

CANADA SENSORS TECHNOLOGY INC.



Manufacturer of Advanced Technology Pressure & Level Transmitters

LIQUID LEVEL TRANSMITTER – PROCESS 10 HART™ Enabled Intrinsically Safe Model

Submersible Pump Lift Station / Sludge Level Transmitter / Long Range Depth Transmitter

Canada Sensors *intelligent* transmitters bring the latest technology to the pressure transmitter & related instrumentation market-place with self-diagnostic features which will maintain consistent accuracy throughout temperature and pressure scales.

FEATURES

- ✓ HART™ Protocol (Easy to Setup Zero & Span)
- ✓ Intrinsically Safe – HazLoc Zone 0
- ✓ On-board Barometric Sensor Optional
- ✓ Eliminate Output Drift
- ✓ Self-Adjusting Real Time Data
- ✓ On-board RTD with Real Time Temperature Compensation
- ✓ All 316SS Construction (Wetted Parts)
- ✓ IP 68 Rated PTFE Vent
- ✓ Circuit Protection RFI and EMI surge protection
- ✓ 316SS Breathable Encapsulated Wire Tubing (BEWT)
(Tubing Length from 12 inches (30 cm) to 9 miles (15 KM))
- ✓ Full Scale Accuracy 0.25% to 0.5%
- ✓ Optional: Large 3" Non-clog 316SS Diaphragm c/w
Protective Cage for Heavy Slurry Applications,
Pipe Mounting Bracket,
- ✓ RoHS2 Compliant Directive 2011/65/EU
- ✓ External Pressures to 15,000 PSI
- ✓ 3 Year Conditional Warranty



TECHNICAL DATA

HART™ Enabled is a standard feature

Two Wire 4-20 mA Output Pressure Transmitter

Temperature compensation, through a mathematical formula, will occur at multiple levels throughout the range of the pressure transmitter offering highly accurate information.

The Process 10 transmitter has an optional on-board barometric calibration chip. This is a self-adjusting feature with zero drift at any altitude or day or night. The transmitter does not require any external adjustments.

Highly accurate and repeatable 0.25% to 0.5% full scale accuracy depending on conditions

Intrinsically Safe - HazLoc Zone 0

Ingress Protection is minimum IP68

Operating pressure ranges from 5 PSI and up

Digitally mapped error correction throughout the level range

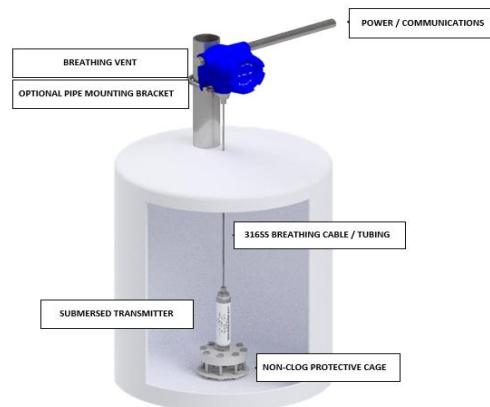
Individually characterized sensor head -316SS silicone oil filled sensor

Corrosion Inhibiting feature is standard on the Process 10 model. This PTFE corrosion protection protects from ambient conditions such as UV rays, humidity, sand, sea-spray, hydrogen sulfide environments, and most chemicals. (PTFE is not available on 3" diaphragm model)

PTFE coating on the process connection provides protection from corrosive media

Multiple Electrical Connectors & Housings Available

316SS Process Connection Materials are standard



Contact Us:

Canada Sensors Technology Inc.

10 – 328 Wale Road
Victoria, BC V9B 0J6
Canada
250-588-8085

sales@canadasensors.com
www.canadasensors.com

**Manufacturer of Advanced Technology
Level and Pressure Transmitters**

Additional Features:

Powder Coated Canister
Engraved Product Information
Laser Welded
3 Year Conditional Warranty (Serial Number Traceability)

Advanced Technology ... Improving Business
Smart THROUGH and THROUGH
This transmitter packs a powerful punch
No drift. No set-up. It just works.

MISSION STATEMENT

Canada Sensors Technology Inc. strives to build a mutually positive and beneficial relationship with our customers, ensuring their long-term success, through the understanding of their needs and the needs of their customers.

We will listen to our customers and constantly improve our technologies as our customers’ needs change with time.

Canada Sensors Technology Inc. is committed to providing the highest level of product quality and customer service. Canada Sensors Technology Inc. is ISO 9001:2015 certified.

