

EZ-ZONE[®] PM Panel Mount Controller

EZ-ZONE[®] PM Controllers Take the Pain Out of Meeting Your Thermal Loop Requirements

The EZ-ZONE[®] PM panel mount controller from Watlow[®] offers control options to reduce system complexity and the cost of thermal loop ownership. It can be ordered as a PID controller, an over/under limit controller or its functions can be combined into an integrated controller. An option to integrate a high amperage power controller output with a high-performance PID controller and an over/under limit controller in one space-saving, panel mount package is also available. Many communication options are offered to support connectivity needs.

Because the EZ-ZONE PM controller is highly scalable, you pay only for what is needed. This controller is available in $^{1}/_{32}$, $^{1}/_{16}$, $^{1}/_{8}$ and $^{1}/_{4}$ DIN panel mount packages. The EZ-ZONE PM controller is easy to use and is ideal for PID, over/under limit or integrated controller needs.

Features and Benefits

Integrated PID and limit controller

- Reduces wiring time and termination complexity compared with connecting discrete products
- Decreases required panel space
- Lowers installation costs
- Increases user and equipment safety for over/under temperature conditions

High amperage power control output

- Drives 15 ampere resistive loads directly
- Reduces component count
- Decreases cost of ownership

Current monitoring

- Detects heater current flow and provides alarm indication of a failed output device or heater load
- Drives output on open or shorted heater

Serial communication capabilities

- Provides a wide range of protocol choices including Modbus® RTU, EtherNet/IP™, Modbus® TCP, PROFIBUS DP, DeviceNet™ and J1939 CAN bus
- Supports network connectivity to a PC or PLC

Dual-channel controller

• Provides two PID controllers in one space-saving package Enhanced control options

• Easily handles complex process problems such as cascade, ratio, differential, square-root, motorized valve control without slidewire feedback, wet-bulb/dry-bulb, compressor control and peltier loads

Countdown timer option

- Provides batch process control
- Supports set point change during countdown

10-point linearization curve

Improves sensor accuracy



EZ-LINK[™] mobile application for iPhone[®] and Android[™]

- Expedites controller setup with intuitive navigation
 Simplifies setting parameters with plain text names
- and descriptions
- Connects quickly and easily via Bluetooth[®] wireless communications

Configuration communications with software

- Includes Watlow standard bus communications used by COMPOSER® or EZ-ZONE configurator software
- Saves time and improves reliability of controller setup
- Advanced PID control algorithm
- Offers TRU-TUNE[®] + adaptive control to provide tighter control for demanding applications
- Provides auto-tune for fast, efficient start-up
- Built-in sensor compensation curves
- Saves cost of buying compensated sensors
- Includes Vaisala RH and altitude (pressure) curves

Remote set point operation

• Supports convenient set point manipulation from a remote device such as a master control or PLC

Profile capability

- Offers pre-programmed process control
- Allows ramp/soak programming with 40 total steps, battery backup and real time clock

Retransmit output

Supports industry needs for recording

Factory Mutual (FM) approved over/under limit with auxiliary outputs

Increases user and equipment safety for over/under temperature conditions

Memory for saving and restoring parameter settings Decreases service calls and time down

Agency approvals: UL[®] listed, CSA, CE, RoHS, W.E.E.E., FM, SEMI F47-0200, Class 1, Div. 2 rating on selected models

- Assures prompt product acceptance
- Reduces end product documentation costs
- Touch-safe package
- Increases safety for installer/operator
- Complies with IP2X requirements
- EZ-KEY
- Enables simple, one-touch operation of user-defined, repetitive activities

Programmable menu system

- Reduces setup time and increases operator efficiency Three-year warranty
- Provides product support and reliability







Specifications

Controller

- User-selectable heat/cool, on-off, P, PI, PD, PID or alarm action, not valid for limit controllers
- Auto-tune with TRU-TUNE+ adaptive control algorithm
- Control sampling rates: input = 10Hz, outputs = 10Hz
- Profile Ramp/Soak Real Time Clock and Battery Backup
- 4 profiles, 40 total steps
- Accuracy (typical): ±30 PPM at 77°F (25°C)
 +30/-100 PPM at -4 to 49°F (-20 to 65°C)
- Battery type/typical life: lithium, three cumulative years unpowered at 77°F (25°C)

Isolated Serial Communications

- EIA 232/485, Modbus[®] RTU
- EtherNet/IP™/Modbus[®] TCP
- DeviceNet[™]
- PROFIBUS DP
- SAE J1939 CAN bus

Wiring Termination—Touch-Safe Terminals

 Input, power and controller output terminals are touch safe, removable, 12 to 22 AWG

Universal Input

- Thermocouple, grounded or ungrounded sensors greater than $20M\Omega$ input impedance, 3μ A open sensor detection, $2k\Omega$ source resistance max.
- RTD 2- or 3-wire, platinum, 100 Ω and 1000 Ω @ 32°F (0°C) calibration to DIN curve (0.00385 $\Omega/\Omega/^{\circ}C)$
- Process, 0-20mA @ 100 Ω , or 0-10VDC @ 20k Ω , 0-50mV at 20M Ω , 0-1000 Ω potentionmeter; scalable; inverse scaling

Functional Operating Range

- Type J: -346 to 2192°F (-210 to 1200°C)
- Type K: -454 to 2500°F (-270 to 1371°C)
- Type T: -454 to 750°F (-270 to 400°C)
- Type E: -454 to 1832°F (-270 to 1000°C)
- Type N: -454 to 2372°F (-270 to 1300°C)
- Type C: 32 to 4200°F (0 to 2315°C)
- Type D: 32 to 4200°F (0 to 2315°C)
- Type F: 32 to 2449°F (0 to 1343°C) Type R: -58 to 3214°F (-50 to 1767°C)
- Type S: -58 to 3214° F (-50 to 1767° C)
- Type B: $32 \text{ to } 3300^{\circ}\text{F}$ (0 to 1816°C)
- RTD (DIN): -328 to 1472°F (-200 to 800°C)
- Process: -1999 to 9999 units

Accuracy

- Calibration accuracy and sensor conformity: ±0.1% of span, ±1°C @ the calibrated ambient temperature and rated line voltage
- Types R, S, B; 0.2%
- Type T below -50°C; 0.2%
- Calibration ambient temperature @ 77°F ±5°F (25°C ±3°C)
- Accuracy span: 1000°F (540°C) min.
- Temperature stability: $\pm 0.1^{\circ}$ F/°F ($\pm 0.1^{\circ}$ C/°C) rise in ambient max.
- Thermistor Input
- 0 to $40k\Omega$, 0 to $20k\Omega$, 0 to $10k\Omega$, 0 to $5k\Omega$
- 2.252k Ω and 10k Ω base at 77°F (25°C)
- Linearization curves built-in

