

HEATEC TEC-NOTE

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Setting Honeywell UDC2500 high media temperature controllers

This document provides information for setting Honeywell UDC2500 controller, series DC2500-EE-0L00-200 (**Figure 1**). This controller is used to control the high media temperature on Heatec HC and HCS heaters (**Figure 2**). It applies to all sizes of HC and HCS heaters.

Note: the term *media* means thermal fluid. Thermal fluid is commonly called hot oil.

HONEYWELL MANUALS

This document along with Honeywell manuals applicable to Honeywell UDC2500 controllers are furnished with Heatec HC and HCS heaters.

Note: printed copies of Honeywell manuals are no longer furnished. A computer CD, which contains PDF versions of their manuals is furnished instead. The PDF file applicable to the UDC2500 is 51-52-25-127 UDC2500 Product Manual.

If you need help on how to use the buttons on the controller, please refer to the Honeywell manual. You can call Honeywell for technical assistance at 1-800-423-9883. Their web site for assistance is www.honeywell.com/imc.

REPLACING AN OLD CONTROLLER

The Honeywell UDC2500 controller replaces the Honeywell UDC2300 controller used on Heatec heaters in the past. Honeywell has discontinued production of the UDC2300.

Consequently, if an old UDC2300 fails and has to be replaced, it should be replaced with a UDC2500, series DC2500-EE-0L00-200. The new one will fit the same



Figure 1. Honeywell UDC2500 high media temperature controller.

opening in the control panel as the old one. However, a minor change is required in the wiring connections as shown in **Figure 3**. The wire terminals used on the UDC2500 have different numbers than those used on the UDC2300.

SETTINGS FOR HEATEC HEATERS

Settings for the DC2500-EE-0L00-200 high media temperature controller that apply to Heatec HC and HCS heaters are shown in **Figure 4**.

The high media temperature controller limits *maximum* temperature of thermal fluid to a set point (SP) value that the operator presets in the controller. (Do not confuse the set point of this controller with the set point of the Modulating Controller.)

The high media temperature controller senses fluid temperature from a thermocouple in the outlet side of the helical coil. If the temperature of the thermal fluid exceeds preset limits (SP) the controller de-energizes the high media temperature relay, opening its contacts and shutting off the burner. The controller must be manually reset in order to restart the burner. The controller cannot be reset until the temperature of the thermal fluid has fallen below the set point value.

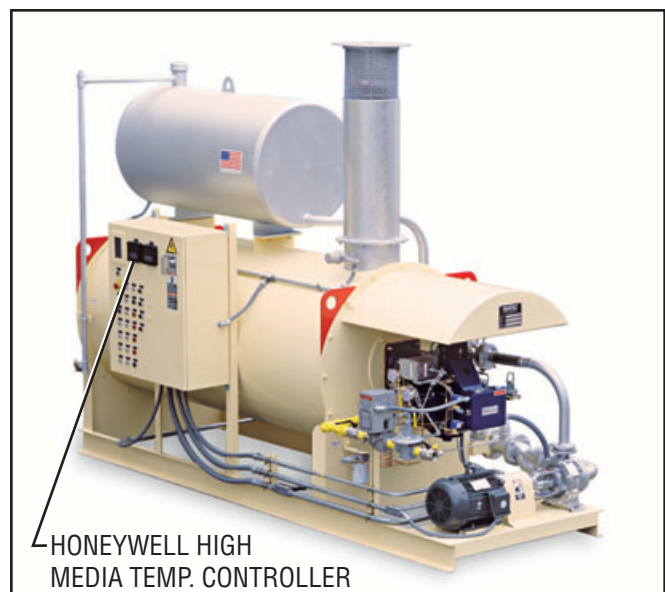


Figure 2. Heatec HC/HCS heater.

The preset temperature limit (SP) should always be set to a value higher than the modulating range of the burner. Otherwise, normal modulation of the burner may cause the burner to shut off prematurely.

