

Electronic Pressure Switches, Watertight or Explosion-Proof Enclosure, N-Series

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
- Choice of watertight, NEMA 4 or explosion-proof NEMA 7/9, 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

1 - FUNCTION

NPA - Single setpoint with adjustable deadband

2 - ENCLOSURE

N4	NEMA 4, IP66, watertight
N7	NEMA 7/9, IP66, explosion proof

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	1/8" NPT male
S02	1/4" NPT male
S03	1/2" NPT female
S04	1/4" NPT female
S05	7/16"-20 SAE-male
S06	1/2" NPT male, 1/4" NPT female
S07	1/4" AMINCO-female
S08	7/16"-20 SAE-J514-female
VM2	1/4" VCR male
VF2	1/4" VCR female

TO ORDER THIS N-SERIES PRESSURE SWITCH:

Select: _____ NPA N4 D L S02 XEA 100 psi

1. Function: _____

2. Body: _____

3. Electrical Output: _____

4. Power Requirements: _____

5. Pressure Port: _____

6. Options (see table 6): _____

7. Pressure Range (see table 7): _____

- Status lights indicate switch state
 - Continuous power assures operation first time and every time even after years of inactivity
- Ideal for pressure alarm, shutdown, control on:
- Machine tools
 - Injection molding machines
 - Presses
 - Pumps
 - Hydraulic systems
 - Turbines and compressors
 - Most process applications

6 - OPTIONS

Code	Description
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



NEMA 7 (N7) Model Shown

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: 10⁸ 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: 4-20mA (2 wire)

Supply Voltage: 12-36 Vdc unregulated

Reverse wiring protected.

Zero Offset: ±1.0%F.S.