Current Transformer Input

- Accepts 0-50mA signal (user-programmable range)
- Displayed operating range and resolution can be scaled and are user-programmable

Digital Inputs (DC Voltage)

- Max. input: 36V at 3mA
- Logic: min. high state 3V at 0.25mA, max. low state 2V
- Digital Inputs (Dry Contact)
- Logic: min. open resistance $10k\Omega,$ max. closed resistance 50Ω
- Max. short circuit: 20mA

2 Digital I/O (ordered with power supply option)

- Update rate: 10Hz
- Input type: user-selectable, dc voltage or dry contact
- Output type: switched dc
- Output voltage: 24V
- Output 5: 24mA max. or drive one 3-pole DIN-A-MITE[®]
- Output 6: 10mA max.
- 6 Digital I/O (ordered with communications option)
- Update rate: 10Hz
- Input type: user-selectable, dc voltage or dry contact
- Output type: user-selectable, switched dc or open collector
 Switched dc output voltage: 12 to 24VDC, depending on
- Switched dc output voltage: 12 to 24VDC, depending on current draw
- Switched dc max. supplied current: 40mA at 20VDC and 80mA at 12VDC
- Switched dc max. low state: 2V
- Open collector max. switched voltage: 32VDC
- Open collector max. switched current: 1.5A per output; 8A total for all 6 outputs

Output Hardware

- Switched dc: 22 to 32VDC @ 30mA max. per single output and 40mA max. total per paired outputs (1 & 2, 3 & 4)
- Open collector: 30VDC max. @ 100mA max.
- SSR, Form A, 24 to 240VAC, 1A at 50°F (10°C) to 0.5A at 149°F (65°C) resistive load, 264VAC max., opto-isolated, without contact suppression, 120/240VAC @ 20VA pilot duty
- Electromechanical relay, Form A, 24 to 240VAC or 30VDC max., 5A resistive load, 100,000 cycles at rated load, 120/240 @ 125VA or 24VAC @ 25VA pilot duty
- Electromechanical relay, Form C, 24 to 240VAC or 30VDC max., 5A resistive load, 100,000 cycles at rated load, 120/240 @ 125VA or 24VAC @ 25VA pilot duty
- NO-ARC relay, Form A, 85 to 264VAC, 15A @ 122°F (50°C), resistive load, no VDC, 2,000,000 cycles at rated load
- Universal process output: range selectable; 0 to $10VDC \pm 15mV$ into a min. $1,000\Omega$ load with 2.5mV nominal resolution; 0 to $20mA \pm 30\mu$ A into max. 800Ω load with 5μ A nominal resolution; temperature stability $100ppm/^{\circ}C$

Operator Interface

- Dual 4-digit, 7-segment LED displays
- Advance, infinity, up and down keys, plus a maximum of 2 programmable EZ-KEY(s) depending on model size
- Typical display update rate: 1Hz
- RESET key substituted for infinity on all models with limit controller

Line Voltage/Power

- High voltage option: 85 to 264VAC, 47 to 63Hz
- Low voltage option: 20 to 28VAC, +10/-15%; 50/60Hz, $\pm 5\%$ or 12 to 40VDC
- Max. power consumption: 10VA (1/32 and 1/16 DIN); 14VA (1/8 and 1/4 DIN)
- Data retention upon power failure via nonvolatile memory
- Compliant with SEMI F47-0200, Figure R1-1 voltage sag requirements @ 24VAC or higher

Environment

- Operating temperature: 0 to 149°F (-18 to 65°C)
- Storage temperature: -40 to 185°F (-40 to 85°C)
- Relative humidity: 0 to 90% RH, non-condensing

Agency Approvals

cULus[®] UL[®]/EN/CSA C22.2 No 61010-1 Listed, File E185611

EtherNet/IP[™] and DeviceNet[™] ODVA Conformance Tested

- CSA C22.2 No. 24, File 158031 (1/32 and 1/16 DIN sizes)
- UL® 50 4X indoor locations, NEMA 4X, UL® 50E, Type 4X front seal
- cULus[®] ANSI/ISA 12.12.01-2012, CSA-C22.2 No. 213-1987, Class 1, Div. 2, Groups A, B, C and D, Temperature Code T4A, File E184390 (optional)
- FM Class 3545 (limit controls)
 CE, RoHS by design, W.E.E.E.



Comparison of Available Features

	¹ ⁄₃₂ DIN	¼₀ DIN	¹ ⁄8 DIN	¼ DIN
PID Loops	1	1	1 to 2	1 to 2
Profile Ramp/Soak	40 total steps	40 total steps	40 total steps	40 total steps
Profile Battery Backup and Real Time Clock	None	None	Yes	Yes
Number of Digital Inputs/Outputs	0 to 2	0 to 2	0 to 8	0 to 8
Number of Outputs	1 to 4	1 to 6	1 to 12	1 to 12
Integrated Safety Limits	Limit must be ordered as separate device	1	1	1
Maximum Power Output	5A mechanical relay	15A NO-ARC	15A NO-ARC	15A NO-ARC
Current Measurement	None	Accepts 0-50mA sigr	al from external curre	ent transformer
Standard Bus Communications	Yes	Yes	Yes	Yes
Bluetooth [®] Technology (PM6 Only)	No	Yes	No	No
Field Bus Communications	Modbus® RTU 485		U 232/485, EtherNet/IP™, Modbus® TCP, t™, PROFIBUS DP, SAE J1939 CAN bus	
10-Point Calibration Offset	Yes	Yes	Yes	Yes
Ratio, Differential and Square-Root	None	Yes	Yes	Yes
Sensor Compensation Curves - Altitude (Pressure) and Vaisala RH	None	Yes	Yes	Yes
Motorized Valve Control (without Feedback)	None	Yes	Yes	Yes
Wet Bulb/Dry Bulb	None	Yes	Yes	Yes
Cascade	None	None	Yes	Yes
Countdown Timer	Yes	Yes	Yes	Yes

Compatible Accessories

More information is available on these products at www.watlow.com



Watlow's new EZ-LINK app allows users to easily setup, monitor and adjust Watlow EZ-ZONE PM controllers via Bluetooth®. The app is available free-of-charge from the app store for phones and tablets, and provides access to the controller's parameters with fully spelled out names in plain text with help topics that explain each parameter and option. EZ-LINK mobile application connects quickly and easily via Bluetooth® wireless communications. Download the at

EZ-Link App 💜 for iPhone[®].





