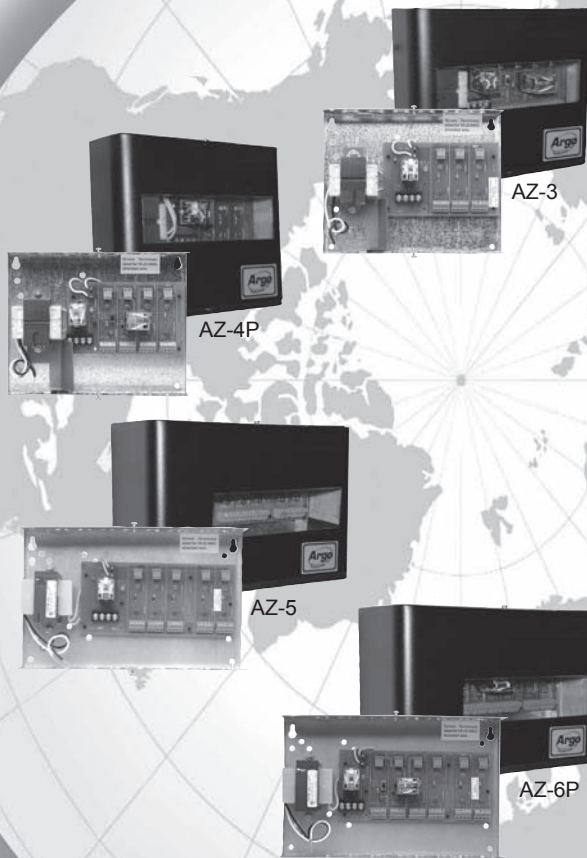


# ARGO AZ SERIES ZONE VALVE CONTROLS

AZ-3, AZ-4P, AZ-5, AZ-6P

# Argo



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P/N 240005130, Rev. 1.2 [10/06]

**INSTALLATION MANUAL  
AND OPERATING INSTRUCTIONS**

P/N#240005130, Rev. 1.2 [10/06]

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**RETAIN THIS MANUAL FOR FUTURE REFERENCE**

## SAFETY SYMBOLS AND WARNINGS

The following defined symbols are used throughout this manual to notify the reader of potential hazards of varying risk levels.

### **DANGER**

Indicates an imminently hazardous situation which, if not avoided, **WILL** result in death or serious injury.

### **WARNING**

Indicates a potentially hazardous situation which, if not avoided, **COULD** result in death or serious injury.

### **CAUTION**

Indicates a potential hazardous situation which, if not avoided, **MAY** result in minor or moderate injury. It may also be used to alert against unsafe practices.

**IMPORTANT:** *Read the following instructions **COMPLETELY** before installing!!*

### **WARNING**

All installations should be done only by a qualified expert and in accordance with the appropriate Argo manual. Installing an electric appliance with improper methods or materials may result in serious injury or death due to fire.

