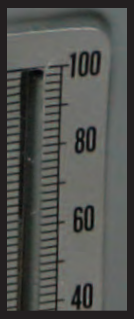
BERKO®

A Marley Engineered Products Brand







# Thermostats and Controls

THERMOSTATS

# ELECTRONIC DIGITAL LINE VOLTAGE




| CATALOG NO. | TH300024 | TH36004 | TH400024 | TH110DPP |
|---|---|---|---|---|
| **Action** | Triac: Silent Operation | Electronic Switch | Triac: Silent Operation | Microprocessor |
| **Type** | 12.5A Resistive 2 wire SPST | 15 A Resistive 4 wire DPST | 16.7A Resistive 2 wire SPST | 16.7 A Resistive 4 wire DPST |
| **Watt Rating** | Minimum: 2 amp load | No minimum load | Minimum: 2 amp load | No minimum load |
| **120V** | 1500 watts | n/a | 2000 watts | n/a |
| **208V** | n/a | n/a | n/a | 3000 watts |
| **240V** | 3000 watts | 3600 watts | 4000 watts | 4000 watts |
| **277V** | n/a | n/a | n/a | n/a |
| **Pilot Duty** | No | No | No | No |
| **Range (ºF)** | 40ºF to 85ºF | 40ºF to 85ºF | 40ºF to 85ºF | 40ºF to 85ºF |
| **Differential** | Accuracy: Within +/- 0.27ºF | Accuracy: Within 1ºF of setpoint | Accuracy: Within +/- 0.27ºF | Accuracy: Within 1ºF of setpoint |
| **Features** | Digital, non-programmable 12.5amp model delivers exceptional accuracy. Ideal for radiant ceiling panels, and baseboard. Not for fan-forced heaters. | Digital, non-programmable model delivers exceptional accuracy. Ideal for radiant ceiling panels, and baseboard. Can be used for fan-forced heaters.. | Digital, programmable high capacity model delivers exceptional accuracy. Ideal for radiant ceiling panels, and baseboard. Can be used for fan-forced heaters and resistive loads. | Digital, programmable model delivers exceptional accuracy. Ideal for radiant ceiling panels, and baseboard. Can be used for fan-forced heaters. |

THERMOSTATS

# ELECTRONIC DIGITAL LOW VOLTAGE





| CATALOG NO. | T8775A1009 | T8775C1005 | TH5220D1003 | LT186F01 |
|---|---|---|---|---|
| **Action** | Electronic Switch | Electronic Switch | Electronic Switch | Microprocessor |
| **Type** | 24 volt .015 -1.0A @ 30V 2-wire | 24 volt .015 -1.0A @ 30V 2-wire | 24 volt .015 -1.0A @ 30V 5-wire | Wall thermistor |
| **Watt Rating** | | | | |
| **120V** | n/a | n/a | n/a | 22A |
| **208V** | n/a | n/a | n/a | 22A |
| **240V** | n/a | n/a | n/a | 22A |
| **277V** | n/a | n/a | n/a | 19A |
| **Pilot Duty** | 24VAC | 24VAC | 24VAC | n/a |
| **Range (ºF)** | 40ºF to 90ºF | 40ºF to 90ºF | 40ºF to 90ºF | 40ºF to 90ºF |
| **Differential** | Accuracy: Within 1ºF of setpoint | Accuracy: Within 1ºF of setpoint | Accuracy: Within 1ºF of set | Accuracy Within 1ºF of setpoint |
| **Features** | Digital, non-programmable 24 volt "Round" model delivers exceptional accuracy. (Heat Only) | Digital, non-programmable 24 volt "Round" model delivers exceptional accuracy. (Heat and Cool) | Digital, 24volt programmable 2 stage 5-7 wire heat and cool thermostat. One touch temperature control with exceptional accuracy. Ideal for plenum heaters, and HVAC systems. | Proportional and Integral non-programmable electronic room sensor thermostat with set point capability, providing exceptional accuracy. Transmits actual temperature to a LTR relay. |

