

# Industrial Transducer

# BLE Series

## Features

- ▶ Intrinsic safety certification with ATEX, IECEx approvals
- ▶ Construction with 316 and 17-4PH stainless steel for superior corrosion resistance
- ▶ Advanced digital electronics provides digital compensation on sensor data for improved performance.
- ▶ Wireless Bluetooth communication, eliminating the need for wired connections
- ▶ Battery life up to 5 years with an option for easy replacement.
- ▶ Reliable data transmission over a wide range, ensuring connectivity up to 100 meters
- ▶ Hazardous location dual seal approved for Canada
- ▶ Provides real-time data monitoring on mobile or desktop devices.
- ▶ Secure and encrypted data transmission for reliability and safety.
- ▶ Thermally compensated sensors ensure high accuracy over wide temperature ranges to mitigate thermal errors on sensitive components.
- ▶ Modular design platform to support fully customizable pressure ranges, mechanical process connections, and other application-specific requirements.
- ▶ RoHS / REACH Compliant



## Applications

- ▶ General industrial equipment
- ▶ Pumps and Compressors
- ▶ Mobile hydraulic equipment
- ▶ Off-highway vehicles
- ▶ Irrigation equipment systems
- ▶ Medical gas systems
- ▶ Marine
- ▶ Hydrogen Refueling Station
- ▶ Hydrogen Compressors & Storage
- ▶ Remote Monitoring
- ▶ Oil well and pipeline monitoring
- ▶ Smart logistics

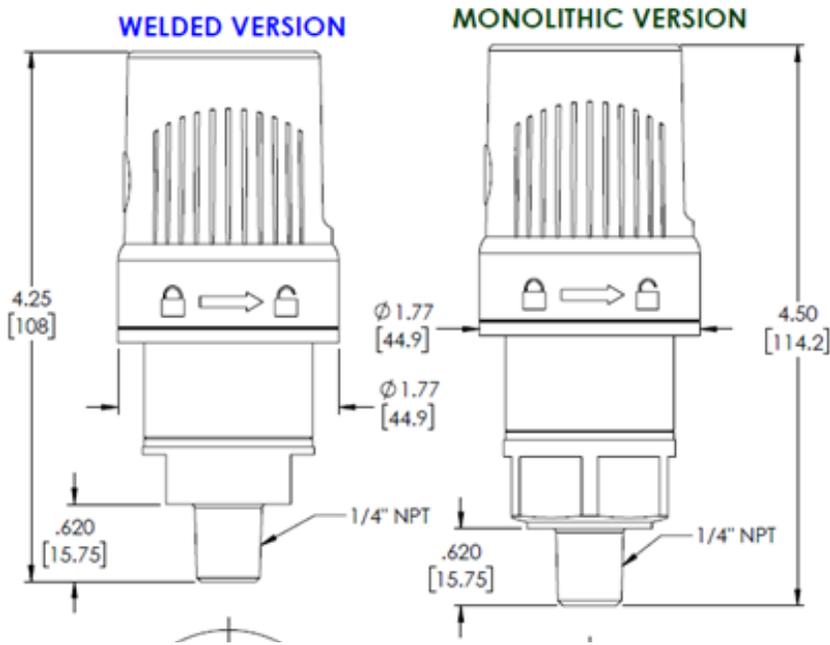
## General Specifications

Wireless protocol	BLE5
Battery Life	1 – 5 years depending on the use
Operating Frequency:	2.4 GHz
Battery:	1/2AA, LiSOC12 (LS 14250)
Variable Transmission Power:	up to 8 dBm
Receiver Operating System	Android and IOS
Line of sight	100 meters
A/D Resolution	18 bit
Pressure Range:	0 to 20,000 psi
Operating Temperature:	-40°F to 185°F (-40° to +85° C)
Compensated Temperature Range:	-4°F to +167 °F (-20 to +75 °C)
Accuracy (BFSL@24°C)	0.5 % FS (Optional: 0.25 % FS)
Proof Pressure	2X Typical (Consult factory for specific pressure ranges)
Zero Offset	± 0.25% FSO
Span Offset	± 0.25% FSO
Lifecycle	100 million cycles
Long-Term Stability	± 0.2% FSO (per year, typical)
Response Time Variable	(100 ms TO 10 secs)

