



Manual Supplement

Model Number: 8630-PM-CRM

Product/System Title: Premium Clean Room Monitor

Contents of this manual supplement include:

- 1) Sequence of operation
- 2) Menu structure drawing
- 3) Description of new software items
- 4) Deleted software menu item
- 5) Wiring diagram
- 6) Access Code

Project:
Date:
Page 1 of 1 Released 4/9/04



Manual Supplement

Sequence of Operation

The Model 8630-PM-CRM monitors room pressure by utilizing a through-the-wall pressure sensor. The Model 8630-PM-CRM features high and low pressure alarms for up to two independent sensors. A minimum supply volume alarm is also present. Additionally, the Model 8630-PM-CRM supports digital communications over an RS-485 network and an analog pressure output.

Menu Structure

<u>ALARM</u>	<u>CONFIGURE</u>	<u>CALIBRATION</u>	
LOW ALARM	DISPLAY AVG	SENSOR ZERO	
HIGH ALARM	UNITS	SENSOR SPAN	
SEC LOW ALM	ROOM VOLUME	2SENSOR ZERO	
SEC HIGH ALM	2 SENSOR	2SENSOR SPAN	
MIN SUP ALM	ACCESS CODE	SUP 1 ZERO	
ALARM RESET		SUP 2 ZERO	
AUDIBLE ALM		ELEVATION	
ALARM DELAY		ACCESS CODE	
MUTE TIMEOUT			
ACCESS CODE			
<u>INTERFACE</u>	<u>DIAGNOSTICS</u>	<u>PRESSURE</u>	<u>FLOW</u>
NET PROTOCOL	PRESS AOUT	SENSOR TYPE	SUP1 AREA
NET ADDRESS	SENSOR INPUT	MAX OUT SIG	SUP2 AREA
OUT SIG	SENSOR STAT	MAX OUT VAL	SUP1 KFACTOR
ACCESS CODE	2 SENS INPUT	ACCESS CODE	SUP2 KFACTOR
	2 SENS STAT		SENSOR TYPE
	SUP 1 INPUT		MAX OUT SIG
	SUP 2 INPUT		MAX OUT VAL
	PRES ALM REL		ACCESS CODE
	SUP ALM REL		
	ACCESS CODE		

Figure 1: Menu Items - Model 8630-PM-CRM Premium Controller

Project:
Date:
Page 2 of 2 Released 4/9/04



Manual Supplement

Description of New Software Items

The Model 8630-PM-CRM has additional software items.

Alarm Menu

Menu Item

LOW ALARM
SEC LOW ALM

Description

The **LOW ALARM** and **SEC LOW ALARM** items set the low pressure alarm set points for the primary and secondary pressure sensor. A low alarm condition occurs when the room pressure falls below or goes in the opposite direction of the low alarm set point. The **SEC LOW ALM** setpoint is only used when the second sensor is enabled through the CONFIGURE menu. The **LOW ALARM** and **SEC LOW ALM** can be set to OFF. The **LOW ALARM** and **SEC LOW ALM** have a range from 0 to within 0.005 “ H₂O of the pressure **SETPOINT**. For **TSI** or **BI DIRECT** sensor types, the low alarm must be of the same sign (positive or negative) as the pressure **SETPOINT**. The default value is **OFF**.

HIGH ALARM
SEC HIGH ALM

The **HIGH ALARM** and **SEC HIGH ALM** items set the high pressure alarm set points. A high alarm condition occurs when the room pressure rises above the high alarm set point. The **SEC HIGH ALM** setpoint is only used when the second sensor is enabled through the CONFIGURE menu. The **HIGH ALARM** and **SEC HIGH ALM** can be set to OFF. The **HIGH ALARM** and **SEC HIGH ALM** have a range from within 0.005 “ H₂O of the pressure **SETPOINT** to within 0.005” H₂O of the pressure **MAX OUT VAL**. For **TSI** or **BI DIRECT** sensor types, the high alarm must be of the same sign (positive or negative) as the pressure **SETPOINT**. The default value is **OFF**.

Project:
Date:
Page 3 of 3 Released 4/9/04



Manual Supplement

Calibration Menu

Menu Item

SUP 1 ZERO
SUP 2 ZERO

Description

The **SUP 1 ZERO** and **SUP 2 ZERO** items are used to calibrate the flow station pressure transducers.

