For Residential and Commercial Applications

Job Name _____

Job Location _____

Engineer _____

Approval _____

Contractor _____

Approval _____

Contractor's P.O. No. _____

Representative _____

DualTemp Digital Thermostat

Dimensions: 3-3/8" x 3-3/8"

The Watts Radiant DualTemp thermostat has the ability to sense the temperature of the air, floor or a combination of air and floor. Each DualTemp comes with an internal air sensor. An OPTIONAL external 10k sensor which allows detection of floor temperatures may be ordered separately. The external sensor does not have to be used if the DualTemp is to detect air temperatures only.

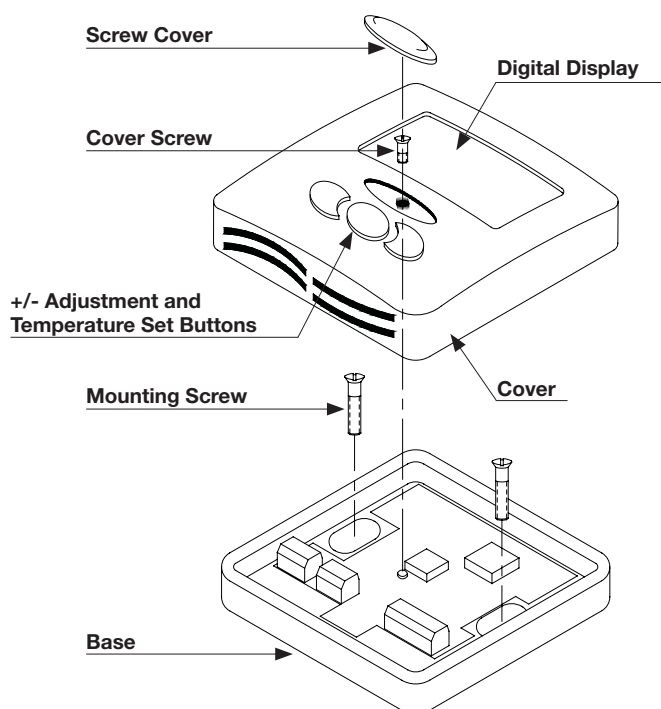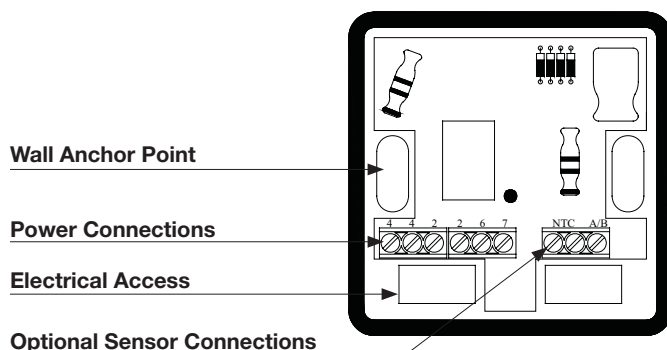| DESCRIPTION	PROPERTY	°C	°F
Operation Voltage	24V	10	50.0
Contact	10A, 230Vac Relay	15	59.0
Sensor	NTC 10K Thermistor	20	68.0
Static Differential	1°F	25	77.0
Proportional	10 minutes for 3.5°F	30	86.0
Built-in manual setback	7°F	35	95.0
Air Temp Range	41- 99°F		
Floor Temp Range	41- 99°F		

Optional Floor Sensor

DETAIL VIEW

Installation & Operation

To mount the thermostat remove the thermostat cover by removing the white Screw Cover (located in the center of the thermostat cover) and the Cover Screw. Secure the Base Unit to the wall. Be sure to feed the electrical wiring (18-3 or 18-4) through the provided slot in the Base Unit and connect to appropriate terminal block(s). Replace the Cover, Cover Screw and Screw Cover.

If floor sensing is desired, make sure the floor sensor is connected to the corresponding floor sensor terminals (labeled NTC, the first two terminals on the right terminal block). It may be necessary to adjust the J6 setting. See wiring diagrams for details.

Screw Cover

Digital Display

Cover Screw

+/- Adjustment and Temperature Set Buttons

Mounting Screw

Cover

Base

Wall Anchor Point

Power Connections

Electrical Access

Optional Sensor Connections

*Watts*Radiant
Floor Heating & Snowmelting

A subsidiary of Watts Water Technologies, Inc.

To enter the parameter menu, press and hold the **OK** button for 5 seconds.

Use the +/- keys to select the installation parameter to be adjusted. Press **OK** to toggle the parameter setting or to edit its value. When the value begins to blink, use the +/- keys to adjust its value. Press OK to select the adjusted value.

Toggle to "End" and press OK to exit the installation parameter menu.