THERMOSTATS

# LINE VOLTAGE

| CATALOG NO. | MS26 MD26 | M601W M602W | M601TPW M602TPW | M611W M612W |
|---|---|---|---|---|
| **Action** | Snap Action | Snap Action | Snap Action | Snap Action |
| **Type** | SPST DPST | SPST DPST | SPST DPST | SPST DPST |
| **Amp Rating** | Model MD26 has Positive OFF | Model M602W has Positive OFF | Model M602TPW has Positive OFF | Model M612W has Positive OFF |
| **120V** | 22A | 22A | 22A | 22A |
| **208V** | 22A | 22A | 22A | 22A |
| **240V** | 22A | 22A | 22A | 22A |
| **277V** | 18A | 18A | 18A | 18A |
| **Pilot Duty** | No | Yes 125VA | Yes 125VA | Yes 125VA |
| **Range (ºF)** | 50ºF to 80ºF | 45ºF to 75ºF | 45ºF to 75ºF | 45ºF to 75ºF |
| **Differential** | +/- 5ºF | +/- 4ºF | +/- 4ºF | +/- 2 1/2ºF |
| **Features** | These economy thermostats are the snap action type that are used in apartment construction. Good thermostat for its value. Ideal for radiant cove heaters and baseboard. | These bi-metal snap action thermostats are sensetive. Large knob allow for easy adjustment. | Same as M601W and M602W except the cover mounting cover offer tamper proof feature. | Built-in heat anticipator assures closer control of room temperature. These snap action thermostats are more sensitive that |

THERMOSTATS

# LINE VOLTAGE


| CATALOG NO. | M600MTP | M600S | T100 T200 | WR651 WR661 |
|---|---|---|---|---|
| **Action** | Modulation (2 stage) | Simultaneous switching (double ckt) | Snap Action with Heat Anticipator | Creep (Hydraulic) Action |
| **Type** | DPST | | SPST DPST | SPST DPST |
| **Watt Rating** | | | | |
| **120V** | 22A | 22A | 22A | 22A |
| **208V** | 22A | 22A | 22A | 22A |
| **240V** | 22A | 22A | 22A | 22A |
| **277V** | 18A | 18A | 18A | na |
| **Pilot Duty** | Yes 125VA | Yes 125VA | Yes 125VA | No |
| **Range (ºF)** | 50ºF to 80ºF | 50ºF to 80ºF | 50ºF to 90ºF | 40ºF to 85ºF |
| **Differential** | Accuracy: Within 3ºF of setpoint | Accuracy: Within 3ºF of setpoint | +/- 2 1/2ºF | +/- 2ºF |
| **Features** | One thermostat controls two separate heating circuits and reduces input during light load periods. Second stage activates when temperature drops to approx. 1 1/2ºF below the first stage turn-ON temperature. | Simultaneous control of two heating loads. Used where the total load slightly exceeds capacity of a single switch, where two thermostats are impractical. Both switches are calibrated to operate at approx. the same temperature. | Line voltage thermostat with everything; Performance, reliability, durability, and a large knob. Built-in heat anticipation assures close temperature regulation. Large knob for easy rotation. | Extra-sensitive element in control knob senses radiant heat as well as air temperature for ultimate control. May cause slight radio or television interference in outlying fringe areas. |

