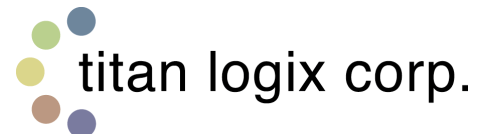


VISI 1332 Installation Manual



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VISI Manual

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VISI 1332 INSTALLATION GUIDE

1. Preparation:

Ensure that a stillwell with the proper internal diameter and other specified parameters is installed in the tank before the installation is attempted.

Using a Tape Gauge, measure the distance from the bottom of the vessel to the top of its riser. Also, measure the fluid level currently in the vessel. These values, along with the specific gravity of the fluid to be gauged, should be written down for future reference.

The VISI 1332 is designed to be mounted onto a 3 or 4" flange by incorporating two of the studs. Ideally a flat faced flange should be used, however, if using a raised face flange be sure to install shims or washers beneath the gauge plate to ensure that the board is not damaged when the studs are tightened.

2. Installation

Attach the fiberglass rod to the float by tightening the compression fitting on the top of the float. Lower the float down the riser until it either floats in the fluid or makes contact with the bottom of the vessel.

Place the flange cover with the 1" NPT process connection over the fiberglass rod. Loosely attach two of the studs to ensure that the flange face does not move and shear the fiberglass rod.

3. Calibration

To accurately calibrate the system, you must know the specific gravity of the fluid to be gauged. This value will determine the minimum level the gauge will indicate. Use the chart below to calculate this level.

<u>Specific Gravity</u>	<u>Min. Level</u>
0.5	14"
0.6	11.5"
0.8	8.75"
1.0	7.0"

With the float on the bottom of the vessel, use a tape measure to cut the fiberglass rod for the proper length. The length is measured from the top of the magnetic follower to the top of the flange face and is determined by the specific gravity of the product. If the product is water (S.G. = 1) then

the distance from the flange to the top of the follower is 7 inches. Ensure that the magnetic follower is securely attached to the rod.

NOTE: *If there is fluid in the tank, the rod should be cut so that the distance between the top of the follower and flange is equal to the level of product in the tank.*

4. Final Assembly:

Loosen the ¼" u-bolts on the gauge board allowing the stainless steel pipe to slide freely. Thread the pipe into the 1" NPT process connection, when it is sufficiently tight rotate the gauge board to the desired reading angle and align the holes in the base plate to mate to the two holes in the flange. Tighten the flange studs and the ¼" u-bolts. If any proximity switches or analog outputs were purchased with your **VISI 1332** Gauge, install them now using the manuals provided with those devices.

ANALOG OUTPUT – 1322 A

1. Preparation:

Be sure to order the correct 1322A analog output electronics for your specific tank diameter (or vertical height>) They are available in 4, 6, 8, and 10 foot lengths.

2. Specifications:

This is a 2-wire loop powered device with a passive analog output. Use 18 AWG twisted pair, shielded instrument cable only.

Input Ratings: Volts: 9 – 26 VDC

Amps: 22 mA

Hertz: DC

Ambient Temperature Range: -40 °C to 60 °C

Approvals: Class 1, Div 1 (EX), Groups C and D

3. Installation:

Mount the 1322VA to your 1332 gauge board using the supplied hardware. It should be mounted with the ¾" stainless steel pipe running parallel to the 1" stainless steel pipe located on the rear of the gauge board. The electronics housing will be at the bottom of the board with the lid opening on the same side as the visual side of the board.

For use in a potentially hazardous location, an explosion proof sealing fitting must be installed as close as practical to and in no case more than

450mm from the electronics enclosure. Any other openings must be appropriately plugged with explosion proof plugs.

You may now wire the electronics according to the diagram. The current meter could be substituted with a PLC having an analog input card or a separate display, which will take in the provided analog signal from the 1322A.

CAUTION: *Be sure that the atmosphere is safe with no explosive gases prior to supplying power and calibrating the 1322A.*

4. Calibration and Additional Programming:

Two push buttons and two jumpers are located on the 1322A electronics. These are used for calibrating the 4-20 mA output as well as setting the fail alarm output.

Place the magnetic follower at the maximum tank level location. This will be where you set the 20 mA output. Press and hold the HIGH push button for at least 5 seconds. This saves the position of the magnet as the High Set Point. Next, place the magnetic follower at the minimum tank level location. This will be where the 4mA output is set. Press and hold the LOW push button for 5 seconds. All points between these two will be appropriately scaled from 4-20 mA.