The maximum limit for a single line heater is not the same as the limit for a heater with a manifold. On single line heaters set the maximum limit to at least 50 degrees F above setpoint of the modulating controller. On heaters with manifolds set the limit to at least 80 degrees F above the setpoint of the modulating controller.

The setpoint (SP) is *not* one of the settings shown in Figure 4. The settings shown in Figure 4 do not normally require any further change after the heater is put in service.

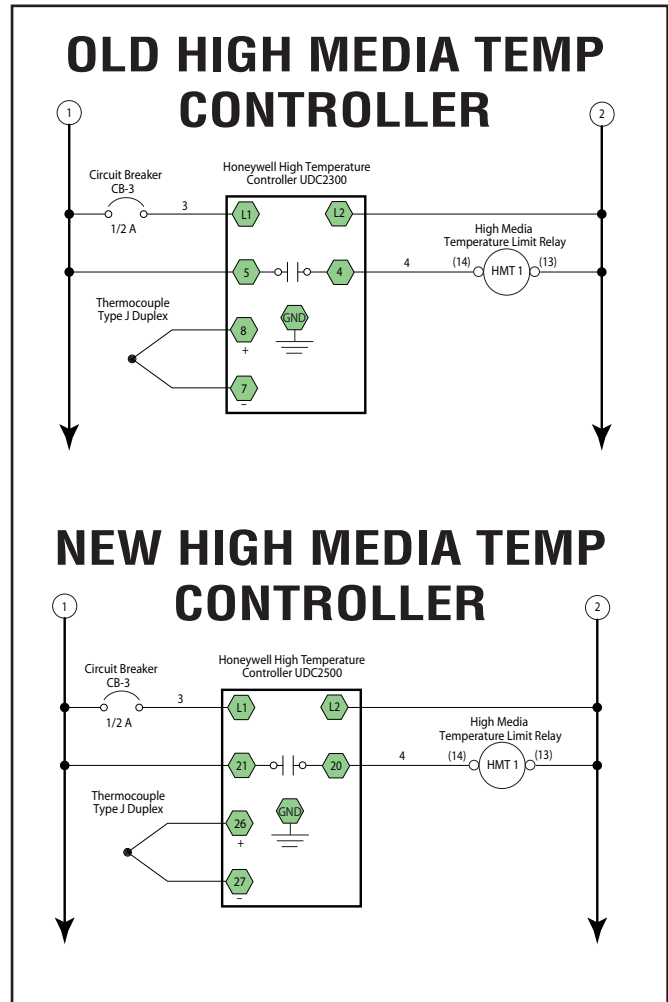


Figure 3. Wiring connections old vs new high media temp controller.

**Figure 4. Programming Honeywell DC2500-EE-0L00-200
high media temperature controller for Heatec HC and HCS heaters**

Group Prompt (Setup button)	Function Prompt (Function button)	Value or Selection (up / down arrows)
LOCK	SECUR	0
	LOCK	CAL
LIMIT	LO or HI	HIGH
	POWRUP	NORM
	SP MAX	500.0
	SP MIN	20.00
	DISPLY	PROC
INPUT1	IN1TYP	J M
	XMITR1	
	IN1 HI	900.0
	IN1 LO	20.00
	BIAS 1	0.0
	FILTR1	1
	BRNOUT	UP
	EMIS	
OPTIONS	AUXOUT	
	0 PCT	
	100 PCT	
	EXT RST	

Group Prompt (Setup button)	Function Prompt (Function button)	Value or Selection (up / down arrows)
COM	ComADR	3
	ComSTA	DIS
	IRENAB	ENAB
	BAUD	19.2K
	TX DLY	1
ALARMS	A1S1TY	NONE
	A1S1VA	
	A1S1HL	
	A1S2TY	NONE
	A1S2VA	
	A1S2HL	
	A2S1TY	NONE
	A2S1VA	
	A2S1HL	
	A2S2TY	NONE
	A2S2VA	
	A2S2HL	
	ALHYST	0.1
	ALARM1	
	BLOCK	DIS
	DIA AL	DIS
DISPLY	DECMAL	NONE
	UNITS	F
	FREQ	60