



CONTROLLER ZAL24

Temperature Controller For Stand Alone
Digital Control of Heat Pumps,
Air-Handling Units and Terminal Units

General

The ZAL24 Series microprocessor based controller provides 3-wire floating (incremental) or 0-10 VDC control output of (P or PI) function. This series controls a variety of two-pipe and four-pipe air handling units, heat pumps, unitary equipment and various cooling and heating applications.

The microprocessor combines a proportional plus integral (PI) control algorithm which provides precise and stable control under varying system capacity and load conditions. Please refer to wiring diagrams for function settings.

Features

- Slim dial for temperature set-point adjustment
- 3-wire floating outputs (P or PI)
- 0 - 10 VDC outputs (P or PI)
- Adjustable I-time
- Adjustable with Fahrenheit or Celsius dial
- Manual or automatic changeover
- Remote and changeover sensor
- Output status indicator
- Customization available

Models

3-wire floating models

ZAL24T1 Single output (auto changeover)

0 - 10 VDC models

ZAL24A1 Single output (auto changeover)

ZAL24A2 Dual outputs (4-pipe)

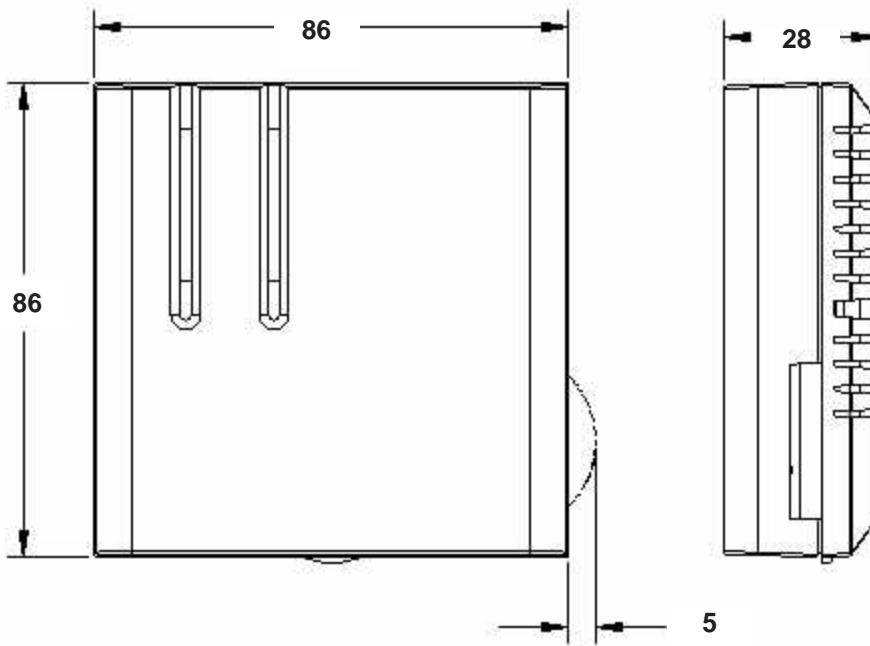


Specifications

Supply Voltage:	24V +/- 15%, 50 - 60 Hz 24V or 15VDC for ZAL24A only
Outputs:	24 VAC, 20 VA (3-wire models) 0 - 10 VDC (at least 100k ohm)
Power Consumption:	24 VAC, 1 VA
Deadband:	1K
P-band:	5K
Sensing element:	NTC (10k ohm at 25°C)
Setpoint Range:	0 ... 30°C
Ambient Limitations:	0 ... 50°C, 90% RH
Agency Approval:	CE compliant to EMC directives
Shipping Weight:	100 g

The specification above are normal and conform to generally acceptable industry standard. Zicon is not responsible for damages resulting from misapplication or misuse of its products.

Dimensions in mm



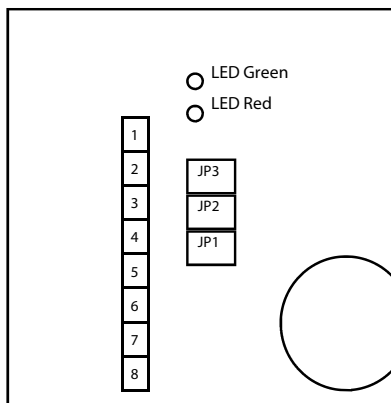
Application notes

- ZAL24 is equipped with internal temperature sensor. For remote temperature sensing please connect ZTE10-1 temperature sensor to terminal 6 & 7 and JP1 to open position.
- When no changeover sensor is used, the ZAL24T1 and ZAL24A1 are associated with cooling control device. Changeover sensor ZTE10-1 is connected to terminals 7 and 8 to achieve auto seasonal changeover, or just connecting a wire between those two terminals to force the unit into heating mode.
- Set jumper JP2 close for P function, open for PI function. (Factory setting: PI)
- Set jumper JP3 close to perform 20 min I-time, open to perform 2 min I-time. (Factory setting 20 min.)
- Set jumper JP4 close to perform 20K P-band, open to perform 5K P-band. (Factory setting 5K)
- Set jumper JP5 upper close for 2 -10 VDC output, lower close for 0 -10 VDC. (Factory setting 0 - 10 VDC)
- ZAL24T features two LEDs; Green and RED to indicate the output status of terminal "3" and " 4" respectively. This model doesn't feature JP4 and JP5.

ZAL24T Wiring diagram

ZAL24A Wiring diagram

1	~ 24 VAC
2	☒ Power common
3	Open output
4	Close output
5	Actuator common
6	Remote Sensor
7	Ground
8	Changeover sensor



1	+ ~ 24V or 15 VDC
2	- ☒ Power common
3	0-10VDC main output
4	Actuator common
5	0-10VDC secondary output
6	Remote Sensor
7	Ground
8	Changeover sensor

