30056 & 30057

INFLOOR
HEATING SYSTEMS

INFLOOR RADIANT HEATING SYSTEMS
INSTALLATION AND OPERATION INSTRUCTIONS
4XTRA FOUR ZONE CONTROLLER WITH PRIORITY (P/N 30056)
8XTRA EIGHT ZONE CONTROLLER WITH PRIORITY (P/N 30057)

DESCRIPTION

The 4XTRA & 8XTRA Zone Valve Controllers are a fully featured controls that provide all required terminations to implement most radiant hydronic heating installations. They are compatible with most 24 VAC boiler controls, tranformers, thermostats, 2 and 4 wire zone valves, and domestic hot water (DHW) diverter valves. A user selectable priority mode allows the control the ability to satisfy DHW requirements prior to satisfying heating requirements. Status indicators viewable on the controller cover indicate which individual zones are active in addition to power and priority mode status.

INSTALLATION

The control box should be located above or adjacent to the zone valves or zone actuators in a manner that enables the wires from the valves, thermostats, & power transformer easy access to the internal screw terminals. The loction should allow the cover mounted status indicators to be readily viewable and the location should not be subject to extremely damp or wet conditions. All installations and wiring must conform to local and national electrical codes and ordinances. Internal wiring shall be kept clear of the central area of the circuit board so as not to interfere with the status indicator light guides protruding from the underside of the top cover. This control is intended for low voltage (Class 2) use only, do not use switched outputs with line voltages. The control may be mounted using the keyhole knockouts on the bottom panel. Using 18 AWG wire minimum for all connections, wires may be routed through one of the six universal bushings on the bottom section of the housing, or the bushings may be removed for installations where 1/2" conduit connections are required.

ELECTRICAL CONNECTIONS

NOTICE: Failure to read and understand the following instructions could cause personal injury and/or property damage and/or damage to the control. Installation is to be performed by a qualified heating contractor or electrician in accordance with all local and national codes. Terminal designations indicated in ( ) are typical for the equipment illustrated. Installers using equipment other than that shown shall determine the correct terminal designations for that particular device.

Fuse sizing: The control board contains a standard AGC / 3AG (1/4" X 1-1/4") normal blow fuse to protect the control and supply transformer which must be sized according to the size of the supply transformer used. The control is shipped with a 4A fuse for use with a 100VA transformer only. This fuse **MUST** be replaced with a smaller amperage rating if a smaller transformer is used. The correct size is 1A per 25VA transformer size (1A for a 25VA transformer, 2A for a 50VA transformer, etc.).

INPUT-OUTPUT TERMINAL BLOCK

XX & X2 – 24 VAC power from the external control transformer (100 VA Max.) to the control is connected to these terminals. XX is the HOT (R) connection. X2 is the common (C) connection.

BS & BS – These terminals are normally open (N.O.) relay contacts that close when any zone thermostat calls for heat. They are used to start a boiler when 2 wire zone valves (without end switches) are used or in DHW priority applications.

PS & PS – These terminals are connected to all of the zone valve ES & ES terminals. These contacts close when any of the end switches connected to the ES terminals in 4 wire zone valves close. They are used to start a boiler after 4 wire zone valves have opened.

THERMOSTAT TERMINAL BLOCKS

X1 & X2 – Fused 24 VAC power from the control may be obtained from these terminals. Some thermostats such as the Infloor Dual Sensing Thermostat (P/N 29002) require 24V power for proper operation. X1 is the HOT (R) connection. X2 is the common (C) connection.

T1 & T2 – These terminals are for the connections to the individual zone thermostats. They switch power to the respective zone valve via the thermostat contacts. T1 is the HOT connection to the thermostat (R or RH). T2 is the connection from the switched HOT of the thermostat (W). Zones 2 & up are inactivated when zone 1 is active and the priority switch on the control board is in the ON position (Yellow priority LED will be on) by the removal of power from the T1 terminal. **NOTE:** This loss of power during a priority override may cause two wire power stealing thermostats (Infloor P/N 29016 and/or P/N 29017) to loose display information. The addition of a resistor (3K-3.5K ohms) between terminals X1 & T1 for that zone will allow enough power to pass to keep the display active without activating the zone valve. See Wiring Diagram Note 5 on the reverse side of this sheet.

ZONE VALVE TERMINAL BLOCKS

V1 & V2 – These terminals are the connections to the zone valve or zone actuator motors or heaters. They supply 24 VAC power to the respective zone, switched by the thermostat. Zones 2-5 are inactivated when zone 1 is active and the priority switch on the control board is in the ON position (Yellow priority LED will be on). V1 is the switched power from the thermostat (R or RH). V2 is the common connection to the power transformer (C).

