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BL-8595-R0

AE25-DPP
OPERATION INSTRUCTIONS

DOCUMENT CONTENTS

Document Control - Revision Notes

Rev	*Date*	*Technician*	*Revision Description*
R0	04/03/15	BS	Operation Instructions Approved for Release

Phone: 414-331-2457
Fax: 414-332-2457
419 West Boden Street
Milwaukee, Wisconsin 53207
E-Mail: support@atmoseng.com
Web: www.atmoseng.com

NOTICE, CAUTIONS, AND WARNINGS

NOTICE

This Bulletin contains important safety information and should be read and understood by all individuals who install, operate, or service this equipment.

Failure to follow the precautions and recommendations of these instructions may subject personnel and property to dangerous conditions.

All installations and applications of the AE25 Controller must adhere to applicable safety guidelines. The AE25 Controller is not an FM approved High Limit Controller and should not be used in this application.

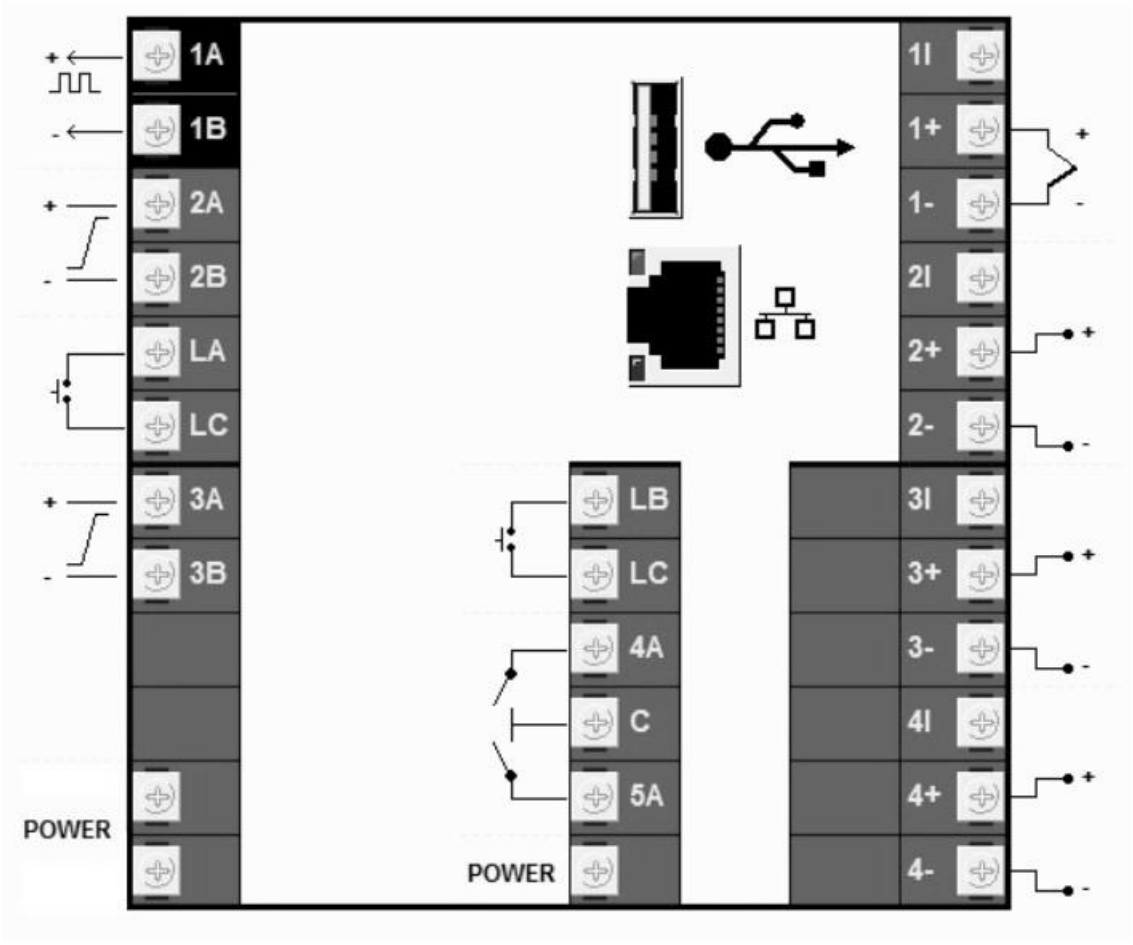
TECHNICAL ASSISTANCE

Contact Atmosphere Engineering with all questions or concerns regarding the installation, operation, and setup of the AEC AE25 Controller.

Atmosphere Engineering Company
419 West Boden Street
Milwaukee, Wisconsin 53207
United States of America

Phone: 414-331-2457
Fax: 414-332-2457
E-Mail: support@atmoseng.com

CONTROLLER WIRING



Power
110VAC power, Neutral and ground wires.

1 +/-
Temperature control thermocouple input (+/-).

2 +/-
Probe temperature thermocouple input (+/-).

3 +/-
Probe millivolt input (+/-).

1A / 1B
Probe burnout relay output. Output will energize when the probe burnout function is active.