# DIGITAL THERMOSTATS AND CONTROLS

| HEATER TYPE | 2500 SERIES BASEBOARD | HBB/OBD BASEBOARD | LARGE WALL HEATER | SMALL WALL HEATER | SMALL WALL HEATER | REGISTER WALL HEATER | TOE SPACE HEATER |
|---|---|---|---|---|---|---|---|
| **Heater Series** | **2500 Series BKOC** | **HBB OBD** | **FRC FRA VFK** | **SRADSAG SRADS** | **CRA SED 1235 & 2400** | **GFR, QFG** | **QTS** |
| Refer to the Notes Section where specified | See Note 1 | | See Note 2 | See Note 3 | See Note 4 | | See Note 6 |
| **Thermostats below are electronic with digital display.** | | | | | | | |
| TH110DPP | Yes | Yes | The electronic | No | See model | See model | Yes |
| TH300024 | Yes | Yes | thermostats are not | No | selection | selection | No |
| TH36004 | Yes | Yes | recommended | No | chart. | chart. | Yes |
| TH400024 | Yes | Yes | for this heater | No | | | Yes |
| TH522D1003 | No | No | | No | | | No |
| **Thermostats listed below are of mechanical type and want to control temperature setting manually.** | | | | | | | |
| MS26 | Yes | Yes | See model | No | See model | See model | Yes |
| MD26 | Yes | Yes | selection chart for | No | selection | selection | Yes |
| M601W | Yes | Yes | the recommended | Yes | chart. | chart. | Yes |
| M601TPW | Yes | Yes | thermostat | Yes | | | Yes |
| M602W | Yes | Yes | | No | | | Yes |
| M602TPW | Yes | Yes | | No | | | Yes |
| M611W | Yes | Yes | | No | | | Yes |
| M612W | Yes | Yes | | No | | | Yes |
| M600S<br>M600MTP | These stats are used when there are two elements to control. Two-stage operation and modulating type. Not normally used for above products. | | | | | | |
| T100 | Yes | Yes | See model | Yes | See model | See model | Yes |
| T200 | Yes | Yes | selection chart for | No | selection | selection | Yes |
| WR651 | Yes | Yes | the recommended | No | chart. | chart. | Yes |
| WR661 | Yes | Yes | thermostat | No | | | Yes |
| **Thermostats below are more commercial / Industrial and not normally used on residential applications.** | | | | | | | |
| WT11A | No | Yes | See model | No | No | No | No |
| WT12A | No | Yes | selection chart for | No | No | No | No |
| WR80 | Yes | Yes | the recommended | No | No | No | No |
| WR80EP | No | No | thermostat | No | No | No | No |
| **Thermostats below are low voltage (18 to 26 volts) See note #6 below.** | | | | | | | |
| T8775A1009 | Yes | Yes | No | No | No | No | No |
| T8775C1005 | Yes | Yes | No | No | No | No | No |
| **Electronic transformer relays with built-in transformer.** | | | | | | | |
| LTR1120<br>LTR208240<br>LTR1277<br>LTR2240 | Highlighted items are “Subject to Stock Availability” | | | | | | |
| LT186F01 | Yes | Yes | Yes | Yes | | Yes | Yes |

† For infrared type heaters, controls may be different for the type of element used. Contact Technical Services for recommendation.

Note 1: Electronic thermostats have amperage minimums and each model has different voltage requirements, please check catalog thermostat specifications.

Note 2: FRC, FRA, and K Series models require the removal of the internal thermostat and wire wall thermostat in its place for proper fan operation. See THERMOSTAT MODEL SELECTION (page 6) for specific thermostat.

Note 3: SRADSAG and SRADS Series models require the removal of the internal thermostat from unit. Wire wall thermostat for proper fan operation. See THERMOSTAT MODEL SELECTION (page 6) for specific thermostats.

Note 4: CRA, SED, 1235, and 2400 Series models require the removal of the internal thermostat from unit. Wire wall thermostat for proper fan operation. See THERMOSTAT MODEL SELECTION (page 6) for specific thermostats.

Note 5: Low voltage thermostats operate in conjuction with low voltage control systems using relays. Compatible with all standard 24V two wire thermostats. Can accept analog signal of 0-10 VDC.

Note 6: The 1100watt units can use either single pole or double stats. The higher wattage, 1500watt, must use a double pole stat. (3 conductors from stat to heater) See website for further details.

Note 7: FFCH and EFF Series models require different thermostats based on internal wiring. Wire wall thermostat for proper fan operation. See THERMOSTAT MODEL SELECTION (page 6) for specific thermostats. Can not use digital thermostats with this unit.

Note 8: Due to the complexity of wiring variations for remote wall thermostats with these products, we recommend that you contact Technical Services for assistance.

Note 9: Remove internal thermostat and wire wall thermostat in its place for proper fan operation.

Note 10: Thermostat wire to the two white wires on the heater.

Note 11: Wire wall thermostats as directed in the Installation Manual for proper fan operation.

