**Installation Instructions**

**Sapphire™ Touch Screen**

Cat. No. TS807

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**Pre-Installation:**

1. **Mounting Plate and Box:**
   - **Wall:** Use Leviton’s Decorator Box and Mounting Plate, unless otherwise specified.
   - **Ceiling**:
     - Use Leviton’s Quick Connect Manifold, unless otherwise specified.

2. **Network Interface:**
   - Use mounting locations listed in the Installation section 9.4 for Network interfaces.

3. **Power Supply:**
   - **Inside North America:**
     - Use the appropriate Leviton Factory-supplied outlets.
   - **Outside North America:**
     - Use local power supply compliant with local installation guidelines.

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**System Configuration:**

- **Backbox Location Template:**
  - Determine the network type the device will communicate on by referring to the Network Configuration section 2.5.
  - Procure appropriate back-box.

- **Power Supply Installation:**
  - Determine how the device will be powered using Leviton factory-supplied outlets.
  - Outside North America, a power supply compliant with local installation guidelines.
  - Three options exist:
    - **LevitnetRF** (Leviton catalog number WIR06-01K or equivalent).
    - **WIFI Ethernet** (Leviton catalog number WIR06-01K or equivalent).
    - **Power over LumaCAN**

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**Faceplate and Decorative Clear Frame:**

- **Faceplate to Mounting Plate Screws:**
  - 4-40 x 7/16” Pan Head Screws.

- **Screws:**
  - To secure faceplate, back out face plate screws by hooking on wall using a Phillips screwdriver.

- **Faceplate Install:**
  - Pull and prepare all network and data wiring into back box and locate and install back-box slightly behind finished wall.

- **Safety Warning:**
  - Touch Screen Grounded

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**System Boot Process:**

- When power is applied the following will happen:
  - The button **Sapphire** logo will be displayed. While the device is booting, the screen may blink out several times. The complete boot process can take between 1 and 15 minutes depending on the size of your network.

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**Troubleshooting:**

- **Reset System:**
  - Press the **Reset** button which is located on the back of the Touch Screen.

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**Technical Support:**

- **Contact:**
  - For assistance with scheduling field commissioning, please contact a Field Commissioning Agent.
  - For assistance with any questions related to this device, contact **LESFieldService@Leviton.com**.

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**Warranty:**

- **Limited Warranty:**
  - Leviton warrants the Touch Screen for a period of 12 months from the date of shipment, or 26 months after shipment, whichever comes first. This Warranty is limited to repair of replacement of defective equipment returned Freight Pre-Paid to Leviton. All equipment shipped back to Leviton must be carefully and properly packed to avoid shipping damage. Replacements or repaired equipment will be returned to the sender freight Pre-Paid, F.O.B. Factory.

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**Specifications:**

<table>
<thead>
<tr>
<th>Network Information and Settings</th>
<th>Power Input Current</th>
<th>Display</th>
<th>Dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Ethernet</strong> (100Base-TX) 100mA, voltage follows input voltage</td>
<td><strong>Class 2 SELV</strong></td>
<td><strong>2.00</strong></td>
<td><strong>2.00</strong></td>
</tr>
<tr>
<td><strong>Ethernet</strong> (1000Base-TX) 100mA, voltage follows input voltage</td>
<td><strong>Class 2 SELV</strong></td>
<td><strong>4.00</strong></td>
<td><strong>4.00</strong></td>
</tr>
<tr>
<td><strong>WiFi</strong> (802.11a/b/g/n) 100mA, voltage follows input voltage</td>
<td><strong>Class 2 SELV</strong></td>
<td><strong>6.00</strong></td>
<td><strong>6.00</strong></td>
</tr>
<tr>
<td><strong>Power over LumaCAN</strong></td>
<td><strong>Class 2 SELV</strong></td>
<td><strong>9.00</strong></td>
<td><strong>9.00</strong></td>
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<tr>
<td><strong>LevitnetRF</strong></td>
<td><strong>Class 2 SELV</strong></td>
<td><strong>12.00</strong></td>
<td><strong>12.00</strong></td>
</tr>
</tbody>
</table>

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**ICC Compliance Statement:**

The intended device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- The device must not cause harmful interference.
- The device must accept any interference which may cause undesired operation.
Analog Input Connector

Background:
The analog input is provided for connection to sensors like switches, potentiometers, occupancy sensors, and photocells. Two analog inputs are provided for connection to peripherals like switches, potentiometers, occupancy sensors, and photocells.

Installation:
1. Connect the analog input to the LumaCAN™ port on the back of the unit.
2. Make sure the switch is in the “TERM” position.
3. The analog input will be floating in the “OFF” state and tied to DC common in the “ON” state.
4. Setting a switch to “OFF” will disable the analog input.

Notes:
- The analog input voltage follows input voltage.
- The analog output voltage follows input voltage.
- The analog output voltage is floating in the “OFF” state.
- The analog output voltage is tied to DC common in the “ON” state.

100/10 Base T Ethernet Termination Diagram

Background:
The 100/10 Base T Ethernet port on the back of the unit requires a TIA-568B termination for proper operation. The only difference between the standards is how the crossover patch cords are used in each of the 8 pairs. The TIA-568B standard uses a crossover patch cord in two of the 8 pairs, whereas the TIA-568A standard uses a straight-through patch cord in all of the 8 pairs.

Installation:
1. Connect the patch cord to the 100/10 Base T Ethernet port on the back of the unit.
2. The patch cord should be terminated with a standard RJ-45 plug.
3. The patch cord should be secured with a cable tie.

Notes:
- Category 5e (Leviton Cat. No. WIR5E-1K or WIR06-1K) or better wiring is required.
- TIA-568B termination required.
- Category 5 wiring may be used, but Leviton recommends Leviton Cat. No. WIR5E-1K or WIR06-1K for a better performance.

RS-485 Network Termination Diagram

Background:
The RS-485 network is most commonly used for connections to BACnet/Modbus networks. The RS-485 network on the back of the unit is a single-ended network with a common ground. The RS-485 network is not self-diagnostic, so it is recommended to monitor the network to ensure proper operation.

Installation:
1. Connect the RS-485 network to the peripheral device.
2. Use a straight-through CAT5 or better patch cord between the peripheral device and the Sapphire™.
3. The RS-485 network is a half-duplex network, so only one device can transmit at a time.

Notes:
- Leviton Cat. No. WIR5E-1K or WIR06-1K is recommended for the RS-485 network.
- TIA-568B termination required.
- Category 5 wiring may be used, but Leviton recommends Leviton Cat. No. WIR5E-1K or WIR06-1K for a better performance.

RS-485 Connector

<table>
<thead>
<tr>
<th>Pins</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>DATA IN</td>
</tr>
<tr>
<td>2</td>
<td>DATA OUT</td>
</tr>
<tr>
<td>3</td>
<td>COM</td>
</tr>
<tr>
<td>4</td>
<td>COM</td>
</tr>
</tbody>
</table>

LED's

Heartbeat
- Yellow: Standby/low power
- Green: Active
Ethernet Activity
- Red: Transmit
- Yellow: Receive
Ethernet Link
- Green: Full Ethernet Connected
- Orange: Half Ethernet Connected
AI Fault
- Red: Open circuit or short circuit
- Orange: Faulty AI input

Factory Default Switch
- Puts the device in a default state
- Press and hold for five seconds, then release, to reset to factory defaults

Ethernet Port

Connect the Ethernet port to an Ethernet switch or hub.

Figure 4

Figure 5

Figure 6

Figure 7

Figure 8

Figure 9