2A / 2B
Temperature control analog output. Signal will be 4mA when the PID output is at 0%, 20mA when the PID output is at 100% and linearly scaled between those values.

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3A / 3B
Dewpoint control analog output. Signal will be 4mA when the PID output is at 0%, 20mA when the PID output is at 100% and linearly scaled between those values.

4A / C
Temperature control relay output. The common wire is shared with output 4A.

5A / C
Low temperature alarm OR dewpoint deviation alarm relay output. Energized when alarm is OK. The common wire is shared with output 5A.

****Note**
The AE25 Controller is not an FM approved High Limit Controller and should not be used in this application. Contact AEC for information on the AE06-L High Limit Controller.

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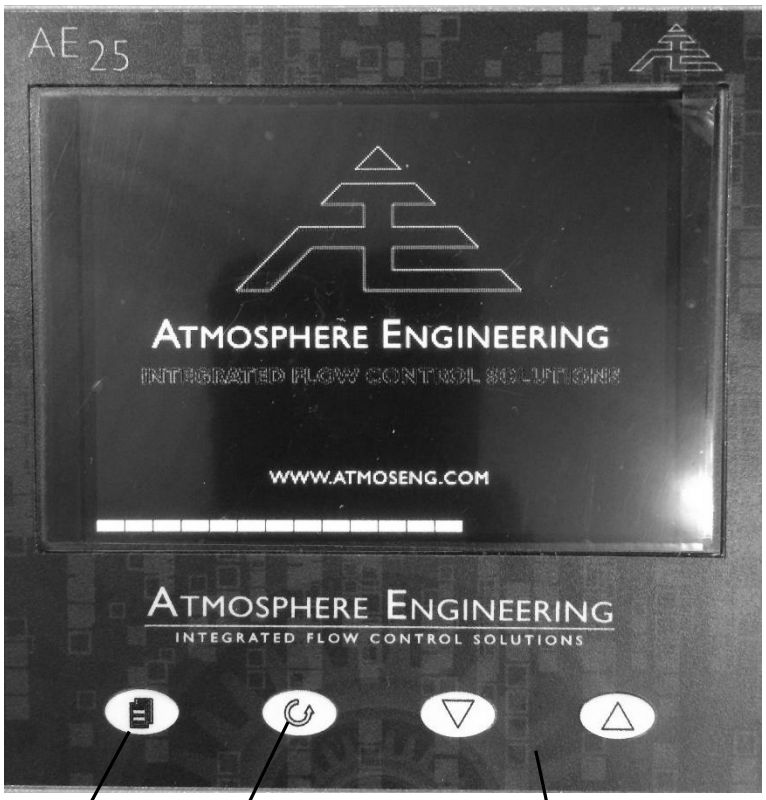
CONTROLLER NAVIGATION



Back Button
Used to go backwards in the program structure

Enter Button
Used to enter values in each screen of the program

Up / Down Arrows
Used to move through program lists / screens and change program values

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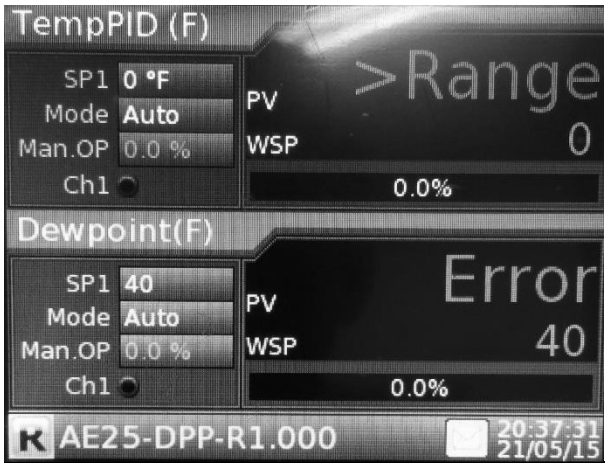
TEMPERATURE / DEWPOINT CONTROL PANEL (HOME)



PV
Process variable for the temperature and dewpoint control PID loop, typically in °F. Minimum and maximum values for temperature and dewpoint are 0°F-2000°F and -150°F-150°F respectively.

WSP
Working set point for the PID loop, typically in °F. Minimum and maximum values for temperature and dewpoint are 0°F-2000°F and -150°F-150°F respectively.

Working Output
Output percentage for the temperature and dewpoint control PID loops. Minimum and maximum values are 0.0% and 100.0% respectively. At 0.0% output the analog output will be 4.00mA. At 100.0% output the analog output will be 20.00mA.

SP1 / Mode / Man. OP
Settable parameters used for the PID loops. SP1 will change the working set point of the loop. In Auto mode the loop will change the working output automatically to maintain the temperature set point. In Manual mode the working output can only be changed manually with the Man.OP parameter, and the output will not respond to the temperature set point.

Procedure for Parameter Changes

1.) While on the "Temperature / Dewpoint Control Panel" screen press the *Enter* button.
2.) Scroll through the parameters with the *up*/*down* arrow keys.
3.) Press the *Enter* button while the desired parameter is highlighted.
4.) Change the parameter value using the *up*/*down* arrow keys.
5.) Press the *Enter* button to save the parameter value.
6.) Press the *Back* button to exit.