A zero or no flow setpoint needs to be established prior to using the supply flow measurements (see **Calibration** section of manual following menu item listing).

Diagnostics Menu

Menu Item

PRESS AOUT

Description

The **PRESS AOUT** item is used to vary the analog output from the Model 8630-PM-CRM. When this item is entered, a number will be shown on the display indicating the last analog output value. The value displayed ranges from 0 to 255. The value 255 corresponds to the lowest voltage (current) output and 0 corresponds to the highest voltage (current) output. Pressing the ▲ key will decrease the analog output and increase the value displayed. Pressing the ▼ key will increase the analog output and decrease the value displayed.

The **PRESS AOUT** function can be used in conjunction with a voltmeter to verify that the analog output is correct.

SUP 1 INPUT
SUP 2 INPUT

The **SUP 1 INPUT** and **SUP 2 INPUT** items are used to read the flow measurement inputs directly. When these item are entered, the display will indicate the voltage from the proper transducer. The exact voltage displayed is relatively unimportant. It is more important that the voltage changes to indicate the flow station is working properly.

PRES ALM REL

The **PRES ALM REL** item is used to change the state of the pressure alarm relay. When this item is entered, the display will indicate either **OPEN** or **CLOSED**. The ▲/▼ keys are used to toggle the state of the relay. The ▲ key is used to **OPEN** the alarm contact. The ▼ key is used to **CLOSE** the alarm contact. When the contact is closed, the pressure alarm relay should be in an alarm condition.

Project:
Date:
Page 4 of 4
Released 4/9/04



Manual Supplement

SUP ALM REL

The **SUP ALM REL** item is used to change the state of the minimum supply alarm relay. When this item is entered, the display will indicate either **OPEN** or **CLOSED**. The **▲/▼** keys are used to toggle the state of the relay. The **▲** key is used to **OPEN** the alarm contact. The **▼** key is used to **CLOSE** the alarm contact. When the contact is closed, the minimum supply alarm relay should be in an alarm condition.

Pressure Menu

Menu Item

SENSOR TYPE

Description

The **SENSOR TYPE** item is used to set the type of pressure sensor used to measure the room pressure differential. This item can be set to **TSI**, **UNI DIRECT**, or **BI DIRECT**. The default value is **TSI**.

MAX OUT SIG

The **MAX OUT SIG** item is used to set the maximum pressure output voltage from the transducer used. This item can be set to **5 V** or **10 V**, with a default value of **10 V**. For a **TSI** pressure sensor, the **MAX OUT SIG** must be set to **10 V**.

MAX OUT VAL

The **MAX OUT VAL** item is used to set the maximum pressure reading of the transducer used. This item can be set between **0.1" H2O** and **2" H2O**, with a default value of **0.2" H2O**. For a **TSI** pressure sensor, the **MAX OUT VAL** must be set to **0.2" H2O**. For a **UNI DIRECT** pressure sensor, the **MAX OUT VAL** must be programmed as a positive or negative, depending on the pressure relationship of the space to its reference.

For **UNI DIRECT** sensors, 0 V (or 4 mA in **CURRENT** mode) corresponds to a pressure differential of 0, and 10 V or (20 mA in **CURRENT** mode) corresponds to a pressure differential of **MAX OUT VAL**. For **BI DIRECT** or **TSI** sensors, 0 V (or 4 mA in **CURRENT** mode) corresponds to a pressure differential of **-MAX OUT VAL**, and 10 V or (20 mA in **CURRENT** mode) corresponds to a pressure differential of **MAX OUT VAL**.

Project:
Date:
Page 5 of 5 Released 4/9/04



Manual Supplement

Flow Menu

Menu Item

SUP1 AREA
SUP2 AREA

Description

The **SUP1 AREA** and **SUP2 AREA** items are used to input the duct sizes for the first and second supply. The duct sizes are needed to compute the air flowing into the room. These items require a flow sensor to be mounted in the proper supply duct. When a duct area is programmed, the display will automatically scroll the actual total supply flow as part of the display scroll sequence. If a zero value is entered, the supply flow value will not scroll on the display.

The programmed duct areas can range from **0** to **10 square feet** if the PRESSURA displays English units. If the PRESSURA displays metric units, then the duct areas can range from **0** to **0.9500 square meters**. The default is **0**.

