

SERVAIRE

Installation and Operation Guide

Server Rack Airflow Measurement Unit with Ethernet Output

Document Name: IG_Servaire-E100_E_R1B



EBTRON Servaire Server Rack Airflow Measurement Unit

IG_Servaire-E100_E_R1B

Part Number: 930-0550

LIST OF EFFECTIVE AND CHANGED PAGES

Insert latest changed pages (in bold text); remove and dispose of superseded pages.

Total number of pages in this manual is **8**.

Page No	Revision *	Description of Change	Date
1, 2	.R1B	.Update revision to R1B	.09/23/2015
3	.R1B	.Update Table 1, from Device, 2 to Device; update Table 3 pressure constant from 2232^2 to 2324^2	.09/23/2015
4, 5	.R1B	.Minor corrections for LCD DISP= and TOL= menu items	.09/23/2015
6	.R1B	.Corrected ADJUSTMENT menu to reflect firmware	.09/23/2015
1 through 8	.R1A	.Initial Document Release	.06/25/2015

* R1A indicates an original page without change


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BACnet Objects List

Table 1. Servaire BACnet Object List

 BACnet MS/TP NOTE: For BACnet IP operation, use port 47808.	Analog Inputs		
	Type, ID	Name	Default Units
	Device	Servaire	
	AI, 1	Average Flow	FPM
	AI, 2	Average Pressure	iWG
AI, 3	Average Temperature	°F	
AI, 4	Alarm Status		

MODBUS Register Map

Table 2. Servaire Modbus Register Map

Modbus						
Modbus TCP						
NOTE: For Modbus operation, use port 502. Modbus IP is always enabled regardless of *BAC MODE setting.	Function	Address	Type	Units	Description	Range/Value
	2	10001	boolean		Trouble Status	0:OK, 1:Trbl
	4	30001-30002	float	FPM	Average Airflow	-2,000 to 2,000
	4	30003-30004	float	iWG	Average Pressure	-0.5 to 0.5
	4	30005-30006	float	°F	Average Temperature	-20 to 160
	4	30007	word		Alarm Status	0: No alarm 1: High Alarm 2: Low Alarm 3: Both
	4	300148	word		Firmware Revision	
	4	300201	word		Float word order	0: high word first; 1: low word first

Table 3. Converting To/From Airflow and Differential Pressure

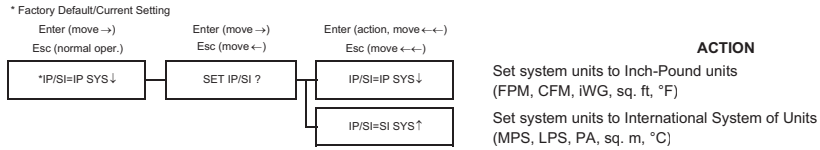
TO CONVERT TO	
Differential Pressure (iWG) from Airflow (FPM)	Differential Pressure (iWG) = Airflow (FPM) ^2/(2324^2)
Airflow (FPM) from Differential Pressure (iWG)	Airflow (FPM) = 2324 * (Differential Pressure (iWG) ^0.5)

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Servaire Setup Menus (Part 1 of 4)

SYSTEM OF UNITS MENU

Simultaneously depress/release ENTER + ESC keys during normal operation to select