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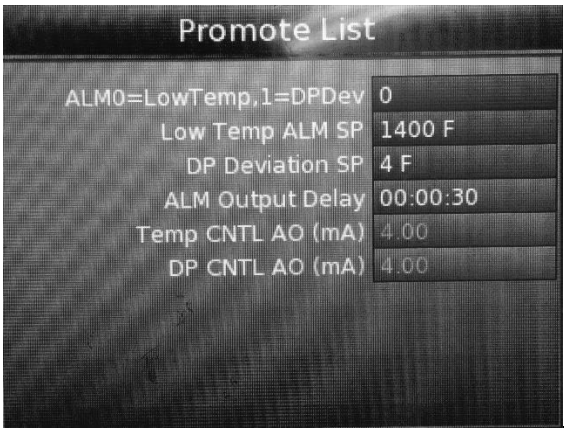
PROMOTE LIST PARAMETERS *(DEFAULT SETTINGS LISTED IN PICTURE)*



ALM, 0=LowTemp, 1=DPDev / Low Temp ALM SP / DP Deviation SP
This parameter sets the function of the 5A/C digital output. If a 0 value is selected then the digital output will correspond to the low temperature alarm and "Low Temp ALM SP". If the actual temperature of the "temperature control" input is greater than the "Low Temp ALM SP" then the 5A/C output will energize.

If a 1 value is selected then the digital output will correspond to the dewpoint deviation alarm and "DP Deviation SP". If the actual dewpoint of the "temperature control" input is less than the "DP Deviation SP" then the 5A/C output will energize.

ALM Output Delay (h:m:s)
"ALM Output Delay (h:m:s)" sets the amount of delay time that the low temp or dewpoint deviation alarm output will de-energize.

Temp Control AO (mA)
Shows the mA signal for the temperature control output. This is a non-writable value (display only).

DP Control AO (mA)
Shows the mA signal for the dewpoint control output. This is a non-writable value (display only).

Procedure for Parameter Changes
1.) While on the "Promote List Panel" screen press the *Enter* button.
2.) Scroll through the parameters with the *up*/*down* arrow keys.
3.) Press the *Enter* button while the desired parameter is highlighted.
4.) Change the parameter value using the *up*/*down* arrow keys.
5.) Press the *Enter* button to save the parameter value.
6.) Press the *Back* button to exit.

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TEMPERATURE / DEWPOINT AUTO TUNE PROCEDURE

1.) Press the *Back* button until the menu screen appears.
2.) Scroll to the "Log In" button using the *up/down* arrow keys
3.) Press the *Enter* button
4.) Select the "Supervisor" access using the *up/down* arrow keys
5.) Press the *Enter* button
6.) Select "Loop" using the *up/down* arrow keys
7.) Press the *Enter* button
8.) Select "1" for temperature and "2" for dewpoint using the *up/down* arrow keys
9.) Press the *Enter* button
10.) Select "Tune" using the *up/down* arrow keys
11.) Press the *Enter* button
12.) Select "Tune Enable" using the *up/down* arrow keys
13.) Press the *Enter* button
14.) Select "On" using the *up/down* arrow keys
15.) Press the *Enter* button
16.) Press the *Back* button until the menu screen appears.
17.) Select "Log Out" using the *up/down* arrow keys
18.) Press the *Enter* button
19.) Press the *Back* button until the "Home" screen appears

The controller will now be in "Auto Tune" mode. During this process the PID output will go to 0% and 100% output to watch the response of the temperature or dewpoint. After the process is complete the P-Value, I-Value and D-value parameters of the loop will be adjusted appropriately. The "Auto Tune" feature will then be turned off automatically and the controller will operate using the new tuning settings.

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THERMOCOUPLE TYPE SETUP PROCEDURE

1.) Press the *Back* button until the menu screen appears.
2.) Scroll to the "Log In" button using the *up/down* arrow keys
3.) Press the *Enter* button
4.) Select the "Engineer" access using the *up/down* arrow keys
5.) Press the *Enter* button
6.) Press the *Enter* button
7.) Enter a value of "100" for the engineering password using the *up/down* arrow keys and *Enter* button
8.) Press the *Back* button
9.) Select "Yes" using the *up/down* arrow keys
10.) Press the *Enter* button
11.) Select "Channel" using the *up/down* arrow keys
12.) Press the *Enter* button
13.) Select "1" using the *up/down* arrow keys
14.) Press the *Enter* button
15.) Select "Main" using the *up/down* arrow keys
16.) Press the *Enter* button
17.) Select "Lin Type" using the *up/down* arrow keys
18.) Press the *Enter* button
19.) Select The appropriate Thermocouple type using the *up/down* arrow keys
20.) Press the *Enter* button
21.) Press the *Back* button until the menu screen appears.
22.) Select "Log Out" using the *up/down* arrow keys
23.) Press the *Enter* button
24.) Press the *Back* button until the "TempPID" screen appears

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