SUBMERSIBLE LEVEL TRANSMITTER

Model 313L

FEATURES:

- All-welded, stainless steel construction
- Rugged, all encapsulated electronics.
- Leakproof
- 1/2" NPT conduit thread standard

PRESSURE RANGES:

• From 0-3 through 0-100 psig (See ordering guide.)

ACCURACY:

• From ±0.1% FSO (RSS) to ±0.5% FSO (RSS) (See specifications & ordering guide.)



ORDERING GUIDE

Ordering: Specify model, and pressure range and indicate modifications or accessories required.

Use the following codes to identify desired item. Example 313L-B-PZ-LJ

MODEL	SERIES	RANGE	OPTIONS
•	_	• -	- •/•/•

MODEL

313L 4-20mA

SERIES

B ±0.5% FSO (RSS) C ±0.2% FSO (RSS) D ±0.1% FSO (RSS)

PRESSURE RANGE

psi		in w	in wc		
PG	3	XK	100		
ΡJ	5	XM	150		
PL	7.5	XO	200		
PΝ	10	XQ	300		
PP	15				
PR	20				
PO	25				
PT	30				
PV	50				
PX	75				
PΖ	100				

OPTIONS

AA None (standard connector)
CZ Alternate cable length (specify)

ALTERNATE PRESSURE PORT

FH 1/8" NPT (F)
FL 1/8" NPT (M)
LD Tapered inlet
LJ Tapered inlet with standoff plate

GENERAL

Tefzel jacketed cable CT Standardized output to ±0.5% FSO GA GB Alternate output, pressure units, or full scale outputs that are non-standard Improved temperature compensation to ±0.5% FSO unless otherwise specified GG Alternate calibration signal Internal calibration resistor set to 100 \pm 0.5% FSO GH unless other wise specified JH Remote cable mounted (in-line) zero & span controls. 3' cable on open side. Length of cable on closed side as required. (500' maximum) GΖ Customer special

Specifications printed on reverse side of this brochure.

GP:50 reserves the right to make product improvements and amendments to the product specification stated throughout this brochure without prior notification. Please contact the factory on all critical dimensions and specifications for verification.

SPECIFICATIONS

Unless otherwise stated, these specifications are the standards to which the units are normally constructed. Alterations may be easily and readily accomplished by the standard modification code or by discussion with the factory. We invite your inquiry.

