



**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



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 | 1/8 NPT male |
| S02 | 1/4 NPT male |
| S03 | 1/8 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 |

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

TO ORDER THIS N-SERIES PRESSURE SWITCH:

Select: **NPI 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): _____

OPTIONAL TRANSMITTER SPECIFICATIONS

PERFORMANCE CHARACTERISTICS

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

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.