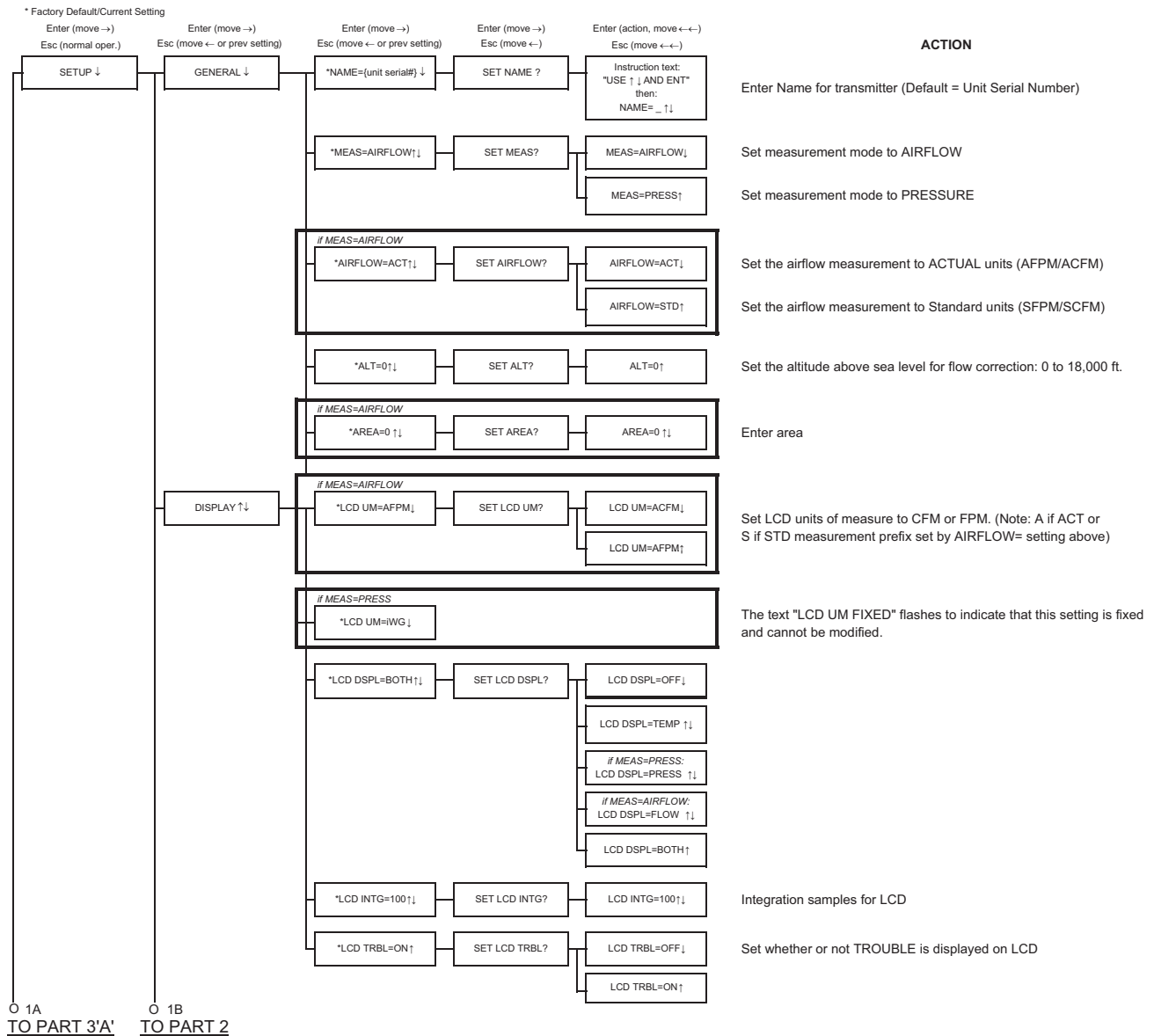
CONTRAST ADJUSTMENT

Simultaneously depress/release ↓ + ESC keys during normal operation to select



SETUP MENU

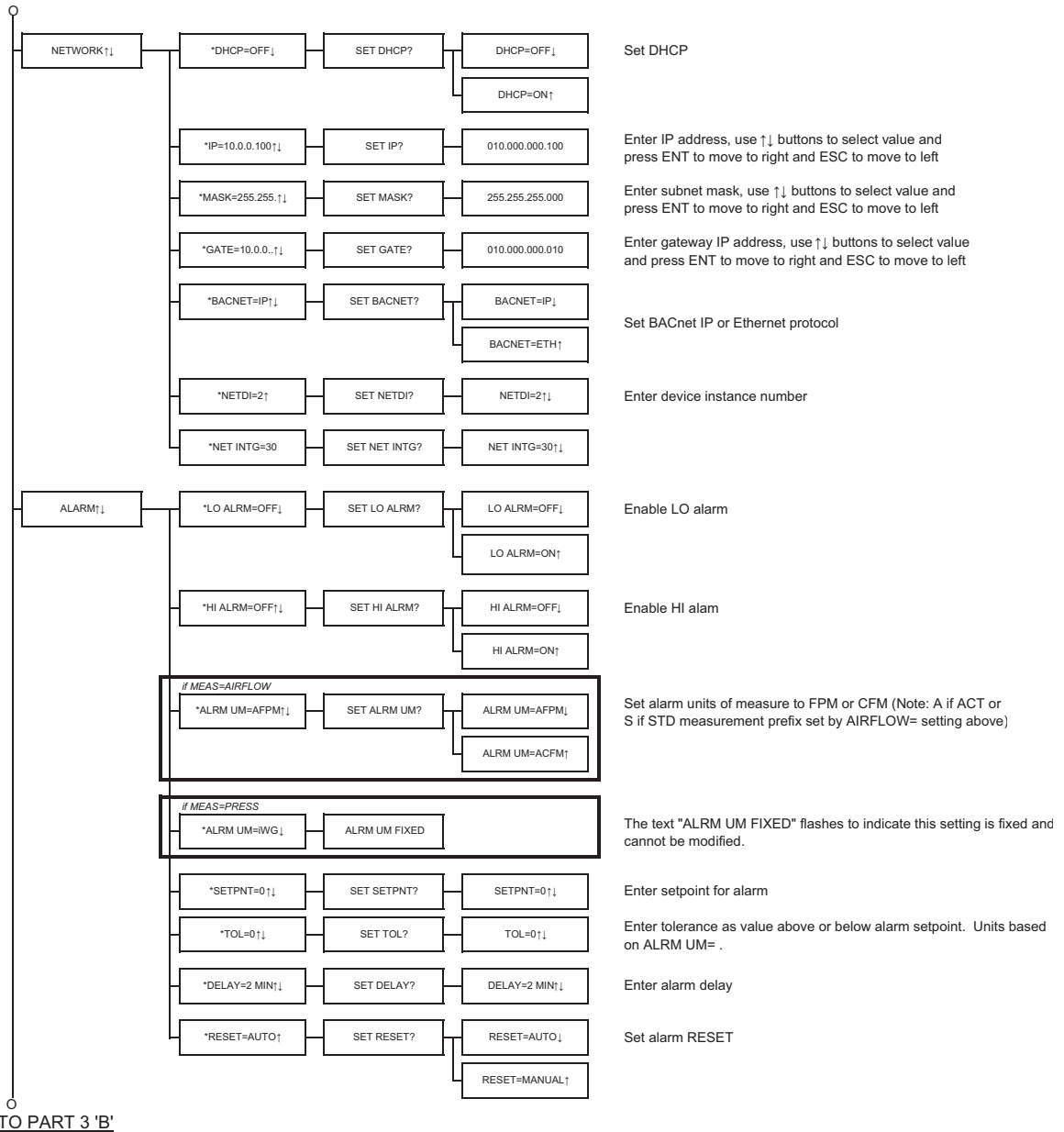
Simultaneously depress/release ↑ + ↓ keys during normal operation to select



