P1800 SYSTEM

INSTALLATION GUIDE

Guide Version: IG1800DLC-IG-R-T Rev. 2

NOTE: Inspect the Profile P1800 System components prior to installation for any damage which may have occurred during shipping. Report any damage found to Profile Systems, LLC immediately.

Installation of Profile P1800 System equipment presents potential unsafe conditions, including, but not limited to, electrical shock, improper voltage to components and improper operation that may cause personal injury or damage to property.

Installation of Profile P1800 System equipment must be performed by qualified electrical and mechanical contractors in good standing who are properly licensed to perform work in the municipality, county, and state where installation of Profile P1800 System equipment will occur. Installation practices should follow recommendations and procedures as determined by the original equipment manufacturer(s) and should adhere to the application and use of the equipment as intended by the original equipment manufacturer(s).

P1800 SYSTEM

WIRING DIAGRAM

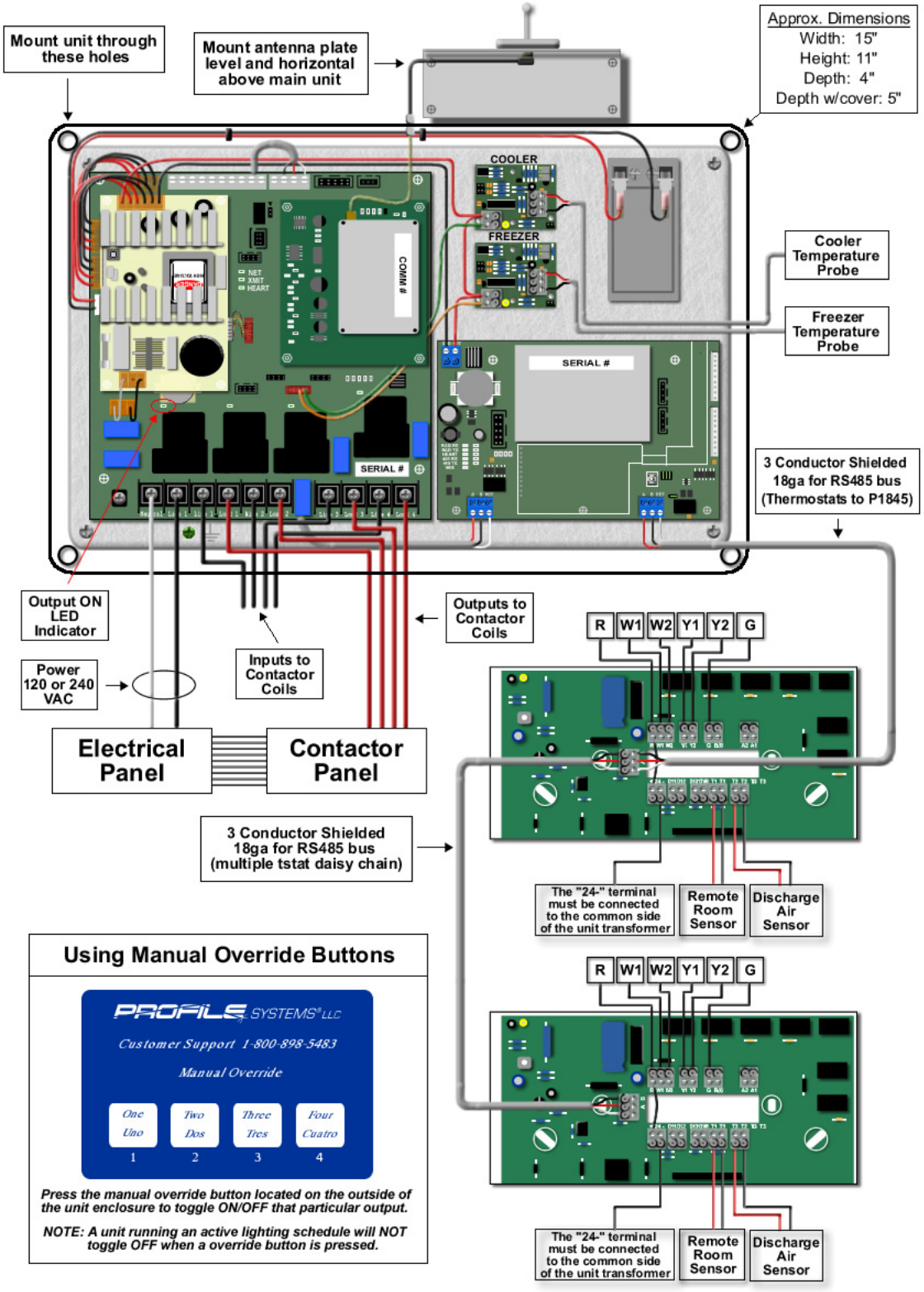

Fig. 1

1. **Mount the P1800 master unit through the corner holes (refer to Fig. 1) in a manner that satisfies the following criteria:**
   - Unit is to be mounted in a plumb and level fashion using appropriate anchoring hardware near existing lighting electrical panel and/or contactors such that high voltage wiring and conduit requirements are minimized.
   - Unit is to be mounted in an area free of any door swing radius.
   - Antenna for wireless communications is to be mounted near the main P1800 System unit in a plumb and level fashion using appropriate anchoring hardware. Weak communications signal may require the antenna to be mounted outside the facility. This will require extension of the coaxial cable to facilitate the exterior mounting location.

