PELICAN

Model: TA1

Temperature and Alarm Sensor (Accessory)
Installation Guide

Before you start

Read Instructions: Review all steps in this guide to avoid issues.

System Requirements: The TA1 is for 24V AC systems only and must be installed by a licensed professional.

Required Components: You need a Pelican Compatible Device and a Gateway to use and setup a TA1.

Need Help?: If unsure about the setup, stop and contact Pelican Technical Support.

Safety Considerations

Disconnect electrical power to the power source and/or the HVAC equipment before starting to install any Pelican devices. Failure to follow this warning could cause electrical shock, personal injury, or damage to the controller.

What is a TA1?

The TA1 is an add-on accessory for Pelican devices. Some primary uses are:

- **Supply Temperature Monitoring**
  Connect an external thermistor to track discharge or outside air temperature.

- **Space Temperature Averaging**
  Combine with a thermostat's internal sensor for adjustable room temperature readings.

- **Remote Temperature Monitoring**
  Monitor external areas like freezers or cold boxes with optional alert notifications.

- **Dry-Contact Input for Alarm, Occupancy, Door/Window, or Flow Detection**
  Accepts dry-contact input to trigger alerts, set occupancy, detect door/window or flow status.

Turn Off Power

Turn OFF the power to the equipment this device is going to be wired to. Either power off at the circuit breaker panel or by turning off the master power at a local disconnect.
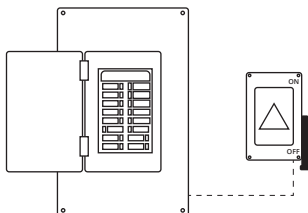
Compatible Pelican Devices

Thermostats

- Use the TA1 as the primary temperature sensor.

- Averages the temperature differences between the TA1 and thermostat.

- Monitor external temperatures such as discharge air temperature or cold box monitoring.

- Wire a dry contact into the TA1 for alarm notifications or for occupancy sensor or door/window control.
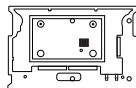
Power Control Modules

- Wire a dry contact input into the TA1 for alarm notifications or flow verification.
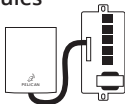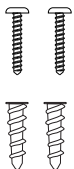
Advanced Controllers

- Wire a dry contact into the TA1 for alarm monitoring or flow verification.
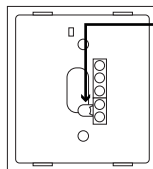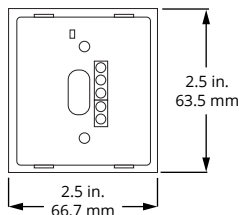
- Add an additional temperature input.

Number of TA1s per Device

Only one (1) TA1 can be wired to a compatible Pelican device.

Dimensions & Specifications

2.5 in.
63.5 mm

2.5 in.
66.7 mm

- **Power:** 24 VAC, 60 Hz, 50 mA

- **Operating Voltages:** 23 — 30 VAC

- **Input:** 10K Type II OR Dry-Contact

- **Temperature Range:** -20°F to 180°F

- **Wired Communication:** Pelican 3-wire power and communication.

- **Operating Range:** -4°F to 160°F, 5–90% RH (non-condensing)

- **Power & Data (3-Wire Connection):** Use 18-gauge thermostat wire (**maximum length: 500 feet**).

Included Parts

(2) Mounting Screws

Front Cover

Sub-Base

Removable Internal Temperature Sensor

Pelican
Wireless Systems

(2) Dry-Wall Anchors

Mounting

- **Location:** Mount on a flat surface.
- **Wiring:** Ensure 3 wires are available to connect to the thermostat. Use 18-gauge thermostat wire (**maximum length: 500 feet**).
- **Power Source:** Verify access to a 24VAC power supply.
- **Securing:** Use the provided screws to secure the TA1.

  Important: The TA1 is not waterproof. Mount it in a moisture-free location.

Terminal Block Designations

| R	⊘	24V AC Power
C	⊘	Common
D	⊘	Data
T	⊘ ⊘	Input: 10K Type 2 thermistor input. or Dry-contact input.

Wiring the TA1 to Pelican

Connect the TA1 to the R (24VAC), C (Common), and D (Data) terminals. Use wire nuts as required. Verify that all connections are secure and that no wires are nicked or damaged.

Pelican TA1
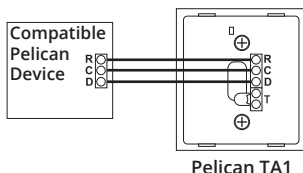
Wire

The TA1 backplate supports wiring either through from behind or the bottom of the device.
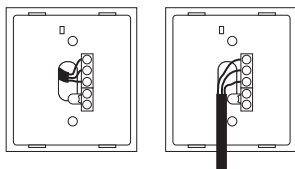

IMPORTANT

The included 10K internal sensor can be used in standard installations. For alternate methods, it **must be removed**. For external temperature sensing, use a Pelican certified external probe to ensure accuracy and compatibility.
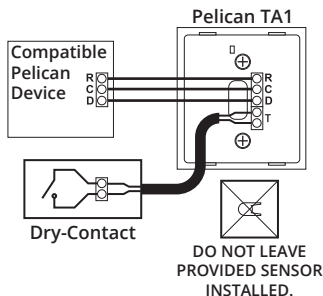
External Temperature Sensor

Remove the internal temperature sensor from the TA1 sensor's [T] terminals. Connect a 10K Type II external temperature probe to the terminals.

Maximum sensor wire length: 100 feet.

Pelican TA1

External 10K Type II Temperature Sensor

DO NOT LEAVE PROVIDED SENSOR INSTALLED.

3
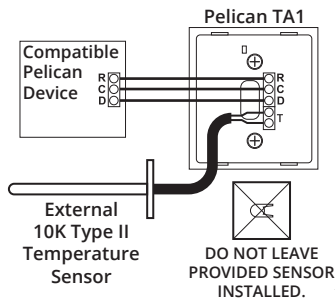
Dry-Contact Input

Remove the internal temperature sensor from the TA1's [T] terminals and connect the dry-contact output to these terminals. The dry-contact may be configured as either a normally open or normally closed relay.

Pelican TA1

Compatible Pelican Device

Dry-Contact

DO NOT LEAVE PROVIDED SENSOR INSTALLED.

Input Configurations Options

Temperature (default) – Averages with the thermostat's internal sensor. Weighting is adjustable via the Pelican Connect web app.

Temp Monitor – Provides a dedicated label and graphs for real-time and historical monitoring.

Supply Temperature – Measures discharge air temperature.

Outside Temperature – Used for sensing outdoor air temperature.

Alarm – Dry-contact input with configurable notification modes:

◦ **Always -** Notification if the contact changes state at anytime.

◦ **During: Heating -** Notification if the contact is in the incorrect state during a heating cycle.

◦ **During: Cooling -** Notification if the contact is in the incorrect state during a cooling cycle.

◦ **During: Fan -** Notification if the contact is in the incorrect state during a fan cycle.

Occupancy Sensor – Dry-contact input from a third-party sensor.

◦ **Open** - Unoccupied (setback applied)

◦ **Closed** - Occupied (scheduled setpoints active)

Door/Window Sensor – Dry-contact input to detect open/closed status.

Flow Sensor (Power and Plant Control Modules Only) – Dry-contact flow switch to monitor flow/no-flow status.

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