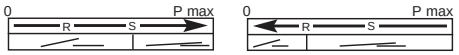
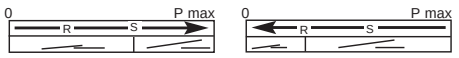
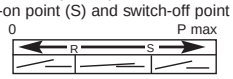
Dual Output Pressure Switches

PN 7 Series

The PN Series of pressure switches uses a three-digit display to program the switching points and provides an accurate readout of system pressure and switch setpoints. The solid-state output is programmable for normally-open and normally-closed operations. **ifm efector** PN Series pressure switches have an accuracy rating of ±2% of full range. Switching points can be set in steps of 1% of full range with a repeatability of 0.25% of full range.

The 6000 psi models show one tenth of the actual pressure on the 3-digit display. This value must be multiplied by a factor of ten to determine the actual value.

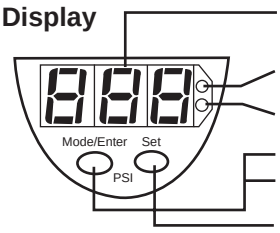
Functions and Features

Hysteresis N.O.	output = ON when the switch-on point (S) has been reached output = OFF when the switch-off point (R) has been reached 
Hysteresis N.C.	output = OFF when the switch-on point (S) has been reached output = ON when the switch-off point (R) has been reached 
window function N.O.	output = ON when the system pressure is between switch-on point (S) and switch-off point (R) 
window function N.C.	output = OFF when the system pressure is between switch-on point (S) and switch-off point (R) 

Programming Mode

1	Press Mode/Enter until desired mode is displayed.
2	Mode is displayed.  (See Pressure Switch Menu Items)
3	Press and hold Set until the desired value is displayed.
4	After holding for 5 seconds the value is continuously incremented. 
5	Press Mode/Enter once to enter desired value.
6	Value and function are set. After another 5 seconds it returns to the operating mode..
7	Repeat these steps to set other values and functions as required.

Display



Locking/unlocking: Press both the pushbuttons for 10 seconds. The LED will blink once.

Error Indication:
SC1 (flashing): Switching output 1 is short circuited
SC2 (flashing): Switching output 2 is short circuited.
OL: Overload pressure (system pressure is greater than 110% of the maximum nominal pressure).

Pressure Switch Menu Items

 Switch-on point (setpoint): in 1% steps
setting range: 5 to 100%

 Switch-off point (resetpoint): in 1% steps
setting range: 3 to 98%

 Switch-on delay: setting range
0 to 50 seconds in steps of 0.2 and 1 second

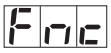
 Switch-off delay: setting range
0 to 50 seconds in steps of 0.2 and 1 second

 Output 1

 Hysteresis mode: normally open

 Hysteresis mode: normally closed

 Field mode: normally open
(window function)

 Field mode: normally closed
(window function)

Repeat the pressure switch menu items for the second output (SP2, rP2, dS2, dr2, OU2, Hno, Hnc, Fno, Fnc).

Rise Time/Switching Frequency

The Rise Time (response time) is programmable. This feature is useful if you wish to ignore pressure spikes of short-duration or high frequency. Changing the rise time will affect the switching frequency of the switch. The following chart lists rise times, and the resulting maximum switching frequency of the switch.

Response time (dAP) of the output [ms]	3	6	10	17	30	60	125	250	500
Resulting switching frequency [Hz]	170	80	50	30	16	8	4	2	1

NOTE: High pressure surges (spikes), can be caused by the opening and closing of values, and may be present in a fluid system. These pressure spikes are short in duration (<5 ms) and can damage the switch of they exceed the ifm efector pressure over pressure limit.

Concerning Safety...ifm efector makes every effort to build a dependable product, but every product will eventually fail. Therefore, your equipment must be designed to prevent property damage and personal injury if our products fail. ifm efector switches are not designed to be used as stand-alone devices to protect or guard human life or limb - Prices F.O.B., Exton, PA. Prices and specifications subject to change without notice.

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