Series B Series C Series D Series C Series D Series C Series D Series D Series C Series D Series D Series C Series D Series C Series D Series C Series D Series D Series C Ser	Accuracy (Static error band includes non-linearity, hysteresis, non-repeatability)				
Series C Series D Emperature Limits* Compensated Operating Storage Temperature Compensated Operating Storage Temperature Compensation* Zero Less than ±2% FSO/100°F at full scale pressure range and/or upper range limit Less than ±2% FSO/100°F at full scale pressure range and/or upper range limit Less than ±2% FSO/100°F at full scale pressure range and/or upper range limit Less than ±2% FSO/100°F at full scale pressure range and/or upper range limit Less than ±2% FSO/100°F at full scale pressure range and/or upper range limit Less than ±2% FSO/100°F at full scale pressure range and/or upper range limit Less than ±2% FSO/100°F at full scale pressure range and/or upper range limit Less than ±2% FSO/100°F at full scale pressure range and/or upper range limit Less than ±2% FSO/100°F at full scale pressure -16.0m ±2% FSO at 70°F 16.0m ±2% FSO at 70	3 1				
Temperature Limits* Compensated Operating Storage Temperature Compensation* Zero Less than ±2% FSO/100°F at full scale pressure range and/or upper range limit Less than ±2% FSO/100°F at full scale pressure range and/or upper range limit Electricals Excitation Zero Balance Span Load Impedance Circuit Protection Insulation Resistance Resolution Mechanicals Proof Pressure Burst Pressure External Pressure Case Materials Pressure Response Long Term Stability Position Effect Calibration Orientation Cycle Life Fluid Fill Length Diameter Connections Pressure Electrical Cable Pros University Prose Pressure Pr	Series C				
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Operating Storage -40°F to +150°F -40°F to +150°F -40°F to +150°F Temperature Compensation* Zero Less than ±2% FSO/100°F at full scale pressure range and/or upper range limit Less than ±2% FSO/100°F at full scale pressure range and/or upper range limit Less than ±2% FSO/100°F at full scale pressure range and/or upper range limit Less than ±2% FSO at 70°F at full scale pressure range and/or upper range limit Less than ±2% FSO at 70°F at full scale pressure range and/or upper range limit Less than ±2% FSO at 70°F at full scale pressure Load Impedance at 4.0mA ±2% FSO at 70°F at 6.0mA ±2% a	l l	0°F to +140°F			
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Less than ±2% FSO/100°F at full scale pressure range and/or upper range limit Less than ±2% FSO/100°F at full scale pressure range and/or upper range limit Less than ±2% FSO/100°F at full scale pressure range and/or upper range limit	Temperature Compensation*				
Less than ±2% FSO/100°F at full scale pressure range and/or upper range limit		Less than ±2% FSO/100°F at full scale			
Electricals Excitation Zero Balance Span Load Impedance Circuit Protection Mechanicals Proof Pressure Burst Pressure External Pressure Case Materials Pressure Response Long Term Stability Position Effect Calibration Orientation Cycle Life Fluid Fill Length Diameter Connections Pressure Electrical Cable Excitation 12 - 40 Vdc 4.0mA ±2% FSO at 70°F 16.0mA ±2% FSO at 70°F 16.0mA ±2% FSO at 70°F 1400 ohm maximum at 40 Vdc excitation Short Circuit - Indefinite Reverse Wired - Indefinite Greater than 10 M ohm at 50 Vdc and 70°F Infinite 1400 ohm maximum at 40 Vdc excitation Short Circuit - Indefinite Reverse Wired - Indefinite Greater than 10 M ohm at 50 Vdc and 70°F Infinite 2 times rated full scale pressure 4 times rated full scale pressure 500 psi maximum Type 316 stainless steel ≤ 5 ms to 90% ≤ +0.5% FSO / year ±0.01% FSO for a 90° change in orientation Horizontal unless specified 1 million pressure cycles Fluid Fill 200 CS. Dow Corning 200. (Silicon Oil) 6.1 inches Connections Pressure Electrical Cable Molded polyurethane jacket, 6 conductor with breather tube, 24 AWG, 8' long		pressure range and/or upper range limit			
Electricals Excitation Zero Balance Span Load Impedance Circuit Protection Mechanicals Proof Pressure External Pressure Case Materials Pressure Response Long Term Stability Position Effect Calibration Orientation Cycle Life Fluid Fill Length Diameter Connections Excitation 12 - 40 Vdc 4.0mA ±2% FSO at 70°F 16.0mA ±2% FSO at 70°F 16.0mA ±2% FSO at 70°F 14.00 ohm maximum at 40 Vdc excitation Short Circuit - Indefinite Reverse Wired - Indefinite	Span	Less than ±2% FSO/100°F at full scale			
Excitation Zero Balance Span 16.0mA ±2% FSO at 70°F 16.0mA ±2% FSO a		pressure range and/or upper range limit			