Technical Specifications

Performance

Accuracy:	0.25 to 0.5% Full Scale Output depending on conditions
Stability:	0.25 to 0.5% Full Scale Output depending on conditions
Temperature Range:	-4C to +60C Calibrated
Temperature Accuracy:	0.25 to 0.5% Full Scale Output depending on conditions
Pressure Cycles:	n/a
Over Range Protection:	2 x Full Scale Output
Burst Pressure:	5 x Full Scale Output

Environmental Data

Temperature

Operating:	-4C to +60C
Storage:	-55C to +125C
Thermal Limits	
Compensated Range:	-4C to +60C
Temp Comp Zero:	0.25 to 0.5% Full Scale Output @ +50C
Temp Comp Span:	0.25 to 0.5% Full Scale Output @ +50C

Electrical Data

Excitation:	14-36 VDC (product accessories may alter excitation values)
Comms:	HART Protocol & Modbus in Development
Current Consumption:	3.6 mA
Zero Offset:	4 mA
Span Tolerance:	Range or Sensor with Turndown
Output Load:	500 OHMS
Barometric Chip (optional):	Monitoring Range 88KPA (12.76 PSI) to 108 KPA (15.7 PSI)
RTD Temperature:	On Board 100 ohm Platinum
Intrinsically Safe - HazLoc Zone 0	

Physical Data

Sensor:	PFAC-8 Treatment is standard on all Silicone Oil Filled 316SS
Vibration:	25gRMS from 20Hz to 2000Hz
Shock:	100g , half sine, 11mSec.
NOTE: Silicone Oil Filled Sensors are standard for low pressure	
Process Connection:	1/4" MNPT Flushmount 316SS w/ Nose Cone or 316SS 3" Flush Non-clog Diaphragm w/protective cage
Electrical Connection:	316SS 1/4" Compression x 1/2" MNPT Bored Tubing Connector w/ BEWT; XP Enclosures (complete system)

NOTE: Intrinsically safe pressure sensors may only be used in hazardous areas if they are installed in conjunction with an Ex barrier

NOTE: 316SS Wetted Parts are the minimum requirement for NACE compliance

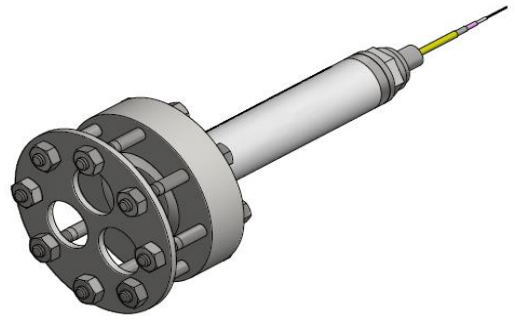
Process Connections:



1/4" MNPT FLUSHMOUNT 316SS



316SS Nose Cone

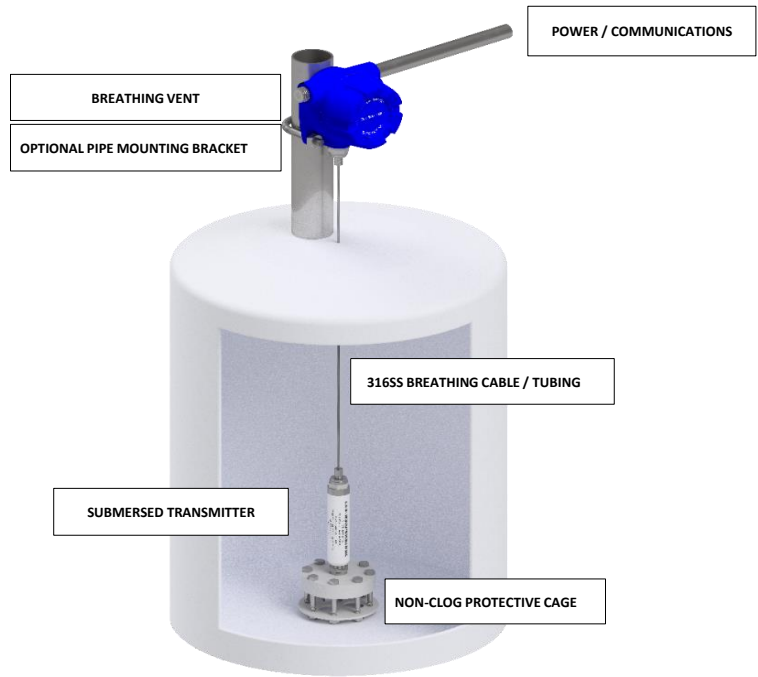


316SS 3" Flush Non-clog Diaphragm & Cage

Electrical Connections:



316SS 1/4" x 1/2" Bored Tubing Connector



Product Accessories:

Aluminum XP Head (1/2" FNPT x 3) - Blank - No Window

Aluminum XP Head (1/2" FNPT x 3) - w/ 3 1/2 + Digits LCD Loop Powered Display

Aluminum XP Head (1/2" FNPT x 3) - w/ 5 Digit LCD Loop Powered Display



Product Nomenclature

MODEL: Liquid Level Transmitter - Process 10

PN Example: A-B-C-D-E-F-G-H-I-J-K-L-M-N

LL10-01-01-01-850-25-14-02-L08-01-01-01-02-04:

Process 10 Transmitter, 4-20 mA, HART Enabled, Gauge (PSIG), .850 Specific Gravity, 25 ft maximum liquid height, 1/2" MNPT Flushmount w/ 3" Flush Non-clog Diaphragm & Cage 316SS, 316SS Wetted Parts, 316SS 1/4" Compression x 1/2"

MNPT Bored Tubing Connector w/ 45 ft BEWT, Head - Blank No Window, No Mounting Bracket, No Treatment, 0.25% to 0.5% Accuracy

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
--	---	---	---	---	---	---	---	---	---	---	---	---	---	---

Model	LL10	-	Process 10											
--------------	------	---	------------	--	--	--	--	--	--	--	--	--	--	--

Output	01	-	4-20 mA											
---------------	----	---	---------	--	--	--	--	--	--	--	--	--	--	--

Calibration Adjustment	01	-	HART Enabled											
-------------------------------	----	---	--------------	--	--	--	--	--	--	--	--	--	--	--

Pressure Reference	01	-	Gauge (PSIG)											
---------------------------	----	---	--------------	--	--	--	--	--	--	--	--	--	--	--

Specific Gravity (water 1,000 kg/m3 = 1) Specific gravity of a liquid is the "ratio of the density of the liquid - to the density of water at 4 °C"

700	-	0.700
701	-	0.701
702	-	0.702
703	-	0.703
704	-	0.704
705	-	0.705
706	-	0.706
707	-	0.707
708	-	0.708
709		0.709
710		0.710
711		0.711
712		0.712
713		0.713
714		0.714
715		0.715
716		0.716
717		0.717
718		0.718
719		0.719
720		0.720
721		0.721
722		0.722
723		0.723
724		0.724
725		0.725
726		0.726
727		0.727
728		0.728
729		0.729
730		0.730
731		0.731
732		0.732
733		0.733
734		0.734
735		0.735
736		0.736
737		0.737
738		0.738
739		0.739
740		0.740
741		0.741
742		0.742
743		0.743
744		0.744
745		0.745
746		0.746
747		0.747
748		0.748
749		0.749
750		0.750
751		0.751
752		0.752
753		0.753
754		0.754
755		0.755
756		0.756
757		0.757
758		0.758
759		0.759
760		0.760
761		0.761
762		0.762
763		0.763
764		0.764
765		0.765
766		0.766
767		0.767
768		0.768
769		0.769
770		0.770
771		0.771
772		0.772
773		0.773
774		0.774

775	0.775
776	0.776
777	0.777
778	0.778
779	0.779
780	0.780
781	0.781
782	0.782
783	0.783
784	0.784
785	0.785
786	0.786
787	0.787
788	0.788
789	0.789
790	0.790
791	0.791
792	0.792
793	0.793
794	0.794
795	0.795
796	0.796
797	0.797
798	0.798
799	0.799
800	0.800
801	0.801
802	0.802
803	0.803
804	0.804
805	0.805
806	0.806
807	0.807
808	0.808
809	0.809
810	0.810
811	0.811
812	0.812
813	0.813
814	0.814
815	0.815
816	0.816
817	0.817
818	0.818
819	0.819
820	0.820
821	0.821
822	0.822
823	0.823
824	0.824
825	0.825
826	0.826
827	0.827
828	0.828
829	0.829
830	0.830
831	0.831
832	0.832
833	0.833
834	0.834
835	0.835
836	0.836
837	0.837
838	0.838
839	0.839
840	0.840
841	0.841
842	0.842
843	0.843
844	0.844
845	0.845
846	0.846
847	0.847
848	0.848
849	0.849
850	0.850
851	0.851
852	0.852
853	0.853
854	0.854
855	0.855
856	0.856
857	0.857
858	0.858
859	0.859
860	0.860
861	0.861
862	0.862
863	0.863
864	0.864
865	0.865
866	0.866
867	0.867
868	0.868
869	0.869
870	0.870
871	0.871
872	0.872