SpecView is designed for industrial users with features such as data logging, trending and support for bar code readers and touch screens. Errors are reduced, for any process, by creating application-specific screens. The software provides a

historical replay option, easy-to-use recipe features and remote access options, including LAN, Internet and modem.



COMPOSER with INTUITION® is Watlow's new, easy-to-use software for configuring and customizing controllers. Use it to optimize Watlow's F4T and EZ-ZONE PM and RM controllers for specific applications. Task-specific views simplify all

aspects of commissioning new controllers including managing the inputs and outputs from pluggable flex modules, setting up functions such as control loops and alarms and creating and editing profiles. COMPOSER software is included on the "Watlow Support Tools" DVD and available for download at www.watlow.com.

Silver Series EM touch screen operator interface terminals provide a customizable user interface, email event notifications and log and graph data for Watlow controllers and other devices. A Silver Series EM operator interface terminal paired with Watlow



controllers is the perfect solution for your industrial process or machine control application.



Dimensional Drawings

EZ-ZONE PM 1/32 DIN

EZ-ZONE PM 1/16 DIN





EZ-ZONE PM 1/8 DIN - Horizontal



EZ-ZONE PM 1/8 DIN - Vertical





EZ-ZONE PM 1/4 DIN





PID Model Ordering Information Universal Sensor Input, Standard Bus Communications, TRU-TUNE+ Adaptive Tune, Red and Green Seven-Segment Displays Part Number

1 2 PM	3 Package Size	④ Primary Functions	ق Power Supply, Digital I/O	ⓒ ⑦ Output 1 and 2 Hardware Options	8 Comm. Options	(9) (1) Future Options AAA	lso Ir	12 plated nput ption	3 4 Custom Options
3	·	·	Package	Size			67		Ou
$3 = \frac{1}{32}$	DIN						PM3:	CH, EF	l and KH a
$6 = \frac{1}{16}$	DIN						type		
8 = ¹ / ₈ [DIN vertica	ıl							Outp
9 = ¹ / ₈ [DIN horizo	ntal					CA =	Switc	hed dc/op
$4 = \frac{1}{4}$	DIN						CH =	Switc	hed dc/op
(4)		P	rimary Fu	actions			CC =	Switc	hed dc/op
	BandEa			¹ / ₃₂ DIN (PM3)	or 1/16 DIN	J	CJ = Switched dc/o		
(PM6) n		ic not ava		/32 0114 (11413)		•	CK =	Switc	hed dc/op
C = PID	controller	with unive	ersal input						anical relay
				and profiling ra	amp/soak				anical relay
B = PID	controller	with unive	ersal input	and profiling ra					anical relay
bat	tery back-	up with rea	al time cloc	k					anical relay
T = PID	controller	with unive	ersal input	and countdow	n timer				anical relay
			nistor inpu					-	rsal proces
				t and profiling					rsal proces
				t and profiling	ramp/soa	k j	FJ =		rsal proces
			h real time	CIOCK					rsal proces
S = Cus	tom firmw							None	
5			, Digital Ir	nputs/Outputs	s (I/O)			-	orm A, 0.5/
	to 240VA						KK =	SSR F	orm A, 0.5/
2 = 100	to 240VA	C plus 2 di	gital I/O po	oints			8		
3 = 20 1	to 28VAC o	or 12 to 40	VDC				Stand	dard bu	us always i
4 = 20 1	to 28VAC o	or 12 to 40	VDC, plus 2	digital I/O poi	nts		A = N		
							D _ D	luctor	+b® (1/ DI

utput 1 and 2 Hardware Options are not valid options for 1/32 DIN package

	Output 1	Output 2
CA =	Switched dc/open collector	None
CH =	Switched dc/open collector	NO-ARC 15A power control
CC =	Switched dc/open collector	Switched dc
CJ =	Switched dc/open collector	Mechanical relay 5A, Form A
CK =	Switched dc/open collector	SSR Form A, 0.5A
EA =	Mechanical relay 5A, Form C	None
EH =	Mechanical relay 5A, Form C	NO-ARC 15A power control
EC =	Mechanical relay 5A, Form C	Switched dc
EJ =	Mechanical relay 5A, Form C	Mechanical relay 5A, Form A
EK =	Mechanical relay 5A, Form C	SSR Form A, 0.5A
FA =	Universal process	None
FC =	Universal process	Switched dc
FJ =	Universal process	Mechanical relay 5A, Form A
FK =	Universal process	SSR Form A, 0.5A
AK =	None	SSR Form A, 0.5A
KH =	SSR Form A, 0.5A	NO-ARC 15A power control
KK =	SSR Form A, 0.5A	SSR Form A, 0.5A
8	Communica	tion Options

8	Communication Options
Standard	bus always included
A = None	2
B = Bluet	ooth® (1/16 DIN models only)*
E = EIA 4	85 Modbus® RTU & Bluetooth® (1/16 DIN models only)*
1 = EIA 4	85 Modbus® RTU
*Note: Bl	uetooth [®] not available in all countries, contact factory.
12	Isolated Input Option
A = None	
D = Isolat	ed input 1
13 14	Custom Options
	Custom Options , overlays, parameter settings
Firmware	
Firmware	, overlays, parameter settings
$\begin{array}{c} \text{Firmware} \\ \text{AA} = \\ \text{Sta} \\ \text{AB} = \\ \text{EZ-} \end{array}$, overlays, parameter settings ndard EZ-ZONE PM face plate
Firmware AA = Sta AB = EZ-AC = No	, overlays, parameter settings ndard EZ-ZONE PM face plate ZONE logo and no Watlow name



Limit Model Ordering Information Universal Sensor Input, Standard Bus Communications, Red and Green Seven-Segment Displays Davt Numb