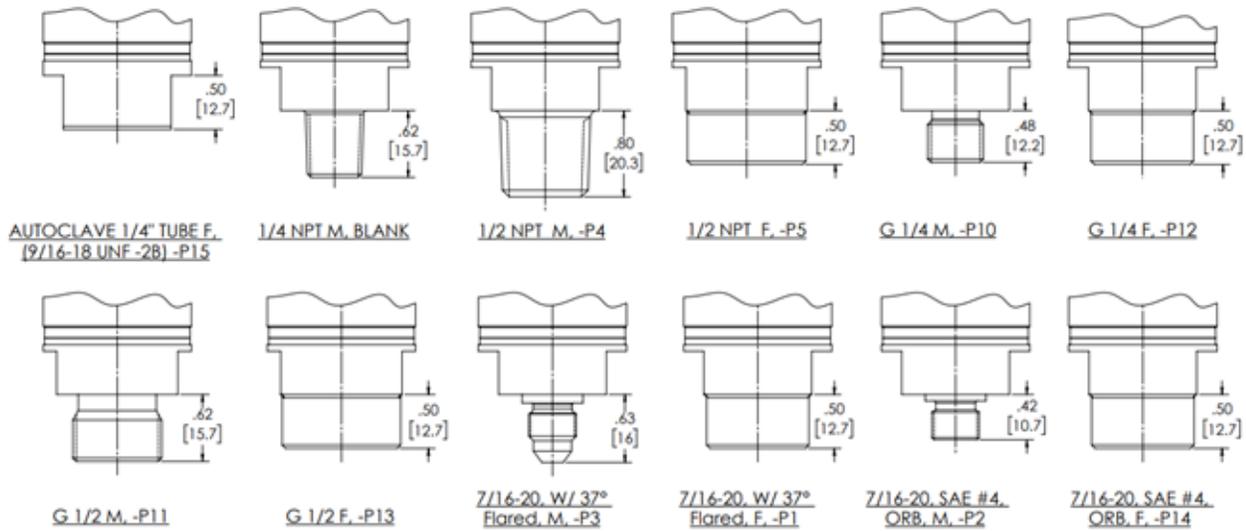
## Environmental Specifications

Shock	50 g's, 11 ms, MIL-STD 202 Method 213, Cond. G
Vibration	15 g's, 10 to 2,000 Hz, MIL-STD 202
Storage Temperature	-40°F to +212°F (-40 to +100 °C){WITHOUT BATTERY}
Media Temperature	-40°F to +248°F (-40 to +120 °C)
Wetted Materials	process connection: 316L & 17-4 PH stainless steel sensor: 316 stainless steel
Ingress Protection	IP67
Reverse Polarity	Yes
Enclosure	NEMA 4, Stainless Steel & PBT
Approvals	Intrinsic Safety, IEC 61326, IEC60079-11, IEC60079-0
Compliance	REACH, RoHS, CE
Weight	13 Ounces (370 grams) Approximately (Consult factory for exact weights)
Electromagnetic	Compatibility (EMC) EN 55032 Emissions Class A & B IEC 61000-4-2 Electrostatic Discharge Immunity (4kV contact/8kV air) IEC 61000-4-3 Radiated, Radio-Frequency Electromagnetic Field Immunity (10V/m, 80M-1GHz); Shift <1.5% 15 301 fcc part subpart b unintentional radiators (us) ices-003 (canada) red etsi en 489-1 v2.1.1 & 480-17 v3.2.1 (europe)

## Technical Drawing



### Process Connections



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## Product Configurator

Example: 

WBO/WBH	-16	G	-P9	-M	-Z1
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### Base Model

WBO	Bluetooth for Ordinary Location
WBH	Bluetooth for Hazardous Location [IS Approved]

### Pressure Range

Pressure Range	PSI	BAR
-23	0-29.9 of Hg	0 to -1Bar
-27	0-1 PSI	0-0.1 Bar
-25	0-5 PSI	0-0.35 Bar
-38	0-7 PSI	0-0.5 Bar
-01	0-15 PSI	0-1 Bar
-39	0-25 PSI	0-1.6 Bar
-21	0-30 PSI	0-2 Bar
-40	0-36 PSI	0-2.5 Bar
-03	0-50 PSI	0-3 Bar
-22	0-60 PSI	0-4 Bar
-41	0-87 PSI	0-6 Bar
-04	0-100 PSI	0-7Bar
-05	0-150 PSI	0-10 Bar
-06	0-200 PSI	0-15 Bar
-42	0-230 PSI	0-16 Bar
-07	0-300 PSI	0-20 Bar
-43	0-360 PSI	0-25 Bar
-08	0-500 PSI	0-35 Bar
-44	0-580 PSI	0-40 Bar
-45	0- 725 PSI	0-50 Bar
-46	0-870 PSI	0-60 Bar
-10	0-1000 PSI	0-70 Bar
-11	0-1500 PSI	0-100 Bar
-12	0-2000 PSI	0-150 Bar
-47	0-2300 PSI	0-160 Bar
-13	0-3000 PSI	0-200 Bar
-48	0-3600 PSI	0-250 Bar
-14	0-4000 PSI	0-300 Bar
-15	0-5000 PSI	0-350 Bar
-16	0-6000 PSI	0-400 Bar
-17	0-7500 PSI	0-520 Bar
-36	0-9000 PSI	0-600 Bar
-18	0-10000 PSI	0-700 Bar
-29	0-15000 PSI	0-1000 Bar
-30	0-20000 PSI	0-1400 Bar

### Options

-Z1	Cleaned for oxygen service
-Z17	Without pressure surge protector
-SXXY	Special pressure ranges Consult Factory
-A1	Accuracy: 0.25 % FS
-Q1 -Q999	Custom and proprietary options; Consult Factory
-S1 -S9	Other vacuum ranges like -0.5 bar to xxx bar
-SS	316L Stainless Steel wetted material (NACE)
-NC	Inconel wetted material (NACE) (Consult Factory)

### Accuracy

Blank (Piezo Welded)	±0.5%FSO
-M (Monolithic)	±0.5%FSO

### Process Connection

Blank	1/4" NPT, Male
-P6	1/2" NPT, Female
-P4	1/2" NPT, Male
-P5	1/2" NPT, Female
-P10	G 1/4, Washer seal, Male
-P12	G 1/4, Washer seal, Female
-P11	G 1/2, Washer seal, Male
-P13	G 1/2, Washer seal, Female
-P3	7/16-20, with 37 Flared, Male
-P1	7/16-20, with 37 Flared, Female
-P2	7/16-20, SAE #4, ORB, Male
-P14	7/16-20, SAE #4, ORB, Female
-P20	G 1/2 EN 837-1, Male
-P15	HF4 Autoclave, 1/4" Tube, Female (9/16-18 UNF-28 THD)
-P21	HF4 Autoclave, 1/4" Tube, Male (9/16-18 UNF-28 THD)

### Pressure Unit & Type

G	PSI - Sealed Gage Pressure
A	PSI - Absolute Pressure
BG	Bar - Sealed Gage Pressure
BA	Bar - Absolute Pressure (range start from -1 Bar)