

Transducer

Non-Incendive Transducer

Series 433, 435, 436

Features

- ▶ High accuracy
- ▶ Protection in hazardous environments, Class I, Div 2
- ▶ Rugged all-welded stainless steel construction
- ▶ Superior EMI, ESD and RFI protection
- ▶ NEMA 4
- ▶ Built-in high pressure snubber (2000 psi and above)

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*

Accuracy (LH & R):	±0.25% FSO at 75°F (±0.5% for vacuum only [-23]) typical
Long Term Stability:	±0.5% FSO of calibration curve
Typical Life Cycle:	100 million cycles
Proof Pressure:	2 times rated pressure or 13,000 psi max. (896 bar), whichever is less
Input:	
433:	Excitation voltage: 11 to 30 VDC
436:	Excitation voltage: 14 to 30 VDC
435:	Excitation voltage: 12 to 28 VDC
Supply Current:	3.0 mA maximum (no load)
Min. Load Resistance:	2K ohms (voltage series)
Output:	
433:	Output: 0.5 to 5.5 VDC Full scale output: 5.0 VDC ± 0.8% Zero output: 0.5 VDC ± 0.4%
436:	Output: 1 to 11 VDC Full scale output: 10 VDC ± 0.4% Zero output: 1.0 VDC ± 0.2%
435:	Output: 4 to 20 mA Full scale output: 16 mA ± 1% Zero output: 4 mA ± 2%
Wetted Parts:	17-4 PH (fitting) & 300 stainless steel (sensor)
Enclosure:	NEMA 4, 300 series stainless steel
Pressure Connection:	1/4"-18 NPT male

Response Time:	2kHz
Electrical Connection:	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).
Temperature Ranges:	
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)
Temperature Shift:	
Zero & Span:	0.01% per °F over compensated range
Vibration:	15 g's, 10-2000 Hz, MIL-STD 202
Shock:	50 g's, 11 ms, MIL-STD 202 Method 213, Cond. G.
Approvals:	Nonincendive pressure transmitters are UL and cUL approved as telemetering equipment for use in Div. 2 hazardous locations as follows: Class I, Div. 2, Groups A, B, C & D Class II, Div. 2 Groups F & G Agency approval varies by electrical termination type as follows: H5(-E) models are cULus listed in UL File E146589, (WYMV, WYMV7). H3(-E), T4(-E) & T5 (-E) models are cURus recognized components in UL File E146589, (WYMV2, WYMV8).
Weight:	
433 & 436:	7.4 oz. (221 grams) to 1,000 psi 9.9 oz. (281 grams) 2,000 psi and higher
435:	7.4 oz. (210 grams) to 1,000 psi 9.4 oz. (266 grams) 2,000 psi and higher
Warranty:	1 year warranty

* See product configurator for additional options.

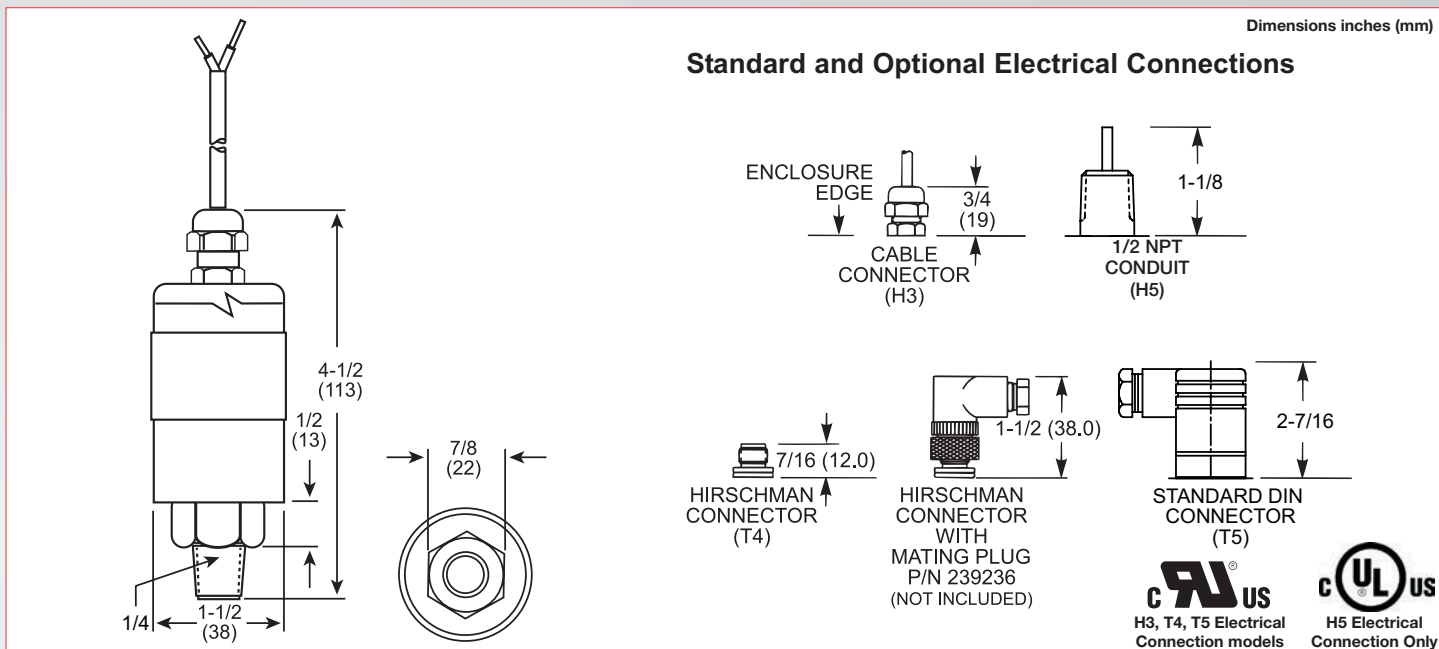
MILLIVOLT SERIES - 433 & 436		
(T4/T5)	(H3/H5)	Signal
1	Red	+ Excitation
3	White	+ Output
2	Black	Common
4	Bare	Drain
MILLIAMP SERIES - 435		
1	Red	+ Excitation
2	Black	- Excitation
4	Bare	Case Drain