2. **Connect a 120vac or 240vac power source (from an independent breaker whenever possible) to "Neutral" & "Line 1" on the P1844 termination strip.**

3. **Call Profile Customer Support at 1-800-898-5483 to complete step 1 & 2 of the commissioning procedure (see "P1800 System Commissioning Procedure") before continuing installation.**

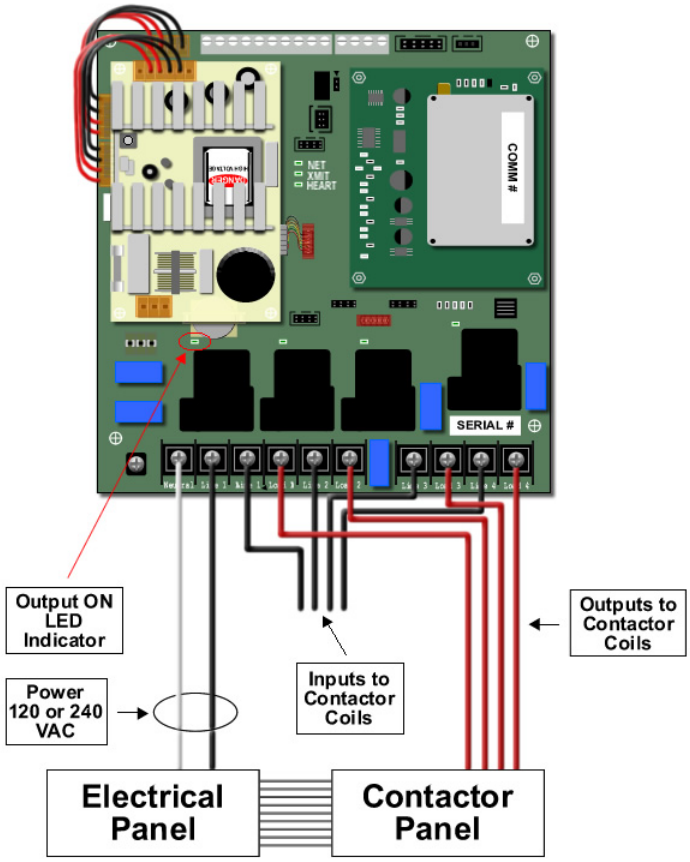

Fig. 2

4. **Complete the following steps for lighting control (refer to Fig. 2):**
   - Install jumpers to the other "Line" terminations across the P1844 termination strip as needed.
   - Connect circuits of controlled loads (i.e. exterior lighting) to the "Load" terminations on the P1844 termination strip via existing contactors as illustrated in the wiring diagram shown in Fig. 2.
   - A typical exterior lighting setup would be connected as follows:

     Circuit 1: Parking Lot Lights
     Circuit 2: Building Lights & Signage
     Circuit 3: Security Lights
     Circuit 4: Spare

5. Mount the provided thermostats and any associated equipment in a manner that satisfies one of the following criteria:

Central Location (Using remote sensors)

Thermostats are to be mounted together near the area where the P1800 System is installed. Remote room sensors are to be mounted in a plumb and level fashion in the same location as the existing thermostats or other HVAC controls. The existing equipment should be removed to allow for installation of new sensors provided that no significant physical damage to wall coverings occurs and no cosmetically unappealing evidence of alteration remains. If necessary cover plates are to be used to cover these areas.