> Mechanical relay 5A, Form A

Part Number						
1 2 3 4 5 Powe	6 7 8 Pr Output 1 and	9 10 11	12 Isolated	(B) (B)		
Package Primary Suppl Size Functions Digital	y, 2 Hardware Comm.	Future Options	Input Option	Custom Options		
PM	-	AAA				
3 Packa	ige Size		8	Communication Options		
$3 = \frac{1}{32}$ DIN			Standard bu	us always included		
$6 = \frac{1}{16} DIN$			A = None			
$8 = \frac{1}{8}$ DIN vertical			B = Bluetoc	oth® (1/16 DIN models only)*		
9 = ¹ / ₈ DIN horizontal			E = EIA 485	Modbus® RTU & Bluetooth® (1/16 DIN models only)*		
$4 = \frac{1}{4} DIN$			1 = EIA 485	Modbus® RTU		
Primary	Functions		*Note: Blue	tooth [®] not available in all countries, contact factory.		
L = Limit controller with universal i			12	Isolated Input Option		
M = Limit controller with thermistor	input		A = None			
D = Custom firmware			D = Isolatec	l input 1		
5 Power Supply, Digita	al Inputs/Outputs (I/O)		13 14	Custom Options		
1 = 100 to 240VAC			Firmware, o	verlays, parameter settings		
2 = 100 to 240VAC plus 2 digital I/C) points		AA = Stand	lard EZ-ZONE PM face plate		
3 = 20 to 28VAC or 12 to 40VDC		AB = EZ-ZONE logo and no Watlow name				
4 = 20 to 28VAC or 12 to 40VDC, pl	us 2 digital I/O points		AC = No lo	go and no Watlow name		
6 7 Output 1 and 2	Hardware Options		AG = Confo	ormal coating		
Output 1	Output 2					
AJ = None	Mechanical relay 5A, Form A	4				
CJ = Switched dc/open collector	Mechanical relay 5A, Form A	4				

Typical Block Diagram

EJ = Mechanical relay 5A, Form C





Integrated PID Controller Model Ordering Information Universal Sensor Input, Standard Bus Communications, TRUE-TUNE+ Adaptive Tune, Red and Green Seven-Segment Displays Part Number

