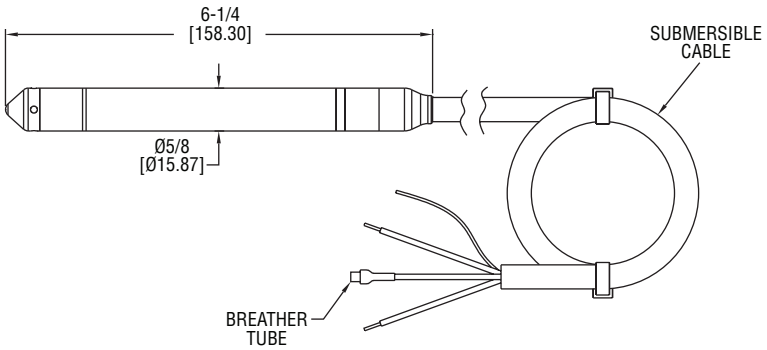
Series MBLT Miniature Submersible Level Transmitter

Specifications - Installation and Operating Instructions



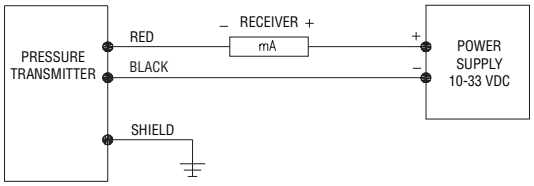
The MBLT Miniature Submersible Level Transmitter is only 0.63″ in diameter making it ideal for level monitoring in well and borehole applications. Constructed for years of trouble free service, the MBLT has a welded 316 SS body and 316 SS nose cap. Body top is also 316 SS and tapered to prevent damage or snares when pulling the unit out of the installation. Featured in the MBLT is a precision ±0.10% or ±0.25% of full scale accuracy output, better than BFSL or BSL rated outputs used by most competitors. Lightning and surge protection (not guaranteed or covered by standard warranty) is included standard to stand up in harsh applications. MBLT comes with a choice of polyether polyurethane or ETFE cable materials and all are vented for barometric pressure compensation. Vent is covered with a maintenance-free filter preventing particulate or water droplets from entering the transmitter.

APPLICATIONS

• Ballast tanks; Ground water monitoring; Surface water monitoring; Dewatering;
Down hole; Remediation and other environmental monitoring applications.

ELECTRICAL INSTALLATION

An external power supply delivering 10 to 33 VDC with minimum current capability of 40 mA DC (per transmitter) is required to power the control loop. See figure below for connection of the power supply, transmitter and receiver.



The maximum receiver load resistance (RLmax) for the DC power supply voltage (Vsup) is expressed by the formula:

$$RLmax = \frac{Vsup - 10V}{0.02A}$$

Shielded cable is recommended for control loop wiring.

SPECIFICATIONS

Service: Compatible liquids.
Wetted Materials:
Body and nose: 316 SS;
Cable: Polyether polyurethane or ETFE;
Seals: Fluoroelastomer;
Label: Polyethylene polyamid.
Accuracy: ±0.25% or ±0.10% of FS.
Temperature Limits: -4 to 176°F (-20 to 80°C).
Compensated Temperature Limits: 0.25%: (0 to 70°C); 0.10%: (0 to 60°C).
Thermal Effect: 0.25%: ±0.45% FS TEB; 0.10%: ±0.30% FS TEB.
Pressure Limit: 2x FS.
Power Requirements: 10 to 33 VDC.
Output Signal: 4 to 20 mA DC 2-wire.
Response Time: < 50 ms.
Max Loop Resistance: 1000 Ω @ 30 VDC.
Electrical Connections: Wire pigtail.
Mounting Connection: Suspended below point being monitored.
Electrical Protection: Surge/lightning protected per EN61000-4-5, Class 5.
Weight:
Body: 0.235 lb (0.107 kg);
Cable: 0.037 lb (0.009 kg) per foot.
Agency Approval: CE.

MERCOID DIVISION
DWYER INSTRUMENTS, INC.
P.O. BOX 258 • MICHIGAN CITY, IN 46361 U.S.A.

Phone: 219/879-8000
Fax: 219/872-9057

www.dwyer-inst.com
e-mail: info@dwyer-inst.com

WARNING:
A voltage potential between the ground wire of the unit and the ground of other equipment can lead to electrolytic corrosion. Always ensure the grounding system provides an equipotential between the transmitter and the earthing ground connection. Avoid using the power system protective ground since this will often have a significant potential difference to the transmitter ground. Also note that dissimiliar metals in the ground system may cause electrolysis corrosion of the transmitter or other components in the ground system.

During installation, connect a voltmeter or ammeter between the shield ground wire and the grounding connection. If there is a measurable voltage or current electrolytic corrosion may be a serious possibility. If there is a potential difference then some isolation system will be required. Improper grounding may lead to damage or poor signal integrity.

Model Number Guide

Example	MBLT	2	S	C	I	V	P	F	30	50	NIST	MBLT-2SC-IVPF-30-50-NIST
Construction	MBLT											Narrow bullet
Circuit Options		2										Surge protected
Body Material			S									316 SS
Accuracy				B C								0.10% 0.25%
Output					I							4 to 20 mA
Reference						V						Vented
Cable Material							P E					Polyether polyurethane ETFE
Range Unit								F M P				Feet of water column Meter of water column PSI
Range Value									X			
Cable Length										X		In feet for feet and psi range, in meters for meter range
Options											NIST	NIST Traceable Certificate

MAINTENANCE/REPAIR
Upon final installation of the Series MBLT, no routine maintenance is required. The Series MBLT is not field serviceable and should be returned if repair is needed (field repair should not be attempted and may void warranty).

WARRANTY/RETURN
Refer to “Terms and Conditions of Sales” in our catalog and on our website. Contact customer service to receive a Return Goods Authorization number before shipping the product back for repair. Be sure to include a brief description of the problem plus any additional application notes.

Printed in U.S.A. 12/13
FR# M2-443891-00 Rev. 2

MERCOID DIVISION
DWYER INSTRUMENTS, INC.
P.O. BOX 258 • MICHIGAN CITY, IN 46361 U.S.A.

Phone: 219/879-8000
Fax: 219/872-9057

www.dwyer-inst.com
e-mail: info@dwyer-inst.com