Space Location

Thermostats are to be mounted in the space that they will control. Thermostats are to be mounted in a plumb and level fashion using appropriate anchoring hardware in the same location as existing thermostats or other HVAC controls. Installers should use existing HVAC control wiring whenever possible. Existing equipment should be removed to allow for installation of new thermostats provided that no significant physical damage to wall coverings occurs and no cosmetically unappealing evidence of alteration remains after installation is complete. If necessary cover plates are to be used to cover these areas.

6. Connect each HVAC unit with its respective thermostat using existing low voltage control wiring or provide and install new low voltage control wiring if required.

- Connect the thermostat outputs with the HVAC unit's low voltage terminal strip, including R (power), C (common), G (fan), W1 (heat 1), W2 (heat 2), Y1 (cool 1), Y2 (cool 2) as applicable. Install a jumper between the "R" and "+24" inputs on the thermostat. The "24-" input on the thermostat must be wired to the common side of the unit transformer.
- Install the supplied Discharge (Supply) Air Sensor within each HVAC unit's supply air duct, insuring that it is downstream of both the Evaporator coil and the Heat Exchanger or Electric Furnace, and wire it to the "T2" thermostat input.
- Install the supplied Remote Room Temperature Sensor in the conditioned space and wire it to the "T1" thermostat input.

