tekmar® - User Brochure

Snow Detector & Melting Control 664

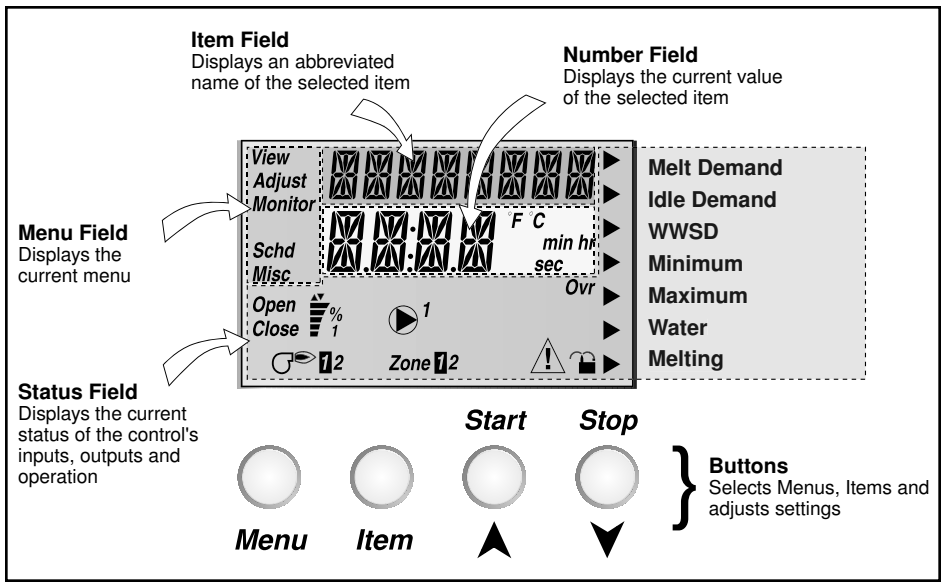
U 664

07/01

The Snow Detector & Melting Control 664 is designed to control up to two zones in a snow melting system. The control automatically adjusts the mixed supply water to the snow melting system by controlling up to two boilers and a single mixing device. For mixing, the 664 can use a variable speed injection pump, a floating action mixing valve or a 4-20 mA device. The snow melting system may be started manually or automatically through the use of a Snow / Ice Sensor 090. Standard features include priority snow melting, slab and boiler protection, and many other useful items.

User Interface

User Access Level(s) The Snow Detector & Melting Control 664 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 adjust the **INST** (Installer) and **ADV** (advanced) access levels.



The tekmar Snow Detector & Melting Control 664 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.

Open *Close*	**Open / Close** Displays when the actuator is opening or closing the mixing valve.
% 1	**Mixing Device Output Scale** Shows output of injection pump, mixing valve or 4-20mA device. Arrows show whether the output is increasing or decreasing.
1	**Pump** Displays when the system pump is operating.
Ovr	**Override** Displays when the control is in override mode.
⚠	**Warning** Displays when an error exists or when a limit has been reached.
	Lock / Unlock Displays whether the access levels are locked or unlocked.
1 2	**Burner** Displays when the Stage 1 and/or Stage 2 relay is turned on.
▶	**Pointer** Displays the control operation as indicated by the text.
°F °C min hr sec	**°F, °C, sec, min, hr** Units of measurement.
Zone 1 2	**Zone** Displays when a zone is in operation.

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

Item	Ltd	User	664 **View** Menu	Range
OUTDOOR	●	●	Current outdoor air temperature as measured by the outdoor sensor.	-67 to 149°F (-55 to 65°C)
SLAB 1		●	Current slab sensor temperature of zone 1.	-58 to 167°F (-50 to 75°C)
STATUS 1	●	●	Operating status of zone 1.	STRT, STOP, IDLE, EXT, 0:00 to 23:59 hr, ---, INF, WWSD, CWCO, DET
SLAB 2	●	●	Current slab sensor temperature of zone 2.	-58 to 167°F (-50 to 75°C)
STATUS 2	●	●	Operating status of zone 2.	STRT, STOP, IDLE, EXT, 0:00 to 23:59 hr, ---, INF, WWSD, CWCO, DET
MIX SUP		●	Current mixed supply water temperature as measured by the mixing supply sensor.	-31 to 266°F (-35 to 130°C)
MIX RET		●	Current mixed return water temperature as measured by the mixing return sensor.	-58 to 167°F (-50 to 75°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)

Item	Ltd	User	664 **Adjust** Menu	Range
RUN TIME	●	●	The time for which the slab is operated once it has reached the MELT temperature. This item cannot be viewed if a Remote Start / Stop Module 039 has been connected.	0:300 to 17:00 hr, INF (Infinity)
SENSTVTY		●	Sensitivity of water detection of the Snow / Ice Sensor 090.	Auto, 20 to 80%
MELT 1		●	The desired slab surface temperature of zone 1 while in the Melting Mode.	32 to 95°F (0 to 35°C)
MELT 2		●	The desired slab surface temperature of zone 2 while in the Melting Mode.	32 to 95°F (0 to 35°C)
STAGE 1		●	Selects stage 1 as operational or not.	AUTO, OFF
STAGE 2		●	Selects stage 2 as operational or not.	AUTO, OFF

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

Item	Ltd	User	664 **Monitor** Menu	Range
OUT HI	•	•	The highest recorded outdoor air temperature since this item was last cleared.	-85 to 170°F (-65 to 77°C)
OUT LO	•	•	The lowest recorded outdoor air temperature since this item was last cleared.	-85 to 170°F (-65 to 77°C)
SLAB 1 HI		•	The highest recorded temperature at the slab sensor of zone 1 since this item was last cleared.	-85 to 170°F (-65 to 77°C)
SLAB 1 LO		•	The lowest recorded temperature at the slab sensor of zone 1 since this item was last cleared.	-85 to 170°F (-65 to 77°C)
SLAB2 HI		•	The highest recorded temperature at the slab sensor of zone 2 since this item was last cleared.	-85 to 170°F (-65 to 77°C)
SLAB2 LO		•	The lowest recorded temperature at the slab sensor of zone 2 since this item was last cleared.	-85 to 170°F (-65 to 77°C)

Item	Ltd	User	664 **Schd (Schedule)** Menu	Range
OVERRIDE	•	•	The setback override that is in effect for the snow melting system.	NONE, AWAY (Ovr)
None — No override. ***AWAY*** — The snowmelting system is shut down.				

Item	Ltd	User	664 **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 as well as time of keypad inactivity until the control automatically returns to the default display.	OFF, 30 sec, ON
ACCESS		•	The access level that is to be used by the control. **DIP Switch =** 🔓 *Only qualified service people should adjust 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 up to the 664 if the remote Start / Stop Module is not used. Adjustments can be made from the Remote Display Module. This module is connected to the control through two wires.

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Notes

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