◀ Wiring Code

Non-Incendive Transducer

Series 433, 435, 436

Technical Drawings



Product Configurator

Example: **433 H3 -21**

Base Model

433	0.5 - 5.5 VDC analog output
435	4 - 20 mA analog output
436	1 - 11 VDC analog output

Electrical Connection

H3	Shielded & jacketed #22 AWB cable (1 meter), (standard)
H5	Shielded & jacketed cable with 1/2" male conduit, UL/CSA
T4 ¹	M12 Hirschman connector (ELST 412 PG9)
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 ²	0 - 15 psi (0 - 1 bar)
-21 ²	0 - 30 psi (0 - 2 bar)
-03 ²	0 - 50 psi (0 - 3.5 bar)
-22 ²	0 - 60 psi (0 - 4 bar)
-04 ²	0 - 100 psi (0 - 6.9 bar)
-05 ²	0 - 150 psi (0 - 10.3 bar)
-06 ²	0 - 200 psi (0 - 13.8 bar)
-07 ²	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 ³	0 - 2,000 psi (0 - 138 bar)
-13 ³	0 - 3,000 psi (0 - 207 bar)
-14 ³	0 - 4,000 psi (0 - 276 bar)
-15 ³	0 - 5,000 psi (0 - 345 bar)
-16 ³	0 - 6,000 psi (0 - 414 bar)
-17 ³	0 - 7,500 psi (0 - 517 bar)
-18 ³	0 - 10,000 psi (0 - 689 bar)

Options

-E ⁷	External adjustment - Zero/Span
-Z10	1 to 5V output (available only on 433 models)
-Z11	1 to 6V output (available only on 433 models)
-Z12	0.5 to 4.5V output (available only on 433 models)
-Z15	Calibrated in 'bar' unit
-Z16 ⁴	0.2 to 10V output (available only on 436 models)
-Z17 ^{4,5}	For high pressure models with larger orifice
-Z18 ⁴	Z17 and Z10 options combined
-ZXXY ⁶	Special pressure ranges
-WXXX	Additional length of free leads (in inches) (H3 & H6 connection)

Accessories

Order #	Description
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 (SAE #4)
-P3	7/16-20 UNF-2A male (JIC 37°)
-P4	1/2" NPT male
-P5	1/2" NPT female
-P6	1/4" NPT female

* Consult factory for more options

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

¹ Mating connector: Hirschman # ELWIKA 4021 PG7 or equivalent (not included). Order number: 239236

² Available in absolute ranges

³ Built-in surge protector

⁴ Not UL Approved

⁵ For pressure > 1,000 psi a 3/16 diameter pressure port orifice with no surge protector is offered.

⁶ Add suffix ZXXY for special pressure ranges. XX = significant digits. Y = number of trailing zeros.

Example: for 230 psi calibration, add Z231

⁷ Available with connector options H3 and T4 only