

General Industrial Transducer (Unamplified)

Series 420, 422

Features

- ▶ General purpose, industrial grade transducer
- ▶ Diffused silicon sensor for high accuracy and reliability
- ▶ Rugged stainless steel construction
- ▶ Built-in pressure snubber for high pressure applications (2000 psi and above)
- ▶ Wide range of electrical connections available

Applications

- ▶ Oil pressure hydraulics
- ▶ Cranes
- ▶ Presses
- ▶ Gas metering
- ▶ HVAC
- ▶ Medical equipment



General Specifications*

Accuracy (LH & R):	±0.25% FSO at 75°F (24°C) typical	Pressure Connection:	1/4"-18 NPT male
Long Term Stability:	±0.5% FSO of calibration curve	Electrical Connection:	4 conductor, 22 awg, PVC jacketed, unshielded cable, 3 ft. (1 m) long with integral strain relief and case ground
Typical Life Cycle:	100 million cycles	Temperature Ranges:	
Proof Pressure:	2 times rated pressure or 13,000 psi max. (896 bar), whichever is less	Operating:	-40° to 185°F (-40° to 85°C)
Input:	Excitation voltage: 10 Volt, nominal 5 to 15 VDC (regulated)	Compensated:	30° to 160°F (-1 to 71°C)
Input Resistance:	15,000 ohm (maximum)	Storage:	-40° to 185°F (-40° to 85°C)
Output:		Temperature Shift:	
Model 420:	Full scale output: 30 mV ±1 mV 3 mV/V sensitivity Zero output: 0 mV ±2mV	Zero & Span:	±3.0% FSO (max.) over compensated range
Model 422:	Full scale output: 100 mV ±1 mV 10 mV/V sensitivity Zero output: 0 mV ±2mV	Vibration:	15 g's, 10-2000 Hz, MIL-STD 202
Wetted Parts:	17-4 PH & 300 series stainless steel	Shock:	50 g's, 11 ms, MIL-STD 202 Method 213, Cond. G.
Enclosure:	NEMA 3, 304 stainless steel	Built-in Protection:	Built-in pressure snubber for 2K psi and greater
Response Time:	2 kHz	Weight:	4.6 oz. (130 grams) to 1000 psi 6.7 oz. (190 grams) 1000 psi and higher
		Warranty:	1 year warranty

* See product configurator for additional options.

Wiring Code

MILLIVOLT SERIES - 420 & 422				
DIN Conn. (H4)	Bendix Conn. (T2)	M12 Hirschman Conn. (T4)	Cable (H2/H3)	Signal
1	A	1	Red	+ Excitation
4	D	4	Black	- Excitation
2	B	3	Green	+ Output
3	C	2	White	- Output
-	-	-	Bare	Shield

Barksdale
 CONTROL PRODUCTS

 Barksdale, Inc./Barksdale GmbH
 A Subsidiary of Crane Co.

www.flowfactor.com

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Technical Drawings

Standard and Optional Electrical Connections

ENCLOSURE EDGE

SUBMINIATURE DIN CONNECTOR (H4) CABLE CONNECTOR (H2 & H3) BENDIX CONNECTOR (T2)

BENDIX CONNECTOR WITH MATING PLUG P/N 23969 (NOT INCLUDED) HIRSCHMAN CONNECTOR (T4) HIRSCHMAN CONNECTOR WITH MATING PLUG P/N 239236 (NOT INCLUDED)

Dimensions: 3-3/8 (86), 1.0 (26) DIA., 2-5/8 (67), 4-1/2 (115), 1-1/2 (39) DIA., 3-3/4 (96), 2.0 (51.0), 3/4 (19), 1/2 (13), 2.0 (51.0), 7/16 (12.0), 1-1/2 (38.0)

MILLIVOLT UNITS
LOW PRESSURE 15 TO 1,000 psi

MILLIVOLT UNITS
HIGH PRESSURE ≥ 2,000 psi

Product Configurator

Example: 422 H3 -04 -A -P1

Base Model

420	30mV full scale output (3mV/V)
422	100mV full scale output (10mV/V)

Electrical Connection

H2	Unshielded jacketed #22 AWB cable (1 meter)
H3	Shielded & jacketed #22 AWB cable (1 meter) (standard)
H4	Mini-DIN connector (43650 type) - mating connector included
T2 ¹	Bendix connector (PT02A-8-4P)-4 pin
T3	Bendix connector (PT02E-10-6P)-6 pin
T4 ²	M12 Hirschman connector (ELST 412 PG9)

Pressure Range

-25	0 - 5 psi (0 - 0.35 bar) ³
-01	0 - 15 psi (0 - 1 bar) ⁴
-21	0 - 30 psi (0 - 2 bar) ³
-03	0 - 50 psi (0 - 3.5 bar) ⁴
-22	0 - 60 psi (0 - 4 bar) ³
-04	0 - 100 psi (0 - 6.9 bar) ⁴
-06	0 - 200 psi (0 - 12.8 bar) ⁴
-07	0 - 300 psi (0 - 20.7 bar) ⁴
-08	0 - 500 psi (0 - 34.5 bar)
-10	0 - 1,000 psi (0 - 69 bar)
-11	0 - 1,500 psi (0 - 104 bar)
-12	0 - 2,000 psi (0 - 138 bar) ⁵
-13	0 - 3,000 psi (0 - 207 bar) ⁵
-14	0 - 4,000 psi (0 - 276 bar) ⁵
-15	0 - 5,000 psi (0 - 345 bar) ⁵
-17	0 - 7,500 psi (0 - 517 bar) ⁵
-18	0 - 10,000 psi (0 - 689 bar) ⁵

Options

-Z1	Cleaned for oxygen service (not UL approved)
-N4	NEMA 4 enclosure
-WXXX	Additional length of free leads (in inches) (H3/H2 connection)

Process Connection

Blank	1/4-18 NPT male (standard)
-P1	7/16-20 UNF-2B female
Blank	Gauge standard
-A	Absolute pressure range (<300psi) (only available in the 422 Series)

Accessories

Order #	Description
23969	Mating conn. for T2 Bendix connection
239236	Mating conn. for T4 Hirschman connection
208360	Pressure snubber (1/4-18 NPT)

¹ Mating connector: Bendix # PT06E-8-4S or equivalent (not included)
² Mating connector: Hirschman # ELWIKA 4021 PG7 or equivalent (not included)
³ Available only on 422 Series; 75mV ± 1mV output at 75°F
⁴ Available in absolute range for 422 Series
⁵ Built-in snubber