

# HEATEC TEC-NOTE

Publication No. 5-07-188

## Setting Honeywell UDC2500 controllers used with Siemens pressure transmitter on Heatec vertical asphalt tanks

This document provides information for setting Honeywell controller **DC2500-EE-1000-200-00000-00-0** (Figure 1) used to indicate levels in Heatec asphalt tanks. The controller is used on six sizes of Heatec vertical tanks equipped with Siemens Sitrans P, Series DSIII pressure transmitter **7MF4033-1CY10-1NC6-Z-B21Y01** (fitted with remote seal **7MF4810-2QA02**) (Figure 2).

The controller indicates levels of asphalt in the tank. Levels are shown in *inches*, measured from the bottom of the tank. The controller automatically activates a circuit to shut off pumps used to fill the tank when the tank reaches a preset “full” level. It also activates an alarm circuit when the tank is “full.”

When the asphalt level reaches its low-level setting, the controller shuts off the valve that allows hot oil to heat the tank. The low-level setting prevents heating the asphalt when its level is below the heating coils and avoids coking the coils.

Honeywell controllers purchased from Heatec are normally set at our factory and require no further setup.



Figure 1. Honeywell Controller DC2500-EE-1000-200-00000-00-0.

However, the controller can be set in the field using the information shown in Figure 3.

A Honeywell UDC Controller Manual is on a CD furnished with each controller. If you need instructions on how to use buttons on the controller to make settings, you will find them in this manual.

### COORDINATION OF SETTINGS

Settings of the Honeywell controller should be coordinated with the settings on the Siemens pressure transmitter shown in Heatec Tec-Note 10-06-180, entitled *Setting Siemens Pressure Transmitter used on Heatec vertical asphalt tanks*. **Failure to coordinate settings may result in erroneous level indications and improper shutoff control!**

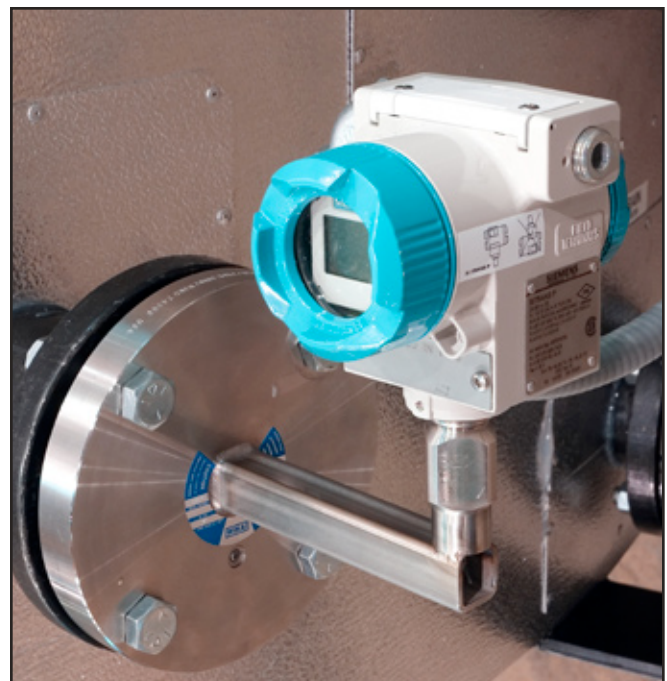


Figure 2. Siemens pressure transmitter.

**Figure 3. Honeywell Controller DC2500-EE-1000-200-00000-00-0  
used with Siemens Pressure Transmitter on Heatec vertical asphalt tanks**