Zero Balance Span Load Impedance Circuit Protection Circuit Protection Resolution Mechanicals Proof Pressure External Pressure Case Materials Pressure Response Long Term Stability Position Effect Calibration Orientation Cycle Life Fluid Fill Length Diameter Connections Pressure Electrical Cable Resolute A.OmA ±2% FSO at 70°F 16.0mA ±0.0mA	Electricals				
Span Load Impedance Circuit Protection Insulation Resistance Resolution Mechanicals Proof Pressure Burst Pressure Case Materials Pressure Response Long Term Stability Position Effect Calibration Orientation Cycle Life Fluid Fill Length Diameter Connections Pressure Electrical Cable PVC bullet nose Indefinite 1400 ohm maximum at 40 Vdc excitation Short Circuit - Indefinite Reverse Wired -	Excitation	12 - 40 Vdc			
Load Impedance Circuit Protection Short Circuit - Indefinite Reverse Wired - Indefinite Reverse Wire	Zero Balance	4.0mA ±2% FSO at 70°F			
Circuit Protection Short Circuit - Indefinite Reverse Wired - Indefinite	Span	16.0mA ±2% FSO at 70°F			
Reverse Wfred - Indefinite Insulation Resistance Resolution Mechanicals Proof Pressure Burst Pressure External Pressure Case Materials Pressure Response Long Term Stability Position Effect Calibration Orientation Cycle Life Fluid Fill Length Diameter Connections Pressure Electrical Cable Reverse Wfred - Indefinite Greater than 10 M ohm at 50 Vdc and 70°F Infinite Reverse Wfred - Indefinite Greater than 10 M ohm at 50 Vdc and 70°F Infinite Reverse Wfred - Indefinite Greater than 10 M ohm at 50 Vdc and 70°F Infinite 2 times rated full scale pressure 4 times rated full scale pressure 500 psi maximum Type 316 stainless steel ≤ 5 ms to 90% ≤ +0.5% FSO / year ±0.01% FSO for a 90° change in orientation Horizontal unless specified 1 million pressure cycles Fluid Fill 200 CS. Dow Corning 200. (Silicon Oil) 6.1 inches Connections Pressure Electrical Cable Molded polyurethane jacket, 6 conductor with breather tube, 24 AWG, 8' long	Load Impedance	1400 ohm maximum at 40 Vdc excitation			
Insulation Resistance Resolution Mechanicals Proof Pressure Burst Pressure External Pressure Case Materials Pressure Response Long Term Stability Position Effect Cycle Life Fluid Fill Length Diameter Connections Pressure Electrical Cable Pressure Resolution Celibration Orientation Resistance Resolution Celibration Orientation Resistance Reread Tumes rated full scale pressure 4 times rated full scale pressure 500 psi maximum Type 316 stainless steel ≤ 5 ms to 90% ≤ +0.5% FSO / year ±0.01% FSO for a 90° change in orientation Horizontal unless specified 1 million pressure cycles Fluid Fill 200 CS. Dow Corning 200. (Silicon Oil) 6.1 inches PVC bullet nose Molded polyurethane jacket, 6 conductor with breather tube, 24 AWG, 8' long	Circuit Protection	Short Circuit - Indefinite			
Resolution Mechanicals 2 times rated full scale pressure Burst Pressure 4 times rated full scale pressure External Pressure 500 psi maximum Case Materials Type 316 stainless steel Pressure Response ≤ 5 ms to 90% Long Term Stability ≤ +0.5% FSO / year Position Effect ±0.01% FSO for a 90° change in orientation Calibration Orientation Horizontal unless specified Cycle Life 1 million pressure cycles Fluid Fill 200 CS. Dow Corning 200. (Silicon Oil) Length 6.1 inches Diameter 1.0 inches Connections Pressure Electrical Cable Molded polyurethane jacket, 6 conductor with breather tube, 24 AWG, 8' long					
Mechanicals 2 times rated full scale pressure Burst Pressure 4 times rated full scale pressure External Pressure 500 psi maximum Case Materials Type 316 stainless steel Pressure Response ≤ 5 ms to 90% Long Term Stability ≤ +0.5% FSO / year Position Effect ±0.01% FSO for a 90° change in orientation Calibration Orientation Horizontal unless specified Cycle Life 1 million pressure cycles Fluid Fill 200 CS. Dow Corning 200. (Silicon Oil) Length 6.1 inches Diameter 1.0 inches Connections Pressure Electrical Cable Molded polyurethane jacket, 6 conductor with breather tube, 24 AWG, 8' long	Insulation Resistance	Greater than 10 M ohm at 50 Vdc and 70°F			
Proof Pressure Burst Pressure External Pressure Case Materials Pressure Response Long Term Stability Position Effect Cycle Life Fluid Fill Length Diameter Connections Pressure Burst Pressure External Pressure External Pressure 500 psi maximum Type 316 stainless steel ≤ 5 ms to 90% ≤ +0.5% FSO / year ±0.01% FSO for a 90° change in orientation Horizontal unless specified 1 million pressure cycles 200 CS. Dow Corning 200. (Silicon Oil) 6.1 inches 1.0 inches PVC bullet nose Molded polyurethane jacket, 6 conductor with breather tube, 24 AWG, 8' long	Resolution	Infinite			
