2 **NSTALLATION** 1 QUICK START GUIDE **EZ-ZONE[®] PM** 44.96 to 45.47 mm (1.77 to 1.79 in.) 44.96 to 45.47 mm (1.77 to 1.79 in.) For Part Numbers: PM6 [C,R,B,J,N,E,T] _ [E,F,C] [J,C] - _ AAA _ figure 1. _ _ fiaure 2 4. Push the collar to the panel 6. Reinstall the screw terminal 1. Make the panel cutout (see figure 1). and secure into position. connectors on the controller now or first connect field 5. Place the blade of a 2. Remove the green screw wiring as indicated in the screwdriver against each terminal connectors from the steps that follow. of the four corners of the controller. mounting collar and apply 3. Insert the case assembly into pressure to achieve IP65 Follow the steps in this quick start guide to Caution: / the panel cutout and slide the seal (see figure 3). Reinstall screw terminal wire and set up your new Watlow controller Connect your sensor mounting collar over the back connectors in their original as indicated in the of the controller (see figure 2). locations corresponding diagram. For assistance contact Watlow: www.watlow.com +1-(507)-494-5656 wintechsupport@watlow.com 0600-0056-0001 Rev. C DATE 3-2017

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Connect your load as indicated in the diagram corresponding to your part number. Notes:

- Relay: 5A @ 240 V(ac) or 30 V(dc)
- 0 to 20 mA: 800Ω max.
 load
- 0 to 10V: 1kΩ min.
 load

AC Load Normally Closed PM6 F -: Universal Process or Current Load Voltage Load Load) to 10 Load 4 to 20mA Internal Circuit PM6__C_-: Switched DC or Open Collector Open Collector Switched DC or Common Power Supply (+)

PM6__E_-__: 5 A Form C Relay

Load

Load

Load

О**U**ТР**U**Т 1

000

Internal Circuit

Internal Circuit Normally

Oper



For other output types see the User's Guide

SENSOR INPUT

Thermocouple





Platinum 100 Ω or 1000 Ω RTD



Process Voltage or Current





Notes: • RTD:

- RTD: 20Ω maximum round trip lead resistance
- Voltage: 0 to 50 mV or 0 to 10V@ 20kΩ
- Current: 0 to 20 mA @ 100Ω



For other sensor types see the User's Guide





SET UP THE INPUT . To enter the Setup Page press and hold 🚺 and Note: Q until "5EL" appears in lower display. This takes about six

- 2. Press () to enter the Analog Input menu.
- 3. Press () to view the Sensor Type setting.
 - 4. To change the sensor type from thermocouple "LC" to another type, press 🔿 until the desired
 - 5. Press () and continue with the instructions for

Thermocouple $(\underline{k} \underline{\zeta})$:

- 6. To change the sensor type from """ to another type, press 🕥 until the desired type is displayed.
 - To exit the Analog Input menu, press 💿 twice to return to the Setup Page.

100 Ω or 1000 Ω RTD (*c* θ , *l* H or *c l*, θ H):

6. Set the number of RTD leads to 2 or 3 according to the sensor you are using. To change this press O until the desired setting is displayed.

