

WinSMART™ Explosion Proof Pressure Transmitter

LY16



Description & Features:

- Microprocessor-based high performing transmitter
- Explosion proof smart pressure transmitter for hazardous locations
- Sour gas NACE0175 compliant
- Built-in temperature sensor
- 0.2% standard; 0.5%, 0.1%, 0.075% or 0.05% optional
- Simple to operate 3-push button control
- HART 5, HART 7, Profibus and Modbus/RS485 networking options
- Low power option available
- Re-zero function for safe field calibration
- Wide range of accuracies and turndown ratios allow for installation in any application setting
- CRN Registered, up to 6,000 psi
- 5 year warranty

Applications:

- Pressure monitoring for oil and gas, well head process control, petrochemical installations, power generation equipment and all hazardous locations
- Suitable for general-purpose areas including potable water, installations and hydraulic systems



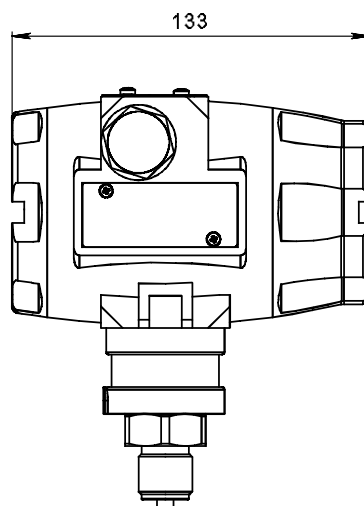
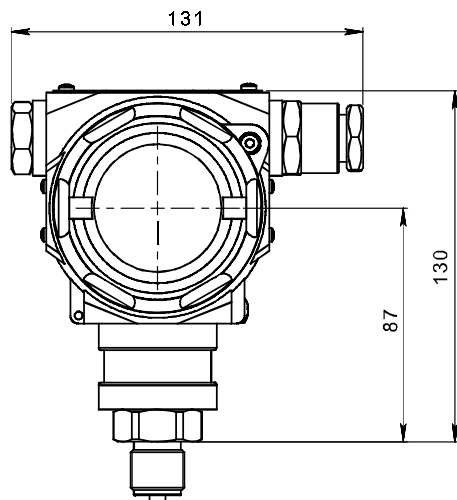
Specifications

Output Signal	4/20 mA, 2-wire / V = 10.5-55 Vdc 4/20 mA + HART 5, 2-wire / V = 16.5-55 vdc or 12.55-55 Vdc (low power) 1/5 Vdc, 3-wire / V = 10.5-55 Vdc Modbus, 4-wire / V = 9-30 Vdc PROFIBUS, 2-wire/ V = 24 Vdc
LCD Display	LCD display (standard) or without LCD display (optional)
Accuracy	0.2% standard; 0.5%, 0.1%, 0.075% or 0.05% optional
Stability	0.1% per year
Temperature Ranges	Working: -40/85°C, -40/185°F (LCD may not be readable at temperatures below -20°C/ -4°F) Storage: -40/110°C (with display -40/85°C), -40/230°F (without display -40/185°F) Media: silicone oil filling: -40/120°C (-40/248°F)
Working Humidity	5-100% at 40°C (104°F)
Pressure Connection	1/4" or 1/2" NPTM or F, 1/4" or 1/2" GM (large 10mm orifice)
Housing	Rugged die-cast aluminum housing, painted blue
Wetted Parts	316L SS
Overload Pressure	1.5 x rated pressure
Power Consumption	=500 mW @ 24 VDC, 20.8 mA (LCD); <= 493mW @ 24VDC, 20.55mA (without LCD)
Wake-Up Time	6 seconds
Vibration	20g, 20Hz...5kHz According to GB/T 1827.3 / IEC 61298-3 tests, <0.1% URL
Shock	20g, 20Hz...5kHz
Available Pressure Units	kPa, Mpa, bar, psi, mmHg, mmH ₂ O, mH ₂ O, inH ₂ O, ftH ₂ O, inHg, mHg, TORR, mbar, g/cm ² , kg/cm ² , Pa, ATM
Available Temperature units	Celsius (°C), Fahrenheit (°F)
Protection Class	EMI, ESD, RFI, reverse polarity protected; Surge protection; IEC 61000-4-2/4-3/4-4/4-5/4-6/4-8
Approvals	CSA, for USA & Canada • Class I, 1, Group A,B,C and D T6 Class II, Division 1 Group E, F and G T80°C Class III Intertek, for USA & Canada • Class I, Zone 0 A Ex ia IIC T6 Gb Class I, Division 1, Group A-D, T6 - 40°C to 60°C SIL 3 Capable • IEC 61508: 2010 ATEX • II 2G Ex db IIC T6 Gb • II 1G Ex ia IIC T6 Ga
Protection Class	IP66 / IP67
Weight	2.9 lbs (1.3 kg)
Operational Life	100 million cycles