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Servaire Setup Menus (Part 2 of 4):

FROM PART 1B



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Servaire Setup Menus (Part 3 of 4):

FROM PART

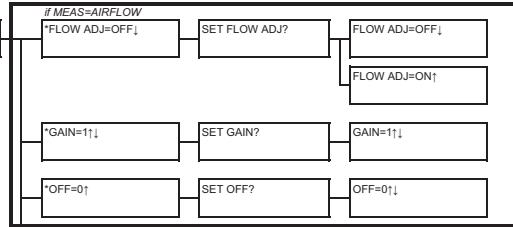
FROM PART 2

1 'A'

0 3A

0 3B

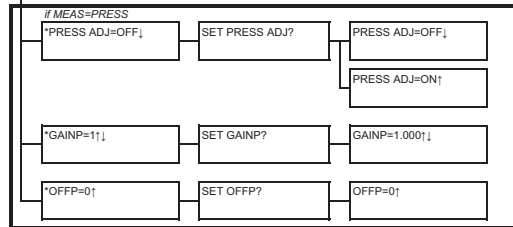
ADJUSTMENTS1



Enable flow adjustments

Enter gain applied to airflow reading

Enter offset applied to airflow reading



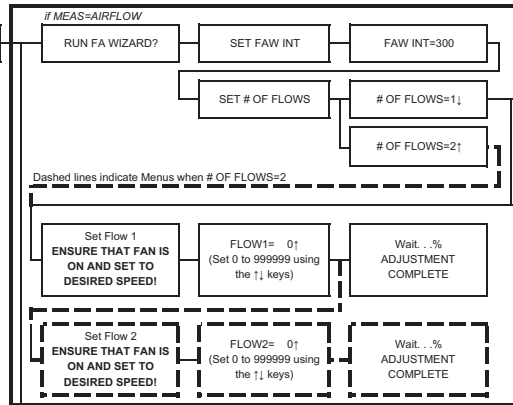
Enable pressure adjustments

Enter gain applied to pressure reading

Enter offset applied to pressure reading

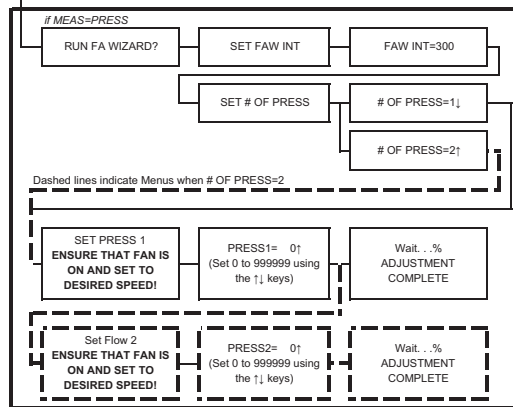
TOOLS1

FIELD ADJUST1



The Field Adjust Wizard will now be engaged as outlined in the following steps. The GAIN and OFF values will be updated, and FLOW ADJ=ON will be set if the wizard is successfully completed.

"Wait . . . %" indicates progress while the Field Adjustment Wizard acquires a large number of samples of airflow rate and averages all of the readings. Display indicates "ADJUSTMENT COMPLETE" when adjustment is complete. If you wish to review the adjustment made, simply navigate back to the SETUP menu and view the ADJUSTMENTS section.



The Field Adjust Wizard will now be engaged as outlined in the following steps. The GAIN and OFF values will be updated, and PRESS ADJ=ON will be set if the wizard is successfully completed.

"Wait . . . %" indicates progress while the Field Adjustment Wizard acquires a large number of samples of airflow rate and averages all of the readings. Display indicates "ADJUSTMENT COMPLETE" when adjustment is complete. If you wish to review the adjustment made, simply navigate back to the SETUP menu and view the ADJUSTMENTS section.

0 3C

TO PART
4 'A'

0 3D

TO PART
4 'B'

Servaire Setup Menus (Part 4 of 4):