Setting the Fail Alarm: Place a digital current meter in series with the output signal. Remove the magnet from close proximity switch to the pipe. An output will now be present. Place jumper J2 to position A and adjust the ZERO potentiometer for 3.6 mA output. Next, place the jumper J2 to position B and adjust the SPAN potentiometer for 22 mA output. Place the fail jumper J1 in the desired position. The unit is now fully programmed.

NOTE: *J1 is a miscellaneous jumper to be used in future applications.*

5. Final Assembly:

Reinstall the magnetic follower and close up the electronics enclosure ensuring that the 1322A as well as all fittings are ready for safe use. Installation is now completed. The end device must be properly set up to receive the analog output signal. The system is now ready for normal operation.

Level & Flow Proximity Switch



MLS - 3 EX Latching Proximity Switch

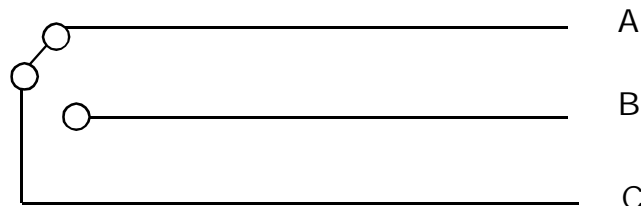
The MS - 30 is a hermetically sealed bi-stable latching reed switch with SPDT form C contacts. The switch is actuated by the float and latches, this maintaining the contact after the float continues to rise or fall with level. The MLS-3 EX comes with an explosion proof enclosure with an internal terminal block and is ideally suited for low power alarm signals.

Specifications

Deadband	0.50 inch
Max. Temp.	650° F (343° C) HT version 350° F (177° C) STD version
Min. Temp.	- 40° F (- 40° C)
Contacts	Form C SPDT
Volts AC	150 AC/DC
AC Current	1.0A AC/DC
Watts	25 W DC/VA

Note: Because of the low current of the switch rating a higher rated interposing relay should be used between the MLS-3EX and the device being switched.

Schematic



Switch Operation / Mounting

To mount the MLS - 3EX Level Switch simply clamp it directly to the side of the level gauge sight glass using the adjustable hose clamps provided. Alarm set points may be changed by simply loosening the clamps and sliding the switch to the desired alarm level. To set up starting point follow the steps below:

Rising Level Alarm -

Terminal Block Letter:
A (NC) C (Common) B (NO)

Falling Level Alarm -

Terminal Block Letter:
B (NC) C (Common) A (NO)

After the switches are mounted and wired, they need to be set to the desired state for rising and falling level as noted previously. This is easily accomplished by either manually pushing the indicator or a magnet past the highest switch, or by carefully monitoring the gauge / switch operation while filling the tank.

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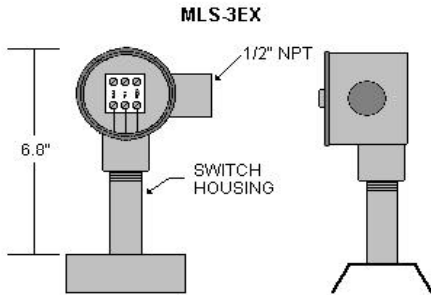
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Level & Flow Proximity Switch

Mounting



The simplicity of mounting the MS-30 switch housing is such that a small screwdriver is the only necessary tool. The MS-30 is mounted using two stainless steel clamps that pass through the mounting slots attached to the housing and around the chamber. Other switches can be added at any position at anytime without concern for additional process piping or valves. Two switches can be mounted so that they can trip at the same point or at two different points separated by less than the length of a switch.

Specifications:

Switch	Magnetically activated, hermetically sealed, magnetically biased bistable reed switch. Single pole double throw-form C.
Switch Action	Break before make
Contact Material	Rhodium
Max Deadband	Approx. +/- 0.075" float travel
Max. Switch Voltage	250 VAC (250 VDC)
Max. Switch Current	1 amp (AC/DC)
Max. Switch VA	250 VA (250 watts resistive)