 (1) 2) (2) (3) (4) (4) (4) (4) (4) (4) (4) (4) (4) (4	Part Nun	nber											
Process Process Synthed Display Display <t< th=""><th>12</th><th>3</th><th>(4)</th><th>5</th><th>67</th><th>8</th><th>9</th><th>10 11</th><th>12</th><th>13 14</th><th></th><th></th></t<>	12	3	(4)	5	67	8	9	10 11	12	13 14			
Produce Print of patient Prin of patient Print of patient		Ŭ	Ŭ	Power	Output 1 and	Comm.	Auxiliarv	Output 3 and					
Size Function Digital ID Function Options Options Options Options 0 // DN Package Size -		Package	Primarv			Options or Add'l			Additional	Custom			
PM Auxiliary Control Functions 3 Y. DIN vertical Auxiliary Control Functions 4 V. DIN vertical Auxiliary Control Functions 5 Y. DIN horizontal Auxiliary Control Functions 4 V. DIN horizontal Auxiliary Control Functions 6 Price Antional With universal input - not available on the control of the cont						Digital I/O		Options	Options	Options			
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 Models V. DIN horizontal V. DIN Primary Functions V. DIN models V. DIN models PD controller with universal input. PD controller with universal input. PD controller with universal input. PD controller with universal input and profiling ramp/soak and battery back-up with real time clock. PD controller with universal input and profiling ramp/soak and battery back-up with real time clock. PD controller with thermistor input and profiling ramp/soak and battery back-up with real time clock. Custom firmware. PD controller with thermistor input and profiling ramp/soak and battery back-up with real time clock. Custom firmware. PD controller with thermistor input and profiling ramp/soak and battery back-up with real time clock. Custom firmware. PD controller with thermistor input and profiling ramp/soak and battery back-up with real time clock. Custom firmware. PD controller with thermistor input and profiling ramp/soak and battery back-up with real time clock. Custom firmware. Output 2 and 2 Hardware Options. Output 2 and 2 Hardware Options. Output 3 and 4 Hardware Options. Output 4 and 2 Hardware Options. Output 3 and 4 Hardware Options. Output 4 and 2 Hardware Options. Mechanical relay 5A. Form A. OSA. Mechani			1							alimmut mat			
Image: System Output 30 Primary Functions 31 Primary Functions 32 Primary Functions 33 Primary Functions 34 Primary Functions 35 Primary Functions 36 Primary Functions 37 Primary Functions 38 Primary Functions 39 Primary Functions 30 Primary Functions 31 Primary Functions 31 Primary Functions 32 Primary Functions 33 Primary Functions 34 Primary Functions 35 Primary Functions 36 Powers Supply, Digital Inputs/Outputs (I/O) 37 Output 3 36 Powers Supply, Digital Inputs/Outputs (I/O) 37 Output 4 38 Output 4 39 Output 4 30 Output 4 30 Output 4 30 Output 4 30 Output 4									with univers	ai input - not	available on 1/16 L	DIN	
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O Prinacy Functions C PDI controller with universal input and profiling ramp/soak. PID controller with universal input and profiling ramp/soak. Ausiliary 2nd input (Internstor Input) PID controller with universal input and profiling ramp/soak. Terret transformer input) PID controller with universal input and profiling ramp/soak. Terret transformer input) PID controller with universal input and profiling ramp/soak. Terret transformer input) PID controller with universal input and profiling ramp/soak. Terret transformer input) PID controller with universal input and profiling ramp/soak. Terret transformer input) PID controller with universal input and profiling ramp/soak. Terret transformer input) PID controller with universal input and profiling ramp/soak. Terret transformer input) PID controller with universal input and profiling ramp/soak. Terret transformer input) PID controller with universal input and profiling ramp/soak. Terret transformer input) PID controller with universal input and profiling ramp/soak. Terret transformer input) PID controller with universal proces Terret transformer input) Profiling transformal transformer input) Terret transformer input) Profiling tramap/soak. Terre	$4 = \frac{1}{4}$	DIN							with thermis	stor input - no	ot available on		
Options B and E are not available with //s DIN (PM6) models C PID controller with universal input and profiling ramp/soak PID controller with universal input and profiling ramp/soak PID controller with universal input and profiling ramp/soak PID controller with thermistor input and profiling ramp/soak PID controller with thermistor input and profiling ramp/soak PID controller with thermistor input and profiling ramp/soak and battery back-up with real time clock Custom firmware Souther back-up with real time clock Custom firmware Souther back-up with thermistor input and profiling ramp/soak and battery back-up with thermistor input and profiling ramp/soak Constructed with thermistor input and profiling ramp/soak and battery back-up with thermistor input and profiling ramp/soak Constructed with thermistor input and profiling ramp/soak and battery back-up with thermistor input and profiling ramp/soak Constructed back and battery back-up with real time clock Souther dock and the real time clock Souther dock and the real time clock Souther dock and battery back-up with thermistor input and profiling ramp/soak and battery back-up with weat the real time clock Souther dock and there back and battery back-up with thermistor input and profiling ramp/soak and battery back-up with thermistor input and profiling ramp/soak and battery back-up with thermistor input a	(4)		Ρ	rimarv F	unctions		7.1-			• • • •			
 C PID controller with universal input and profiling ramp/soak PID controller with universal input and profiling ramp/soak and battery back-up with real time clock. PID controller with universal input and profiling ramp/soak and battery back-up with real time clock. PID controller with thermistor input and profiling ramp/soak and battery back-up with real time clock. PID controller with thermistor input and profiling ramp/soak and battery back-up with real time clock. Custom finware. Custom finware. Custom finware. Custom finware. O to 220/MC put 2 digital I/O points. Output 1 Output 2 Add Volce, plus 2 digital I/O points. O to 220/MC put 2 digital I/O points. O witched d c/open collector. None A.SA Form A. 0.5A. Mcchanical relay 5A, Form C. Mcchanical relay 5A, Fo		B and E a				models							
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battery back-up with real time clock • • PID controller with theressil input and countdown timer • PID controller with thermistor input and profiling ramp/soak and battery back-up with treat time clock • PID controller with thermistor input and profiling ramp/soak and battery back-up with treat time clock • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • </td <td></td> <td>controller</td> <td>with unive</td> <td>ersal inpu</td> <td>t and profiling r</td> <td>amp/soak and</td> <td>sele</td> <td>ections = FA, Fe</td> <td>C, FJ and FK</td> <td>)</td> <td></td> <td></td>		controller	with unive	ersal inpu	t and profiling r	amp/soak and	sele	ections = FA, Fe	C, FJ and FK)			
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N= PID controller with thermistor input and profiling ramp/soak and battery back-up with real time clock PID controller with thermistor input and profiling ramp/soak and battery back-up with real time clock S Custom firmware Custom firmware Power Supply, Digital Inputs/Outputs (I/O) 1= 100 to 240VAC 1= 100 to 240VAC 1= 100 to 240VAC 20 to 28VAC or 12 to 40VDC, dus 2 digital I/O points 3= 20 to 28VAC or 12 to 40VDC, dus 2 digital I/O points 40 Output 1 and 2 Hardware Options Cols Switched dc/open collector None Cols Switched dc/open collector None Cols Switched dc/open collector None Cols Switched dc/open collector Switched dc/open collector Switched dc/open collector Cols Switched dc/open collector Switched dc/open collector Switched dc/open collector Cols Switched dc/open collector Switched dc/open collector Switched dc/open collector Cols Switched dc/open collector Switched dc/open collector Switched dc/open collector Cols Switched dc/open collector Switched dc/open collector Switched							M = Inte	grated limit co	ontroller wit	th thermistor	input (only valid		
