



QUICK START GUIDE

PM3 LEGACY™ EXPRESS PID CONTROLLER

For Configurations:

PM3 _ [A,C,E,F,K] [A,C,J,K] - _ AAAH _ _



For assistance contact Watlow: www.watlow.com
1-800-WATLOW2 (1-800-928-5692)
wintechsupport@watlow.com

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December 2020

1 - MOUNT TO PANEL

NOTE: Mounting requires access to the back of the panel.

1. Make the panel cutout using the measurements in figure 1.

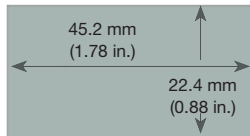


Figure 1

2. Remove the green terminal connectors and the mounting collar assembly.

3. Insert the controller into the panel cutout from the front.

4. Orient the collar base so the flat side faces front and the screw openings are on the sides (see figure 2), then slide the base over the back of the controller.

5. Slide the mounting bracket over the controller with the screws aligned to the collar base. Push the bracket gently but firmly until the hooks snap into the slots in the case.

6. Tighten the two #6-19 x 1.5 in. screws with a phillips screwdriver until the device is flush to the panel (3 to 4 in-lbs torque).

7. Reinstall the terminal connectors to their original locations. (Or first connect field wiring as indicated in this guide and then reinstall the connectors).

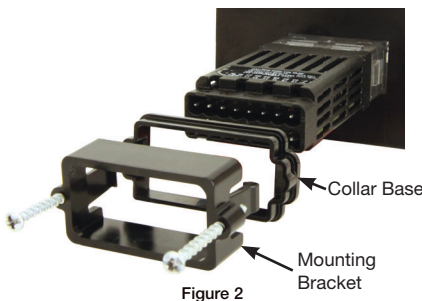


Figure 2

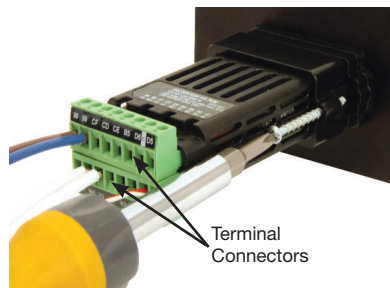


Figure 3

2 - CONNECT THE SENSOR INPUT

Connect your sensor as indicated in the diagram for your sensor input. Figure 4 is an example illustrating the connection shown for a Thermocouple.

Thermocouple



Process Voltage or Current

Voltage: 0 to 10V@ 20kΩ

Current: 4 to 20 mA @ 100Ω

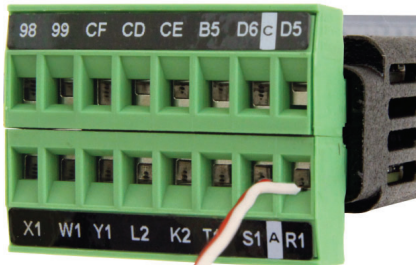
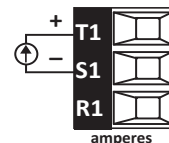
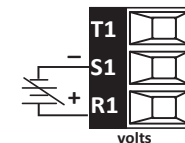
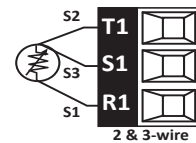


Figure 4: Thermocouple Wiring Example

Platinum 100Ω

20Ω max. round trip lead resistance



3 - WIRE OUTPUT 1

Refer to the wiring diagram for your configuration code and connect to the slots indicated.

PM3 _ [C] _ AAAH _ : Switched DC or Open Collector

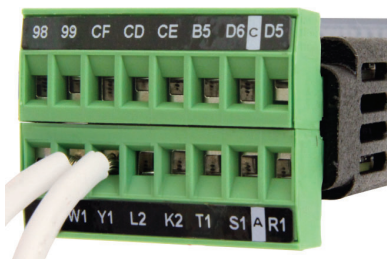
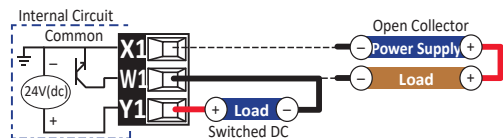
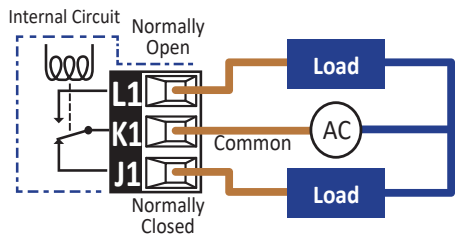
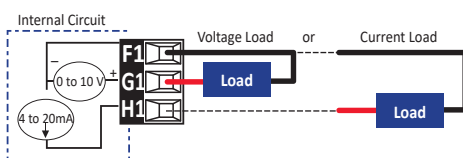


