

# HEATEC TEC-NOTE

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## Setting Datel display used with Heatec vertical asphalt tanks

This document provides information for setting Datel Displays DMS-20 PC (**Figure 1**) that are used to indicate levels of asphalt in Heatec vertical asphalt tanks. It applies to six sizes of vertical tanks equipped with VEGA PULS 65 radar sensors.

Displays purchased from Heatec are normally set at our factory and require no further setup. However, personnel at the hot mix plant can use these instructions to reset a display if it ever becomes necessary to do that.

You will need a signal simulator, such as a Fluke 787 Processmeter, capable of providing outputs from 4 to 20 mA. You will also need a small screwdriver, such as a jewelers No. 0. Here's how to reset the display (**See Figure 2**):

1. Disconnect existing wires from the two terminals on the back of the display.
2. Set DIP switches as indicated in **Figure 3**.
3. Connect wires from the signal simulator to the



Figure 1. Datel display.

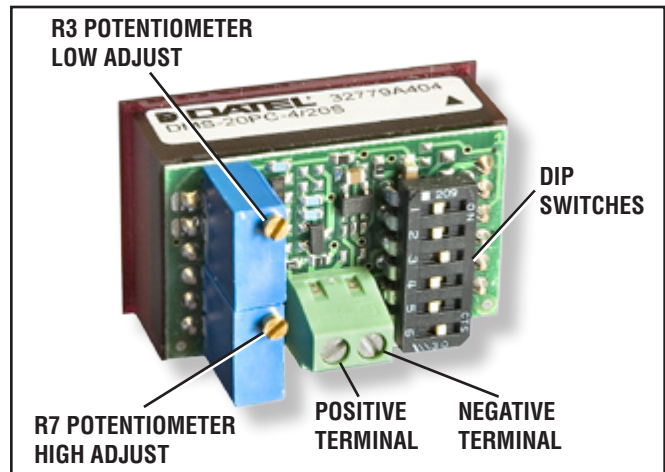


Figure 2. Controls on back of Datel display

Figure 3. Setting Datel display DMS-20PC-4/20S for Heatec vertical asphalt tanks

Tank capacity (gallons)	DIP SWITCHES						Display value (feet) @ 4 mA input (Low Adjust)	Display value (feet) @ 20 mA input (High Adjust)
	1	2	3	4	5	6		
10,000	off	off	off	off	ON	off	0.00	14.50
15,000	ON	ON	ON	off	off	ON	00.0	22.5
20,000	off	off	ON	off	off	ON	00.0	28.5
25,000	off	off	ON	off	off	ON	0.00	36.5
30,000	off	off	ON	off	off	ON	0.00	42.5
35,000	off	off	ON	off	off	ON	00.0	48.5

two terminals on the back of the display (observe polarity).

4. Set the output of the simulator to 4.0 mA.
5. Adjust potentiometer R3 on the back of the display to make the display indicate 00.0. This is the *Low Adjust* value or zero feet shown in **Figure 3**.
6. Reset the output of the simulator to 20.0 mA.
7. Adjust potentiometer R7 on the back of the display to make the display indicate the *High Adjust* value shown in **Figure 3** for the appropriate tank capacity.
8. Reset the simulator to 4.0 mA and then to 20 mA to make sure the display still indicates 0 and the *High* value that you set. If not repeat the process.
9. Disconnect the wires from the simulator and reconnect the original wires.

The display should now indicate levels in feet and should match the levels that appear on the PLICSCOM module of the Vega radar sensor.

Please refer to Heatec Tec-Note, Publication 5-04-116 for more information on the Vega radar sensor used on vertical asphalt tanks.

## COORDINATION OF SETTINGS

Certain settings of the Datel display should be coordinated with the settings on the radar sensor. Thus, when you change settings on the radar sensor, you should also change settings on the Datel display.

The latest changes to the radar settings are made in Heatec Tec-Note 5-04-116, Revised 10-11-04: *Setting up Vega radar sensors for Heatec vertical asphalt tanks*.

***So it is important for you to change the settings of the Datel display when you make the changes shown in that Tec-Note. Failure to change these settings will result in erroneous level indications.***

New settings on the Datel display are highlighted in yellow.