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and battery back-up with real time clock G Custom firmware S Custom firmware B Custom firmware B Custom firmware Custom firmware Custom firmware B Custom firmware D To to 240VAC D To to 240V							¹ /16 DIN I	Models: If com	munication	options F, G,	H, J, K or 2 thru 7	is	
Custom firmware Output Devices Supply, Digital Inputs/Outputs (I/O) Output 3 Output 3 Addital inputs/Output 3 Output 3 Output 3 Addital inputs/Output 4 Output 3 Output 3 Output 4 Output 1 Output 3 Output 4 Output 1 Output 3 Output 4 Output 1 Output 1 Output 4 Output 1 Output 2 Output 3 Output 4 Ame None Mechanical relay 5A, Form C None Output 1 Output 2 Output 2 Output 3 Output 4 Output 1 Output 2 Output 3 Output 4 Ame Output 1 Output 2 Output 3 Output 4 Ame Output 3 Output 4 Output 3 Output 3 Output 4 Output 4 Output 3 Output 3 Output 3 Output 3 Output 3 Output 3 Output 3 Output 3 <t< td=""><td></td><td></td><td></td><td></td><td></td><td>ramp/soak</td><td>ordered</td><td>in previous dig</td><td>git, then Op</td><td>tion A must k</td><td>be ordered here.</td><td></td></t<>						ramp/soak	ordered	in previous dig	git, then Op	tion A must k	be ordered here.		
Secusion infimware S				n real tim	e CIOCK		All Mode	els: Auxiliary in	put suppor	ts remote set	point, backup		
Bit Devers Supply, Digital Inputs/Outputs (I/O) Output 3 and 4 Hardware Options 100 to 240VAC Output 4 Output 3 Output 4 20 to 28VAC or 12 to 40VDC Marchanical relay 5A, Form A, 0.5A None Marchanical relay 5A, Form A, 0.5A 60/0 Output 1 Output 2 Switched dc/open collector None SR Form A, 0.5A CA: Switched dc/open collector None SR Form A, 0.5A SR Form A, 0.5A CC: Switched dc/open collector None ARC 15A power control Switched dc/open collector Switched dc/open collector CX: Switched dc/open collector Mochanical relay 5A, Form C None Cite Switched dc/open collector None ARC 15A power control CX: Switched dc/open collector SR Form A, 0.5A Cite Amechanical relay 5A, Form C None C C4: Switched dc/open collector SR Form A, 0.5A None C Cite Amechanical relay 5A, Form C None C C5: Mechanical relay 5A, Form C SR Form A, 0.5A None C None C C4: Switched dc SR Form A, 0.5A None C None C C4: Univ	S = Cust	tom firmw	lare				sensor ra	atio, differentia	and wet-b	ulb/dry-bulb	input.		
Image: The Top to 240%AC Output 2 state 4 Markedware Options Image: Top to 240%AC prize 2 digital I/O points Output 3 Output 4 Image: Top to 280%AC or 12 to 40VDC None Mone Image: Top t	5	Pow	er Supply	, Digital	Inputs/Output	s (I/O)							
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Image: String				gital I/O r	oints				ut 3		Output 4		
4 = 20 to 28VAC or 12 to 40VDC, plus 2 digital I/O points Alg None Mechanical relay SA, Form A, 0.5A 6/20 Output 1 and 2 Hardware Options Alg None SS F form A, 0.5A 6/20 Output 1 and 2 Hardware Options Alg None SS F form A, 0.5A CA = Switched dc/open collector None Switched dc/open collector Switched dc/open collector Switched dc/open collector Switched dc/open collector SS F form A, 0.5A CA = Switched dc/open collector Switched dc/open collector SS F form A, 0.5A CH Switched dc/open collector SS F form A, 0.5A CA = Switched dc/open collector SS F form A, 0.5A CH Switched dc/open collector SS F form A, 0.5A CA = Switched dc/open collector Switched dc/open collector SS F form A, 0.5A CH Switched dc/open collector None EH = Mechanical relay SA, Form C None SS F Form A, 0.5A CH EH Mechanical relay SA, Form C None FC = Universal process None SS F Form A, 0.5A KK = SS Form A, 0.5A SS F Form A, 0.5A					Jointo		AA = Nc	one					
Image: Stream A, 0.5A Stream A, 0.5A Stream A, 0.5A Image: Stream A, 0.5A Stream A, 0.5A Stream A, 0.5A Image: Stream A, 0.5A Stream A, 0.5A Stream A, 0.5A Image: Stream A, 0.5A Stream A, 0.5A Stream A, 0.5A Image: Stream A, 0.5A Stream A, 0.5A Stream A, 0.5A Image: Stream A, 0.5A Stream A, 0.5A Stream A, 0.5A Image: Stream A, 0.5A Stream A, 0.5A Stream A, 0.5A Image: Stream A, 0.5A Stream A, 0.5A Stream A, 0.5A Image: Stream A, 0.5A Stream A, 0.5A Stream A, 0.5A Image: Stream A, 0.5A Stream A, 0.5A Stream A, 0.5A Image: Stream A, 0.5A Stream A, 0.5A Stream A, 0.5A Image: Stream A, 0.5A Stream A, 0.5A Stream A, 0.5A Image: Stream A, 0.5A Stream A, 0.5A Stream A, 0.5A Image: Stream A, 0.5A Stream A, 0.5A Stream A, 0.5A Image: Stream A, 0.5A Stream A, 0.5A Stream A, 0.5A Image: Stream A, 0.5A Stream A, 0.5A Stream A, 0.5A Stream A, 0.5A Image: Stream A, 0.5A Stream A, 0.5A Stream A, 0.5A Stream A, 0.5A S					2 digital 1/0 poi	ntc	AJ = Nc	one		Mechanic	al relay 5A, Form	Α	
Output 1 Output 2 CA = Switched dc/open collector None CH = Switched dc/open collector NO-ARC 15A power control CS = Switched dc/open collector Switched dc/open collector CA = Switched dc/open collector Switched dc/open collector CS = Switched dc/open collector Switched dc/open collector CS = Switched dc/open collector SSR Form A, 0.5A EA = Mechanical relay 5A, Form C None EA = Mechanical relay 5A, Form C Switched dc EA = Mechanical relay 5A, Form C Switched dc EA = Mechanical relay 5A, Form C Switched dc EA = Mechanical relay 5A, Form C Switched dc EA = Mechanical relay 5A, Form C SSR Form A, 0.5A FA = Universal process None FE = Universal process Mechanical relay 5A, Form A, 0.5A FK = Universal process SSR Form A, 0.5A FM = Buetooth* (1/s DIN models only)* <t< td=""><td></td><td>0 28VAC C</td><td></td><td></td><td></td><td></td><td>AK = Nc</td><td>one</td><td></td><td>SSR Form</td><td>A, 0.5A</td><td></td></t<>		0 28VAC C					AK = Nc	one		SSR Form	A, 0.5A		
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LAE Switched dc/open collector Non-ARC 15A power control CHE Switched dc/open collector Switched dc/open collector Mechanical relay 5A, Form C CLE Switched dc/open collector Switched dc/open collector Switched dc/open collector Switched dc/open collector Switched dc/open collector Switched dc/open collector Switched dc/open collector Switched dc/open collector None EA Mechanical relay 5A, Form C None EA Mechanical relay 5A, Form C None EG Mechanical relay 5A, Form C None EL Mechanical relay 5A, Form C Switched dc EH Mechanical relay 5A, Form C Non-ARC 15A power control EL Mechanical relay 5A, Form C SSR Form A, 0.5A SSR Form A, 0.5A None FA Universal process Mechanical relay 5A, Form C, 0.5A Non-ARC 15A power control EL Universal process SSR Form A, 0.5A No-ARC 15A power control RK = Universal process SSR Form A, 0.5A No-ARC 15A power control INK = SSR Form A, 0.5A SSR Form A, 0.5A SSR Form A, 0.5A KK = Universal process SSR Form A, 0.5A					Outp	ut 2				Switched	dc		
CH = Switched dc/open collector NO-ARC 15A power control CC = Switched dc/open collector Skitched dc/open collector Switched dc/open collector None EH = Mechanical relay SA, Form C None EK = Mechanical relay SA, Form C Skitched dc EH = Mechanical relay SA, Form C Skitched dc EK = Mechanical relay SA, Form C Skitched dc EK = Mechanical relay SA, Form C Skitched dc EK = Mechanical relay SA, Form C Skitched dc FJ = Universal process None FK = Universal process Skitched dc FJ = Universal process Skitched dc/open A, 0.5A KK = SSR Form A, 0.5A Skitched dc/open A, 0.5A KK = SSR Form A, 0.5A Skitched dc/open A, 0.5A KK = SSR Form A, 0.5A Skitched dc/open A, 0.5A Skitched dc/open A, 0.5A Skitched dc/open A, 0.5A Ski					Vone							1	
CC = Switched dc/open collector Switched dc/open collector SSR Form A, 0.5A CK = Switched dc/open collector SSR Form A, 0.5A None EA = Mechanical relay 5A, Form C None None HM = Mechanical relay 5A, Form C None None EX = Mechanical relay 5A, Form C Switched dc/open collector SSR Form A, 0.5A EX = Mechanical relay 5A, Form C Switched dc/open collector SSR Form A, 0.5A EX = Mechanical relay 5A, Form C Switched dc Mechanical relay 5A, Form C No-ARC 15A power control EX = Mechanical relay 5A, Form C SSR Form A, 0.5A Mechanical relay 5A, Form C SSR Form A, 0.5A FX = Universal process None SSR Form A, 0.5A NO-ARC 15A power control FX = Universal process SSR Form A, 0.5A NO-ARC 15A power control KK = SSR Form A, 0.5A FX = Universal process SSR Form A, 0.5A NO-ARC 15A power control KK = SSR Form A, 0.5A SK = Mone A, 0.5A NO-ARC 15A power control SSR Form A, 0.5A NO-ARC 15A power control SK = Mone A, 0.5A NO-ARC 15A power control KK = SSR Form A, 0.5A NO-ARC 15A power control Standard bus always included None SSR Form A, 0.5A	CH = Sv	witched do	/open coll	lector	VO-ARC 15A pov	ver control							
