

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)

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
S07	1/4" AMINCO-female
S08	7/16"-20 SAE-J514-female

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

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



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.):

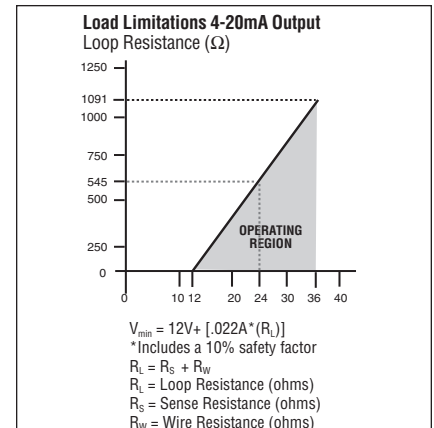
Accuracy	Zero and Span
1%	±0.040% F.S./°F

ELECTRICAL SPECIFICATIONS

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

Reverse wiring protected.

Zero Offset: ±1.0% F.S.



TO ORDER THIS N-SERIES PRESSURE SWITCH:

Select: _____ NPI N4 D L S02 XEA 100#

1. Function: _____

2. Body: _____

3. Electrical Output: _____

4. Power Requirements: _____

5. Pressure Port: _____

6. Options (see table 6): _____

7. Pressure Range (see table 7): _____

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

Transducers & Transmitters

MODEL GC31 ULTRA-COMPACT DIGITAL PRESSURE SENSOR



ACCURACY: $\pm 1.0\%$ FS
ANALOG OUTPUT: (1-5Vdc)
DISPLAY TYPE: 3½ digit, 10mm LED
STANDARD RANGES (Gauge):
 50 to 1500 psig
STANDARD RANGES (Compound):
 -15 to 15 psig thru -15 to 300 psig
Proof Pressure:
 2X range: 500 psi & below
 1.5X range: 1000 psi & above
Burst Pressure:
 10X range
SWITCH CONTACTS:
 (2) NPN or PNP open collector outputs
MEDIA: Fluids and gases compatible with 304SS (sensor housing) and 17-4 pH SS (sensor diaphragm)
ENVIRONMENTAL RATING: IP40
AGENCY APPROVALS: CE



This ultra-compact pressure sensor is used on a wide variety of applications where consistent, reliable pressure measurement is essential. The GC31 features an integral display, user scalable analog output and two independent switches. Ideal for monitoring and control of pneumatic and hydraulic systems where high cycle life and functionality is required.

MODEL GC35 ULTRA-COMPACT DIGITAL PRESSURE SENSOR



ACCURACY: $\pm 1.0\%$ FS
ANALOG OUTPUT: (4-20mA)
DISPLAY TYPE: 4 digit, 8mm LED
STANDARD RANGES (Gauge):
 50 to 7500 psig
STANDARD RANGES (Compound):
 -15 to 75 psig thru -15 to 300 psig
Proof Pressure:
 Ranges 1500 psig & below: 4X range
 Ranges 3000 psig & above: 2.5X range
Burst Pressure:
 Ranges 1500 psi & below: 10X range
 Ranges 3000 psi & below: 5X range
 Ranges 5000 psi & above: 3X range
SWITCH CONTACTS:
 (2) NPN or PNP open collector outputs
MEDIA: Fluids and gases compatible with 304SS (sensor housing) and 17-4 pH SS (sensor diaphragm)
ENVIRONMENTAL RATING: IP40
AGENCY APPROVALS: CE



Ultra-compact digital pressure sensor, ideal for monitoring pressures within hydraulic presses/stamping equipment and lifts, water/wastewater pressure control and cooling / lubrication systems. This versatile sensor offers a highly visible LED display for local indication. Product features allow the user to configure the analog scaling to any range within the full scale of the sensor range while integrated switches offer actuation and deadband to any points within the full scale range.

TYPE GC51 RANGEABLE PRESSURE TRANSMITTER



ACCURACY: $\pm 0.25\%$ FS (URL)0
ANALOG OUTPUT: 4-20mA (2-wire)
DISPLAY TYPE: 4 digit, 10mm LCD with LED backlight
STANDARD RANGES (Compound):
 -15 to 15psi thru -15 to 50psi
STANDARD RANGES (Gauge):
 50 to 7500 psig
Overpressure (F.S.):

Proof	Burst
1500psi and below	200% 500%
3000, 5000psi	150% 300%
7500psi	120% 150%

ENVIRONMENTAL RATING:
 IP65 / NEMA 4X
MEDIA: Fluids and gases compatible with 316SS and pH17-4 stainless steel
AGENCY APPROVALS: CE



Compact pressure transmitter used to monitor wet/dry media pressures within process automation, hydraulic systems, compressors, pumps and tank level applications.

TYPE GC55 WET/WET DIFFERENTIAL PRESSURE TRANSDUCER



ACCURACY: $\pm 0.5\%$ FS
ANALOG OUTPUT: (4-20mA or 1-5Vdc)
DISPLAY TYPE: 3½ digits
STANDARD RANGES (Differential):
 75 to 300 psid
Pressure Range Proof Burst
 All 2X FS (URL) 10X FS (URL)
Static (Line) Pressure Effects: None
Single Side (Differential Limits):
Pressure Range Proof Burst
 All 2X FS (URL) 10X FS (URL)
MEDIA: Fluids and gases compatible with 304SS (sensor housing) and 17-4 pH SS (sensor diaphragm)
ENVIRONMENTAL RATING: IP66

Compact high-differential pressure transducer for filter monitoring on HVAC hydronic cooling/heating systems and pump controls. Model contains two polysilicon thin film sensors with welded Stainless Steel wetted components to accommodate wet or dry pressure media. The product features a bright LED front panel display for local indication and button to allow the user to select between the dP value and line pressure readings from either sensor.