Burst Pressure External Pressure Case Materials Pressure Response Long Term Stability Position Effect Cycle Life Fluid Fill Length Diameter Connections Pressure External Pressure 4 times rated full scale pressure 500 psi maximum Type 316 stainless steel ≤ 5 ms to 90% ≤ +0.5% FSO / year ±0.01% FSO for a 90° change in orientation Horizontal unless specified 1 million pressure cycles 200 CS. Dow Corning 200. (Silicon Oil) 6.1 inches 1.0 inches PVC bullet nose Molded polyurethane jacket, 6 conductor with breather tube, 24 AWG, 8' long	Mechanicals	~0.			
External Pressure Case Materials Pressure Response Long Term Stability Position Effect Calibration Orientation Cycle Life Fluid Fill Length Diameter Connections Pressure Electrical Cable External Pressure Flood polyurethane jacket, 6 conductor with breather tube, 24 AWG, 8' long	Proof Pressure	2 times rated full scale pressure			
Case Materials Type 316 stainless steel Pressure Response ≤ 5 ms to 90% Long Term Stability ≤ +0.5% FSO / year Position Effect ±0.01% FSO for a 90° change in orientation Calibration Orientation Horizontal unless specified Cycle Life 1 million pressure cycles Fluid Fill 200 CS. Dow Corning 200. (Silicon Oil) Length 6.1 inches Diameter 1.0 inches Connections Pressure Electrical Cable Molded polyurethane jacket, 6 conductor with breather tube, 24 AWG, 8' long	Burst Pressure	4 times rated full scale pressure			
Pressure Response Long Term Stability Position Effect Calibration Orientation Cycle Life Fluid Fill Length Diameter Connections Pressure Electrical Cable Pressure Response ≤ 5 ms to 90% ≤ +0.5% FSO / year ±0.01% FSO for a 90° change in orientation Horizontal unless specified 1 million pressure cycles 200 CS. Dow Corning 200. (Silicon Oil) 6.1 inches 1.0 inches PVC bullet nose Molded polyurethane jacket, 6 conductor with breather tube, 24 AWG, 8' long	External Pressure	500 psi maximum			
Long Term Stability Position Effect Calibration Orientation Cycle Life Fluid Fill Length Diameter Connections Pressure Electrical Cable Long Term Stability ≤ +0.5% FSO / year ±0.01% FSO for a 90° change in orientation Horizontal unless specified 1 million pressure cycles 200 CS. Dow Corning 200. (Silicon Oil) 6.1 inches 1.0 inches PVC bullet nose Molded polyurethane jacket, 6 conductor with breather tube, 24 AWG, 8' long	Case Materials	Type 316 stainless steel			
Position Effect Calibration Orientation Horizontal unless specified 1 million pressure cycles Fluid Fill Length Diameter Connections Pressure Electrical Cable Position Orientation Horizontal unless specified 1 million pressure cycles 200 CS. Dow Corning 200. (Silicon Oil) 6.1 inches 1.0 inches PVC bullet nose Molded polyurethane jacket, 6 conductor with breather tube, 24 AWG, 8' long	Pressure Response				
Calibration Orientation Cycle Life Fluid Fill Length Diameter Connections Pressure Electrical Cable Cycle Life 1 million pressure cycles 200 CS. Dow Corning 200. (Silicon Oil) 6.1 inches 1.0 inches PVC bullet nose Molded polyurethane jacket, 6 conductor with breather tube, 24 AWG, 8' long	Long Term Stability				
Cycle Life 1 million pressure cycles Fluid Fill 200 CS. Dow Corning 200. (Silicon Oil) Length 6.1 inches Diameter 1.0 inches Connections Pressure PVC bullet nose Electrical Cable Molded polyurethane jacket, 6 conductor with breather tube, 24 AWG, 8' long					
Fluid Fill Length Diameter Connections Pressure Electrical Cable Processing Processing 200 CS. Dow Corning 200. (Silicon Oil) 6.1 inches 1.0 inches PVC bullet nose Molded polyurethane jacket, 6 conductor with breather tube, 24 AWG, 8' long		·			
Length Diameter 6.1 inches 1.0 inches Connections Pressure Electrical Cable Molded polyurethane jacket, 6 conductor with breather tube, 24 AWG, 8' long					
Diameter 1.0 inches Connections Pressure Electrical Cable Molded polyurethane jacket, 6 conductor with breather tube, 24 AWG, 8' long					
Connections Pressure Electrical Cable Molded polyurethane jacket, 6 conductor with breather tube, 24 AWG, 8' long					
Pressure PVC bullet nose Electrical Cable Molded polyurethane jacket, 6 conductor with breather tube, 24 AWG, 8' long	Diameter	1.0 inches			
Electrical Cable Molded polyurethane jacket, 6 conductor with breather tube, 24 AWG, 8' long	Connections				
with breather tube, 24 AWG, 8' long	Pressure				
	Electrical Cable				
Identification Etched onto housing		with breather tube, 24 AWG, 8' long			
	Etched onto housing				

^{*} See modifications on ordering guide.

WIRING CODE

	313L
Red	+ Excit./Signal
Green	NC
White	NC
Black	- Excit./Signal
Blue	NC Option GH
Brown	NC Option GH
Shield	Open

Some options will affect dimensions. Consult factory if important.

Note: Altering option codes will alter the unit length.