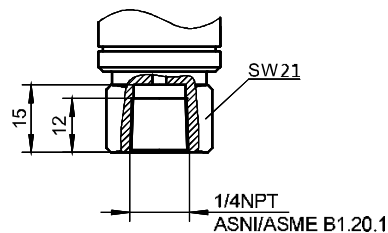
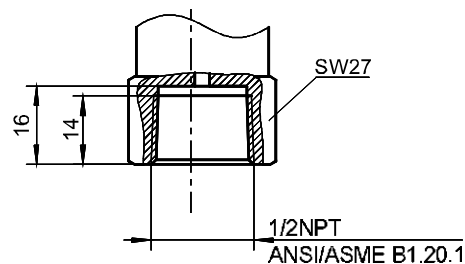
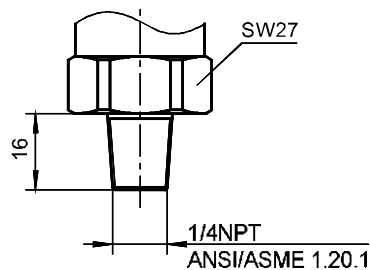
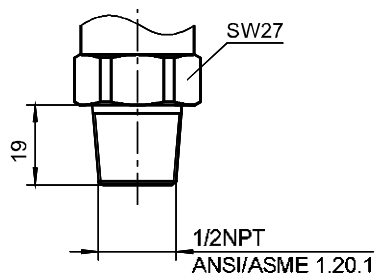
Order Codes

Pressure Range	Smallest Calibration Span	Low Range Limit (LRL)	Upper Range Limit (URL)	Overload Limit	Quick Codes, per CSA, Stainless Steel Welded Process Connection 1/2" NPT M			
					4/20 mA	4/20 mA + HART (Power Supply = 16.5-55 VDC)	1/5 VDC	MODBUS RS485
-1/0/1 PSI	0.7 PSI	-1.0 PSI	1.0 PSI	1.5 PSI	LY16P011X	LY16P01HX	LY16P012X	LY16P01RX
-3/0/3 PSI	1.5 PSI	-2.9 PSI	2.9 PSI	4.4 PSI	LY16P021X	LY16P02HX	LY16P022X	LY16P02RX
-5/0/5 PSI	3.0 PSI	-5.1 PSI	5.1 PSI	7.6 PSI	LY16P031X	LY16P03HX	LY16P032X	LY16P03RX
-14.5/0/14.5 PSI	5.1 PSI	-14.5 PSI	14.5 PSI	21.8 PSI	LY16P041X	LY16P04HX	LY16P042X	LY16P04RX
-14.5/0/30 PSI	14.5 PSI	-14.5 PSI	29.0 PSI	43.5 PSI	LY16P051X	LY16P05HX	LY16P052X	LY16P05RX
-14.5/0/100 PSI	29.0 PSI	-14.5 PSI	101.5 PSI	152.3 PSI	LY16P061X	LY16P06HX	LY16P062X	LY16P06RX
-14.5/0/150 PSI	72.5 PSI	-14.5 PSI	145.0 PSI	217.6 PSI	LY16P071X	LY16P07HX	LY16P072X	LY16P07RX
-14.5/0/250 PSI	145 PSI	-14.5 PSI	246.6 PSI	369.8 PSI	LY16P081X	LY16P08HX	LY16P082X	LY16P08RX
-14.5/0/500 PSI	247 PSI	-14.5 PSI	507.6 PSI	761.4 PSI	LY16P091X	LY16P09HX	LY16P092X	LY16P09RX
-14.5/0/1,000 PSI	508 PSI	-14.5 PSI	1,015.0 PSI	1,522.9 PSI	LY16P101X	LY16P10HX	LY16P102X	LY16P10RX
-14.5/0/2,500 PSI	1,015 PSI	-14.5 PSI	2,465.6 PSI	3,698.5 PSI	LY16P111X	LY16P11HX	LY16P112X	LY16P11RX
-14.5/0/5,000 PSI	2,466 PSI	-14.5 PSI	5,076.0 PSI	7,614.5 PSI	LY16P121X	LY16P12HX	LY16P122X	LY16P12RX
-14.5/0/6,000 PSI	2,901 PSI	-14.5 PSI	5,801.5 PSI	8,702.26 PSI	LY16P131X	LY16P13HX	LY16P132X	LY16P13RX
-14.5/0/8,700 PSI	4,351 PSI	-14.5 PSI	8,702.0 PSI	13,053.4 PSI	LY16P141X	LY16P14HX	LY16P142X	LY16P14RX
-14.5/0/10,000 PSI	5,076 PSI	-14.5 PSI	10,152.6 PSI	15,229.0 PSI	LY16P151X	LY16P15HX	LY16P152X	LY16P15RX
-14.5/0/14,500 PSI	7,252 PSI	-14.5 PSI	14,503.8 PSI	21,755.7 PSI	LY16P161X	LY16P16HX	LY16P162X	LY16P16RX

