tekmar® - User Brochure
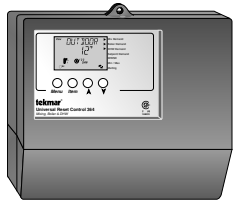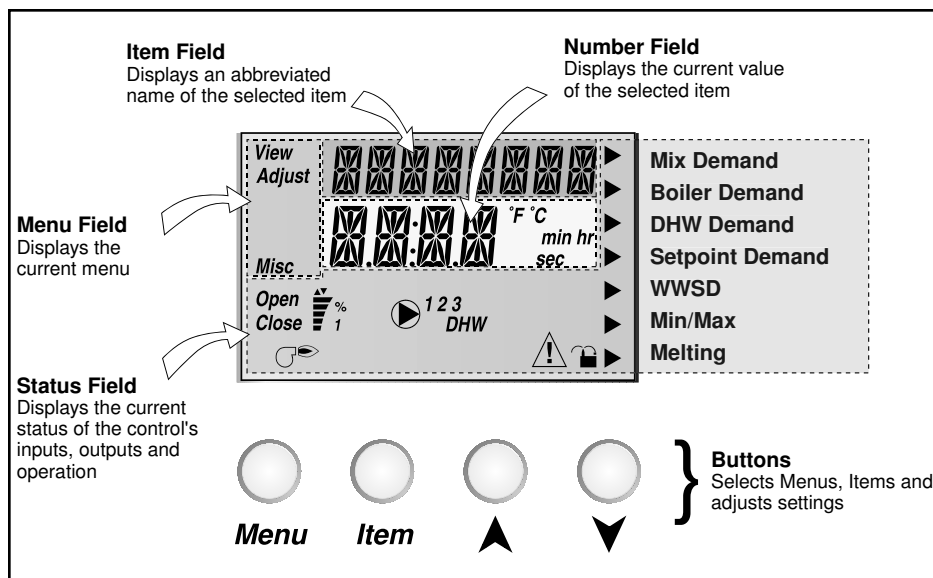
Universal Reset Control 364

The Universal Reset Control 364 is designed to maximize the comfort and efficiency provided by a hydronic heating system. The control automatically adjusts the boiler and mixed loop water temperatures that are delivered to the heating system by using outdoor reset. Outdoor reset increases the water temperature in the heating system as the outdoor temperature becomes colder. Outdoor reset also increases the energy efficiency of the heating system by not allowing more heat into the building than the building normally loses to the outside. The mixed water temperature can be used to supply either a space heating system or a single zone snow melting system. The 364 can intelligently integrate indirect Domestic Hot Water (DHW) and tekmar zone controls into the heating system. Standard features include boiler protection (when a boiler sensor is installed), pump exercising, and digital temperature readouts.

User Interface

Access Level(s) The tekmar Universal Reset Control 364 has four access levels which are **LTD** (limited), **USER, INST** (installer), and **ADV** (advanced). This brochure only covers the **LTD** (limited) and **USER** levels. Only qualified service people should make adjustments in the **INST** (installer) and **ADV** (advanced) access levels.

Item Field
Displays an abbreviated name of the selected item

Number Field
Displays the current value of the selected item

Menu Field
Displays the current menu

Status Field
Displays the current status of the control's inputs, outputs and operation

View
Adjust
Misc
Open
Close

► Mix Demand
► Boiler Demand
► DHW Demand
► Setpoint Demand
► WWSD
► Min/Max
► Melting

Buttons
Selects Menus, Items and adjusts settings

Menu   Item   ▲   ▼

Symbol	Description
Open Close	**Open / Close** Displays when the actuator is opening or closing the valve.
	Mixing Device Output Scale Shows output of injection pump or mixing valve. Arrows show whether the output is increasing or decreasing.
☞	**Burner** Displays when the boiler relay is turned on.
⬤ 1 2 3	**Pump** Displays when the primary pump 1, boiler system pump 2 and / or mixing pump 3 is operating.
⬤DHW	**DHW Pump** Displays when the DHW pump or valve is on.
⚠	**Warning** Displays when an error exists.
🔒	**Lock / Unlock** Displays whether the access levels are locked or unlocked.
°F °C min hr sec	**°F, °C, sec, min, hr** Units of measurement.
►	**Pointer** Displays the control operation as indicated by the text.

The tekmar Universal Reset Control 364 has a Liquid Crystal Display (LCD) and four push buttons (Menu, Item, ▲, ▼) which are used to view and adjust the settings.

Menu ⬤ ○ ○ ○

All of the items displayed by the control are organized into various menus. These menus are listed on the left hand side of the display (Menu Field). To select a menu, use the **Menu** button. By pressing and releasing the **Menu** button, the display will advance to the next available menu. Once a menu is selected, there will be a group of items that can be viewed within that menu.

