



# EQUIPMENT Operation Manual



**Loctite® EQ HM20 PUR Controller**  
Part Number 2033850

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# TABLE OF CONTENTS

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<b>1. PLEASE OBSERVE THE FOLLOWING.....</b>	<b>3</b>
1.1 EMPHASIZED SECTIONS.....	3
1.2 ITEMS SUPPLIED.....	3
1.3 FOR YOUR SAFETY.....	3
1.4 FIELD OF APPLICATION, (INTENDED USAGE).....	4
<b>2. DESCRIPTION.....</b>	<b>4</b>
2.1 THEORY OF OPERATION.....	4
2.2 OPERATING ELEMENTS AND CONNECTIONS, REFERS TO FIGURE 1.....	5
<b>3. TECHNICAL DATA.....</b>	<b>7</b>
3.1 SPECIFICATIONS.....	7
4.1 UNPACKING AND INSPECTION.....	8
4.2 CONNECTING THE UNIT.....	8
4.3 CAPACITY.....	8
<b>5. OPERATING THE UNIT.....</b>	<b>9</b>
5.1 OPERATION.....	9
5.2 USING FOOT SWITCH / REMOTE DEVICE.....	9
<b>6. CARE AND MAINTENANCE.....</b>	<b>10</b>
6.1 CARE.....	10
6.2 MAINTENANCE.....	10
<b>7. TROUBLESHOOTING.....</b>	<b>10</b>
<b>8. DOCUMENTATION.....</b>	<b>11</b>
8.1 WIRING DIAGRAM.....	11
8.2 PIN CONNECTION.....	13
8.3 REPLACEMENT PARTS AND ACCESSORIES.....	14
<b>9. WARRANTY.....</b>	<b>15</b>

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## 1. Please Observe the Following

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### 1.1 Emphasized Sections



#### **WARNING!**

Refers to safety regulations and required measures that protect the operator or other persons from injury or danger to life.



#### **Caution!**

Emphasizes what must be done or avoided so that the unit or other property is not damaged.



#### **Notice:**

Gives recommendations for better handling of the unit during operation or adjustment, as well as for service activities.

### 1.2 Items Supplied

- 1 EQ HM20 PUR Controller
- 1 Foot switch
- 1 User manual
- 1 Power cord
- 1 6mm Air Feed Line
- 1 4mm Air Feed Line

#### **Additional Items Required (Need to Purchase Separately)**

- HM20 PUR Syringe Preheater, Part Number 2033861
- HM20 PUR Dispense Head, Part Number 2016756

### 1.3 For Your Safety

For safe and successful operation of the unit, read these instructions completely. If the instructions are not observed, the manufacturer can assume no responsibility. Be sure to retain this manual for future reference.



#### **WARNING!**

Always wear temperature resistance gloves before touch the housing of dispensing head or pre heater.



#### **WARNING!**

Never remove the cover of the unit without first switching the power off and unplugging the power cord.



#### **WARNING!**

Damage to the power cord or the housing can result in contact with live electrical parts. Check the power cord and housing before each use. If the power cord or unit is damaged, do not operate.

**The unit may be repaired only by a Loctite® authorized service technician.**

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## **1. Please Observe the Following (continued)**

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### **1.4 Field of Application, (Intended Usage)**

This Loctite® EQ HM20 PUR Controller is designed to control the Loctite® PUR-Dispense Head-30ml Syringe or Loctite® PUR-Pre Heater-30ml Syringe. The system can operate up to two devices. The system is designed for use with Loctite® brand PUR hotmelt adhesive products at manual or semi-automation workstations, such as in workshops, laboratories, industrial installations and production lines. It is a self-contained dispense system, which can also be can integrated with a Loctite® Benchtop Robot.