ES & ES – These terminals are the connections between the end switch wires in 4 wire zone valves and the PS & PS terminals on the Input-Output Terminal Block that are used for boiler control. Any one zone valve end switch closure will cause the boiler connected to the PS & PS terminals to start.

TYPICAL WIRING DIAGRAMS

Figure 1 and figure 2 on the reverse of this sheet depict typical wiring for standard applications. Read and follow all notes and cautions as indicated.

TYPICAL WIRING DIAGRAMS
INFLOOR ZONE CONTROLLER MODELS 4XTRA & 8XTRA

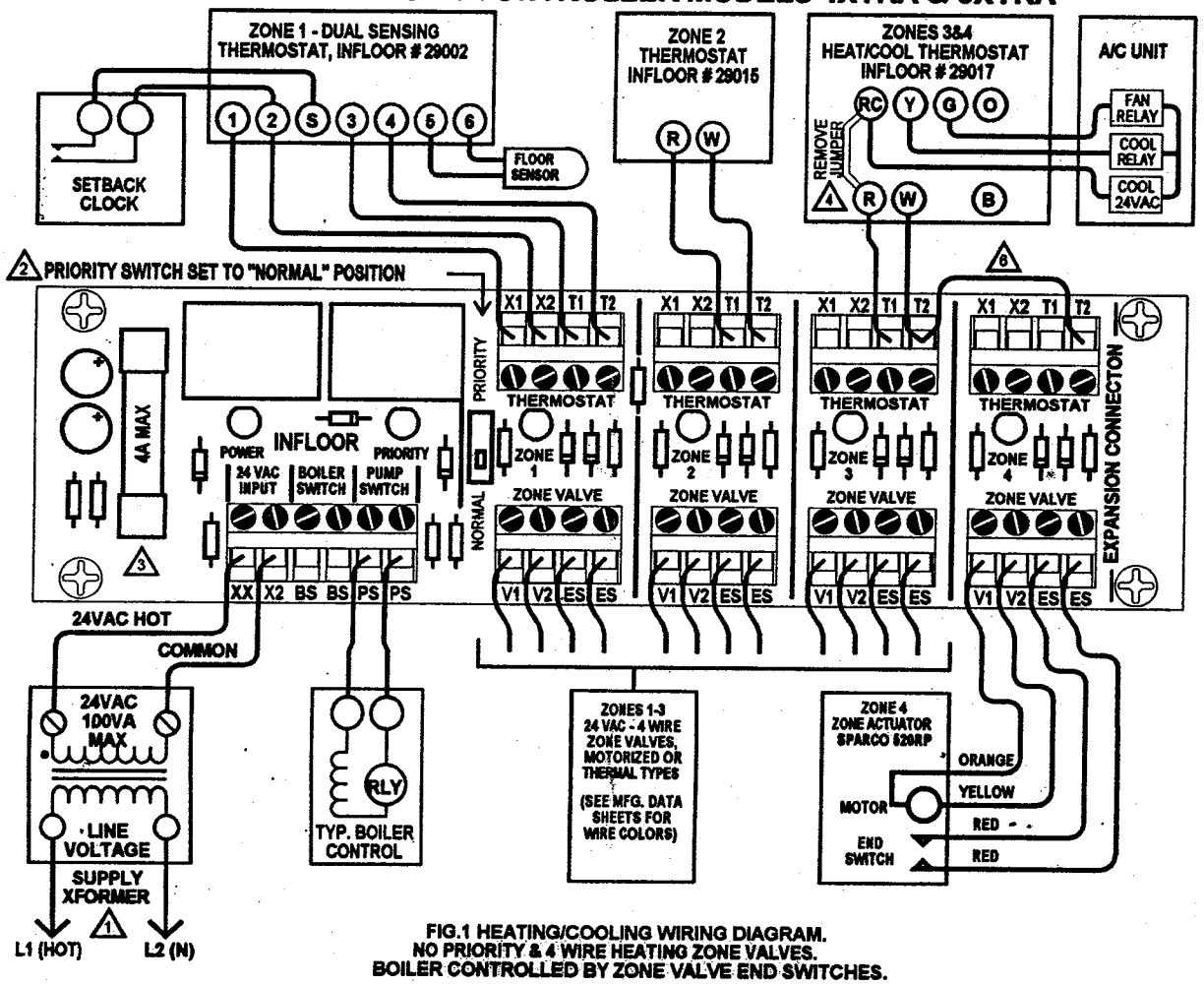

FIG.1 HEATING/COOLING WIRING DIAGRAM.
NO PRIORITY & 4 WIRE HEATING ZONE VALVES.
BOILER CONTROLLED BY ZONE VALVE END SWITCHES.