**Technical Services Contact Information**
Phone: 800-452-4328
email: meptechsupport@marleymep.com

| | CEILING HEATER | CABINET UNIT HEATER | UNIT HEATER | PLENUM HEATER | ALUMINUM AND STEEL CONVECTORS | COVE RADIANT | CP RADIANT | RP & RS INFRARED HEATERS* | INDUSTRIAL RADIANT |
|---|---|---|---|---|---|---|---|---|---|
| | **FFCH QFF QCH** | **HUHAA UH** | **CUH900** | **BPH** | **All Series** | **RCC** | **CP** | **RP & RS** | **M, N, and L** |
| | See note 7 | See note 8 | | | See note 8 | | | | |
| **Thermostats below are electronic with digital display.** | | | | | | | | | |
| | See model selection chart. | Contact Tech Services for assistance | Yes | No | Contact Tech Services for assistance | Yes | Yes | † | † |
| | | | No | No | | Yes | Yes | † | † |
| | | | Yes | No | | Yes | Yes | † | † |
| | | | Yes | No | | Yes | Yes | † | † |
| | | | No | Yes | | No | No | † | † |
| **Thermostats listed below are of mechanical type and want to control temperature setting manually.** | | | | | | | | | |
| | See model selection chart. | Contact Tech Services for assistance | No | No | Contact Tech Services for assistance | Yes | Yes | † | † |
| | | | No | No | | Yes | Yes | † | † |
| | | | Yes | No | | Yes | Yes | † | † |
| | | | Yes | No | | Yes | Yes | † | † |
| | | | Yes | No | | Yes | Yes | † | † |
| | | | Yes | No | | Yes | Yes | † | † |
| | | | Yes | No | | Yes | Yes | † | † |
| | | | Yes | No | | Yes | Yes | † | † |
| | See model selection chart. | Contact Tech Services for assistance | Yes | No | Contact Tech Services for assistance | Yes | Yes | † | † |
| | | | Yes | No | | Yes | Yes | † | † |
| | | | No | No | | Yes | Yes | † | † |
| | | | No | No | | Yes | Yes | † | † |
| **Thermostats below are more commercial / Industrial and not normally used on residential applications.** | | | | | | | | | |
| | Yes | Contact Tech Services for assistance | Yes | No | Contact Tech Services for assistance | No | Yes | † | † |
| | No | | Yes | No | | No | Yes | † | † |
| | Yes | | Yes | No | | Yes | Yes | † | † |
| | No | | No | No | | No | No | † | † |
| **Thermostats below are low voltage (18 to 26 volts) See note #6 below.** | | | | | | | | | |
| | No | No | Yes | No | Yes | Yes | Yes | † | † |
| | No | No | Yes | Yes | Yes | Yes | Yes | † | † |
| **Electronic transformer relays with built-in transformer.** | | | | | | | | | |
| | Yes | Yes | Yes | No | Yes | Yes | Yes | † | † |

# THERMOSTAT MODEL SELECTION

From Notes 2, 3, 4 and 7 (see page 4)