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## **2. Description**

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### **2.1 Theory of Operation**

When the unit is switched on, electrical power is supplied to the temperature controller and timer. The system will reach the pre-set temperature (time varies with different pre-set temperatures typically within 10-15 minutes). The dispensing parameters (temperature, pressure and dispensing time) must be determined before use. The dispensing parameters depend on the properties of the adhesive product.

The timed exposure cycle starts by momentarily depressing the footswitch or when an externally operated device such as Loctite® Benchtop Robot or PLC makes a relay closure across pins 1 and 9 of the nine pin footswitch connection on the rear panel. In the manual operating mode, the dispensing pressure remains open for as long as the footswitch is depressed or an external device maintains contact between pins 1 and 9.

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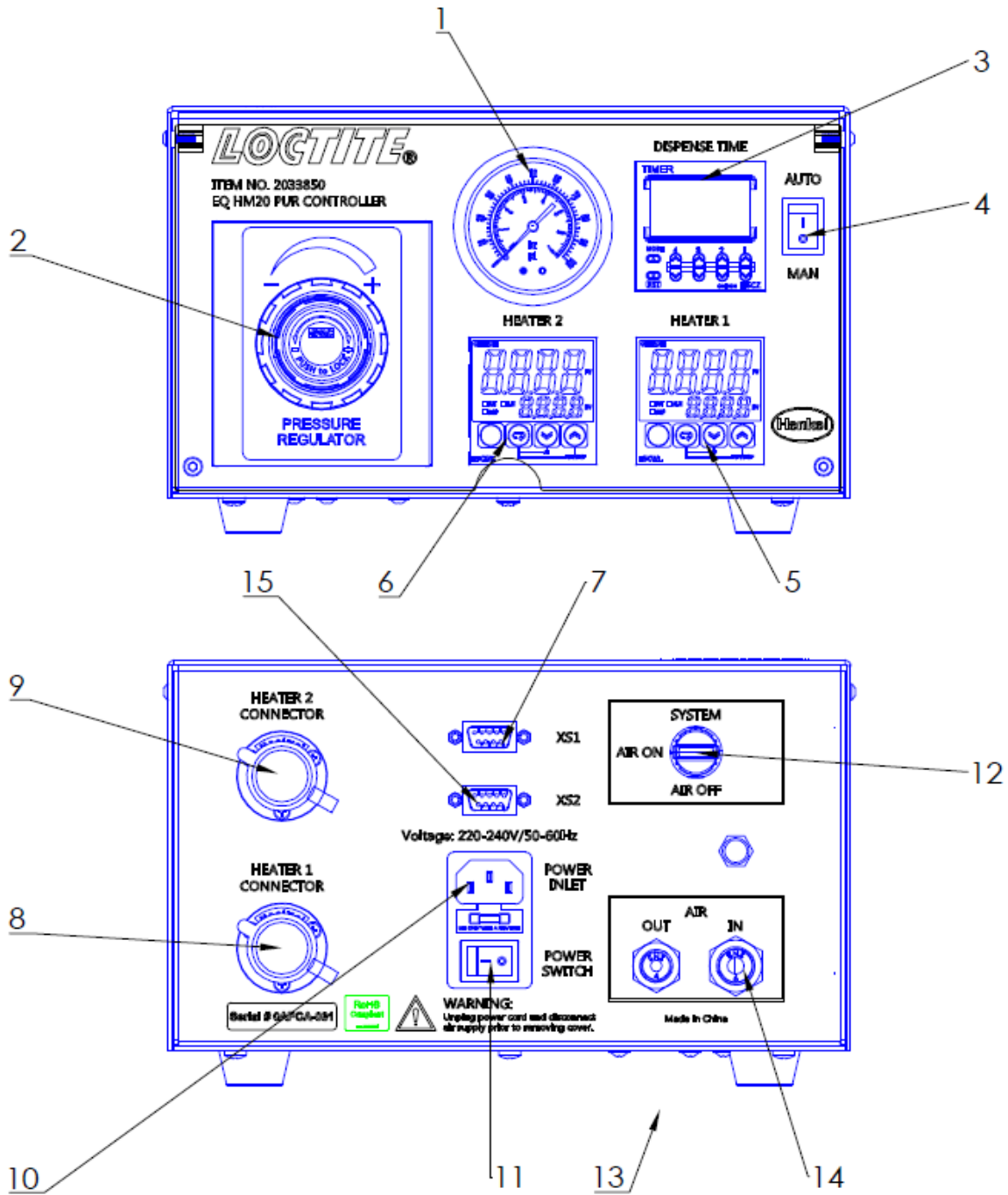
## 2. Description (continued)