Figure 5: Switched DC Output Wiring

PM3 _ [E] _ AAAH _ :
Mechanical Relay 5A Form C Relay

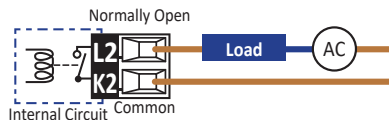


PM3 _ [F] _ AAAH _ : Universal Process

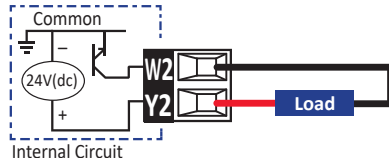


4 - WIRE OUTPUT 2

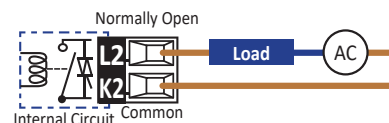
PM3 _ [J] _ AAAH _ :
Mechanical Relay 5A Form A Relay



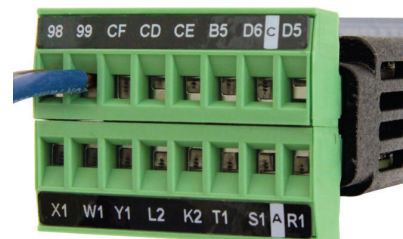
PM3 _ [C] _ AAAH _ : Switched DC



PM3 _ [K] _ AAAH _ :
Solid State Relay 0.5A, Form A



5 - CONNECT POWER



Configuration Code:
PM3 _ [1,3] _ AAAH _

1: 120-240 V (ac)
3: 24 V (ac or dc)

CAUTION
Do not connect high voltage to a controller that requires low voltage.

6 - CE DECLARATION OF CONFORMITY

CE Declaration of Conformity - Series EZ-ZONE™ PM
WATLOW Electric Manufacturing Company
1241 Bonyon Blvd., Watons, MN 55951 USA

Declares that the following product meets the essential requirements of the following European Union Directives by using the relevant standards shown below to indicate compliance:

Designation: **Series EZ-ZONE™ PM (Panel Mount)**
Model Numbers: PM 3, 6, 9 or 4 (Any Letter or number) 1, 2, 3 or 4 (A, C, E, F or K) (A, C, H, J or K) (Any three letters or numbers)
Classification: **Rated Voltage and Frequency** 100 to 240 V~ (ac 50/60 Hz) or 15 to 36 Vdc (24 V~ max 50/60 Hz 10 VA maximum PM3, PM6, PM9 Models)
Rated Power Consumption: 14 VA maximum PM3, PM6, PM9 Models

2014/53/EU Electromagnetic Compatibility Directive
Electrical equipment for measurement, control and laboratory use – EMC requirements (Industrial immunity, Class B (B1/B2)).
Electrostatic discharge immunity
Radiated, radio-frequency electromagnetic field immunity 10V/m 80-1000 MHz, 3 V/m 1.4-2.7 GHz
Electrical fast transient / burst immunity
Surge immunity
Immunity to conducted disturbances induced by radio-frequency fields

2014/35/EU Low-Voltage Directive
Limits for harmonic current emissions for equipment < 16 Amps per phase
Voltage fluctuations and flicker < 10 Amps per phase
Specification for semiconductor switching (Figure R1-1)
For mechanical relay loads, cycle time may need to be extended up to 160 seconds to meet flicker requirements depending on load inrush and source impedance

2014/53/EU Radio Equipment Directive (RED)
Part 1: General requirements
Covering the essential requirements of article 3.1(a) to Directive 2014/53/EU
Electromagnetic Compatibility (EMC) standard for radio equipment and services, Part 1: Common technical specifications, Harmonized Standard covering the essential requirements of article 3.1(b) of Directive 2014/53/EU and the essential requirements of article 6 of Directive 2014/53/EU
Specific conditions for Broadband Data Transmission Systems, Harmonized Standard covering the essential requirements of article 3.1(b) of Directive 2014/53/EU
Electromagnetic compatibility and Radio spectrum matters (ERM), Harmonized Standard covering the essential requirements of article 3.2 of the R&TTE Directive
Additional Receiver blocking test for to cover requirements for 2014/53/EU
NVA-PT Test Report 1164646-2