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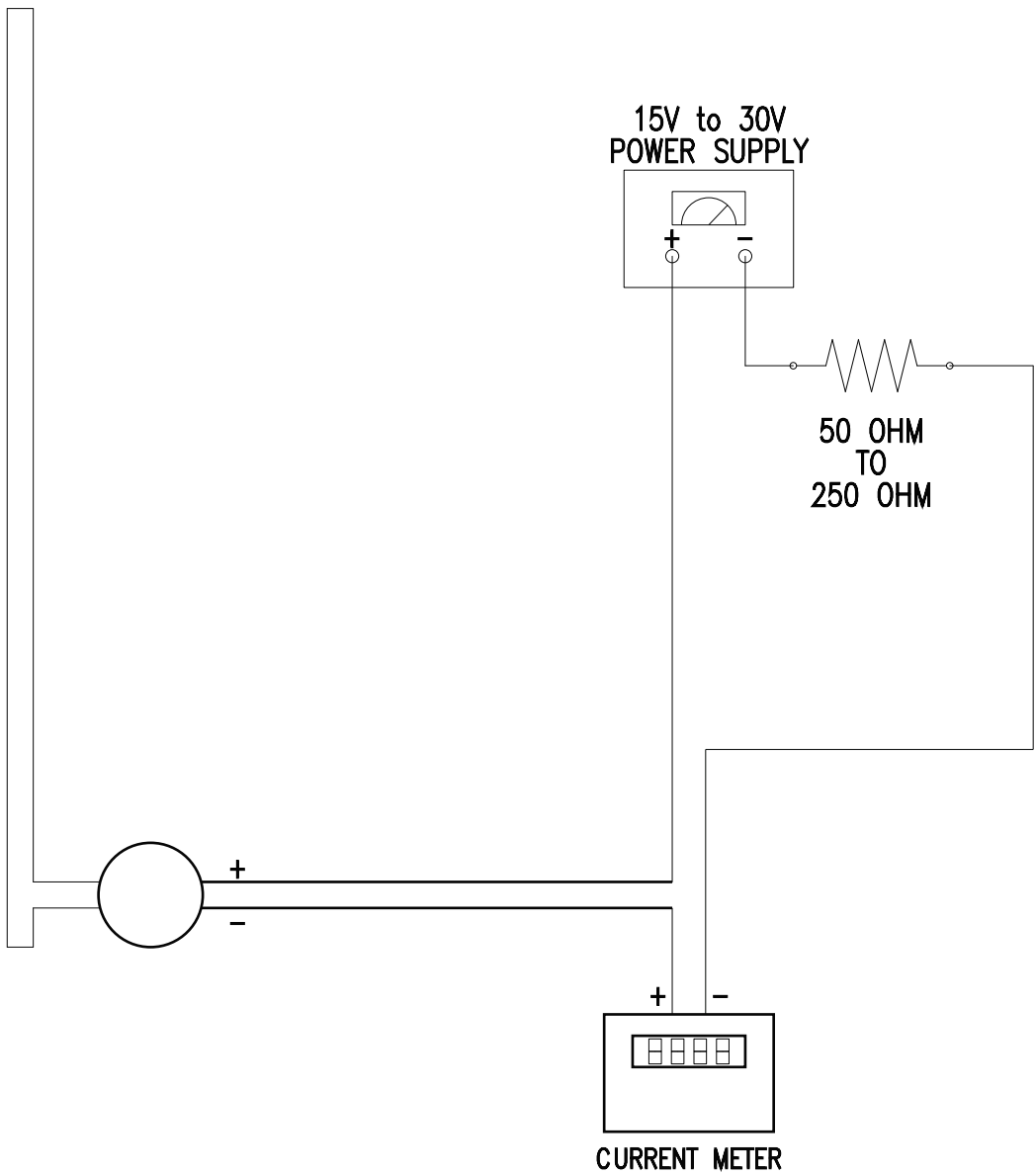


FIGURE #1

PROPRIETARY INFORMATION

THIS DOCUMENT AND INFORMATION CONTAINED HEREIN ARE PROPRIETARY TO TITAN LOGIX CORP., AND ARE FURNISHED TO THE RECIPIENT SOLELY FOR THEIR USE IN OPERATING, MAINTAINING, AND REPAIRING TITAN EQUIPMENT AND SHALL NOT BE REPRODUCED OR DIVULGED TO ANY THIRD PARTY OR UTILIZED BY THE RECIPIENT FOR ANY PURPOSE EXCEPT AS STATED HEREIN WITHOUT WRITTEN PERMISSION FROM TITAN LOGIX CORP.

DWG. TITLE VISI 1322A TEST AND CALIBRATION SETUP

CLIENT

PART NO.

FILE NAME (LAYER)
VISITEST.DWG

REV.