Dimensions (mm)

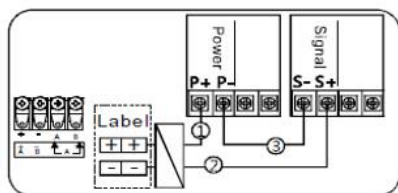


Process Connections



LY16

4-20mA two wires, intrinsic safety (module terminals-four terminals)



- ① Power supply+ is connected with transmitter terminals+
- ② Signal+ is connected with transmitter terminals-
- ③ Signal- is connected with power supply-

Diagram illustrating a 2x2 factorial experiment with two replicates. The top row shows four beakers with a '+' sign in the top circle, representing the first replicate. The bottom row shows four beakers with a '-' sign in the top circle, representing the second replicate. The columns are labeled 'A' and 'B' at the bottom. The first column is labeled '+' and the second column is labeled '-'.

Label	Two Wires	Three Wires	Four Wires
+	Power+	Power+	Power+
-	Power-	Power-	Power-
A		Signal+	Signal+
B			Signal-

Label	P+	P-	A	B	Out	PE
Modbus-RTU/ RS485	Power+	Power-	A+	B-		Housing
Five wires	Power+	Power-	A+	B-	Signal+	Housing ground

LY16 ENGINEERED PART NUMBER

OUTPUT	4...20 mA / 2-wire 4...20 mA / 2-wire + HART 5 4...20 mA / 2-wire + HART 7 4...20 mA / 2-wire + HART 5, 12/55 Vdc 1...5 V, 3-wire Profibus PA MODBUS RS485, 4-wire
AREA CLASSIFICATION	Without area classification, standard Hazardous location per CSA, IP66 Intrinsically Safe per Intertek, IP67 Explosive atmosphere per ATEX, IP67
SERIES PRESSURE RANGE (PSI)	-1/0/1, smallest calibration span 0.7 -3/0/3, smallest calibration span 1.5 -5/0/5, smallest calibration span 3.0 -14.5/0/14.5, smallest calibration span 5.1 -14.5/0/30, smallest calibration span 14.5 -14.5/0/100, smallest calibration span 29.0 -14.5/0/150, smallest calibration span 72.5 -14.5/0/250, smallest calibration span 145 -14.5/0/500, smallest calibration span 247 -14.5/0/1,000, smallest calibration span 508 -14.5/0/2,500, smallest calibration span 1,015 -14.5/0/5,000, smallest calibration span 2,466 -14.5/0/6,000, smallest calibration span 2,901 -14.5/0/8,700, smallest calibration span 4,351 -14.5/0/10,000, smallest calibration span 5,076 -14.5/0/14,500, smallest calibration span 7,252 Other, specify P17 thru P99
PRESSURE	Gauge (standard) Absolute (Only available in 0-1,450 psi pressure ranges and 0.2% accuracy)
ACCURACY	0.2%, 2:1 turndown (standard) 0.5%, 2:1 turndown 0.10% (up to 6,000 psi), 10:1 turndown 0.075% (up to 6,000 psi) 20:1 turndown 0.05% (up to 1,000 psi) 20:1 turndown
ELECTRICAL CONNECTION	Water proof M20x1.5 F, PVC, IP66 Flame proof 1/2" NPT F, SS, IP66 or IP67 Flame proof M20x1.5 F, SS, IP66 or IP67
PROCESS CONNECTION	1/4" NPT M 1/2" NPT M (standard) 1/4" NPT F 1/2" NPT F 9/16" Autoclave F G1/4" M (includes M20x1.5 F cable entry) G1/2" M (includes M20x1.5 F cable entry)
SEALS	FKM O-Ring Welded (standard)
PRESSURE PORT	304 SS (standard) 316 SS Hastelloy C 316L SS (standard) Hastelloy C
DIAPHRAGM	U-shaped 2" mounting bracket Without LCD display Other, specify Z1 thru Z99
SPECIAL	

[illegible]