To exit the Analog Input menu, press 💿 to return

T POINTS	10	LOOP	CONTROL MODE	E/LOOP SET POINT
	Set I	Loop Co	ntrol Mode	
Note: To get to the home page, hold ♀ until the process value and set point appear in the display. Note: Whether you can set a high alarm, a low alarm or both depends on how the Alarm Sides is set.	Star	ting at th $\overline{58}^{\circ}$	 Home Page: To view the control mode, press () until 	<i>Note:</i> To get to the home page, hold 🗪 until the process
	1 de	75	"בריח ל" appears in the lower display.	value and set point appear in the display.
	WATLOW		Use (and to change the control mode.	Note: By default the control loop $hERL$ algorithim (hRB) is enabled for PID control. The
	Adju On t	i <mark>st Loop</mark> he Home	Set Point Page:	oFF by default. To enable, go to Setup Page and then to the Loop menu
<i>Note:</i> The low set point for a deviation type alarm should be set as a negative number.	WATLOW	EZONE	Use (and to adjust the value in the lower display.	Control Modes: <u>RULo</u> automatic: loop adjusts output to make
	Hint: Hold t numb accelu before and fi overs	<i>Hint:</i> Hold the arrow key to change a number such as the set point at an accelerating rate. Release the key before reaching the desired setting and fine tune the value to avoid overshooting.		process match set point.
	POINTS Note: To get to the home page, hold and out of the process value and set point appear in the display. Note: Whether you can set a high alarm, a low alarm or both depends on how the Alarm Sides is set. Note: The low set point for a deviation type alarm should be set as a negative number.	T POINTS10Note: To get to the home page, hold of until the process value and set point appear in the display.Set I StarNote: Whether you can set a high alarm, a low alarm or both depends on how the Alarm Sides is set.Image: Image:	 T POINTS <i>Note:</i> To get to the home page, hold oo until the process value and set point appear in the display. <i>Note:</i> Whether you can set a high alarm, a low alarm or both depends on how the Alarm Sides is set. <i>Note:</i> The low set point for a deviation type alarm should be set as a negative number. <i>In the display of the display of the display of the display of the display. In the display of the display of the display. In the display of the display of the display. Interplay of the display. Interplay of the display of the display. Interplay of the display. Interplay. Int</i>	 In the process value and set point appear in the display. Mote: Mother you can set a high alarm, a low alarm or both depends on how the Alarm Sides is set. Note: The low set point for a deviation type alarm should be set as a negative number. In the wave of the the top of th

seconds and you will see

the operations page first. If

you release the arrow keys

thermocouple

millivolts

milliamp

100Ω RTD

1000Ω RTD

potentiometer

analog input off

For other sensor types

see the user manual.

volts

too soon, press 🖾 once

and then start again.

Sensor Types:

ĿΓ

 P_{10}

uobt

r 0.1H

r 1.0H

Pot

oFF

<u>ריז</u>

а R, 2. T oPEr m " ш n oPEr а 3. P RLM а

tł

g

tł

AL o

and/or

300

Rh -

relative to the control Press To select the loop's set point. alarm and press () to oFF alarm does not view the alarm type. occur. Press (to set the

Press () to enter the

alarm menu.

alarm type.

display and use 🔼

to set on which sides

of the process value

To return to the top of

the Alarm menu, press

co or press it twice

to return to the Setup

alarms occur.

page

Press () until "#5d" Alarm Sides: appears in the lower

high: alarm only when process is above high alarm set point.

dERL deviation alarm:

alarm set points are set

Loud low: alarm only when process is below low alarm set point.

both: high and low alarms are active.



RI 09

RLPA

oFF

h,9h

RSd

REY



Repeat for other alarms

SET UP OUTPUTS FOR HEAT, COOL AND ALARM Starting at the Setup Page:

- upper display.
- H, SEE
- aEPE function SEŁ
 - 5. For hEAL or Cool, press () and continue with the hardware specific options below (step 6). For an RLPP, press () and use () and () to select



oEPE

hERE

Fo

off cycle.



INT

- **1.** To view the output menu, press \bigcirc until "o L^{PL} " appears in
- 2. To enter the Output menu press ()
- 3. If the controller has more than one output, use \square and \bigcirc to select the output and press \bigcirc to view the output's
- 4. To set what the output does in the controller, use 🔼 and To select the desired function.
- which alarm drives the output.
- For other output functions or after selecting the alarm press of to return to the top of the Output menu or press it twice to return to the Setup Page.

Form A, Form C or No-Arc Relay:

6. Use 🔿 and 🜍 to set the time base, the length of an on-

Switched DC or Open Collector:

- 6. Use 🔿 to set the method the controller uses to switch the output (Output Control).
- For fixed time base use \bigcirc and \bigcirc to set the length of the
- 7. Press 💿 to return to the top of the Output menu or press it twice to return to the Setup Page.

Output Functions:

- hERE. heat control output
- Cool cool control output
- EntA event output a
- Entb event output b
- RLCO alarm
- oFF output off

Output Control:

FEb fixed time base: output switches per time base setting

utb variable time base: output switches up to 20 times per second.

Repeat for other outputs

For other output types and settings see the user manual



auto mode.