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### 2.2 Operating Elements and Connections, refers to Figure 1

1. Pressure Gauge  
Displays the dispensing pressure.
2. Pressure Regulator  
Controls the dispensing pressure which determines adhesive flow rate.
3. Dispense Timer  
Controls and displays the dispense time. This controls the amount of adhesive dispensed.
4. Mode Switch  
Switches the system between “Manual” and “Auto” mode.
5. Heater 1 Temperature Control  
Controls and displays the temperature for Heater 1.
6. Heater 2 Temperature Control  
Controls and displays the temperature for Heater 2.
7. XS1 Foot Switch Connection  
Standard 9 pin “D” connector for foot switch or other external control.
8. Heater 1 Connector  
Connects the Heater 1 control to either dispense unit or pre-heater.
9. Heater 2 Connector  
Connects the Heater 2 control to either dispense unit or pre-heater.
10. Power Inlet  
Is used to connect the main power input.
11. Main Power Switch  
Controls the main power supply (ON/OFF) to the system.
12. Main Air On/Off switch  
Controls the main air supply (ON/OFF) to the system.
13. Air Out Connector  
Connects the output air to the dispense unit.
14. Air In Connector  
Connects the input air to the system.
15. XS2 Connection  
Standard 9 pin “D” connector for low level signal.

## 2. Description (continued)



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### 3. Technical Data

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#### 3.1 Specifications

Attribute		Value
<b>Time Range</b>		<b>0 – 99.99 seconds</b>
<b>Air Input*</b>		<b>Clean, dry air not to exceed 125 psig (8.5 bar), and filtered with a maximum of 50 micron</b>
<b>Regulation Range of the Pressure Regulator</b>		<b>0 – 7 bar (0 – 100 PSI)</b>
<b>Pressure Indication</b>		<b>0 – 10 bar (0 – 145 PSI)</b>
<b>Power**</b>		<b>Supply: 220V / 50 – 60 Hz, 2.0A Internal :24VDC</b>
<b>Dimensions</b>	<b>Width</b>	<b>250 mm</b>
	<b>Depth</b>	<b>160 mm</b>
	<b>Height</b>	<b>265 mm</b>
<b>Operation Temperature</b>		<b>+ 10°C to + 40°C (+50°F to +104°F)</b>
<b>Storage Temperature</b>		<b>- 10°C to + 60°C (+14°F to +140°F)</b>
<b>Amperage:</b>		<b>1.5A</b>

\* If the required air quality is not achieved, install a Loctite® filter regulator. In the US order a 5 µm filter using part number 985397. In Europe or Asia, order a 10 µm filter using part number 97120.

\*\* Note: The unit is supplied with an Asian style 240V power cord. If required cut off the plug supplied and replace with a facility compatible plug using a qualified electrician.