J0: °C/°F Temperature display section.
J1: Hot/Cold regulation mode. Select Hot for Heating, Cold for cooling.
Cy: Proportional Integral regulation time cycle, value in minutes (default: 15 minute cycle).
bp: Proportional Integral regulation band amplitude value in degrees °C/°F (default: 2.0°C/3.6°F).
J4: NO/NC Normally Open or Normally Close actuator selection.
    NC: If using an isolation relay and/or a relay box.
    NO: if connecting to a Watts Zone Valve control.
J5: Select PMP (Pump Maintenance Program) to perform a 1 minute exercise everyday.
J6: Air: Air (room) setpoint. Displays air temperature with floor low (FL) and high (FH) limits.
    Flr: Floor (external sensor) setpoint. Displays floor temperature without floor low/high limits. Air temperature is not a control boundary.
J7: rEG (proportional Integral) or HYs (0.3°C Hysteresis) regulation type selection.
Cp: Proportional Integral regulation temperature compensation value in °C/°F (default: 2.0°C/3.6°F).
Ao: Air Sensor offset adjustment (default: no offset), display measure air sensor value.
Fo: Floor sensor offset adjustment (default: no offset), display measure floor sensor value.
FL: Floor temperature LOW limitation (default: 5°C/41°F), effective only if floor sensor present and set **J6** to **Air**.
FH: Floor temperature HIGH limitation (default: 28°C/82°F), effective only if floor sensor present and set **J6** to **Air**.
CLr: Press **OK** to reset to factory defaults.
End: Press **OK** to exit installation parameters.
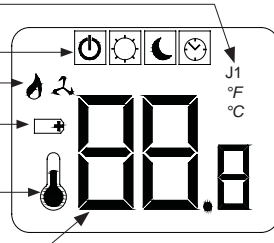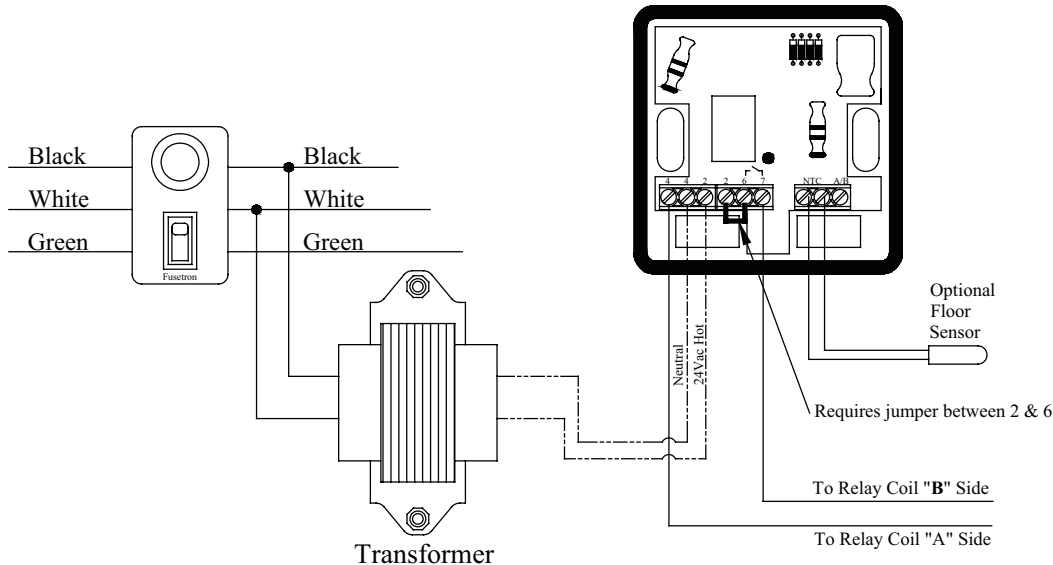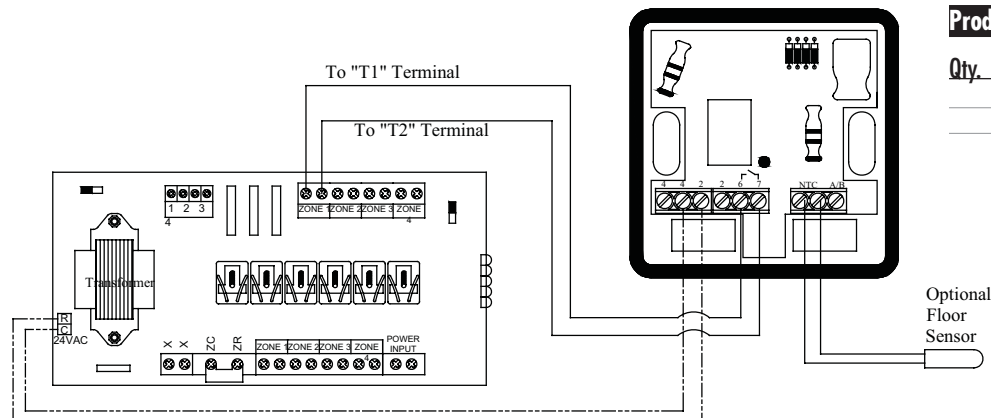
Operation Parameter (see chart for details)

Operating Mode Menu
(power, comfort, set-back, timer)

Heat/Cool Operation Indicator

Low Battery

Indicates Display is Showing
Current Temperature

Shows Measured or Set Temperature

J1
°F
°C

Digital DualTemp with Transformer and Relay

Black
White
Green

Black
White
Green

Fusetron

Neutral
24Vac Hot

Optional
Floor
Sensor

Requires jumper between 2 & 6

To Relay Coil "**B**" Side

To Relay Coil "A" Side

Transformer

Digital DualTemp with Third Party Relay Box

To "T1" Terminal

To "T2" Terminal

ZONE 1 ZONE 2 ZONE 3 ZONE

Transformer

R
C
24VAC

X X ZC ZR ZONE 1 ZONE 2 ZONE 3 ZONE POWER INPUT

Optional
Floor
Sensor

Product Options

Qty.	Description	Part #	Order #
	DualTemp, 24V Digital, Air/Floor	P-3285	81009395
	Floor Sensor, 10K	500802	81000505

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