ASHCROFT®

NEW!

Electronic Pressure Switches, Watertight Enclosure with Pressure Indication, N-Series

Ideal for pressure alarm, shutdown, control on:

- ***Machine tools***
- ***Injection molding machines***
- ***Presses***
- ***Pumps***
- ***Hydraulic systems***
- ***Turbines and compressors***
- ***Most process applications***

Special features:

- ***Ashcroft® K Series polysilicon thin film pressure sensor (transducer) for long, stable life (minimum 1 million cycles at rated load)***
- ***Setpoint repeatability of 0.5% of range***
- ***Watertight, NEMA 4X, IP66 enclosures for safety and reliability***
- ***Pressure setpoints to 20,000 psi***
- ***Deadbands adjustable between 0.1% and 95% of nominal range***
- ***Multi-turn potentiometers make setpoint and deadband adjustments easy***
- ***Status lights indicate switch state***
- ***Continuous power assures operation first time and every time even after years of inactivity***

IN A RUSH? ASK FOR ASHCROFT GOLD SERVICE

1 - FUNCTION

NPI - Single setpoint with adjustable deadband and indication

2 - ENCLOSURE

N4	NEMA 4, IP66, watertight

3 - OUTPUT

D	SPDT Relay	10A, 250 Vac 10A, 30 Vdc
I	SPDT Relay and current output	10A, 250 Vac 10A, 30 Vdc and 4-20mA

4 - POWER REQUIREMENTS

Code	Power Supply
L	110 Vac, 50/60 Hz
C	24 Vdc
V	250 Vac, 50/60 Hz

5 - PRESSURE CONNECTIONS

Code	Description
S01	⅛ NPT male
S02	¼ NPT male
S03	⅛ NPT female
S04	¼ NPT female
S05	7/16-20 SAE-male
S06	½ NPT male, ¼ NPT female
S07	¼ AMINCO-female
S08	7/16-20 SAE-J514-female
VM2	¼ VCR male
VF2	¼ VCR female

6 - OPTIONS

Code	
XEA	External adjustment (N4 only)

7 - STANDARD PRESSURE RANGES

Range psi	Setpoint(1) Limits psi	Proof psi	Burst psi
60	3-60	120	480
100	5-100	200	800
200	10-200	400	1600
300	15-300	600	2400
500	25-500	1000	4000
750	35-750	1500	6000
1000	50-1000	2000	8000
2000	100-2000	4000	16,000
3000	150-3000	4500	15,000
5000	250-5000	7500	25,000
7500	375-7500	9000	22,500
10,000(2)	500-10,000	12,000	30,000
15,000(2)	750-15,000	18,000	45,000
20,000(2)	1000-20,000	24,000	60,000

(1) Switch setpoint is adjustable throughout these limits.
(2) Pressure connection S07 only on these ranges.

NOTES:

Temperature Specifications (70°F ref.)
–20°F to 160°F ambient and process
Setpoint shift of up to 2% of range per 50°F change can be expected

OPTIONAL TRANSMITTER SPECIFICATIONS

PERFORMANCE CHARACTERISTICS

Accuracy Class (F.S.):	**1%**
Nonlinearity	
Terminal Point*	±0.7%
B.F.S.L.	±0.4%
Hysteresis	±0.2%
Nonrepeatability	±0.07%
Interchangeability	±1.0%

*Includes hysteresis

Stability: ±0.5% F.S./year

Durability: 10^8 cycles 20/80% F.S. with negligible performance change

Response Time: Less than 5msec

ENVIRONMENTAL CHARACTERISTICS

Temperature Limits:

Storage	–65/+250°F
Operating	–20/+180°F
Compensated	–20/+160°F

Thermal Coefficients (70°F ref.):

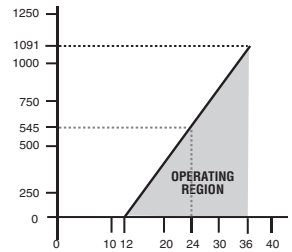
Accuracy	Zero and Span
1%	±0.040% F.S./°F

ELECTRICAL SPECIFICATIONS

Output Signal:	**Supply Voltage:**
4-20mA (2 wire)	12-36 Vdc unregulated

Reverse wiring protected.
Zero Offset: ±1.0%F.S.

Load Limitations 4-20mA Output
Loop Resistance (Ω)



V_{min} = 12V+ [.022A*(R_L)]
*Includes a 10% safety factor
$R_L = R_S + R_W$
R_L = Loop Resistance (ohms)
R_S = Sense Resistance (ohms)
R_W = Wire Resistance (ohms)

TO ORDER THIS N-SERIES PRESSURE SWITCH:

Select: NPI N4 D L S02 XEA 100 PSI

1. Function: NPI
2. Body: N4
3. Electrical Output: D
4. Power Requirements: L
5. Pressure Port: S02
6. Options (see table 6): XEA
7. Pressure Range (see table 7): 100 PSI

Consult factory for guidance in product selection
Phone (203) 385-0217, Fax (203) 385-0602 or
visit our web site at www.ashcroft.com

DRESSER Instruments