## 4. Installation

### 4.1 Unpacking and Inspection

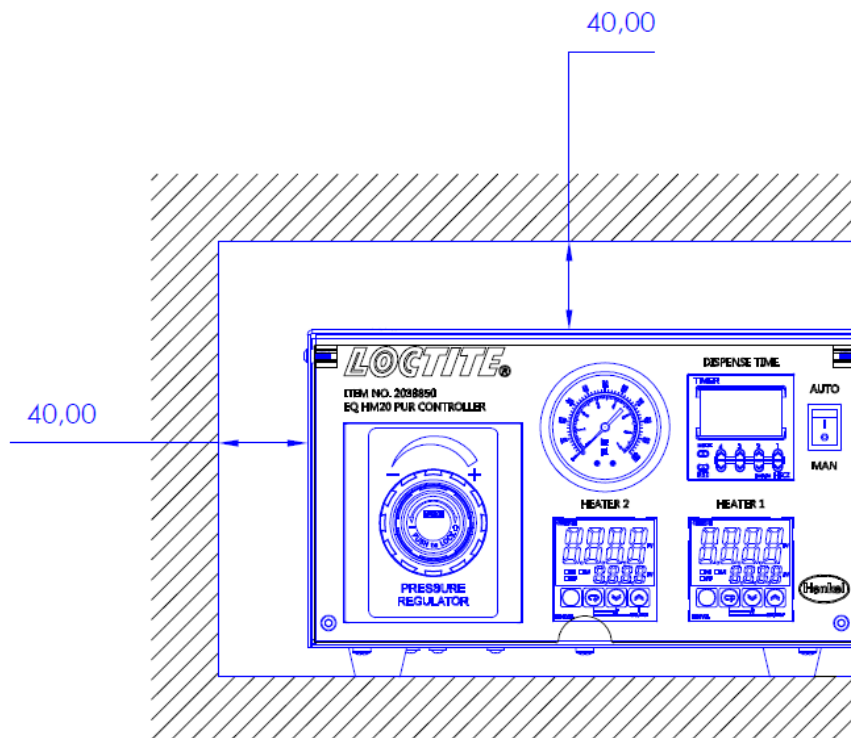
Carefully remove the system from its shipping carton and inspect it for any signs of damage. Any damage should be reported immediately to the carrier. Refer to the list of supplied parts (see page 4) and compare to the contents. Report any missing or damaged parts promptly to the Henkel local office or distributor.

### 4.2 Connecting the Unit

- Use only the cable and hose sets supplied.
- Connect power cord to the main power inlet. (11).
- Connect air pressure supply to pneumatic connection (14).
- Connect the Dispense Head or Pre-Heater to the “Heater 1 Connector” or “Heater 2 Connector”.

### 4.3 Capacity

Min. space required for the equipment, see below.






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## 5. Operating the Unit

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### 5.1 Operation

1. Switch the main power (11) to ON position. The power switch is in the middle of the rear panel.
2. The display on the Dispense Timer (3), Heater 1 Temperature Controller (5) and Heater 2 Temperature Controller (6) will come on.
3. Set the operating mode by using the “Mode Switch” (4).  
Auto Mode – Engaging the footswitch starts the cycle. Dispensing will begin immediately and continue until the system times out.  
Manual Mode – Engaging the footswitch starts dispensing and requires holding the footswitch down until the cycle is complete. When the footswitch is released, the dispensing will end immediately.
4. Set the required temperature by adjusting the Heater 1 Temperature Control (5) and Heater 2 Temperature Controller (6).
5. Set the required dispense time by adjusting the “Dispense Timer” (3).
6. Turn the “Main Air On Switch” (12) to “ON” position.
7. Set the dispense pressure by adjusting the “Pressure Regulator” (2).
8. Dispense cycles may be initiated by using the footswitch or an externally operated device, such as a PLC controlled relay in place of the footswitch. (Refer to section 8.2).

 **Caution:** When adjusting the pressure via “Pressure Regulator”, always adjust from Low-to-High. For example, to adjust from 4 bar to 2 bar, decrease the pressure to 0~1 bar, then increase to 2 bar.

### 5.2 Using Foot Switch / Remote Device

The Loctite®EQ HM20 PUR Controller can also be actuated using a foot switch or by external devices. The foot switch connection is made up of a 9 pin D connector. Making a dry-contact relay closure across pins 1 and 9 can actuate the unit.