CK Switched dc/open collector Mechanical relay 5A, Form A CK Switched dc/open collector SSR Form A, 0.5A CK Switched dc/open collector SSR Form A, 0.5A CK Mechanical relay 5A, Form C Switched dc EX Mechanical relay 5A, Form C None EX Mechanical relay 5A, Form C None EX Mechanical relay 5A, Form C SSR Form A, 0.5A EX Mechanical relay 5A, Form C SSR Form A, 0.5A FA Universal process None FA Universal process Sign Form A, 0.5A FK Universal process SSR Form A, 0.5A FK Universal process SSR Form A, 0.5A KK SSR Form A, 0.5A SSR Form A, 0.5A KK SSR Form A, 0.5A SSR Form A, 0.5A KK SSR Form A, 0.5A SSR Form A, 0.5A SW SSR Form A, 0.5A SSR Form A, 0.5A SSR For	CC = Sv	witched do	/open coll	lector 9	Switched dc							<u> </u>	
CK Switched dc/open collector SSR Form A, 0.5A EA = Mechanical relay 5A, Form C None HM Mechanical relay 5A, Form C NO-ARC 15A power control EC = Mechanical relay 5A, Form C None EL = Mechanical relay 5A, Form C Switched dc EX = Mechanical relay 5A, Form C SSR Form A, 0.5A FA = Universal process None FL = Universal process Switched dc EU universal process SSR Form A, 0.5A FK = Universal process SSR Form A, 0.5A FK = Universal process SSR Form A, 0.5A KK = SSR Form A, 0.5A SSR Form A, 0.5A KK = SSR Form A, 0.5A SSR Form A, 0.5A KK = SSR Form A, 0.5A SSR Form A, 0.5A KK = SSR Form A, 0.5A SSR Form A, 0.5A SSR Form A, 0.5A SSR Form A, 0.5A SSR Form A, 0.5A SSR Form A, 0.5A SSR Form A, 0.5A SSR Form A, 0.5A SSR Form A, 0.5A SSR Form A, 0.5A SSR Form A, 0.5A Sort Mard bus always included SSR Form A, 0.5A SSR Form A, 0.5A B					Mechanical relay	5A, Form A					A, U.SA		
EA = Mechanical relay SA, Form C None EH = Mechanical relay SA, Form C NO-ARC 15A power control EH = Mechanical relay SA, Form C NO-ARC 15A power control EL = Mechanical relay SA, Form C Switched dc EL = Mechanical relay SA, Form C Mechanical relay SA, Form C Mechanical relay SA, Form C EK = Mechanical relay SA, Form C SR Form A, 0.5A FE = Universal process Switched dc FE = Universal process SR Form A, 0.5A FK = Universal process SSR Form A, 0.5A KK = SSR Form A, 0.5A NO-ARC 15A power control KK = SSR Form A, 0.5A NO-ARC 15A power control KK = SSR Form A, 0.5A SSR Form A, 0.5A KK = SSR Form A, 0.5A SSR Form A, 0.5A KK = SSR Form A, 0.5A SSR Form A, 0.5A KK = SSR Form A, 0.5A SSR Form A, 0.5A Standard bus always included SSR Form A, 0.5A Standard Buetooth* (1/16 DIN models only)* EIA 485 Modbus* RTU and Bluetooth* (1/16 DIN models only)* EIA 321/485 Modbus* RTU SE EIA 232/485 Modbus* RTU <											1		
EH = Mechanical relay SA, Form C NO-ARC 15A power control EC = Mechanical relay SA, Form C Switched dc EM = Mechanical relay SA, Form C SSR Form A, 0.5A EK = Mechanical relay SA, Form C SSR Form A, 0.5A EK = Universal process None FA = Universal process Switched dc FJ = Universal process Switched dc FL = Universal process Switched dc FJ = Universal process Switched dc FL = Universal process SSR Form A, 0.5A KH = SSR Form A, 0.5A NO-ARC 15A power control KK = SSR Form A, 0.5A SSR Form A, 0.5A KK = SSR Form A, 0.5A SSR Form A, 0.5A KK = SSR Form A, 0.5A SSR Form A, 0.5A KK = SSR Form A, 0.5A SSR Form A, 0.5A K = SKR Form A, 0.5A													
EC Mechanical relay SA, Form C Switched dc EX Mechanical relay SA, Form C SSR Form A, 0.5A FA Universal process None FA Universal process None FA Universal process Mechanical relay SA, Form A, 0.5A FA Universal process Mechanical relay SA, Form A, 0.5A FA Universal process Mechanical relay SA, Form A, 0.5A FA Universal process SSR Form A, 0.5A MK SSR Form A, 0.5A NO-ARC 15A power control KK SSR Form A, 0.5A SSR Form A, 0.5A KK SSR Form A, 0.5A SSR Form A, 0.5A KK SSR Form A, 0.5A SSR Form A, 0.5A Modus* RTU 232/485 and Bluetooth* (1/16 DIN models only)* E ELA 485 Modbus* RTU E DeviceNet** and Bluetooth* (1/16 DIN models only)* SE EtharetXI/IP**/Modbus* TCP E <td></td> <td></td> <td></td> <td></td> <td></td> <td>ver control</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>						ver control							
EJ = Mechanical relay 5A, Form C Mechanical relay 5A, Form C SSR Form A, 0.5A FA = Universal process None FA FA = Universal process Switched dc FA = Universal process SSR Form A, 0.5A KH = SSR Form A, 0.5A NO-ARC 15A power control KK = SSR Form A, 0.5A SSR Form A, 0.5A KH = SSR Form A, 0.5A SSR Form A, 0.5A KK = SSR Form A, 0.5A SSR Form A, 0.5A KK = SSR Form A, 0.5A SSR Form A, 0.5A KK = SSR Form A, 0.5A SSR Form A, 0.5A KK = SSR Form A, 0.5A SSR Form A, 0.5A SSR Form A, 0.5A SSR Form A, 0.5A SSR Form A, 0.5A Standard												A	
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 B = Bluetooth[®] (1/16 DIN models only)[*] E = EIA 485 Modbus[®] RTU and Bluetooth[®] (1/16 DIN models only)[*] F = Modbus[®] RTU 232/485 and Bluetooth[®] (1/16 DIN models only)[*] G = EtherNet/IP[™]/ Modbus[®] TCP and Bluetooth[®] (1/16 DIN models only)[*] H = DeviceNet[™] and Bluetooth[®] (1/16 DIN models only)[*] J = PROFIBUS DP and Bluetooth[®] (1/16 DIN models only)[*] E EIA 485 Modbus[®] RTU 2 = EIA 232/485 Modbus[®] RTU 2 = EIA 232/485 Modbus[®] RTU 3 = EtherNet/IP[™]/Modbus[®] TCP 5 = DeviceNet[™] 6 = PROFIBUS DP 7 = SAE J1939 CAN bus C = 6 digital I/O (not available on 1/16 DIN modules) 			ays meruu	eu								ade,	
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J = PROFIBUS DP and Bluetooth® (¹/16 DIN models only)* K = SAE J1939 CAN bus and Bluetooth® (¹/16 DIN models only)* 1 = EIA 485 Modbus® RTU 2 = EIA 232/485 Modbus® RTU 3 = EtherNet/IP™/Modbus® TCP 5 = DeviceNet™ 6 = PROFIBUS DP 7 = SAE J1939 CAN bus C = 6 digital I/O (not available on ¹/16 DIN modules)							isola	ated.					
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1 = EIA 485 Modbus® RTU AB = EZ-ZONE logo and no Watlow name 2 = EIA 232/485 Modbus® RTU AB = EZ-ZONE logo and no Watlow name 3 = EtherNet/IP™/Modbus® TCP AC = No logo and no Watlow name 5 = DeviceNet™ AG = Conformal coating 6 = PROFIBUS DP 12 = Class 1, Div. 2 (not available with integrated limit Optic or "M", or with Output types E, H or J) 7 = SAE J1939 CAN bus C = 6 digital I/O (not available on 1/16 DIN modules)	K = SAE	J1939 CA	N bus and	Bluetoot	h® (1/16 DIN mod	els only)*		andard F7-70					
2 = EIA 232/485 Modbus® RTU AC = No logo and no Wattow name 3 = EtherNet/IP™/Modbus® TCP AC = No logo and no Wattow name 5 = DeviceNet™ AG = Conformal coating 6 = PROFIBUS DP 12 = Class 1, Div. 2 (not available with integrated limit Optic or "M", or with Output types E, H or J) 7 = SAE J1939 CAN bus c = 6 digital I/O (not available on 1/16 DIN modules)													
3 = EtherNet/IP™/Modbus® TCP AG = Conformal coating 5 = DeviceNet™ Class 1, Div. 2 (not available with integrated limit Optic or "M", or with Output types E, H or J) 7 = SAE J1939 CAN bus C = 6 digital I/O (not available on 1/16 DIN modules)				TU									
5 = DeviceNet™ Class 1, Div. 2 (not available with integrated limit Optic Or "M", or with Output types E, H or J) 6 = PROFIBUS DP Class 1, Div. 2 (not available with integrated limit Optic Or "M", or with Output types E, H or J) 7 = 6 digital I/O (not available on 1/16 DIN modules) Class 1, Div. 2 (not available with integrated limit Optic Or "M", or with Output types E, H or J)										lie			
6 = PROFIBUS DP 7 = SAE J1939 CAN bus C = 6 digital I/O (not available on 1/16 DIN modules) 0 r "M", or with Output types E, H or J)			moubus										
$C = 6 \text{ digital I/O (not available on \frac{1}{16} \text{ DIN modules})$													
C = 6 digital I/O (not available on ¹ / ₁₆ DIN modules)							or	ivi", or with C	utput types	5 E, H Or J)			
c algital I/O (not available on 1/16 DIN modules)				I 17									
	C = 6 dI	igital I/O (r	iot availab	ne on 1/16									
D = 6 digital I/O and EIA 485 Modbus® RTU (not available on				wodbus	~ кто (not availa	ible on							
¹ / ₁₆ DIN modules)				ala : 11		t fa ata							
*Note: Bluetooth [®] not available in all countries, contact factory.	- note: B	nuelooth®	not avalla	ole in all (ountries, contac	i idelory.							



