Water Heater and Pool Pump Switch with measurement and verification

**Device Features**
- Cost effective two-way remote controllable & programmable
- Over four million individual addresses with remote programmability
- Visual indicators
- Remote test functions
- All devices are pre-wired for installation
- Devices are pre-programmed per customer specifications
- Ability to record and transmit Host Voltage, Amperage and Line
- Frequency of a load at predetermined customizable intervals and report that data on request
- Remote auditing and load shed verification and reporting
- Internal Diagnostics
- Cold Load Pick-up
- Receiver Visual Indicators
- Historical Event Counters
- Local override and opt-out-Secondary Option

**Power Provider Functionality**
- Control strategies may be defined for each group, subgroup, or individual devices
- Devices may be assigned to multiple sets of groups and subgroups
- On-board intelligence for smooth ramp-in and ramp-out of control across the population of devices
- Events in progress may be interrupted with a smooth ramp-out across the population of devices
- Customizable control events from various shed/cycling strategies
- Control events may be targeted for each or all group, subgroup, or individual devices
- Non-volatile data storage has capacity for over 30 days data when recorded at 15 minute intervals

**Mounting Bracket**
**LED Indicators**

**SPECIFICATIONS**

- ½” Seal Tight or ¾” NPT
- Meter Seal
- Mounting Brackets
<table>
<thead>
<tr>
<th>Circuitry:</th>
<th>Microprocessor-controlled</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-Volatile Memory:</td>
<td>512K EEPROM</td>
</tr>
</tbody>
</table>

**COMMUNICATION OPTIONS**

<table>
<thead>
<tr>
<th>Type:</th>
<th>Cisco 900 MHz Mesh Networks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regulatory Compliance:</td>
<td>FCC</td>
</tr>
<tr>
<td>Type:</td>
<td>Cellular Dual-band CDMA 800 /1900 MHz</td>
</tr>
<tr>
<td></td>
<td>Built in UDP/TCP/IP stack</td>
</tr>
<tr>
<td>Other Communication Paths Available:</td>
<td>Zigbee</td>
</tr>
</tbody>
</table>

**DIRECT LOAD CONTROLLER MEASUREMENTS**

<table>
<thead>
<tr>
<th>2-Wire or 3-Wire Single-Phase Measurements</th>
<th>Range: 192 - 288 VAC RMS</th>
</tr>
</thead>
<tbody>
<tr>
<td>RMS Voltage:</td>
<td>Range: 0 - 30 A RMS</td>
</tr>
<tr>
<td>Frequency:</td>
<td>Range: 47 - 63 Hz</td>
</tr>
</tbody>
</table>

**ADDRESS CODES**

<table>
<thead>
<tr>
<th>Individual Address:</th>
<th>4,194,304 (222) possibilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Common Individual Address:</td>
<td>Common to all units</td>
</tr>
<tr>
<td>Extended Address:</td>
<td>16,384 (214) possibilities</td>
</tr>
<tr>
<td>Upper Address:</td>
<td>128 (27) possibilities</td>
</tr>
<tr>
<td>Lower Address:</td>
<td>128 (27) possibilities</td>
</tr>
<tr>
<td>Address Assignment (Remote):</td>
<td>From one up to 8 upper and associated lower extended addresses</td>
</tr>
<tr>
<td>Address Function:</td>
<td>Controls load (Interrupts/Restores relay contact)</td>
</tr>
</tbody>
</table>

**RELAY**

<table>
<thead>
<tr>
<th>Relay Output: 2 wires</th>
<th>12 gauge via the device’s ½” flexible conduit fitting or ¾”MNPT, Length and fitting specified at time of order, One (1) Form B Contacts with a rating of 30 amps @ 240</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relay Rating:</td>
<td>VAC (Resistive Load) – other relay options available</td>
</tr>
<tr>
<td>Wire Insulation:</td>
<td>600V, 105°C (220°F)</td>
</tr>
<tr>
<td>Time Out Duration:</td>
<td>One of 16 preprogrammed intervals from 6 minutes to 120 minutes</td>
</tr>
<tr>
<td>Time Out Tolerance:</td>
<td>±10 seconds, +20%/-0%, ±20%, user selectable</td>
</tr>
<tr>
<td>Test-on Duration Selection:</td>
<td>Via codes</td>
</tr>
</tbody>
</table>

**TEST FUNCTIONS**

**Receiver Operation Including**

<table>
<thead>
<tr>
<th>Relay Coil Continuity:</th>
<th>LED indication in response to test command signal from a handheld transmitter or load management system transmitter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Propagation Test on LED:</td>
<td>LED indication in response to propagation test signal or load management system transmitter</td>
</tr>
</tbody>
</table>
LED INDICATIONS
Steady State: FUNCTIONS INDICATED
Receiver Operation Check - Test Command

Duration (Test Commands Only): One of eight remotely programmable times from 2 seconds to 1 hour
Specified at time of order

Blink State: Whenever relay is interrupted.

POWER REQUIREMENTS

- Power Input: 240VAC ±20% (192-288); 60 Hz
- Input Power Connection: (2 Black) wires 18 gauge via the device’s fitting conduit
- Wire Insulation: 600V, 105°C (220°F)
- Wire: 18 gauge standard UL 1015
  Length specified at time of order
- Internal DC Power: +5VDC derived from 240 VAC/10 VAC step down transformer
- Power Consumption: 7.5 watts maximum at 240 VAC with full load

CONTROL DEVICE ENCLOSURE

- Type: High-impact molded Lexan® with neoprene enclosure gasket for raintight operation. Meets NEMA IV requirements with gasket and snap latch construction. Provision for utility meter seal.
- Dimensions: 6 3/8 “ X 8 3/8” X 2 7/8” – 1.2 lbs
- Mounting: Mount in an upright position direct to air conditioner housing or to conduit box. Hangers are a part of the casing, required area is 8” X 8 3/8” X 8 1/2”.
- Tinted Lid: For LED observation

OPERATING ENVIRONMENT

- Relative Humidity: Up to 95% (non-condensing)
- Operating Temperature: -30 °C to 70 °C
- Storage Temperature: -40 °C to 85 °C

MISCELLANEOUS

- Surge Withstand Capability: Meets and exceeds ANSI C37.90a, 1974 requirements
- Automated Measurement and Verification Options:
  - » Verified Load Shed
  - » Remote Auditing
  - » Spinning Reserve
  - » Report Auditing
  - » Tamper Evident
  - » Reporting

All devices are 100% Factory Tested and Inspected in accordance with Factory Acceptance
Testing Procedures mutually determined with each utility.
Specifications subject to change
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INSTALLATION OPTIONS

3/4" NPT Fitting

90° Elbow

1/2" Flexible Seal Tight Fitting

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CORPORATE HQ
2111 North Molter Road
Liberty Lake, WA 99019 USA
Phone: 1.800.635.5461
Fax: 1.509.891.3355