873	0.873
874	0.874
875	0.875
876	0.876
877	0.877
878	0.878
879	0.879
880	0.880
881	0.881
882	0.882
883	0.883
884	0.884
885	0.885
886	0.886
887	0.887
888	0.888
889	0.889
890	0.890
891	0.891
892	0.892
893	0.893
894	0.894
895	0.895
896	0.896
897	0.897
898	0.898
899	0.899
900	0.900
901	0.901
902	0.902
903	0.903
904	0.904
905	0.905
906	0.906
907	0.907
908	0.908
909	0.909
910	0.910
911	0.911
912	0.912
913	0.913
914	0.914
915	0.915
916	0.916
917	0.917
918	0.918
919	0.919
920	0.920
921	0.921
922	0.922
923	0.923
924	0.924
925	0.925
926	0.926
927	0.927
928	0.928
929	0.929
930	0.930
931	0.931
932	0.932
933	0.933
934	0.934
935	0.935
936	0.936
937	0.937
938	0.938
939	0.939
940	0.940
941	0.941
942	0.942
943	0.943
944	0.944
945	0.945
946	0.946
947	0.947
948	0.948
949	0.949
950	0.950
951	0.951
952	0.952
953	0.953
954	0.954
955	0.955
956	0.956
957	0.957
958	0.958
959	0.959
960	0.960
961	0.961
962	0.962
963	0.963
964	0.964
965	0.965
966	0.966
967	0.967

968	0.968
969	0.969
970	0.970
971	0.971
972	0.972
973	0.973
974	0.974
975	0.975
976	0.976
977	0.977
978	0.978
979	0.979
980	0.980
981	0.981
982	0.982
983	0.983
984	0.984
985	0.985
986	0.986
987	0.987
988	0.988
989	0.989
990	0.990
991	0.991
992	0.992
993	0.993
994	0.994
995	0.995
996	0.996
997	0.997
998	0.998
999	0.999
1000	1.000
1001	1.001
1002	1.002
1003	1.003
1004	1.004
1005	1.005
1006	1.006
1007	1.007
1008	1.008
1009	1.009
1010	1.010
1011	1.011
1012	1.012
1013	1.013
1014	1.014
1015	1.015
1016	1.016
1017	1.017
1018	1.018
1019	1.019
1020	1.020
1021	1.021
1022	1.022
1023	1.023
1024	1.024
1025	1.025
1026	1.026
1027	1.027
1028	1.028
1029	1.029
1030	1.030
1031	1.031
1032	1.032
1033	1.033
1034	1.034
1035	1.035
1036	1.036
1037	1.037
1038	1.038
1039	1.039
1040	1.040
1041	1.041
1042	1.042
1043	1.043
1044	1.044
1045	1.045
1046	1.046
1047	1.047
1048	1.048
1049	1.049
1050	1.050
1051	1.051
1052	1.052
1053	1.053
1054	1.054
1055	1.055
1056	1.056
1057	1.057
1058	1.058
1059	1.059
1060	1.060
1061	1.061
1062	1.062
1063	1.063
1064	1.064

1065 1.065
1066 1.066
1067 1.067
1068 1.068
1069 1.069
1070 1.070
1071 1.071
1072 1.072
1073 1.073
1074 1.074
1075 1.075
1076 1.076
1077 1.077
1078 1.078
1079 1.079
1080 1.080
1081 1.081
1082 1.082
1083 1.083
1084 1.084
1085 1.085
1086 1.086
1087 1.087
1088 1.088
1089 1.089
1090 1.090
1091 1.091
1092 1.092
1093 1.093
1094 1.094
1095 1.095
1096 1.096
1097 1.097
1098 1.098
1099 1.099
1100 1.100
1101 1.101
1102 1.102
1103 1.103
1104 1.104
1105 1.105
1106 1.106
1107 1.107
1108 1.108
1109 1.109
1110 1.110
1111 1.111
1112 1.112
1113 1.113
1114 1.114
1115 1.115
1116 1.116
1117 1.117
1118 1.118
1119 1.119
1120 1.120
1121 1.121
1122 1.122
1123 1.123
1124 1.124
1125 1.125
1126 1.126
1127 1.127
1128 1.128
1129 1.129
1130 1.130
1131 1.131
1132 1.132
1133 1.133
1134 1.134
1135 1.135
1136 1.136
1137 1.137
1138 1.138
1139 1.139
1140 1.140
1141 1.141
1142 1.142
1143 1.143
1144 1.144
1145 1.145
1146 1.146
1147 1.147
1148 1.148
1149 1.149
1150 1.150
1151 1.151
1152 1.152
1153 1.153
1154 1.154
1155 1.155
1156 1.156
1157 1.157
1158 1.158
1159 1.159
1160 1.160
1161 1.161
1162 1.162