DESIGN JIM JANKE

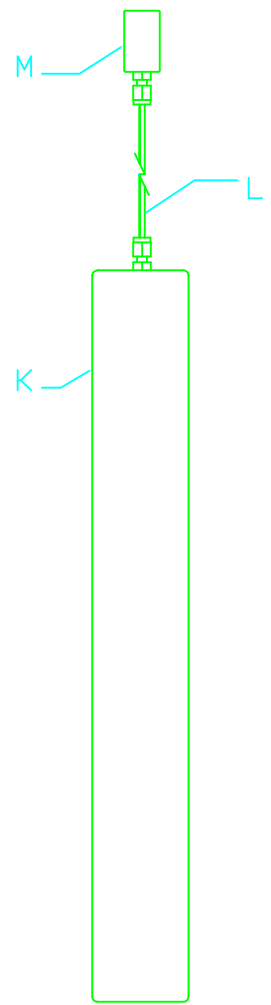
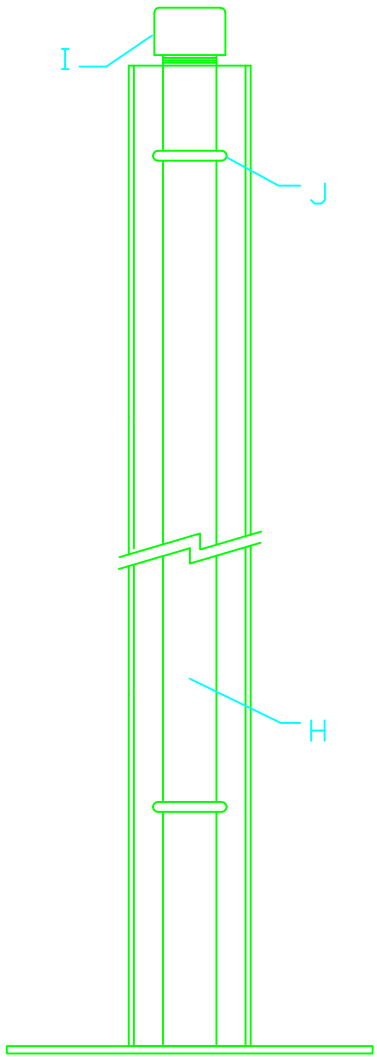
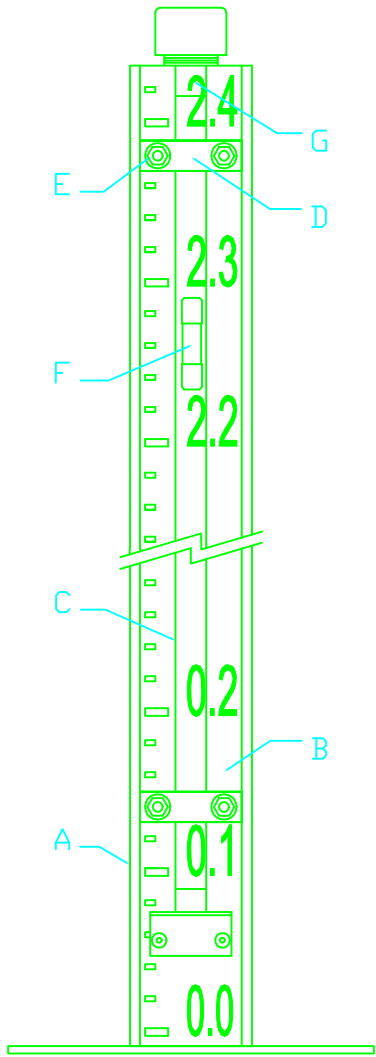
DRAWN JIM JANKE

DATE AUG 8 1999

SCALE NTS

**TITAN
LOGIX
CORP.**

ITEM	DESCRIPTION	QUANTITY
A	Aluminum Gauge Board c/w Base	Length based on tank dia
B	Reflective Gauge Decal	Length based on tank dia
C	Polycarbonate Sight Tube	Length based on tank dia
D	PVC Clamping Block	2
E	1/4" Stainless Steel Hardware	4
F	Magnetic Indicator	1
G	End Cap	2
H	1" Sched 40 Stainless Steel Pipe	Length based on tank dia
I	1" Stainless Steel End Cap	1
J	1/4" Stainless Steel U-Bolt	2
K	Fiberglass Float	1
L	1/8" Fiberglass Rod	20 feet
M	Magnetic Follower	1



REV		DESCRIPTION		BY	DATE	<p style="text-align: center;">TITAN LOGIX CORP.</p> <p style="text-align: center;">TEL: 780-462-4085</p>	
DIMENSION UNITS: INCHES [mm] TOLERANCES EXCEPT AS NOTED				BREAK SHARP EDGES CHAMFER FIRST THRD REMOVE ALL BURRS		SCALE Not to Scale DESIGN CHK DRAWN CC CHK	
.X	±0.05	125	RMS	MATERIAL		DATE	PART NO.
.XX	±0.01	63	RMS	N/A		2003MAY02	REVISION
.XXX	±0.005	32	RMS	FINISH		FILE 1000445APV00	SHT
ANGLES ±1° PROJECTION						<p style="font-size: 24pt; color: purple;">1000445APV00</p>	