *Pump Fail:*

Pump fail is indicated the red light on the panel facia is flashing. To reset this pump fail condition open the control panel door & in the bottom left of the control panel are the 2 motor starters c/w their thermal overload relay. On the right hand side of the overloads is a small blue tag which will be raised if the overload has tripped. Push this tag back down to reset.

### **NOTES:**