1163	1.163
1164	1.164
1165	1.165
1166	1.166
1167	1.167
1168	1.168
1169	1.169
1170	1.170
1171	1.171
1172	1.172
1173	1.173
1174	1.174
1175	1.175
1176	1.176
1177	1.177
1178	1.178
1179	1.179
1180	1.180
1181	1.181
1182	1.182
1183	1.183
1184	1.184
1185	1.185
1186	1.186
1187	1.187
1188	1.188
1189	1.189
1190	1.190
1191	1.191
1192	1.192
1193	1.193
1194	1.194
1195	1.195
1196	1.196
1197	1.197
1198	1.198
1199	1.199
1200	1.200
1201	1.201
1202	1.202
1203	1.203
1204	1.204
1205	1.205
1206	1.206
1207	1.207
1208	1.208
1209	1.209
1210	1.210
1211	1.211
1212	1.212
1213	1.213
1214	1.214
1215	1.215
1216	1.216
1217	1.217
1218	1.218
1219	1.219
1220	1.220
1221	1.221
1222	1.222
1223	1.223
1224	1.224
1225	1.225
1226	1.226
1227	1.227
1228	1.228
1229	1.229
1230	1.230
1231	1.231
1232	1.232
1233	1.233
1234	1.234
1235	1.235
1236	1.236
1237	1.237
1238	1.238
1239	1.239
1240	1.240
1241	1.241
1242	1.242
1243	1.243
1244	1.244
1245	1.245
1246	1.246
1247	1.247
1248	1.248
1249	1.249
1250	1.250
1251	1.251
1252	1.252
1253	1.253
1254	1.254
1255	1.255
1256	1.256
1257	1.257

1258	1.258
1259	1.259
1260	1.260
1261	1.261
1262	1.262
1263	1.263
1264	1.264
1265	1.265
1266	1.266
1267	1.267
1268	1.268
1269	1.269
1270	1.270
1271	1.271
1272	1.272
1273	1.273
1274	1.274
1275	1.275
1276	1.276
1277	1.277
1278	1.278
1279	1.279
1280	1.280
1281	1.281
1282	1.282
1283	1.283
1284	1.284
1285	1.285
1286	1.286
1287	1.287
1288	1.288
1289	1.289
1290	1.290
1291	1.291
1292	1.292
1293	1.293
1294	1.294
1295	1.295
1296	1.296
1297	1.297
1298	1.298
1299	1.299
1300	1.300
9999	Specific Gravity - Other

Liquid Level - Maximum Height (ft)

001	1 ft
002	2 ft
003	3 ft
004	4 ft
005	5 ft
006	6 ft
007	7 ft
008	8 ft
009	9 ft
010	10 ft
011	11 ft
012	12 ft
013	13 ft
014	14 ft
015	15 ft
016	16 ft
017	17 ft
018	18 ft
019	19 ft
020	20 ft
021	21 ft
022	22 ft
023	23 ft
024	24 ft
025	25 ft
026	26 ft
027	27 ft
028	28 ft
029	29 ft
030	30 ft
031	31 ft
032	32 ft
033	33 ft
034	34 ft
035	35 ft
036	36 ft
037	37 ft
038	38 ft
039	39 ft
040	40 ft
041	41 ft
042	42 ft
043	43 ft
044	44 ft
045	45 ft
046	46 ft
047	47 ft
048	48 ft
049	49 ft
050	50 ft

051	51 ft
052	52 ft
053	53 ft
054	54 ft
055	55 ft
056	56 ft
057	57 ft
058	58 ft
059	59 ft
060	60 ft
061	61 ft
062	62 ft
063	63 ft
064	64 ft
065	65 ft
066	66 ft
067	67 ft
068	68 ft
069	69 ft
070	70 ft
071	71 ft
072	72 ft
073	73 ft
074	74 ft
075	75 ft
076	76 ft
077	77 ft
078	78 ft
079	79 ft
080	80 ft
081	81 ft
082	82 ft
083	83 ft
084	84 ft
085	85 ft
086	86 ft
087	87 ft
088	88 ft
089	89 ft
090	90 ft
091	91 ft
092	92 ft
093	93 ft
094	94 ft
095	95 ft
096	96 ft
097	97 ft
098	98 ft
099	99 ft
100	100 ft
999	Custom Length

