

# Transducers

## General Industrial Transducer (Amplified)

**Series 423, 425, 426**

### Features

- ▶ General purpose, industrial grade transducer
- ▶ Diffused silicon sensor for high accuracy and reliability
- ▶ Rugged stainless steel enclosure
- ▶ Superior surge voltage protection and EMI/RFI immunity
- ▶ Built-in high pressure snubber (2000 psi and above)
- ▶ Current and voltage signals
- ▶ UL and cUL approved (UL508)

### Applications

- ▶ Industrial hydraulic equipment
- ▶ Cranes
- ▶ Compressors
- ▶ Gas metering
- ▶ Vacuum machinery packaging



### General Specifications\*

<b>Accuracy (LH &amp; R):</b>	±0.25% FSO (±0.5% for vacuum only [-23]) at 75°F (24°C), typical
<b>Long Term Stability:</b>	±0.5% FSO of calibration curve
<b>Typical Life Cycle:</b>	100 million cycles
<b>Proof Pressure:</b>	2 times rated pressure or 13,000 psi max. (896 bar), whichever is less
<b>Input:</b>	
423:	Excitation voltage: 11 to 30 VDC
426:	Excitation voltage: 14 to 30 VDC
425:	Excitation voltage: 12 to 30 VDC
<b>Supply Current:</b>	16 mA maximum (no load)
<b>Min. Load Resistance:</b>	2K ohms (voltage series only)
<b>Output:</b>	
423:	Output: 0.5 to 5.5 VDC Full scale output: 5.0 VDC ± 1% Zero output: 0.5 VDC ± 2%
426:	Output: 1 to 11 VDC Full scale output: 10 VDC ± 1% Zero output: 1.0 VDC ± 2%
425:	Output: 4 to 20 mA Full scale output: 16 mA ± 1% Zero output: 4 mA ± 2%

\* See product configurator for additional options.

### Wiring Code

Voltage - Series 423, 426			
T2		H3	
A	1	Red	+ Excitation
B	3	White	+ Output
C	2	Black	Common
D	4	Bare	Case Drain
Milliamp - Series 425			
A	1	Red	+ Excitation
B	2	Black	- Excitation
D	4	Bare	Case Drain

<b>Wetted Parts:</b>	17-4 PH (fitting) & 300 stainless steel (sensor)
<b>Enclosure:</b>	NEMA 4, 300 series stainless steel
<b>Pressure Connection:</b>	1/4"-18 NPT male (STD)
<b>Response Time:</b>	2 kHz
<b>Electrical Connection:</b>	3 conductor for voltage series and 2 conductor for current series, 24 awg, PVC jacketed, shielded cable, 3 ft. (1 m) long with integral strain relief and case ground.
<b>Temperature Ranges:</b>	
Operating:	-40° to 185°F (-40° to 85°C)
Compensated:	30° to 160°F (-1° to 71°C)
Storage:	-40° to 185°F (-40° to 85°C)
<b>Temperature Shift:</b>	
Zero & Span:	± 0.0125% per °F over compensated range, 75°F reference
<b>Vibration:</b>	15 g's, 10-2000 Hz, MIL-STD 202
<b>Shock:</b>	50 g's, 11 ms, MIL-STD 202 Method 213, Cond. G.
<b>Built-in Electrical Protection:</b>	Conducted & radiated RF emissions/interference to EN 55011  IEC 801-2, -3, -4, -5, and -6  EN/IEC 61000-4-2, -3, -4, -5, -6  Refer to engineering sales drawing for details.
<b>Weight:</b>	
423 & 426:	7.4 oz. (221 grams) to 1000 psi 9.9 oz. (281 grams) 2,000 psi and higher
425:	7.4 oz. (210 grams) to 1000 psi 9.4 oz. (266 grams) 2,000 psi and higher
<b>Warranty:</b>	1 year warranty

**Barksdale**

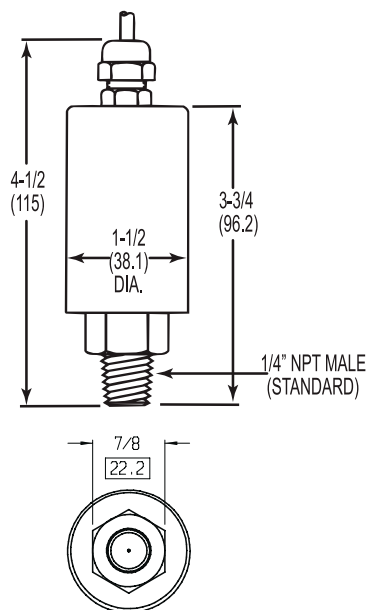
CONTROL PRODUCTS

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

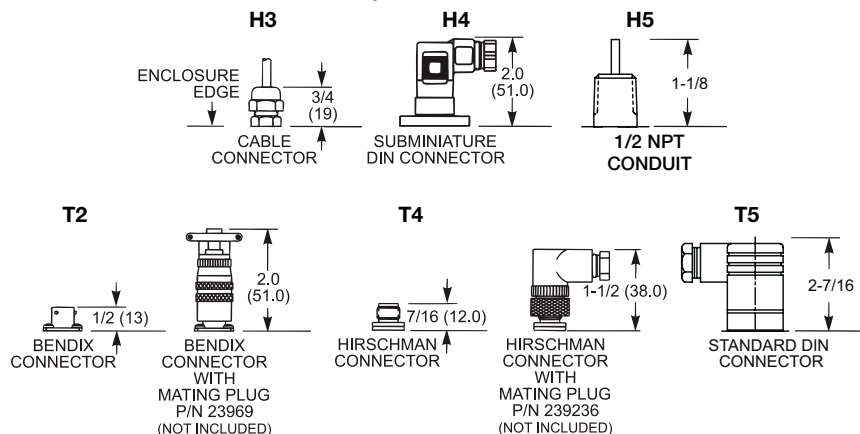
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## Technical Drawings