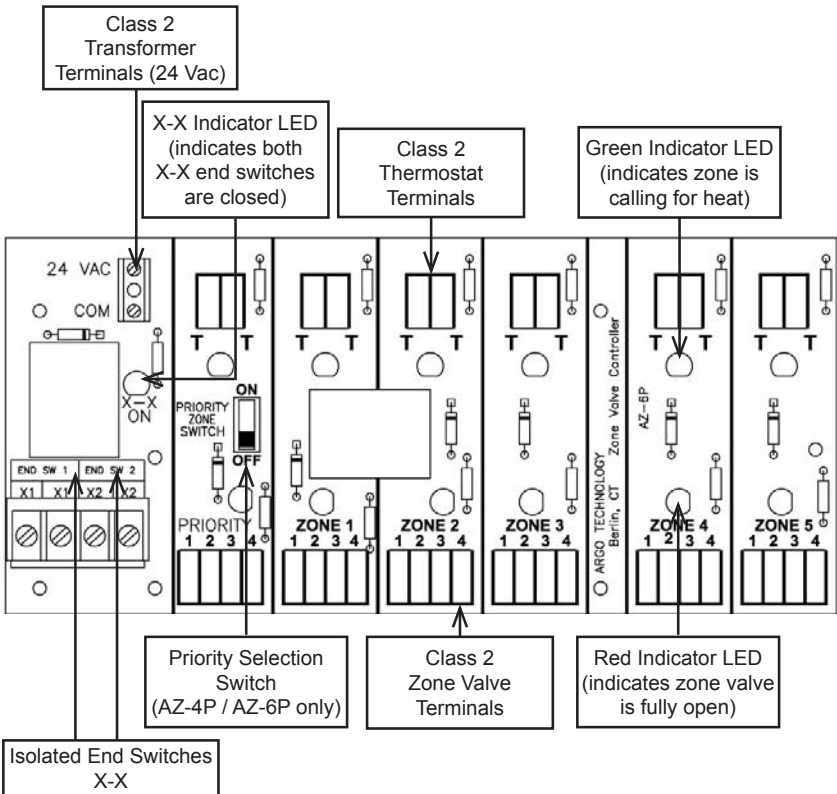
# INTRODUCTION

This manual is intended to familiarize the installer and user of the Argo AZ Series Zone Valve Controls with their installation and operation to assure normal trouble-free operation.

Argo Controls are designed and manufactured with quality components for maximum life and durability and require minimal service. To insure a satisfactory installation, it is imperative that the instructions be followed carefully before operating the relays. Failure to do so may result in breach of warranty.

# AZ CIRCUIT BOARD

The diagram below represents an Argo AZ-6P Zone Valve Control. The AZ-3, AZ-4P, and AZ-5 have similar connections. Differences in operating features are noted in this manual.



## MOUNTING INSTRUCTIONS

Mount the Argo AZ control vertically on a solid wall or partition. For your convenience it is recommended that the control be mounted as close as possible to the device to be controlled. The switching relay should never be mounted more than 75 feet away. Select a location that is easily accessible for installation and service.

**NOTE:** *To reduce the possible transformer hum and relay noise that is sometimes amplified by mounting surfaces such as sheet metal, plasterboard, and similar materials, place rubber or felt washers between the case and the mounting surface.*

1. Position the control and mark the mounting holes.
2. Start screws (not provided) for the keyhole type mounting holes in the upper corner(s). Tighten the screws down to about  $\frac{1}{8}$ " (3mm) from the surface.
3. Hang the control on the screw(s), position the case, and start the bottom screws.
4. Tighten all screws.

## ELECTRICAL SPECIFICATIONS & WIRING



**ELECTRICAL SHOCK HAZARD!** Disconnect power before installing or servicing. Can cause severe personal injury, death, or substantial property damage if ignored.

### GENERAL WIRING NOTICE

All primary wiring must be 14 AWG minimum. Torque terminal screws 6 to 7 inch pounds.

All wiring must be installed in accordance with:

**U.S.A.** – National Electrical Code and any other national, state or local code requirements. Wiring must be N.E.C. Class 1.

**Canada** – C.S.A. C22.1 Canadian Electrical Code Part 1 and any other national, provincial or local code requirements. Wiring must be C.S.A. C22.1 C.E.C, Part 1.

#### ELECTRICAL SPECIFICATIONS

ARGO Model Number	Zones	Transformer Voltage
AZ-3	3	120V, 60 HZ, 40VA
AZ-4P	4	120V, 60 HZ, 40VA
AZ-5	5	120V, 60 HZ, 75VA
AZ-6P	6	120V, 60 HZ, 75VA

## SEQUENCE OF OPERATION

### **- NORMAL OPERATION -**

(PRIORITY SWITCH IN OFF POSITION ON AZ-4P AND AZ-6P)