Process Connection

13	-	1/4" MNPT Flushmount w/ Nose Cone 316SS (Maximum Pressure 5,000 PSI)
14	-	1/2" MNPT Flushmount w/ 3" Flush Non-clog Diaphragm & Cage 316SS (Maximum Pressure 1,500 PSI)

Wetted Parts

02	-	316SS
----	---	-------

Electrical Connection

L01	-	316SS 1/4" Compression x 1/2' MNPT Bored Tubing Connector w/ 10 ft BEWT
L02	-	316SS 1/4" Compression x 1/2' MNPT Bored Tubing Connector w/ 15 ft BEWT
L03	-	316SS 1/4" Compression x 1/2' MNPT Bored Tubing Connector w/ 20 ft BEWT
L04	-	316SS 1/4" Compression x 1/2' MNPT Bored Tubing Connector w/ 25 ft BEWT
L05	-	316SS 1/4" Compression x 1/2' MNPT Bored Tubing Connector w/ 30 ft BEWT
L06	-	316SS 1/4" Compression x 1/2' MNPT Bored Tubing Connector w/ 35 ft BEWT
L07	-	316SS 1/4" Compression x 1/2' MNPT Bored Tubing Connector w/ 40 ft BEWT
L08	-	316SS 1/4" Compression x 1/2' MNPT Bored Tubing Connector w/ 45 ft BEWT
L09	-	316SS 1/4" Compression x 1/2' MNPT Bored Tubing Connector w/ 50 ft BEWT
L10	-	316SS 1/4" Compression x 1/2' MNPT Bored Tubing Connector w/ 55 ft BEWT
L11	-	316SS 1/4" Compression x 1/2' MNPT Bored Tubing Connector w/ 60 ft BEWT
L12	-	316SS 1/4" Compression x 1/2' MNPT Bored Tubing Connector w/ 65 ft BEWT
L13	-	316SS 1/4" Compression x 1/2' MNPT Bored Tubing Connector w/ 70 ft BEWT
L14	-	316SS 1/4" Compression x 1/2' MNPT Bored Tubing Connector w/ 75 ft BEWT
L15	-	316SS 1/4" Compression x 1/2' MNPT Bored Tubing Connector w/ 80 ft BEWT
L16	-	316SS 1/4" Compression x 1/2' MNPT Bored Tubing Connector w/ 85 ft BEWT
L17	-	316SS 1/4" Compression x 1/2' MNPT Bored Tubing Connector w/ 90 ft BEWT
L18	-	316SS 1/4" Compression x 1/2' MNPT Bored Tubing Connector w/ 95 ft BEWT
L19	-	316SS 1/4" Compression x 1/2' MNPT Bored Tubing Connector w/ 100 ft BEWT
L20	-	316SS 1/4" Compression x 1/2' MNPT Bored Tubing Connector w/ 105 ft BEWT
L21	-	316SS 1/4" Compression x 1/2' MNPT Bored Tubing Connector w/ 110 ft BEWT
L22	-	316SS 1/4" Compression x 1/2' MNPT Bored Tubing Connector w/ 115 ft BEWT
L23	-	316SS 1/4" Compression x 1/2' MNPT Bored Tubing Connector w/ 120 ft BEWT
L24	-	316SS 1/4" Compression x 1/2' MNPT Bored Tubing Connector w/ 125 ft BEWT
L99	-	316SS 1/4" Compression x 1/2' MNPT Bored Tubing Connector w/ BEWT Custom Length

Aluminum XP Enclosure

01	-	Aluminum XP Head (1/2" FNPT x 3) - Blank - No Window
02	-	Aluminum XP Head (1/2" FNPT x 3) - w/ 3 1/2 + Digits LCD Loop Powered Display
03	-	Aluminum XP Head (1/2" FNPT x 3) - w/ 5 Digits LCD Loop Powered Display

Mounting Bracket

01	-	None
02	-	2" Pipe Mounting Kit

Environmental Treatment

- 01** - PTFE Treatment (Sensor / Nose Cone only, not available on 3" Diaphragm Model)
- 02** - No Treatment

Accuracy

- 04** - 0.25% to 0.5% Full Scale