

SUBMERSIBLE LEVEL TRANSMITTER



TL1

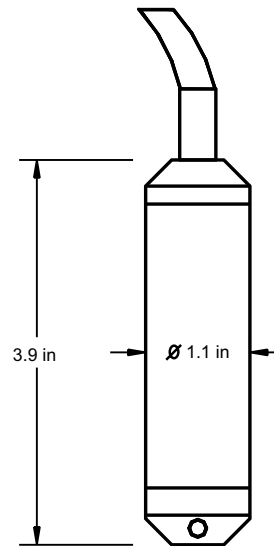


FEATURES / BENEFITS

- Accurate Level Measurements from 5" WC to 300 psi
- 316SS and Polyurethane Wetted Parts
- $\pm 0.25\%$ or $\pm 0.125\%$ Accuracy
- Vented, Strong Submersible Cable
- Lightning, Short Circuit, and Reverse Polarity Protection
- NEMA 6/IP68 Protection, Submersible to 1,000 ft.

SPECIFICATIONS

Output Signal	4-20mA, 2-wire 0-5Vdc, 0-10Vdc, or 0.5-2.5Vdc (3-wire)
Pressure Ranges	0-2 psi through 0-500 psi
Proof Pressure	2x Range
Burst Pressure	4x Range
Accuracy (BFSL)	$\pm 0.25\%$ of span (standard) $\pm 0.125\%$ of span (standard)
Input	12-30Vdc (for current output) 14-30Vdc (for Vdc output) 6Vdc (for 0.05-2.5Vdc output)
Temperature	Compensated: 32 to 122°F Effect: $\pm 0.01\%$ of span/°F (on zero and span) Media: -14 to 175°F
Environmental Rating	NEMA 6, IP68 (submersible to 1,000 ft.)
Electrical Protection	Reverse polarity, short circuit, and lightning protection
Submersible Cable	Vented, watertight, polyurethane jacketed, tensile strength: maximum 220 lbs.
Wetted Parts	316 SS, Cable: Polyurethane (teflon available), Nose Cone: Polyamide



TL1 (case style 1)

Note: Dimensions are nominal and may vary. Check with Reotemp sales if dimensions are critical. Other case styles available.

HOW TO ORDER: Choose options to build a part number. For example: **TL1IN502A-P40-N**

TL1	IN50	2	A	P200	G	LP
MODEL	RANGE	ACCURACY	OUTPUT SIGNAL	CABLE	PROCESS CONNECTION	OPTIONS
TL1 = General Protection TLA = Intrinsically Safe, FM Compliant & CSA Approved See Transmitter Technical Reference on 193	<i>Special INWC ranges for TL1:</i> IN50 = 0/50 IN100 = 0/100 IN150 = 0/150 IN200 = 0/200 IN400 = 0/400	2 = $\pm 0.25\%$ Full Scale (standard) 3 = $\pm 0.125\%$ Full Scale	<i>Both Models</i> A = 4-20mA (2-Wire) (standard) <i>TL1 ONLY</i> B = 0-5Vdc (3-Wire) E = 0-10Vdc (3-Wire) H = 0.5-2.5Vdc (3-Wire)	P??? = PUR Cable (??? = Length in .ft) F??? = FEP Cable (??? = Length in .ft)	N = Standard Nose Cone W = Weighted Nose Cone G = 2" Flush Diaphragm with Protective Cage 2 = 1/2" Male NPT Adapter	<i>TL1 ONLY</i> LP = Lightning Protection

TRANSMITTER TECHNICAL REFERENCE

SPECIFICATIONS

Wetted Parts: Body: 316 SS for ranges under 400 psi, high pressure ranges 17-4PH SS diaphragm and 300 series SS pressure chamber. For TE model: 316 SS for ranges up through 0 psi to 300 psi, 316 SS with Elgiloy ranges 0 psig to 500 psig and higher

Repeatability: 0.05% of scale (model TM, 0.2%)

Hysteresis: 0.1% full-scale

Stability: 0.2% full-scale (model TM, 0.5%)

Burst Pressure: 4 x range

Response Time: <1 ms (between 10-90% of scale), Model TM: <5ms

Operating Life: 100 million cycles

Electromagnetic Rating: CE compliant to EMC norm, EN61326:1997/A1:1998, RFI, EMI and ESD protection

Electrical Protection: Reverse Polarity, over voltage, and short circuit protection

Shock: Less than ± 0.05% full-scale effect for 1,000 g's @ 2ms on any axis (model TM: 600 g's)