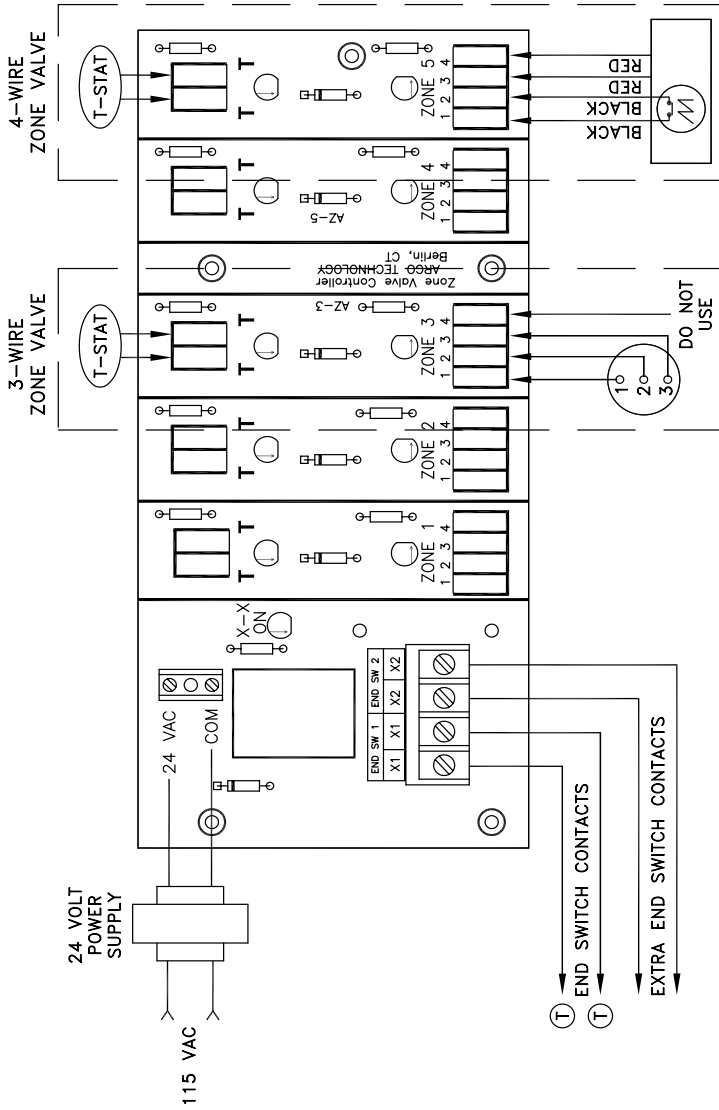
- The control will scan all TT terminals looking for a call for heat from any thermostat.
- When a call for heat is detected the green TT LED for that zone will illuminate.
- The corresponding zone terminals 1 & 2 will be energized with 24 volts.
- The control will then wait for the zone valve end switch to close, a red LED will illuminate, indicating zone valve is fully open.
- Once the zone valve opens the X-X contact will close.

### **- WITH PRIORITY ON -**

(AZ-4P AND AZ-6P ONLY)

- The control will scan all TT terminals looking for a call for heat from any thermostat.
- When a call for heat is detected on the priority zone the green TT LED for the priority zone will illuminate.
- The priority zone terminals 1 & 2 will be energized with 24 volts.
- The control will then wait for the priority zone valve end switch to close, a red LED will illuminate indicating the valve is fully open.
- Once the zone valve opens the X-X contacts will close.
- While the priority zone is calling for heat any call for heat on other zones will be ignored until the priority zone is satisfied.
- If a call for heat is detected on terminals 1 or above when the priority zone is not calling the control will operate as outlined above.