SUP1 KFACTOR
SUP2 KFACTOR

The **KFACTOR** menu item sets the “K” factor for the flow probe being used. The flow signal is multiplied by the **KFACTOR** so that the flow measurement matches the actual flow, usually determined with a pitot tube traverse. The **KFACTOR** has a minimum value of **0** and a maximum value of **10.**, with a default of **1**.

SENSOR TYPE

The **SENSOR TYPE** item is used to select the flow station input signal. **PRESSURE** is used when flow stations with pressure transducers are installed. **LINEAR** is selected when a linear output flow station, typically a thermal-based flow station, is installed.

MAX OUT SIG

The **MAX OUT SIG** item is used to set the maximum output voltage from the transducer used. This item can be set to **5 V** or **10 V**, with a default value of **5 V**. For a TSI flow station, the **MAX OUT SIG** must be set to **5 V**.

MAX OUT VAL

The **MAX OUT VAL** item is used to set the maximum pressure reading of the transducer used, or the maximum velocity of the linear flow station used. For a pressure based measurement, this item can be set between **0.1” H2O** and **0.5” H2O**, with a default value of **0.5” H2O**. For a linear flow station, this item can be set between **0** and **5,000 ft/min**. For a TSI flow station, the **MAX OUT VAL** must be set to **0.5” H2O**.

Project:
Date:
Page 6 of 6
Released 4/9/04



Manual Supplement

Deleted Software Menu Items

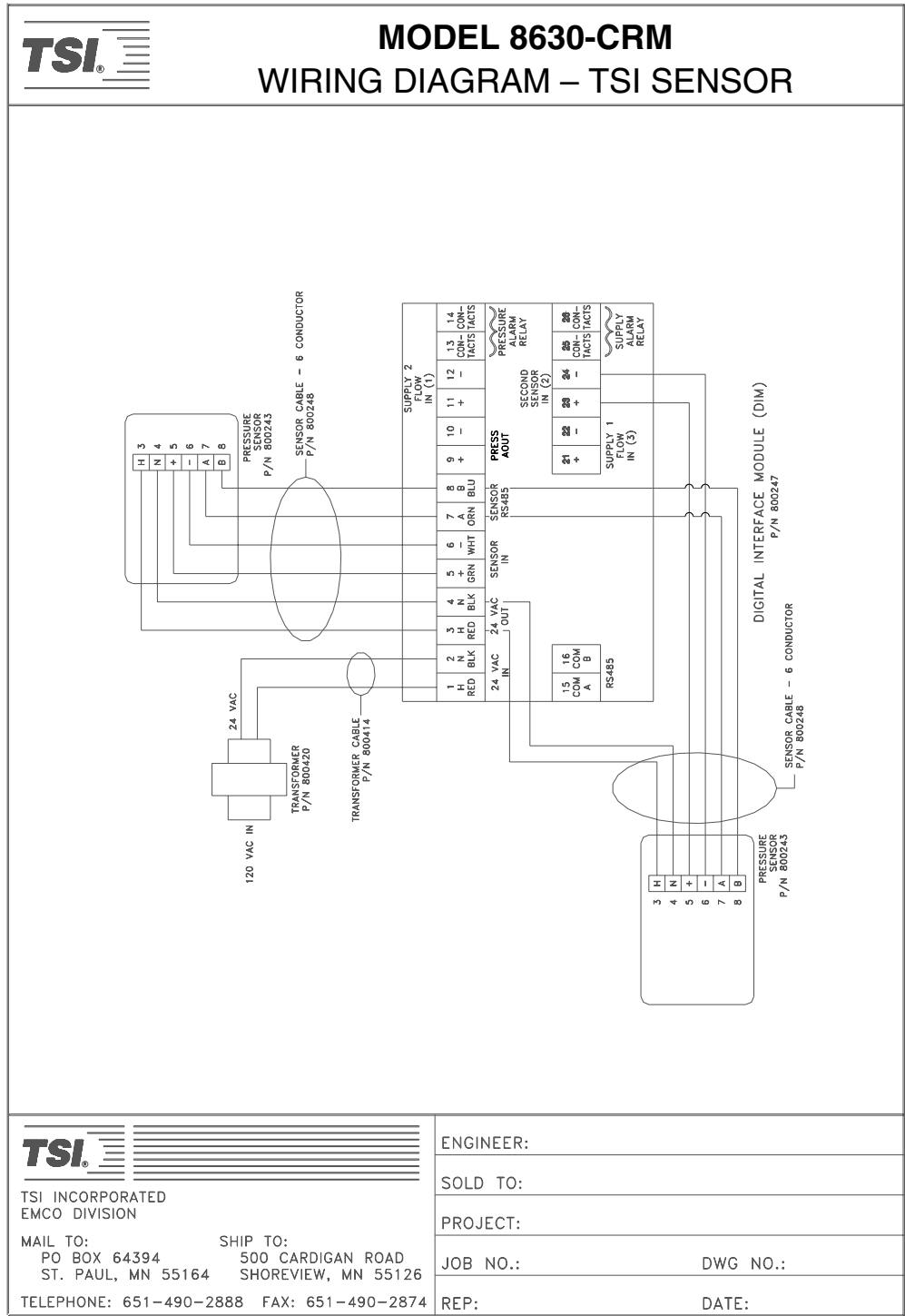
The following items have been replaced on the 8630-PM-CRM.:

ALARM MENU	NEG LOW ALARM NEG HIGH ALARM POS LOW ALARM POS HIGH ALARM MIN CFM ALM 2 LOW ALM 2 HIGH ALM
CONFIGURE MENU	ROOM MODE DCT AREA
CALIBRATION MENU	FLOW ZERO
INTERFACE MENU	OUTPUT RANGE
DIAGNOSTICS MENU	ANALOG OUT KEY INPUT FLOW INPUT LOW ALM RELAY HIGH ALM RELAY



Manual Supplement

Wiring Diagrams



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 SOLD TO: _____
 PROJECT: _____
 JOB NO.: _____ DWG NO.: _____
 REP: _____ DATE: _____

10/29/99

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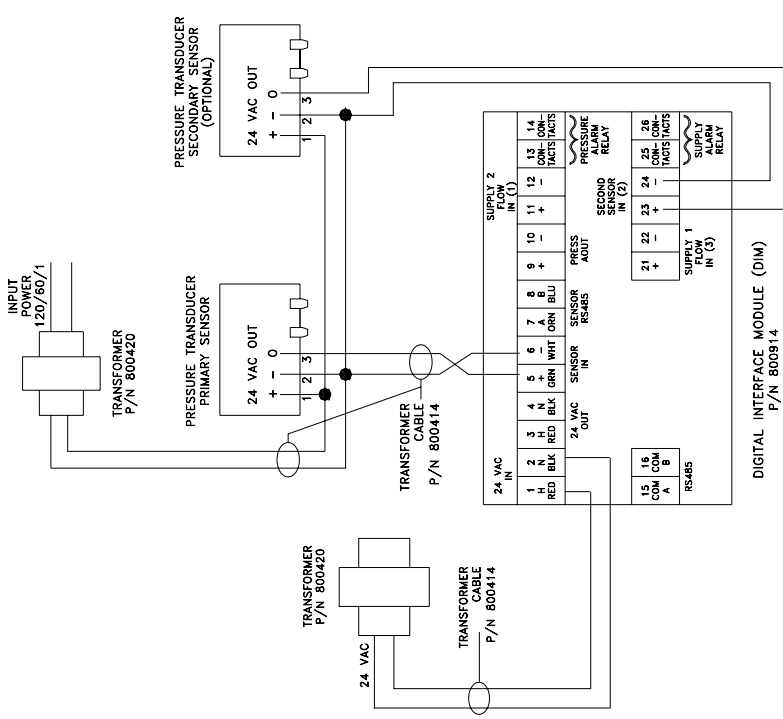
Project:
Date:
Page 8 of 8
Released 4/9/04



Manual Supplement



MODEL 8630-CRM MONITOR WIRING DIAGRAM - XDCR



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JAN/14/2003

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Project:
Date:
Page 9 of 9
Released 4/9/04



Manual Supplement

Access Codes

The 8630-PM-CRM has a single access code for all menus. Each menu has the access code enabled individually; implementing the access code in one menu does not enable the access code in other menus. When an access code is required, pressing the following key sequence will provide access:

Key

1	EMERGENCY
2	MUTE
3	MUTE
4	MENU
5	AUX