

# Transducer

## Intrinsically Safe Transducer

## Series 443, 445, 446

### Features

- ▶ High accuracy
- ▶ Protection in hazardous environments, Class I, Div 1
- ▶ Superior EMI, ESD and RFI protection
- ▶ Rugged all-welded stainless steel construction
- ▶ NEMA 4
- ▶ Built-in high pressure snubber (2000 psi and above)
- ▶ cULus, CE approved
- ▶ ATEX / IECEx certified - 445 only

### Applications

- ▶ Oil & gas pipelines
- ▶ Oil patch
- ▶ Petrochemical plants
- ▶ Refineries
- ▶ Pulp and paper mills
- ▶ Coal and oil fired power plants
- ▶ Cement plants
- ▶ Gas transfers for fuel systems
- ▶ Gas panels
- ▶ Gas mixing systems

### General Specifications\*



<b>Accuracy (LH &amp; R):</b>	±0.25% FSO at 75°F (±0.5% for vacuum only [-23]) 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. (884 bar), whichever is less
<b>Input:</b>	443: Excitation voltage: 11 to 28 VDC 446: Excitation voltage: 14 to 28 VDC 445: Excitation voltage: 12 to 28 VDC
<b>Supply Current:</b>	3.0 mA maximum (no load)
<b>Output:</b>	443: Output: 0.5 to 5.5 VDC Full scale output: 5.0 VDC ± 0.8% Zero output: 0.5 VDC ± 0.4%  446: Output: 1 to 11 VDC Full scale output: 10 VDC ± 0.4% Zero output: 1.0 VDC ± 0.2%  445: Output: 4 to 20 mA Full scale output: 16 mA ± 1% Zero output: 4 mA ± 2%
<b>Wetted Parts:</b>	17-4 PH (fitting) & 300 stainless steel (sensor)
<b>Enclosure:</b>	NEMA 4, 300 series stainless steel

<b>Response Time:</b>	2 kHz
<b>Pressure Connection:</b>	1/4"-18 NPT male
<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 (standard).
<b>Temperature Ranges:</b>	Operating: -40° to 158°F (-40° to 70°C) Compensated: -40° to 158°F (-40° to 70°C) Storage: -40° to 185°F (-40° to 85°C)
<b>Temperature Shift:</b>	Zero & Span: 0.01% per °F over compensated range 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>Approvals:</b>	Intrinsically safe pressure transducers are UL and cULus approved as telemetering equipment for use in hazardous locations (UL File E146589, WYMV, WYMV7) as follows:  Class I, Div. 1, Groups A, B, C & D Class II, Groups E, F & G, when installed in accordance with control drawing 272148 (443); TD-B77 (445); 272147 (446).  445 only: ATEX/IECEx Certification: CE 0081 (S) II 1 G D, Ex ia IIC T4 Ga, Ex ia IIIC T135°C Da, -40°C to 70°C, DEMKO 09 ATEX 143402, IECEx UL 13.0069
<b>Weight:</b>	443 & 446: 7.4 oz. (221 grams) to 1000 psi 9.9 oz. (281 grams) 2,000 psi and higher  445: 7.4 oz. (210 grams) to 1000 psi 9.4 oz. (266 grams) 2,000 psi and higher
<b>Warranty:</b>	1 year warranty

\* See product configurator for additional options.

MILLIVOLT SERIES - 443 & 446		
(T4/T5)	(H3/H5)	Signal
1	Red	+ Excitation
3	White	+ Output
2	Black	Common
4	Bare	Case Drain
MILLIAMPER SERIES - 445		
1	Red	+ Excitation
2	Black	- Excitation
4	Bare	Case Drain

### Wiring Code

