



Supplemental Instructions for the Parr 4833 Controller (Ref. 271M)

Overview

The Parr 4833 Temperature Controller is designed to provide temperature control for the 3900 Series Shaker Type Hydrogenators.

The 4833 Temperature Controller utilizes a 1/16 DIN microprocessor-based PID temperature control which accepts input from a type-J thermocouple and can control heating loads, using a solid state relay, up to 3 A. A secondary output is wired in series with the main load and is used as an alarm. An alarm condition, such as an over temperature, or open sensor situation, will open or interrupt the heating load circuit.

The 4833 Controller has two front panel switches. The DISPLAY switch is the main power switch for the 4833 Control. In the on (up) position the switch and control front panel will illuminate. The HEATER switch is wired in series with the heater load and will illuminate when on (up) and when current is being supplied to the heater.

The rear panel contains the power cord, fuse holder (4A), Parr heater socket, and the thermocouple panel.

Detailed technical information may be located in the 448M User's Manual for the Cal 9500P Programmable Process Controller.

The 4833 Controller is equipped with a set of control parameters intended to provide reasonable temperature control in most applications conducted with the 3900 Series Shaker Type Hydrogenator.

Operation

Connect the heater and thermocouple to the rear of the control chassis. Plug in the power cord to an appropriate 115V or 230V outlet.

Turn the DISPLAY and HEATER switch ON. Adjust the desired setpoint using the [* + UP] and [* + DOWN] arrow keys on the front of the 1/16 DIN control module.



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Navigating the Cal Controller Menu System and Restoring Factory Defaults

The Cal controller uses a level system to organize its settings. A useful analogy for the level system is a building with an elevator, with menus being grouped by floors in the building, and changing the level on the display equivalent to taking an elevator to the proper floor.

Accessing the level menu (elevator) may be done by holding the up and down arrows for three seconds, and then hitting the down arrow to show [Levl 1]. You may change the level you are at by hitting [*+up] or [*+down].

After reaching the desired level, the menu items may be accessed using the up and down arrows. A list of the settings, grouped by level, is shown, along with the Parr defaults.

No attempt should be made to modify the settings on the 4833 controller without first contacting the Parr Technical Team, with the exception of the level 1 settings. The level 1 settings are the only ones which directly affect the heating output, and may be modified by users familiar with PID control.

Menu Item	Value	Menu Item	Value
Level 1		Level 3	
tune	off	SP1.d	SSd
band	25	SP2.d	rly
int.t	10	burn	up.SC
der.t	25	rEv.d	1r.2d
dAC	1.5	rEv.L	1n.2n
CyC.t	5.0	SPAn	0.0
oFst	0	ZEro	0.0
SP.LK	off	CheK	off
set.2	0	rEAd	-
bnd.2	5.0	teCh	-
CyC.2	5.0	vEr	-
		rSET	off
Level 2		Level A	
SP1.P	-	An.hi	1000
hAnd	off	AnLo	0
PL.1	100	hi.in	50.0
PL.2	100	Lo.in	10.0
SP2.A	cool	deCP	0000
SP2.b	none	SP3.A	Fs.hi
di.SP	1	SP3.b	none
hi.SC	800	SEt.3	100
lo.SC	0	hyS.3	2.0
inPT	Tc J	brn.3	upSC
unit	°C	rEV.3	3d
Level P			
Prog	1		
run	off		
FAil	rSEt		
St.u	PV		
SPru	hour		



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Alarms

High Temperature Alarm

In order to protect against over temperature, the controller will interrupt power to the heater if the thermocouple senses a temperature above 100C. This default temperature alarm limit may be modified by accessing the "set.3" setting on level A. When the thermocouple senses a temperature above this alarm setting limit, it will cut power to the heater, and prevent it from heating until the temperature has dropped back below the alarm level. The LED display will flash "-AL-" when this occurs.

Input Fail Alarm

If the thermocouple loop is not continuous, the LED display will flash "input Fail", and interrupt power to the heater. The most common cause for this is the thermocouple not being plugged in, or a fault in either the thermocouple or thermocouple extension wire.

Related Instructions

The following Parr publications are also included to further your understanding of this instrument and its component parts:

<u>No.</u>	<u>Description</u>
271M	Operating Instructions for the Parr 3911 and 3921 Hydrogenation Apparatus
448M	User's Manual for Cal 9500P Programmable Process Controller

Customer Service

Questions concerning the installation or operation of this instrument can be answered by the Parr Customer Service Department:

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4833 Replacement Parts List

Part No.	Description
1129E	Thermocouple Jack, Type J
A1845E2	Controller, 1/16th DIN, Cal 9500P
1434E	Fuse Fast Acting, 4 Amp 250V
138E	Fuse Holder
585E2EE	Switch
911E	Filtered Power Entry Module, 10 Amp
A719E	Cordset 115V
1200EEE	Cordset 220V CE Plug (4833EE only)
132E6EB	Receptacle 125V
132E6EE	Receptacle 250V (4833EE only)
1111E	3 A SSR



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