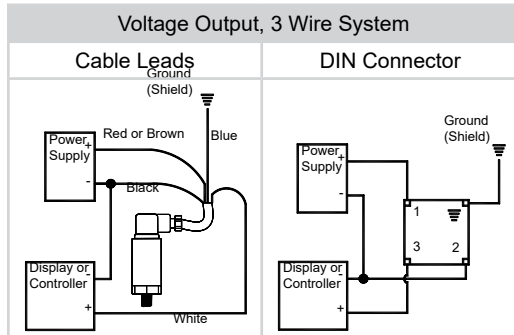
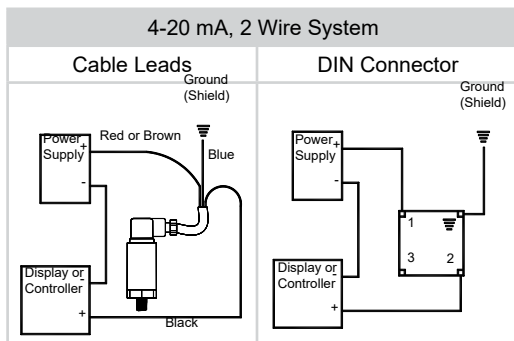
Vibration: Less than ± 0.01% full scale effect for 15 g's @ 0-2,000 Hz on any axis (model TG: less than 0.05% full scale effect for 20 g's @ 5-2,000 Hz on any axis.)

Temperature Range for Storage: -40-212°F

Environmental Protection: NEMA 4x (IP65), Series TL: NEMA 6, IP68

Proof Pressure: At Proof Pressure, zero and span may shift but no permanent damage has occurred.

Burst Pressure: At Burst Pressure, permanent non-recoverable damage may occur.



SERIES		TSA	TSB	TSC	TG1	TM	TE	TH1	THX	TL1
Code	Range	VACUUM								
P01	-30"Hg VAC	✓	✓	✓	✓	✓	✓	✓	✓	
Code	Range	COMPOUND RANGES								
P02	-30"Hg/0/15psi	✓	✓	✓	✓			✓	✓	
P03	-30/0/30 psi	✓	✓	✓	✓		✓	✓		
P04	-30/0/60 psi	✓	✓	✓	✓					
P05	-30/0/100 psi	✓	✓	✓	✓		✓			
P06	-30/0/150 psi	✓	✓	✓	✓					✓
P07	-30/0/200 psi						✓			
P08	-30/0/300 psi	✓	✓	✓	✓					
Code	Range	PRESSURE RANGES								
IN50	0/50 inH ₂ O							✓		✓
IN100	0/100 inH ₂ O				✓			✓		✓
IN200	0/200 inH ₂ O									✓
L11	0/55 INWC			✓				✓		
L12	0/80 INWC			✓				✓		
L13	0/140 INWC	✓	✓	✓	✓			✓		
L14	0/280 INWC	✓	✓	✓	✓			✓		
P11	0/2 psi			✓				✓	✓	✓
P12	0/3 psi			✓				✓	✓	✓
P13	0/5 psi	✓	✓	✓	✓			✓	✓	✓
P14	0/10 psi	✓	✓	✓	✓			✓	✓	✓
P15	0/15 psi	✓	✓	✓	✓	✓	✓	✓	✓	✓
P16	0/30 psi	✓	✓	✓	✓	✓	✓	✓	✓	✓
P17	0/60 psi	✓	✓	✓	✓	✓	✓	✓	✓	✓
P18	0/100 psi	✓	✓	✓	✓	✓	✓	✓	✓	✓
P195	0/150 psi	✓	✓	✓	✓	✓		✓	✓	✓
P20	0/200 psi	✓	✓	✓	✓	✓	✓	✓	✓	✓
P21	0/300 psi	✓	✓	✓	✓	✓	✓	✓	✓	✓
P26	0/500 psi	✓	✓	✓	✓	✓	✓	✓	✓	✓
P23	0/600 psi	✓	✓	✓	✓	✓		✓		
P27	0/750 psi	✓	✓	✓	✓	✓	✓	✓	✓	✓
P25	0/1000 psi	✓	✓	✓	✓	✓	✓	✓	✓	✓
P30	0/1500 psi				✓	✓		✓		
P31	0/2000 psi				✓	✓	✓	✓		
P32	0/3000 psi				✓	✓	✓	✓		
P34	0/5000 psi				✓	✓	✓	✓	✓	
P35	0/6000 psi				✓	✓	✓	✓		
P28	0/7500 psi				✓	✓		✓	✓	
P37	0/10000 psi				✓	✓	✓	✓	✓	
P38	0/15000 psi				✓	✓	✓	✓	✓	
P39	0/20000 psi							✓		
P40	0/30000 psi							✓		
P41	0/40000 psi							✓		
P42	0/50000 psi							✓		
P43	0/60000 psi							✓		
Code	Range	ABSOLUTE RANGES								
A15	0/15 psia	✓	✓		✓					
A16	0/30 psia	✓	✓		✓					
A17	0/60 psia	✓	✓		✓					
A18	0/100 psia	✓	✓		✓					
A19	0/150 psia	✓	✓		✓					
A20	0/200 psia	✓	✓		✓					
A21	0/300 psia	✓	✓		✓					

Don't See the Range You Need?
Other ranges may be available, contact Reotemp customer service for more information.

TRANSMITTERS