| HEATER MODEL | WALL THERMOSTAT |
|---|---|
| FRC1512 | M601W |
| FRC3180 | M601W |
| FRC4020 | M601W |
| FRC4024 | M601W |
| FRC4027 | M601W |
| FRC3027 | M601W |
| FRC4820 | M601W |
| FRC4824 | M601W |
| FRC4827 | M601W |
| FRC40203 | NA |
| FRC40243 | NA |
| **NOTE**: See note 10, pg. 4. | |
| SRA1012DSAG | M601W |
| SRA1512DSAG | M601W |
| SRA1812DSAG | M601W |
| SRA2024DSAG | M601W |
| SRA2027DSAG | M601W |
| SRA1527DSAG | M601W |
| SRA2020DSAG | M601W |
| **NOTE**: See note 10, pg. 4. | |
| SRA1012DS | M601W |
| SRA1512DS | M601W |
| SRA1812DS | M601W |
| SRA2024DS | M601W |
| SRA2027DS | M601W |
| SRA1527DS | M601W |
| SRA2020DS | M601W |
| **NOTE**: See note 10, pg. 4. | |
| FRA1512 | M602W |
| FRA1812 | M602W |
| FRA4024 | M602W |
| FRA4027 | M602W |
| FRA3027 | M602W |
| FRA4020 | M602W |
| FRA4824 | M602W |
| FRA4827 | M602W |
| FRA4820 | NA |
| **NOTE**: See note 10, pg. 4. | |
| GFR1500 | TH400024, M601W, M611W, T100, WR651 |
| GFR2004 | TH110DPP, TH400024, TH300024, M602W, M612W, T200, WR661 |
| GFR2404 | TH110DPP, TH400024, TH300024, M602W, M612W, T200, WR661 |
| GFR1500T2 | TH400024, M601W, M611W, T100, WR651 |
| GFR2004T2 | TH110DPP, TH400024, TH300024, M602W, M612W, T200, WR661 |
| GFR2404T2 | TH110DPP, TH400024, TH300024, M602W, M612W, T200, WR661 |
| QFG1512IFM | TH400024, M601W, M611W, T100, WR651 |
| QFG2024IFM | TH110DPP, TH400024, TH300024, M602W, M612W, T200, WR661 |
| QFG2224IFM | TH110DPP, TH400024, TH300024, M602W, M612W, T200, WR661 |
| QFG2228IF | M602W, M612W, T200, WR661 |
| QFG1512T2M | TH400024, M601W, M611W, T100, WR651 |
| QFG2024T2M | TH110DPP, TH400024, TH300024, M602W, M612W, T200, WR661 |
| QFG2224T2M | TH110DPP, TH400024, TH300024, M602W, M612W, T200, WR661 |

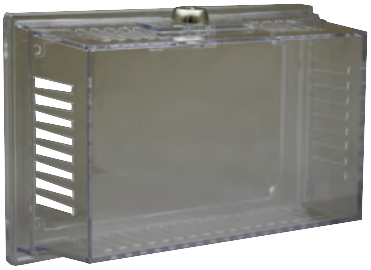
| HEATER MODEL | WALL THERMOSTAT |
|---|---|
| VFK151 | M602W |
| VFK204 | M602W |
| VFK304 | M602W |
| VFK404 | M602W |
| VFK484 | M602W |
| **NOTE**: See note 10, pg. 4. | |
| SED1012C | TH400024, TH300024, M601W, M611W, T100, WR651 |
| SED1024C | TH110DPP, TH400024, TH300024, M602W, M612W, T200, WR661 |
| SED1512 | TH400024, TH300024, M601W, M611W, T100, WR651 |
| SED2024 | TH110DPP, TH400024, TH300024, M602W, M612W, T200, WR661 |
| ECP1024 | TH110DPP, TH400024, TH300024, M602W, M612W, T200, WR661 |
| ECP1524 | TH110DPP, TH400024, TH300024, M602W, M612W, T200, WR661 |
| CRA1512IF | TH400024, M601W, M611W, T100, WR651 |
| CRA2028IF | M602W, M612W, T200, WR661 |
| CRA2024IF | TH110DPP, TH400024, TH300024, M602W, M612W, T200, WR661 |
| CRA2224IF | TH110DPP, TH400024, TH300024, M602W, M612W, T200, WR661 |
| CRA1512T2 | TH400024, M601W, M611W, T100, WR651 |
| CRA2024T2 | TH110DPP, TH400024, TH300024, M602W, M612W, T200, WR661 |
| CRA2224T2 | TH110DPP, TH400024, TH300024, M602W, M612W, T200, WR661 |
| 1235 | TH400024, M601W, M611W, T100, WR651 |
| 1235P | TH400024, M601W, M611W, T100, WR651 |
| 2435 | TH110DPP, TH400024, TH300024, M602W, M612W, T200, WR661 |
| 2435P | TH110DPP, TH400024, TH300024, M602W, M612W, T200, WR661 |
| FFCH548 | MS26, M601W |
| FFCH542 | TH400024, MS26, M601W |
| FFCH547 | MS26, M601W |
| FFCH558 | MS26, M601W |
| FFCH552 | MS26, M601W |
| FFCH557 | MS26, M601W |
| **NOTE**: See note 11, pg. 4. | |
| QFF1500 | TH400024, MS26, M601W |
| QFF3007 | MS26, M601W |
| QFF4008 | MS26, M601W |
| QFF4004 | TH400024, MS26, M601W |
| QFF4007 | MS26, M601W |
| QFF4804 | MS26, M601W |
| QFF4807 | MS26, M601W |
| **NOTE**: See note 12, pg. 4. | |
| QCH1101 | TH400024, TH300024, M601W, MS26 |
| QCH1151 | TH400024, M601W, MS26 |
| QCH1202 | TH400024, TH300024, M601W, MS26 |
| QCH1207 | TH400024, TH300024, M601W, MS26 |
| **NOTE**: See note 12, pg. 4. | |