Contains Module FCC ID: VPI1BZV Part 15C.2
Contains Module IC: 772C-LBZY R68 210

Output Power: Frequency Range 2402.0 - 2480.0
Output Power: 0.001 Watts, Antenna gain: -2.6 dB, PCB antenna

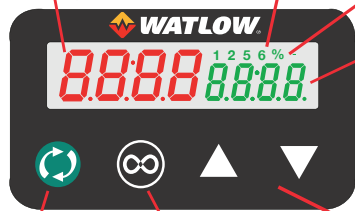
Watons, Minnesota, USA
Director of Operations
May 2018
Signature of Authorized Representative

7 - KEYPAD OVERVIEW

Left Display: Home at beginning displays process value (PV). Entering into menus displays the value or setting of parameter

Output Activity: Indicate activity of outputs 1 & 2, dio 5 & 6

Manual Power: Indicates the set point is in % manual mode



Right Display: Home at beginning displays set point (SP). Displays page name when entering pages. Entering into menus displays the parameter name

Advance Key: Advances through menu prompts.

Infinity Key: Clears or silence alarm when active else return home

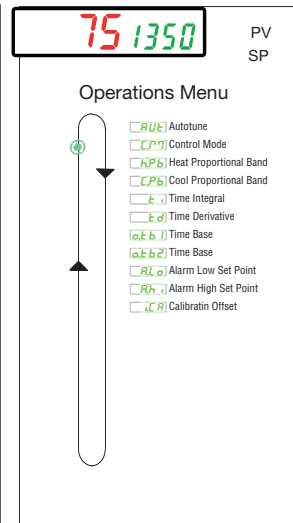
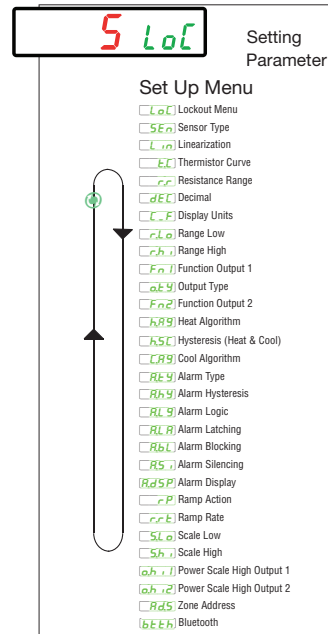
Up and Down Keys: At Home adjust the set point in right display. Changes menu inside pages. Inside menus, changes the selected setting in left display



Scan for full manual.

For assistance contact Watlow: www.watlow.com
+1-(507)-494-5656
wintechsupport@watlow.com
<https://www.watlow.com/resources-and-support/Technical-Library>

8 - INTRODUCTION TO KEYPAD AND MENU BASICS



Menu and Keypad Basics

NOTE: You must read and understand the role of each key on your controller keypad before proceeding. See Panel 7 - Keyboard Overview.

These instructions are not inclusive. This Quick Start Guide (QSG) is meant to be a quick reference guide. It will show you how to navigate to frequently used areas of your controller. As an example, settings process outputs are not documented in this QSG. Refer to the User Manual for more detailed instructions. NOTE: These diagrams might vary depending on the Controller programming.

Introduction to the Set Up & Operating Menus

Upon power up, the display will default

to the home page in the Operations Menu. The red row displays

the process value (PV). The

rgreen ow displays the set point (SP).

Operations Menu

To enter the Operations Menu, press [] to return to Home

Page. Press the green advance key [] to scroll through

the various prompts found in the Operations Menu. Press

the Infinity key [] at any point within the Operations Menu to

return to the Home Page. Use Arrow Keys [] to increment or

decrement settings or change selection.

Set Up Menu

To enter the Setup Menu press [] to return to Home Page. Press both Arrow Keys

[] for 6 seconds. Press green Advance Key [] to scroll through to the

prompt of choice. Use Arrow Keys [] to increment or decrement settings or

change selection.