Item ○ ⬤ ○ ○

The abbreviated name of the selected item will be displayed in the item field of the display. To view the next available item, press and release the **Item** button. Once you have reached the last available item in a menu, pressing and releasing the **Item** button will return the display to the first item in the selected menu.

Adjust ○ ○ ⬤ ⬤

To make an adjustment to a setting in the control, begin by selecting the appropriate menu using the **Menu** button. Then select the desired item using the **Item** button. Finally, use the ▲ and / or ▼ button to make the adjustment.

Additional information can be gained by observing the Status field of the LCD. The status field will indicate which of the control's outputs are currently active. Most symbols in the status field are only visible when the View menu is selected.

Note: Depending on the settings the installer makes in the control, certain items may not appear.

Item	Ltd	User	364 **View** Menu	Range
OUTDOOR	●	●	Current outdoor air temperature as measured by the outdoor sensor. This is the default display for the control.	-67 to 149°F (-55 to 65°C)
ROOM TRG		●	Target room air temperature. "–––" denotes no heat is required.	–––, 35 to 100°F (2 to 38°C)
ROOM	●	●	Measured room air temperature at the indoor sensor.	-58 to 167°F (-50 to 75°C)
SNOWMELT	●	●	Current operating status of the snow melting system.	STRT, STOP, IDLE, EXT, 0:00 to 17:00 hr, –––, INF, WWSD, CWCO
MIX SUP		●	Current mixed supply water temperature as measured by the mixing sensor.	-31 to 266°F (-35 to 130°C)
Boil SUP		●	Current boiler supply water temperature as measured by the boiler sensor.	-31 to 266°F (-35 to 130°C)
Boil RET		●	Current boiler return water temperature as measured by the boiler sensor.	-31 to 266°F (-35 to 130°C)
DHW TRG		●	Target DHW tank temperature. This item can only be viewed if a tekmar sensor is used to measure the DHW tank temperature.	–––, OFF, 70 to 190°F (21 to 88°C)
DHW	●	●	Current DHW tank temperature as measured by the DHW tank sensor.	-31 to 266°F (-35 to 130°C)

Note: Depending on the settings the installer makes in the control, certain items may not appear.

Item	Ltd	User	364 **Adjust** Menu	Range
MELTING		●	This item is the desired slab surface temperature while in the melting mode.	32 to 95°F (0 to 35°C)
RUN TIME	●	●	This item is the time that the slab is operated for once it has reached the MELTING temperature. This item can only be viewed if a Remote Start / Stop Module 039 has not been connected.	OFF, 0:30 to 17:00 hrs, INF (Infinite)
MIX ROOM	●	●	The desired room air temperature for the mixing zones. Note: There is only a ±3°F (±1°C) adjustment in the LTD access level.	35 to 100°F (2 to 38°C)
SLAB MIN		●	The minimum temperature at the slab sensor as long as the control is not in WWSD. This item can only be adjusted if a tekmar sensor is connected.	OFF, 35 to 120°F (2 to 49°C)
Boil ROOM	●	●	The desired room air temperature for the boiler zones. Note: There is only a ±3°F (±1°C) adjustment in the LTD access level.	35 to 100°F (2 to 38°C)
DHW TANK		●	The desired DHW storage tank temperature. This item can only be adjusted if a tekmar sensor is used to measure the DHW tank temperature.	–––, OFF, 70 to 190°F (21 to 88°C)
WWSD		●	The system's warm weather shut down temperature.	35 to 100°F, OFF (2 to 38°C)

Item	Ltd / User	364 **Misc (Miscellaneous)** Menu	Range
UNITS	●	The units of measure that all of the temperatures are to be displayed in by the control.	°F, °C
BACKLITE	●	The operating mode for the back lighting on the LCD and the time until the control returns to the view menu after any button was pressed. *If Backlight is set to OFF,* the control returns after 10 seconds and the backlight stays off. *If Backlight is set to 30 sec,* the control returns after 30 seconds and the backlight stays on for 30 seconds after any button is pressed. *If Backlight is set to ON,* the control returns after 90 seconds and the backlight stays on.	OFF, 30 sec, ON
ACCESS	● ●	The access level that is to be used by the control. **Dip Switch = ▛** *Only qualified service people should asdjust items in the* ADV *(Advance) and* INST *(Installer) access levels.*	ADV, INST, USER, LTD

Remote Display Module (RDM)
An optional Remote Display Module can be connected to the Universal Reset Control 364. All items displayed on the 364 menu will also be displayed on the Remote Display Module. Adjustments can be made from the Remote Display Module. This module is connected to the control through two wires.