Tank System Controller
CTA-2045 Configuration
CA023902

Date:

Project #:

Engineer:

Prepared By:

Bid Date:

LAARS Heating Systems Company

Submittal Data

Project Name:

Location:

Contractor:

Standard Equipment

- UL508A certified control system
- CTA-2045 gateway
- 24"x24" NEMA 4 rated enclosure for indoor use
- 7" touchscreen interface
- Ten (10) RTD temperature sensors, thermal wells, and terminal junction boxes for use within the system:
  - Six (6) sets for stratified tanks
  - One (1) set for a swing tank
  - Three (3) for advanced loadup, demand response, and/or measurement & verification
- 4-Amp circuit breaker to protect 24VDC power supply & electronics

Features

- Controls up to 6 heat pumps in a cascaded system - up to 16 with additional ethernet switches
- Cascade redundancy keeps system operating if lead or any other heat pump is inoperable
- CTA-2045 grid utility gateway for remotely-managed utility control with automatic override for DHW security
- Controls multiple tanks in the stratified tank system
- Can control swing tank temperature and interrupt
- Load shift management via 24/7 fully field-adjustable schedule
- Can monitor swing tank electrical consumption when heat pump is built with the power meter that is included with the measurement and verification system option
- Three 4-20mA inputs for flow meters used for cold water makeup, domestic water recirculation return, and heat pump inlet flow
- Homescreen visually depicts system piping and distribution of tank sensors, based on user input of system configuration
- Diagnostic annunciation of each heat pump in the system
- Two separate dry contacts to control up to two back up heaters
- Two separate dry contacts to control up to two back up heater pumps
- Uses 15A 120VAC circuit

Specifications

- 120 VAC 15 Amp service
- Control Dimensions: 24"x24"x8"
- Shipping Dimensions: 31.5"x49"x21.5"
- Shipping Weight: 175 lbs
- Operating conditions:
  -4°F to 131°F (-20°C to 55°C)
  5% to 90% RH
  non-condensing
- Storage conditions:
  -22°F to 158°F (-30°F to 70°C)
  5% to 90% RH
  non-condensing