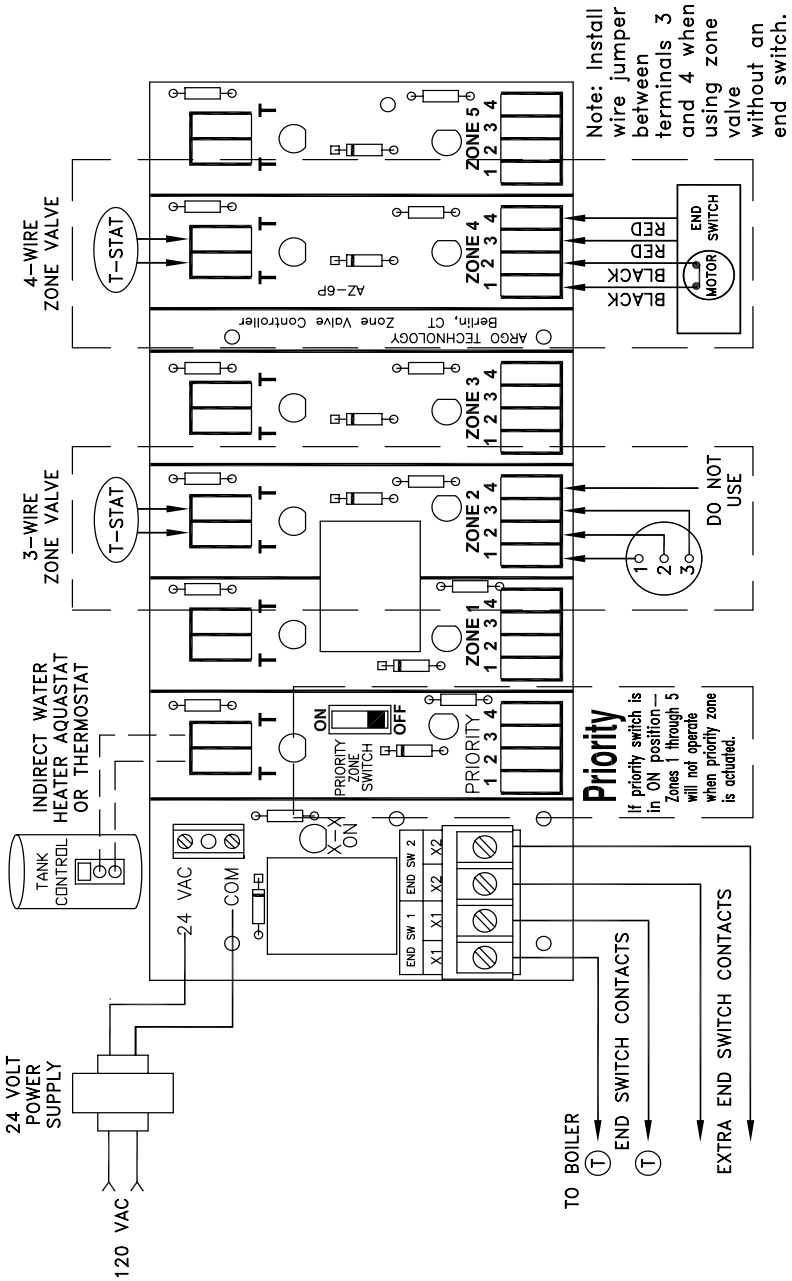
# AZ-5 WIRING SCHEMATICS



Note: Install wire jumper between terminals 3 and 4 when using zone valve without an end switch.