# SPECIALTY CONTROLS


| CAT. NO. | VOLT | AMPS |
|---|---|---|
| LTR1120 | 120V | 22A |
| LTR208240 | 208/240V | 22A |
| LTR1277 | 277V | 19A |

| CATALOG NO. | WR80 | WR80EP | WT11A WT12A | LTR SERIES |
|---|---|---|---|---|
| **Action** | Snap Action Switch | Snap Action Switch | Positive snap action switch | Electronic Relays |
| **Type** | SPST | SPST | SPDT | Microprocessor base design |
| **Amp Rating** | | | Nema 4X rated | These electronic relays have been designed for silent control of high voltage resistive loads from a low voltage control circuit. Inductive motor loads can also be controlled (120V to 240V only). Compatible with 24V thermostats and accepts analog signal of 0-10V DC. |
| **120V** | 25A | 25A | 25A n/a | |
| **208V** | 22A | 22A | 25A | |
| **240V** | 22A | 22A | 25A | |
| **277V** | 18A | 18A | 22A | |
| **Pilot Duty** | Yes 125VA | Yes 125VA | Yes 125VA | |
| **Range (ºF)** | 40ºF to 90ºF | 40ºF to 90ºF | 40ºF to 110ºF | |
| **Differential** | +/- 3ºF | +/- 3ºF | +/- 2 1/2ºF | |
| **Features** | Rugged design for garages, factories, warehouses and similar commercial and industrial installations. The WR80 can control several heaters by using an external contactor. | This explosion proof room thermostat is suitable for Class 1, Group D and Class II, Groups E, F, and G locations. | Nema 4X weatherproof enclosure. The control has a SPDT output and can be used for heating or cooling (ventilation) Multi-positional mounting offers flexibility in new or existing installations. | The relays can be used with model LT186F01 electronic room sensor, providing proportional and integral control. Also can be tied to building management systems. |

# SPECIALTY CONTROLS




| CATALOG NO. | LTR2240 | TC1 | M600THW M600THB |
|---|---|---|---|
| **Action** | Dual Silent Relay | Enclosure protection for thermostats. | M600THW -White thermostat cover with built-in thermometer. For M600 Series stats. |
| **Type** | 2 single pole switches. | Material: Impact resistant polycarbonate. Clear. Dimensions are: 7"L X 4.28"H X 2.75" D | |
| **Watt Rating** | Resistive Inductive | | M600THB - Beige thermostat cover with built-in thermometer. For M600 Series stats. |
| **120V** | N/A | Thermostat enclosure kits are designed to protect the thermostat. Circulating slots allow airflow for proper operation. Guards are lockable and a key is provided to maintain security. | |
| **208V** | 25A 1HP, 8.8A | | Minimum 50pcs |
| **240V** | 25A 1HP, 8A | | Allow 4 weeks. |
| **277V** | N/A | | |
| **Pilot Duty** | Yes 125VA | | |
| **Range (ºF)** | Can be operate in 20 to 140ºF | | |
| **Differential** | Accuracy: Within 1.5ºF of setpoint | | |
| **Features** | This dual level temperature relay may be used to operate two separate heating loads by means of a single low voltage thermostat. Relay is mounted in an enclosure. | | |