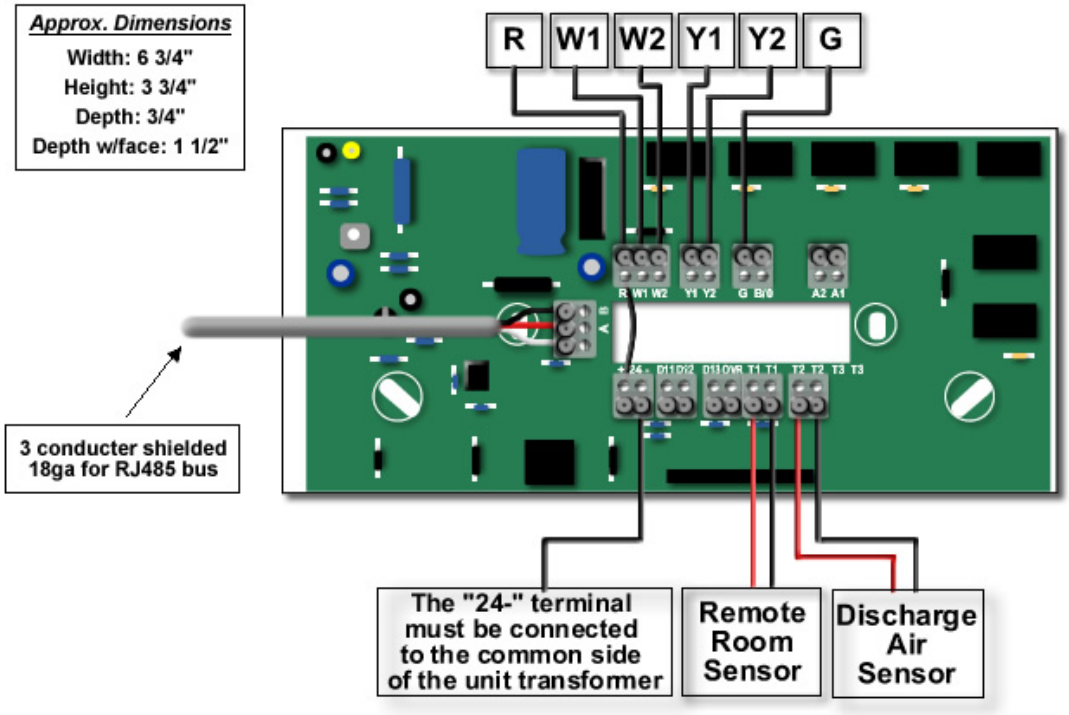

Fig. 3

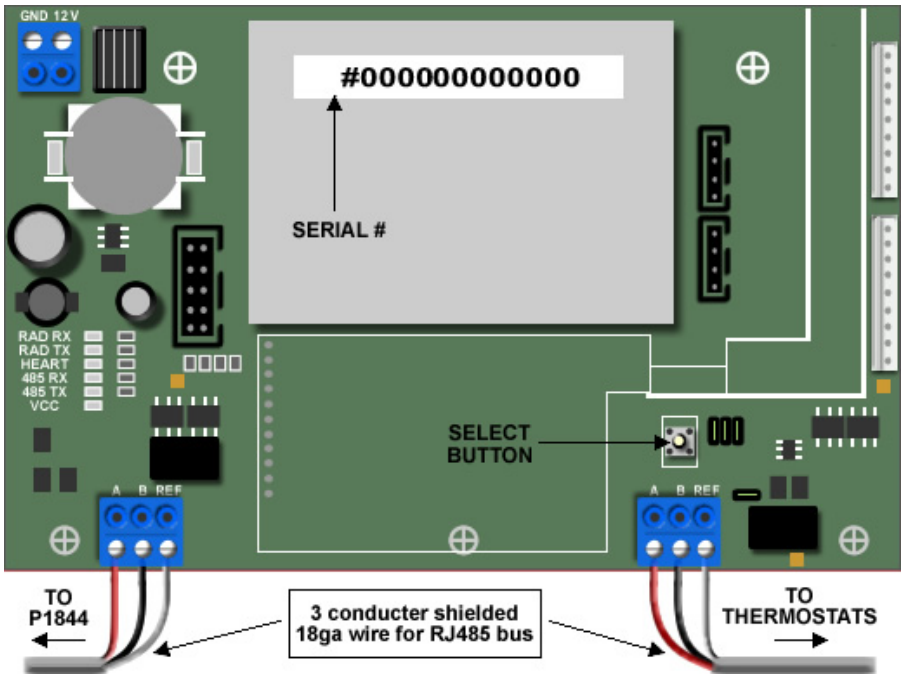

Fig. 4

7. **Connect the communications bus of the thermostats IN DAISY-CHAIN FASHION ("A" to "A", "B" to "B", "Ref" to "Ref") terminating the communications wiring at the "A"-"B"-"Ref" input on the P1845 unit.**

8. **Install temperature probes in walk-in refrigeration units for refrigeration monitoring:**
   - Install the supplied temperature probes within each refrigeration unit (walk-in cooler, walk-in freezer) behind the evaporator fan and near the ceiling such that the probes are protected from stocking shelve areas. Refrigeration unit penetrations should not exceed 3/8" and must be properly sealed (i.e. silicon-filled) after the probes are installed.
   - Wire the probe back to the inputs on the appropriate temperature transmitters using 18ga shielded wire.

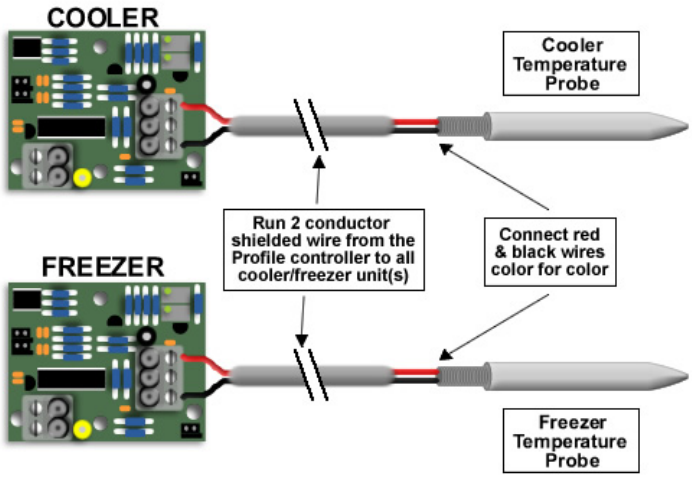

Fig. 5

9. **Call Profile Customer Support at 1-800-898-5483 to complete the commissioning procedure (see "P1800 System Commissioning Procedure").**