| Setup button | Function button | Make these settings (Use up/down buttons) |                 |                 |                 |                 |                 |
|--------------|-----------------|---|-----------------|-----------------|-----------------|-----------------|-----------------|
|              |                 | 10,000 gal tank                           | 15,000 gal tank | 20,000 gal tank | 25,000 gal tank | 30,000 gal tank | 35,000 gal tank |
| TUNING       | CYC T1          | 1   | 1               | 1               | 1               | 1               | 1               |
|              | SECUR           | 0   | 0               | 0               | 0               | 0               | 0               |
|              | LOCK            | CAL                                       | CAL             | CAL             | CAL             | CAL             | CAL             |
| SPRAMP       | SPRAMP          | DIS                                       | DIS             | DIS             | DIS             | DIS             | DIS             |
| ALGOR        | CTRALG          | ONOF                                      | ONOF            | ONOF            | ONOF            | ONOF            | ONOF            |
|              | TIMER           | DIS                                       | DIS             | DIS             | DIS             | DIS             | DIS             |
| OUTALG       | OUTALG          | RLY                                       | RLY             | RLY             | RLY             | RLY             | RLY             |
| INPUT1       | IN1TYP          | 4-20                                      | 4-20            | 4-20            | 4-20            | 4-20            | 4-20            |
|              | XMITR1          | LIN                                       | LIN             | LIN             | LIN             | LIN             | LIN             |
|              | IN1 HI          | 600.0                                     | 600.0           | 600.0           | 600.0           | 600.0           | 600.0           |
|              | IN1 LO          | 11.0                                      | 11.0            | 11.0            | 11.0            | 11.0            | 11.0            |
|              | RATIO1          | 1.00                                      | 1.00            | 1.00            | 1.00            | 1.00            | 1.00            |
|              | BIAS 1          | 0.0                                       | 0.0             | 0.0             | 0.0             | 0.0             | 0.0             |
|              | FILTR1          | 1   | 1               | 1               | 1               | 1               | 1               |
|              | BRNOUT          | NONE                                      | NONE            | NONE            | NONE            | NONE            | NONE            |
| CONTRL       | LSP'S           | ONE                                       | ONE             | ONE             | ONE             | ONE             | ONE             |
|              | SP TRK          | NONE                                      | NONE            | NONE            | NONE            | NONE            | NONE            |
|              | PWR UP          | ALSP                                      | ALSP            | ALSP            | ALSP            | ALSP            | ALSP            |
|              | SP Hi           | 0.00                                      | 0.00            | 0.00            | 0.00            | 0.00            | 0.00            |
|              | SP Lo           | 0.00                                      | 0.00            | 0.00            | 0.00            | 0.00            | 0.00            |
|              | ACTION          | REV                                       | REV             | REV             | REV             | REV             | REV             |
|              | HYST            | 100.0                                     | 100.0           | 100.0           | 100.0           | 100.0           | 100.0           |
|              | FAILSF          | 0.0                                       | 0.0             | 0.0             | 0.0             | 0.0             | 0.0             |
| OPTION       | AUXOUT          | IN 1                                      | IN 1            | IN 1            | IN 1            | IN 1            | IN 1            |
|              | 0 PCT           | 11.0                                      | 11.0            | 11.0            | 11.0            | 11.0            | 11.0            |
|              | 100PCT          | 600.0                                     | 600.0           | 600.0           | 600.0           | 600.0           | 600.0           |
|              | CRANGE          | 4-20                                      | 4-20            | 4-20            | 4-20            | 4-20            | 4-20            |
|              | DIGIN1          | NONE                                      | NONE            | NONE            | NONE            | NONE            | NONE            |
| COM          | ComADR          | 3   | 3               | 3               | 3               | 3               | 3               |
|              | ComSTA          | DIS                                       | DIS             | DIS             | DIS             | DIS             | DIS             |
|              | IRENAB          | ENAB                                      | ENAB            | ENAB            | ENAB            | ENAB            | ENAB            |
|              | BAUD            | 19.2K                                     | 19.2K           | 19.2K           | 19.2K           | 19.2K           | 19.2K           |
|              | TX DLY          | 1   | 1               | 1               | 1               | 1               | 1               |
| ALARMS       | A1S1TY          | IN 1                                      | IN 1            | IN 1            | IN 1            | IN 1            | IN 1            |
|              | A1S1VA          | 12.00                                     | 12.00           | 18.00           | 18.00           | 18.00           | 18.00           |
|              | A1S1HL          | LOW                                       | LOW             | LOW             | LOW             | LOW             | LOW             |
|              | A1S2TY          | NONE                                      | NONE            | NONE            | NONE            | NONE            | NONE            |
|              | A2S1TY          | IN 1                                      | IN 1            | IN 1            | IN 1            | IN 1            | IN 1            |
|              | A2S1VA          | 153.0                                     | 249.0           | 321.0           | 417.0           | 489.0           | 561.0           |
|              | A2S1HL          | HIGH                                      | HIGH            | HIGH            | HIGH            | HIGH            | HIGH            |
|              | A2S2TY          | NONE                                      | NONE            | NONE            | NONE            | NONE            | NONE            |
|              | ALHYST          | 0.1                                       | 0.1             | 0.1             | 0.1             | 0.1             | 0.1             |
|              | ALARM1          | NO L                                      | NO L            | NO L            | NO L            | NO L            | NO L            |
|              | BLOCK           | DIS                                       | DIS             | DIS             | DIS             | DIS             | DIS             |
|              | DIA AL          | DIS                                       | DIS             | DIS             | DIS             | DIS             | DIS             |
| DISPLY       | DECMAL          | ONE                                       | ONE             | ONE             | ONE             | ONE             | ONE             |
|              | TUNITS          | NONE                                      | NONE            | NONE            | NONE            | NONE            | NONE            |
|              | FREQ            | 60  | 60              | 60              | 60              | 60              | 60              |
|              | DISPLY          | PR N                                      | PR N            | PR N            | PR N            | PR N            | PR N            |
|              | LNGUAG          | ENGL                                      | ENGL            | ENGL            | ENGL            | ENGL            | ENGL            |

**Setting sequence: ALGOR, INPUT1, CONTRL, OPTION, COM, ALARMS, DISPLY, TUNING, SPRAMP, OUTALG.**