Liquid-Level Sensors

with Temposonics® Magnetostrictive Technology

MTS® SENSORS

DDA/LDF Measurements **551037 A**

Technical Tip #2

Introduction

This document describes a standard procedure to test the proper functionality of the gauge(s). For this procedure, a digital voltmeter is required.

Please fill in the blank for all of the following questions, then fax or e-mail a copy to us.

- How many gauges are connected to this net? ..... gauges.
- Check if there is a good ground connection from the safety barrier mounting bar to earth ground. This ground must be connected for proper communications. Please verify. Connected ? ☐ YES ☐ NO
- Stop the host device or monitor

Measure the following wires / signals at the safety barrier terminals:

- + 26V before barrier (power supply) to ground (safety barrier mounting bar) is ..... DC V
- + 26V safety barrier (blue terminal) to ground (safety barrier mounting bar) is ..... DC V
- RX/TX+ to RX/TX- (blue terminals) is ..... DC V
- RX/TX+ (blue terminals) to ground (safety barrier mounting bar) is ..... DC V
- RX/TX - (blue terminals) to ground (safety barrier mounting bar) is ..... DC V

From the DDA transmitter terminal block, check the following voltages:

- + 26V (red wire) to power supply ground (black wire) is ..... DC V
- RX/TX+ (white wire) to RX/TX- (green wire) is ..... DC V
- RX/TX+ (white wire) to power supply ground (black wire) is ..... DC V
- RX/TX - (green wire) to power supply ground (black wire) is ..... DC V
- Please list current DDA address switch settings in the table below:

At the DDA transmitter, ↓	SW1	SW2	SW3	SW4	SW5	SW6	SW7	SW8	SW9
OFF									
ON									

All specifications are subject to change. Please contact MTS for specifications that are critical to your needs.

first set all of the address switches to the OFF position (see below):

OFF	X	X	X	X	X	X	X	X	X
ON									
	SW1	SW2	SW3	SW4	SW5	SW6	SW7	SW8	SW9

then, set switch #1 to the ON position (see below):

OFF		X	X	X	X	X	X	X	X
ON	X								
	SW1	SW2	SW3	SW4	SW5	SW6	SW7	SW8	SW9

This puts the DDA transmitter into maximum current mode (approximately 30 - 40 mA).

Repeat measurements below for the DDA transmitter terminal block.

- + 26V (red wire) to power supply ground (black wire) is ..... DC V
- RX/TX+ (white wire) to RX/TX- (green wire) is ..... DC V
- RX/TX+ (white wire) to power supply ground (black wire) is ..... DC V
- RX/TX - (green wire) to power supply ground (black wire) is ..... DC V

Now you can perform a "dynamic" reading of the gauge. You can simulate a Temperature output response by moving switch #7 to the ON position.

Note that this test is very fast, the voltage value will display for a maximum of 5 seconds. Before moving the switch, please insert the terminals of the voltmeter across the + 26V (red wire) to power supply ground (black wire). Then move the switch #7 to the ON position:

OFF		X	X	X	X	X	X	X	X
ON	X								
	SW1	SW2	SW3	SW4	SW5	SW6	SW7	SW8	SW9

Within 5 seconds please read the value:

- + 26V (red wire) to power supply ground (black wire) is ..... DC V

(If you want to repeat this test, you must set all switches to the OFF position, then switch #1 to the ON, then switch #7 to the ON position as shown above).

- Reset all switches to their original (addressed) position.
- Fax a copy of this test to fax number (919) 677-2545 or e-mail a copy to sensorsinfo@mts.com.

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