9 - SET UP THE INPUT

[] Start from Home.

5 LoC

Press [] + [] for 6 seconds to enter Setup Menu. It must be level 5 to make changes.

tC SE n

[] If Thermocouple, select (tC).

J L i n

[] Select Thermocouple type (J, K is letter H or T is letter t).

5 LoC

[] Return Home.

5 LoC

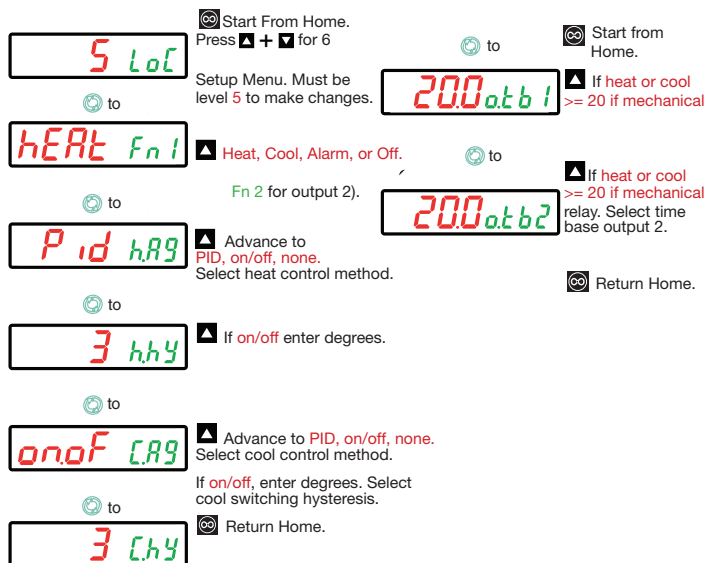
Press [] + [] for 6 seconds to enter Setup Menu. Must be level 5 to make changes.

r 0.14 SE n

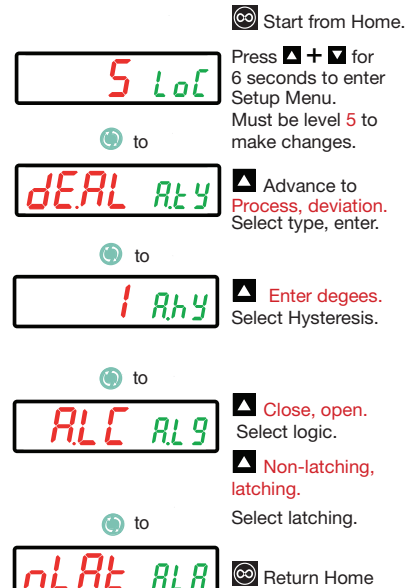
[] If rtd 100 ohm, select rtd.

[] Return Home.

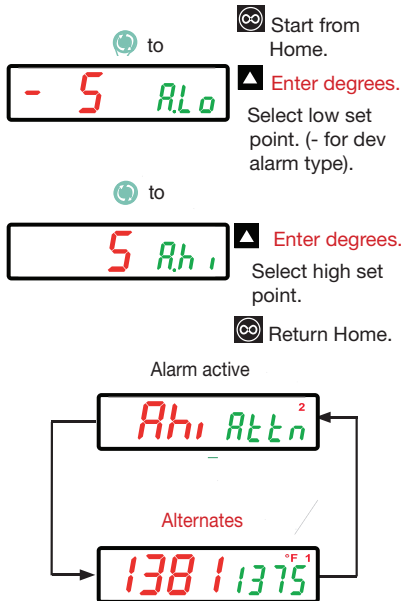
10 - SET UP OUTPUTS FOR HEAT, COOL, ALARM



11 - SET UP AN ALARM

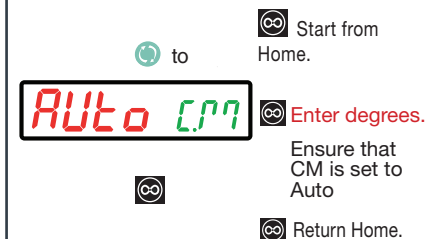


12 - SET ALARM SET POINTS



13 - LOOP CONTROL MODE/LOOP SET POINT

Set Loop Control Mode



Adjust Loop Set Point



14 - AUTOTUNE THE CONTROL LOOP