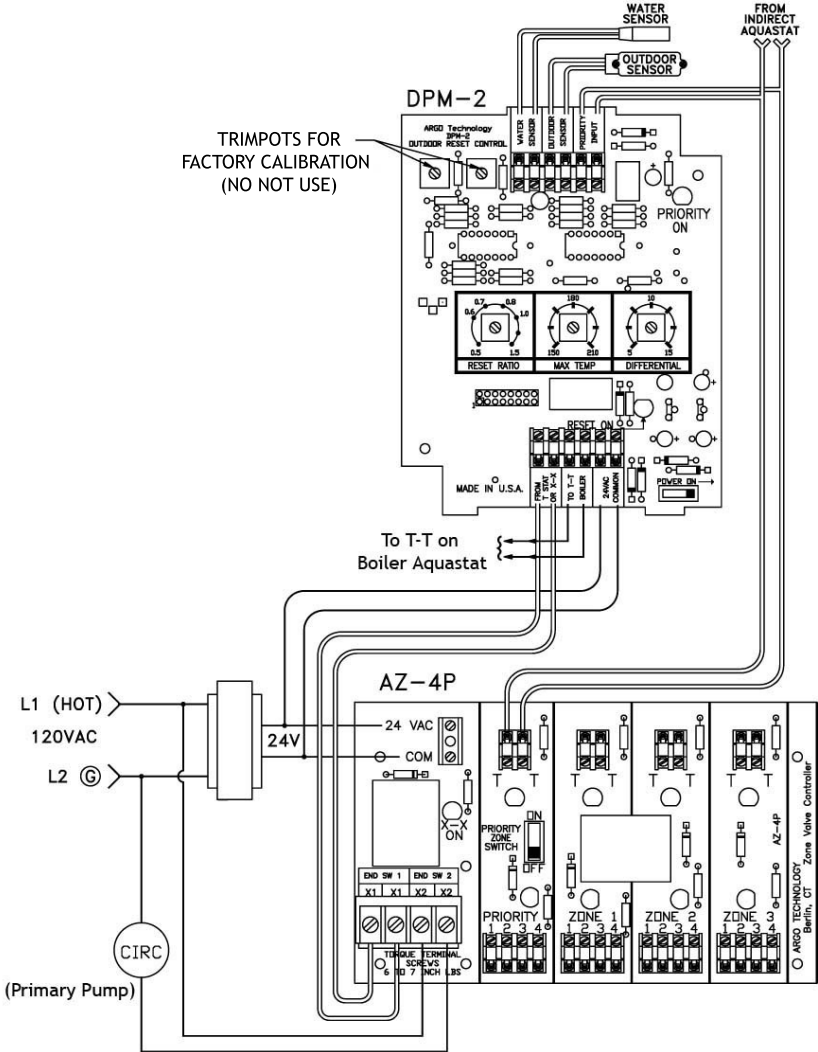


# AZ-6P WIRING SCHEMATICS



# AZ CONTROL W/DPM-2 OUTDOOR RESET CONTROL

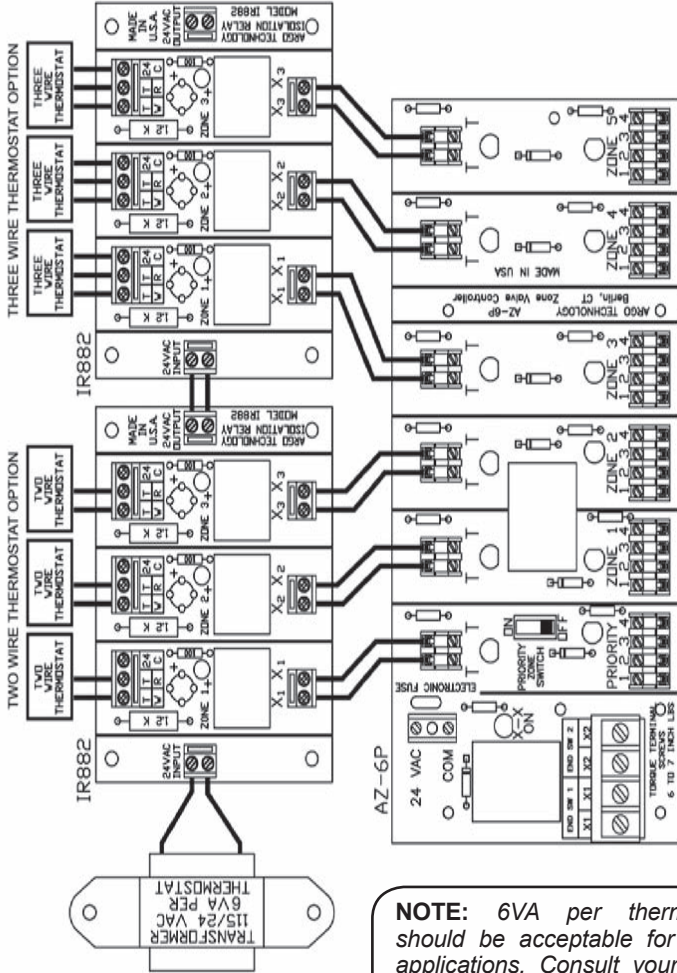
The DPM-2 Outdoor Reset Control is designed to raise or lower the temperature of the boiler supply water based upon a proportionate drop or rise in temperature at the outside sensor. This control plugs into Argo control equipment with a data port or as a stand alone device that can be easily wired into almost any system. See the separate DPM-2 Installation Manual for more information.



# AZ CONTROL W/POWER ROBBING THERMOSTAT

Your new Argo AZ control should work well with all standard and most programmable setback thermostats. In the event the programmable thermostat you are using causes the control board relays to chatter, you will require an external 24V power supply (transformer) and an Argo IR882 Isolation Relay. Please refer to the literature with the IR882 for proper wiring and transformer sizing.

**\* Typical Application Using (2) IR882 Relays To Isolate Power Stealing Thermostats From An Argo AZ-6P Zone Control Panel**



**NOTE:** 6VA per thermostat should be acceptable for most applications. Consult your thermostat manufacturer's literature for their actual VA requirements.

## REPLACEMENT PARTS

Part Description	Part Number
Circulator plug-in relay (24 VAC coil)	R35C
Transformer 40 VA (AZ-3, AZ-4P)	T40
Transformer 75 VA (AZ-5, AZ-6P)	T25

## TECHNICAL SUPPORT

For technical support on this and all Argo products, please contact ECR International Technical Service at 1-800-325-5479. Please have your model number available when calling.

### Information Needed When Calling

Model Number

Installation Date

Installer