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## 6. Care and Maintenance

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### 6.1 Care

This unit should be stored in a level, dry location at ambient condition out of direct sunlight.

### 6.2 Maintenance

The unit requires no special maintenance.

**Clean, dry, filtered air must be used. If it is not, the solenoids on the controller will be fouled over time.**

 **Notice:** If the required air quality is not achieved, install a Loctite<sup>®</sup> filter regulator. In the US order a 5 µm filter using Part Number 985397. In Europe or Asia, order a 10 µm filter using Part Number 97120.

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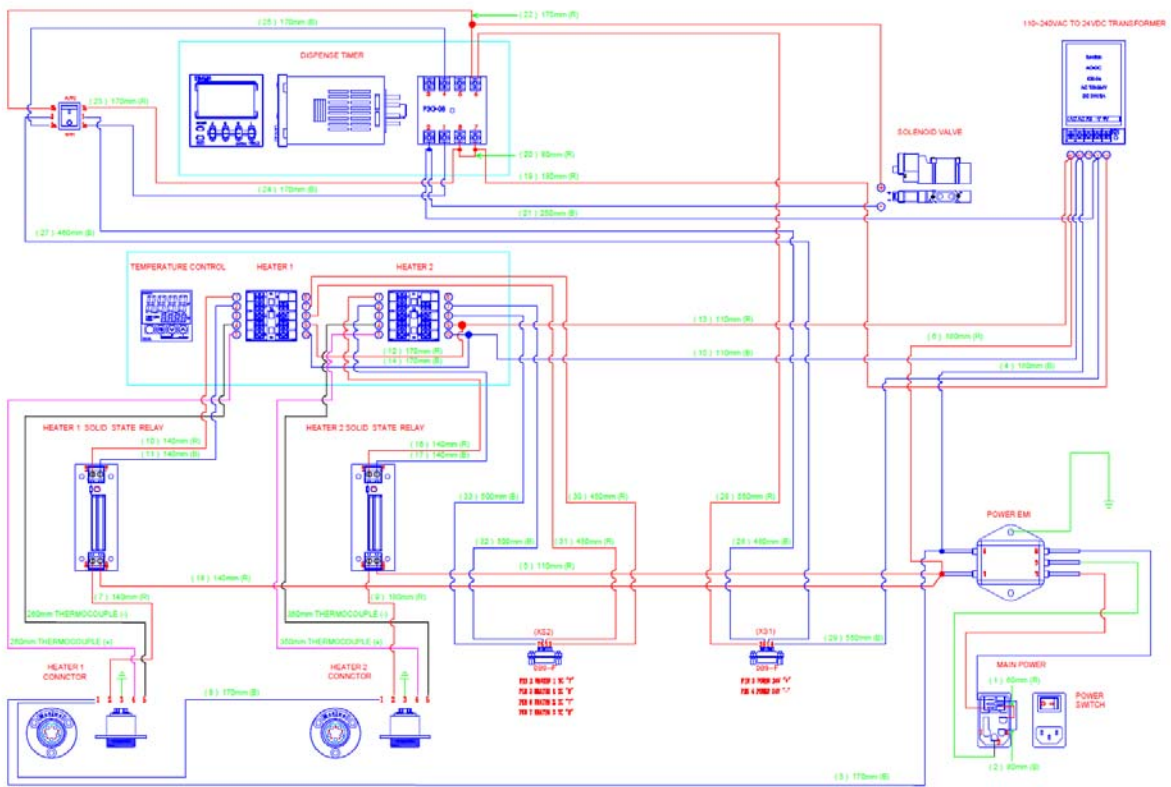
## 7. Troubleshooting

