

AZEL TECHNOLOGIES INC.

Universal Dual Display Setpoint Temperature Controls

NEW

With the latest PWM Technologies



- Single stage
- Dual stage

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DST-777 SINGLE STAGE /DUAL STAGE SETPOINT TEMPERATURE CONTROL

DST-777 series controls are microprocessor-based electronic one or two stage setpoint temperature controls, designed to provide one or two on/off controls (Single-Pole Double-Throw (SPDT) relay output) for residential/commercial heating, cooling, air conditioning and refrigeration applications.

The DST-777 is equipped with a Dual Digital display with backlit that provides a constant readout of the sensor temperature and setpoint simultaneously as well as the other programmed settings. The front buttons allow the user to easily and accurately select the set point temperature, differential and heating/cooling mode of the operation. Unique **QuickSet** feature allows instant setpoint adjustment without entering programming mode. This reliable and versatile control has a very wide setpoint range, an adjustable differential and time delay that makes it applicable in many different applications. The single stage models have Pulse Width Modulation (PWM) control logic to prevent overshoots and undershoots in slow responding systems with large thermal mass such as pools or slabs. A sensor probe P-01 is supplied with the control. This solid state temperature sensor probe can be extended up to 500 feet.

APPLICATIONS:

The DST-777 can be used for a wide variety of applications:

- Tank Heating
- Slab thermostat for radiant floor heating
- Boiler control (used as a thermostat)
- Space and return air temperature control
- Condenser fan cycling
- Milk coolers, Chillers
- Cooling tower pump control
- Refrigerated warehouses
- Beer and beverage coolers
- Refrigerated display cases
- Walk-in and reach-in refrigerators
- Other applications: research, science, laboratory, education, aquarium, hydroponics, pools and more..

SPECIFICATIONS:

- Setpoint Temperature Range: -40 to 240°F (-40 to 116°C)
- Temperature Display Resolution: 0.1°F/0.1°C
- Differential Adjustment: 1 to 100°F (1 to 38°C)
- Anti-Short Cycle Delay: 0 to 20 min. (1-Minute increments)
- PWM Cycle Length: 30 to 1500 sec. (10-Second Increments)
- PWM Differential: 3 to 50°F (2 to 25°C)
- Accuracy: ±1°C / ±1°F
- Input: 10K ohm thermistor probe (included): P-01 (designed for strap on a pipe or insert into a temperature well)
- Operating Voltage: 120 VAC, 50/60Hz
- Relay: 1 or 2 x SPDT, 120VAC, Full Load 10A, 1Hp
- Enclosure: Flame Retardant Plastic 94V0
- Weight: 3.0 lbs
- Dimension: 6 3/8"(W) x 6 5/8"(H) x 2 3/4"(D)

FEATURES:

- Reliable Digital Electronic Accuracy
- **QuickSet** feature allows instant setpoint adjustment without entering programming mode.
- Easy-to-Read Dual Digital Display with backlit which provides constant readout of sensor temperature and setpoint simultaneously, functional status and control settings. It also allows precise setpoint and differential settings
- Simple and user-friendly programming of setpoint temperature, differential and cooling/heating modes
- EEPROM memory retains control settings in the event of a power failure
- Wide adjustable setpoint with temperature range from -40 to 240°F and differential from 1 to 100°F. This enables the user to optimize the system performance for any applications. A tighter differential can be achieved (eg. 1°F or 1°C) than conventional electromechanical controls
- Advanced PWM (Pulse Width Modulation) Control to achieve high control accuracy on single stage models.
- Choice of one or two stage models
- One or two SPDT relay outputs. Model: DST-7772 (two stage) can handle one or two sensor inputs with two setpoints. When using two sensor inputs, each setpoint can be corresponding to one relay output. (Two units in one control)
- LED indicates output relay status
- Adjustable Anti-Short Cycle Delay to ensure the output relay remains off for up to 20 minutes. This would avoid unnecessary hard start and equipment wear
- Selectable Fahrenheit or Celsius scales
- Selectable Heat or Cool modes
- Maximum and minimum memory for sensor temperature
- Lockout switch to prevent tampering by unauthorized personnel
- Remote temperature sensor which can be extended to 500 ft.
- Sensor Failure and out of range Indication
- Easy installation and setup
- Easy-Connect Screwless Terminals for sensor connection
- Backlit option: Auto (30 sec.) / OFF / ON
- Power surge protection

UNIVERSAL SENSOR PROBE (THERMISTOR)



Model: P-01

The Azel Sensor Probe is engineered to ensure long life and rapid response. It is designed to strap on a pipe or insert into a temperature well. P-01 is specially designed for use with DS-60 and other controls that require 10K ohm thermistors.

SPECIFICATIONS:

- Sheath: Copper
- Lead: 10" of 20 AWG heat resistance wire
- Dimension: 3/8" OD x 13/16" length
- Operating range: -60 to 255°F (-50 to 125°C)
- Sensor: 10K ohm @ 77°F (25°C ± 1%) thermistor

MODEL	DESCRIPTION
DST-777S	Single stage setpoint control
DST-777D	Single stage setpoint control with two relay switches
DST-7772	Two stage setpoint control with two relay switches

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