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Model 3 – 1-pump pressure on – time off control unit

Panel	Display	
1	0-XXX PSI	XXX
2	LOW PRES ON	XXX
3	HI PRES OFF	XXX
4	SET TIME	XX:XX
5	LO PRES SAFE	XXX
6	HI PRES SAFE	XXX
7	P1 HOURS	XXXX.X
8	P1 CYCLES	XXXX
9	XX ANTI - OSC	XXX
10	OSC PREVENT	XXX
11	TIME	XX:XX:XX

1. Adjustments.

When the IC Pump Station (ICPS) is first "powered up" the display will show:

SUSPEND

No signal source. Pressure sensor is not connected and pump will remain off. Control will not go into safety shutoff and pumps will start when signal source (pressure sensors) are connected.

0-100 PSI XXX

Pump system pressure in PSI

ADVANCE ->

Press the "Advance" key to advance to next display.

LOW PRES ON XXX

Pressure that Pump 1 will turn on the pump (after delays). When the system pressure goes below this setting the pump will turn on

ADVANCE ->

Press the "Advance" key to advance to next display.

HI PRES OFF XXX	Pressure that pump 1 will turn off (after delays) When the system pressure goes above this setting the pump will turn off. This will override the timer Setting.
ADVANCE ->	*Press the "Advance" key to advance to next display.*
SET TIME XX:XX	Run time setting. When the pump turns on it will turn off after this elapsed time.
ADVANCE ->	*Press the "Advance" key to advance to next display.*
LO PRES SAFE XXX	The Pump 1 pressure that the ICPS unit will go into safety shutoff. The system pressure must be below this pressure for 30 seconds (default) continuously in order for the safety shutoff to activate. To clear any safety shutoff condition press AUTO/OFF to turn off and press AUTO/OFF again to turn it back on. If the Low Pressure Safety feature is not desired move the setting to "00" and the safety shutoff will not activate.
ADVANCE ->	*Press the "Advance" key to advance to next display.*
HI PRES SAFE XXX	The Pump 1 pressure that the ICPS unit will go safety shutoff. This number can be adjusted anywhere on the scale to act exclusively as a safety over pressure shutoff.
ADVANCE ->	*Press the "Advance" key to advance to next display.*
P1 Hours	Pump 1 Hours Records how long pump has been on. To reset to "0000.0" press and hold the "down arrow" RESET/NO.
ADVANCE ->	*Press the "Advance" key to advance to next display.*

P1 Cycles	Pump 1 cycles. Records the number of pump on-off cycles. To Reset to "0000" press and hold the "down arrow" RESET/NO key.
ADVANCE ->	*Press the "Advance" key to advance to next display.*
XX ANTI-OSC XX	The first number is the "countdown" time. The second number is the system pressure. When the system pressure goes above or below the Low Pressure on level this delay timer is activated and the "OSC PREVENT" time is placed here to start a count-down before starting the pump. This greatly improves pump on-off stability.
ADVANCE ->	*Press the "Advance" key to advance to next display*.
OSC PREVENT	Time in seconds anti-oscillation delay is active. This value is transferred to the ANTI-OSC display whenever the system pressure rises above or drops below the "low pressure on" setting.
ADVANCE ->	*Press the "Advance" key to advance to next display.*
TIME XX:XX:XX	Pump time on remaining. Time remaining until pump will turn off. Will be overridden by a "high pressure off" or by pressing the AUTO/OFF key.
ADVANCE ->	*Press the "Advance" key to advance to next display.*
0-100 PSI XXX	The control unit goes back to the beginning.

2. Control Functions

"UP ARROW" increases number viewed on display. "DOWN ARROW" decreases number viewed on display. When the AUTO/OFF switch is pressed the display will say "OFF" and will remain off indefinitely. When the indicator light turns on the relay coil is energized. Control is supplied with external relay that is intended for pilot duty only – typically to switch the coil on a much larger load relay or contactor.

3. Specifications

Temperature range: 30-120 degrees F. Power input for control unit: 12 VDC 200 mA max supplied by external "wall cube" transformer. Standard relay: IDEC RH1B-U DC12V. Relay contact rating: SPDT 7 amps @ 240 VAC. When switching high voltage relay must be mounted inside a user-supplied, grounded metal enclosure for safety.

4. Pressure sensor

This IC Pump Station model 3 is designed to work with widely available 4-20mA 0-100 PSI full scale pressure transducers. Other pressure ranges can be used. Contact our office for more information.

5. Installation.

DIN rails (Aluminum mounting rails) are provided. Observe all safety procedures including, but not limited to, proper electrical grounding and pressure relief provisions. Mount the IC Pump Station unit (DIN rail) out of sunlight and direct weather. Snap IC Pump Station unit on the DIN rail. Mount the other DIN rail and relay inside a (user provided) grounded, metal junction box for safety. The relay can be also mounted inside most pump panels. Use the ½" knockout bushings provided to prevent wire chafing on the metal edges. This relay is intended for normally open, pilot duty only (to switch a much larger contactor) up to 250 VAC and is not suitable to drive motor loads. Wiring diagram is printed on the relay. Contact the factory regarding higher voltage/current relays.

6. Operation

To the IC Pump Station unit connect power supply ("wall cube" transformer), pressure sensor and relay output. Plug in the power supply and make adjustments. Observe pump operation to make sure it's working correctly and re-adjust if needed.

Contact information:

For more information: P2FlowLLC 5475 Hawley Road, The Dalles, OR 97058.
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