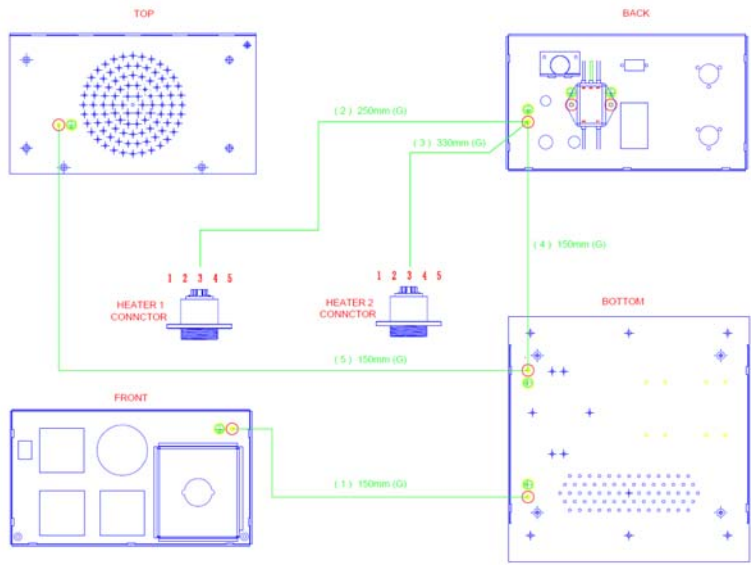
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Symptom	Possible Corrective Action(s)
The "POWER" does not come "ON"	<ol style="list-style-type: none"><li>1. Plug the unit in</li><li>2. Set the "POWER" button (11) in the "I" position</li><li>3. Check local power outlet to confirm 240V supply</li></ol>
The system will not pressurize.	<ol style="list-style-type: none"><li>1. Confirm that the "AIR IN" is connected</li><li>2. Confirm that the air supply is 80-125 psi.</li><li>3. Confirm that the "Main Air On Switch" is in "ON" position</li></ol>
The dispense head does not dispense.	<ol style="list-style-type: none"><li>1. Check the pneumatic connection</li><li>2. Check the pneumatic supply</li><li>3. Check the dispensing tip to make sure the dispensing tip is not clogged.</li></ol>