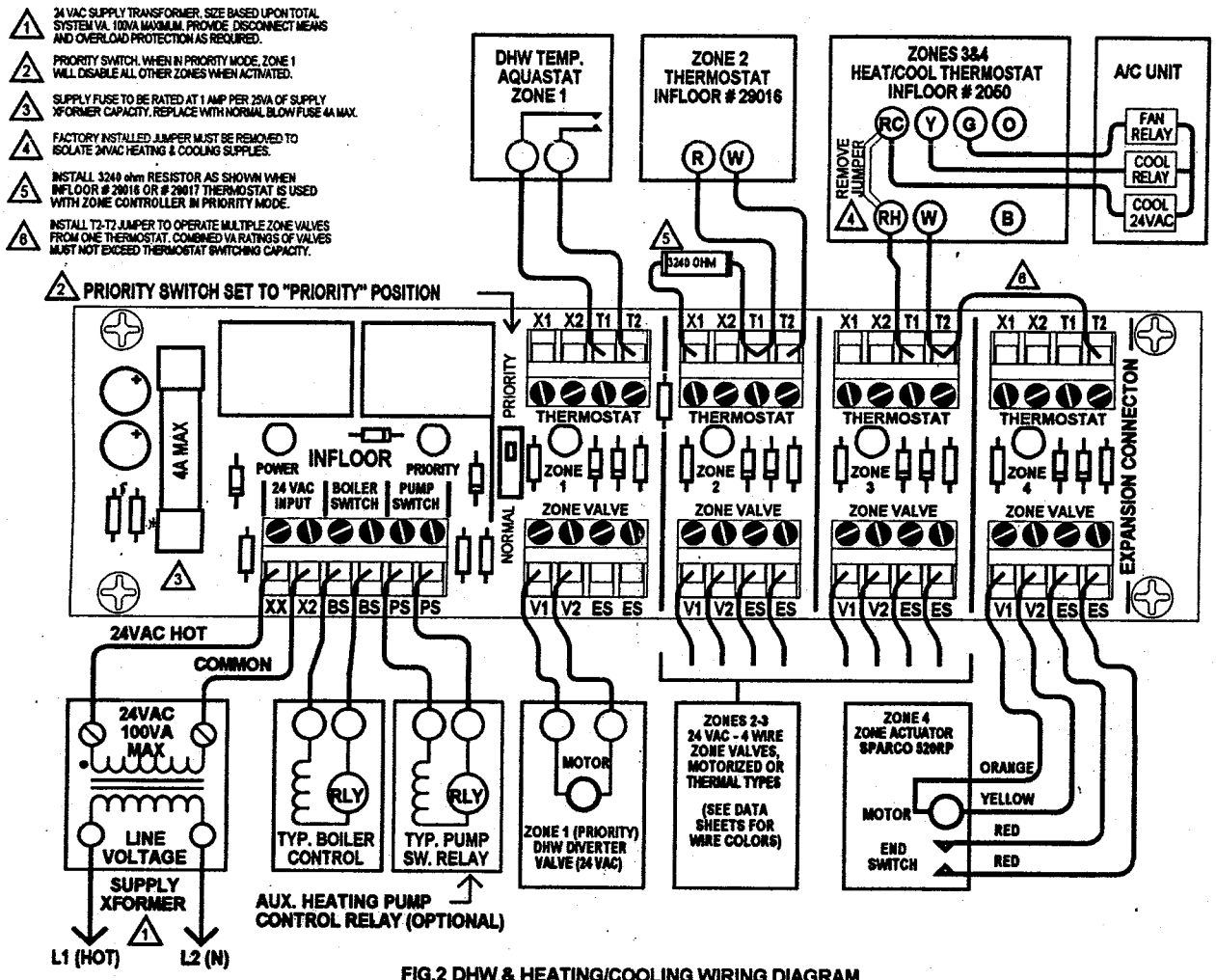

FIG.2 DHW & HEATING/COOLING WIRING DIAGRAM.
DHW PRIORITY DIVERTER VALVE & 4 WIRE HEATING ZONE VALVES.
BOILER CONTROLLED BY BOILER RELAY SWITCH.
OPTIONAL AUX. PUMP CONTROLLED BY END SWITCHES AND SWITCHING RELAY.