Enhanced Limit Model Ordering Information

Universal Sensor Input, Configuration Communications, Red and Green Seven-Segment Displays

Part Number							
12345Package SizePrimary FunctionsSupply DigitalPM	y, 2 Hardware Options or Add'l	9 Future Option A	10 11 Output 3 and 4 Hardware Options	12 Isolated Input Option	13 14 Custom Options		
3 Packa	age Size	10 11	Out	put 3 and 4	l Hardwar	e Options	
$6 = \frac{1}{16} \text{DIN}$		Outpu	t 3		Output 4		
$8 = \frac{1}{8}$ DIN vertical		AA = Nc			None		
$9 = \frac{1}{8}$ DIN horizontal		AJ = Nc				cal relay 5A, Form A	
$4 = \frac{1}{4} DIN$		AK = Nc			SSR Forn	n A, 0.5A	
(4) Primary	Functions		witched dc/ope		None		
L = Limit controller with universal i			witched dc/ope		Switched		
M = Limit controller with thermistor			witched dc/ope			cal relay 5A, Form A	
D = Custom firmware	-		witched dc/ope		SSR Forn	n A, 0.5A	
5 Power Supply, Digita	al Inputs/Outputs (I/O)		echanical relay		None		
1 = 100 to 240VAC	in inputs/Outputs (1/O)		echanical relay		Switched		
2 = 100 to 240VAC plus 2 digital I/C) points		echanical relay		Mechanical relay 5A, Form A		
3 = 20 to 28VAC or 12 to 40VDC	points		echanical relay		SSR Form A, 0.5A		
4 = 20 to 28VAC or 12 to 40VDC	us 2 digital I/O points		= Universal process			None Switched dc	
	2 1		FC = Universal process FJ = Universal process			Mechanical relay 5A, Form A	
	Hardware Options		FK = Universal process			SSR Form A, 0.5A	
Output 1	Output 2		SR Form A, 0.5A		SSR Forn		
AJ = None	Mechanical relay 5A, Form A					i, H, J or 2 thru 6 is	
CJ = Switched dc/open collector	Mechanical relay 5A, Form A					st be ordered here.	
EJ = Mechanical relay 5A, Form C	Mechanical relay 5A, Form A		in previous arg				
	ons or Additional Digital	12		Isolated I	nput Opti	on	
Inputs/O	utputs (I/O)	A = Nor					
Standard bus always included		D = Isola	ated input 1				
$B = Bluetooth^{\circ} (1/16 DIN models on)$		13 14		Custo	m Option	5	
E = EIA 485 Modbus® RTU and Blue			andard EZ-ZON				
$F = Modbus^{\circ} RTU 232/485 and Blue$		AB = EZ-ZONE logo and no Watlow name					
G = EtherNet/IP [™] / Modbus [®] TCP an only)*		AC = No logo and no Watlow name AG = Conformal coating					
H = DeviceNet [™] and Bluetooth [®] (¹ / ₁	6 DIN models only)*			-			
J = PROFIBUS DP and Bluetooth® (1							
1 = EIA 485 Modbus® RTU							
2 = EIA 232/485 Modbus [®] RTU							
3 = EtherNet/IP [™] /Modbus [®] TCP							
5 = DeviceNet [™]							
6 = PROFIBUS DP							
*Note: Bluetooth® not available in a	countries contact factory						

*Note: Bluetooth[®] not available in all countries, contact factory.

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