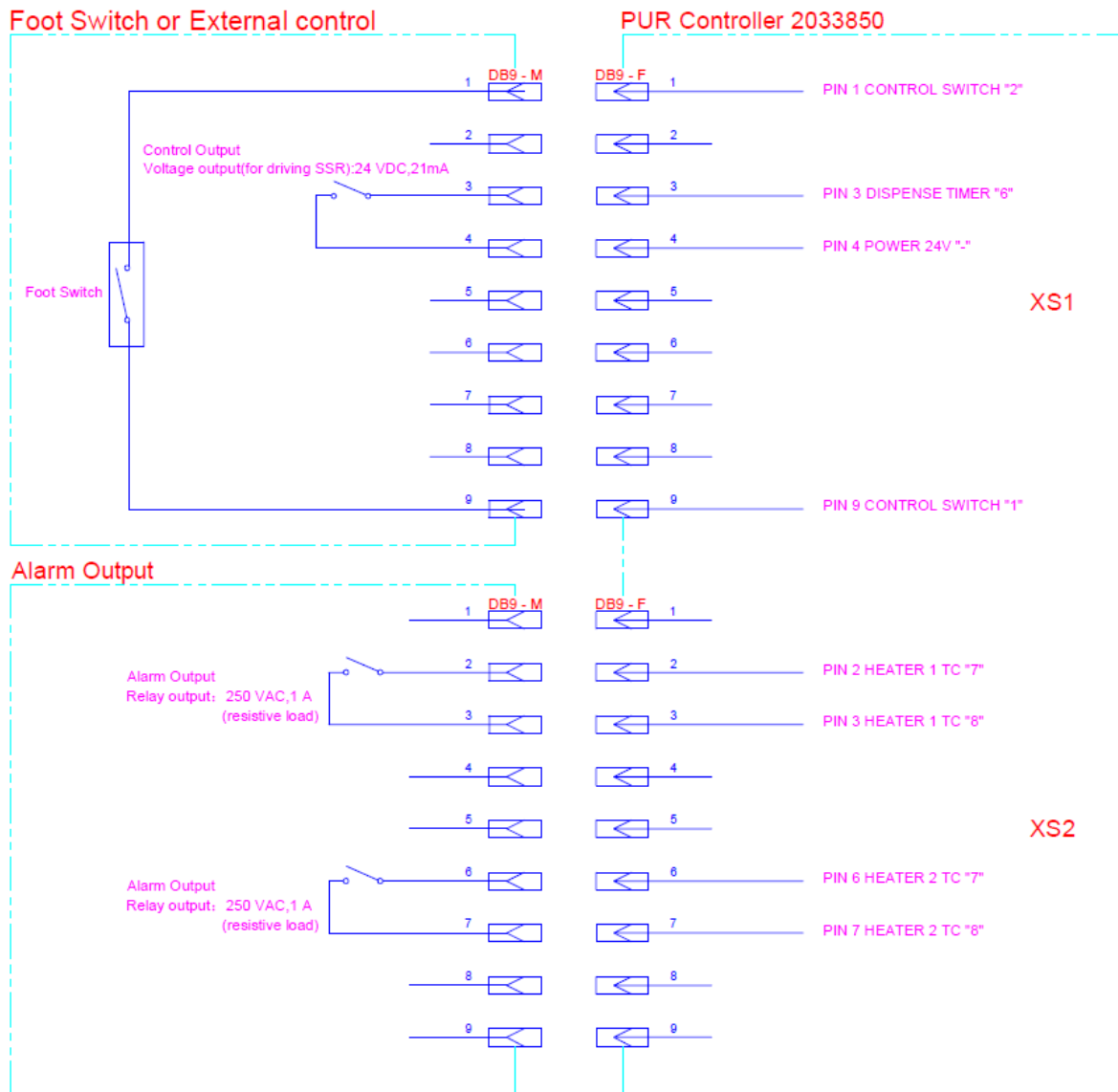
## 8. Documentation

### 8.1 Wiring Diagram





## 8.2 Pin Connection



### 8.3 Replacement Parts and Accessories

Loctite Part Number	Description
2016756	HM20 PUR Dispense Head
2033861	HM20 PUR Syringe Preheater
985397	Loctite <sup>®</sup> Air Filter, Regulator, Gauge
97201	Foot Switch Assembly
1483249	Needle—All SS, 1/2” 18G
1500889	Needle—All SS, 1/2” 19G
1483250	Needle—All SS, 1/2” 20G
1483262	Needle—All SS, 1/2” 21G
1483264	Needle—All SS, 1/2” 23G
1483265	Needle—All SS, 1/2” 25G
1667508	SD15 Heat Controller
2033849	HM20 PUR Needle Preheater

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## 9. Warranty

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### For Loctite® EQ HM20 PUR Controller

Henkel expressly warrants that all products referred to in this Instruction Manual for Loctite® EQ HM20 PUR Controller (hereafter called “Products”) shall be free from defects in materials and workmanship. Liability for Henkel shall be limited, at its option, to replacing those Products which are shown to be defective either in materials or workmanship or to credit to the purchaser the amount of the purchase price thereof (plus freight and insurance charges paid therefore by the user). The purchaser’s sole and exclusive remedy for breach of warranty shall be such replacement or credit.

A claim of defect in materials or workmanship in any Products shall be allowed only when it is submitted to Henkel in writing within one month after discovery of the defect or after the time the defect should reasonably have been discovered and in any event, within twelve months after the delivery of the Products to the purchaser. No such claim shall be allowed in respect of Products which have been neglected or improperly stored, transported, handled, installed, connected, operated, used or maintained or in the event of unauthorized modification of the Products including, where products, parts or attachments for use in connection with the Products are available from Henkel, the use of products, parts or attachments which are not manufactured by Henkel.

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Manual P/N: 8906015, Date: 11/19/2015