### Standard and Optional Electrical Connections



## Product Configurator

Example	425	H3	-19		-P1	
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### Base Model

423	0.5 - 5.5 VDC analog output
425	4 - 20 mA analog output
426	1 - 11 VDC analog output

### Electrical Connection

H3	Shielded & jacketed #22 AWB cable (1 meter) (standard)
H4	Subminiature DIN connector (43650 type) - mating connector included
H5	Shielded & jacketed cable with 1/2" male conduit
T2 <sup>1</sup>	Bendix connector (PT02A-8-4P) - 4 pin
T3	Bendix connector (PT02E-10-6P)-6 pin
T4 <sup>2</sup>	M12 Hirschman connector (ELST 4012 PG7)
T5	Standard DIN connector (43650) - mating connector included

### Pressure Range

-23	0 - 29.9" of Hg (Vacuum)
-25	0 - 5 psi (0 - 0.35 bar)
-01 <sup>4</sup>	0 - 15 psi (0 - 1 bar)
-21 <sup>4</sup>	0 - 30 psi (0 - 2 bar)
-03 <sup>4</sup>	0 - 50 psi (0 - 3.5 bar)
-22 <sup>4</sup>	0 - 60 psi (0 - 4 bar)
-04 <sup>4</sup>	0 - 100 psi (0 - 6.9 bar)
-05 <sup>4</sup>	0 - 150 psi (0 - 10.3 bar)
-06 <sup>4</sup>	0 - 200 psi (0 - 13.8 bar)
-07 <sup>4</sup>	0 - 300 psi (0 - 20.7 bar)
-08	0 - 500 psi (0 - 34.5 bar)
-19	0 - 600 psi (0 - 41 bar)
-10	0 - 1,000 psi (0 - 69 bar)
-11	0 - 1,500 psi (0 - 104 bar)
-12 <sup>5</sup>	0 - 2,000 psi (0 - 138 bar)
-13 <sup>5</sup>	0 - 3,000 psi (0 - 207 bar)
-14 <sup>5</sup>	0 - 4,000 psi (0 - 276 bar)
-15 <sup>5</sup>	0 - 5,000 psi (0 - 345 bar)
-16 <sup>5</sup>	0 - 6,000 psi (0 - 414 bar)
-17 <sup>5</sup>	0 - 7,500 psi (0 - 517 bar)
-18 <sup>5</sup>	0 - 10,000 psi (0 - 689 bar)

### Options

-N4X <sup>7</sup>	Nema 4X enclosure (H3 Option only) \$200 minimum per order
-E <sup>6</sup>	External zero span adjustment
-Z15	Calibrated in 'bar' unit
-Z10	1 to 5V output (available only on 423 models)
-Z11	1 to 6V output (available only on 423 models)
-Z12	0.5 to 4.5V output (available only on 423 models)
-Z16 <sup>7</sup>	0.2 to 10V output (available only on 426 models) Not UL approved
-WXXX	Additional length of free leads (in inches) (H3/H5 connection)
-ZXXY <sup>3</sup>	Special pressure ranges
-Z1 <sup>7</sup>	Cleaned for oxygen service
-U <sup>8</sup>	UL & cUL approved

## Accessories

Order #	Description
23969	Bendix mating connector (T2 electrical option)
239236	Hirschman mating connector (T4 electrical option)
208360	Pressure snubber (1/4-18 NPT female/male)

### Process Connection

Blank	1/4-18 NPT male (standard)
-P1	7/16-20 UNF-2B female
-P3	7/16-20 UNF-2A male (JIC 37°)
-P4	1/2" NPT male
-P5	1/2" NPT female
-P6	1/4" NPT female
-P9	G1/4 male (Gasket Seal)

Blank	Gauge pressure
-A	Absolute pressure range (<300psi)

<sup>1</sup> Mating connector: Bendix # PT06E-8-4S or equivalent (not included). Order number: 23969

<sup>2</sup> Mating connector: Hirschman # ELWIK 4012 PG7 or equivalent (not included). Order number: 239236

<sup>3</sup> Add suffix ZXXY for special pressure ranges. XX = significant digits. Y = number of trailing zeros. Example: for 230psi calibration, add Z231

<sup>4</sup> Available in absolute ranges

<sup>6</sup> Available with connector options H3 and T4 only

<sup>5</sup> Built-in surge protector

<sup>7</sup> Not UL approved

<sup>8</sup> Ambient: 60° C - 420, 422; 80° C - 423, 425, 426