

AZEL TECHNOLOGIES INC.

Universal Digital Setpoint Temperature Controls

DST-900 DST-902 - One Stage

DST-922 - Two Stage



DST-900E/902E/922E

DST control series are microprocessor-based electronic setpoint temperature controls, designed to provide on/off controls (SPDT relay outputs) for residential/commercial heating, cooling, air conditioning and refrigeration. The DST-900/DST-902 is a One Stage Digital Setpoint Control to drive a relay (DST-902 comes with two relays) in order to reach a preset temperature value. The DST-922 is a Two Stage Digital Setpoint Control to drive two relays according to two different temperature values. The controllers are available with off cycle defrost (compressor switching OFF). They are equipped with a Digital display that provides a constant readout of the sensor temperature and can be used to view the setpoint 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. 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. A universal 10K ohm sensor P-01 is supplied with the control. This solid state temperature sensor probe can be extended up to 500 feet. DST control series were conceived on purpose to be installed on switchboards, panel boards, heating/cooling units and other applications.

FEATURES:

- Reliable Digital Electronic Accuracy
- Easy-to-Read Digital Display which displays sensor temperature and functional status. It also allows precise setpoint and differential settings
- Simple programming of setpoint temperature, differential and cooling/heating modes. Setpoint can be adjusted easily without going into programming mode.
- Wide adjustable setpoint with temperature range from -39 to 248°F (-39 to 120°C) and differential from 0 to 18°F (0 to 10°C). This enables the user to optimize the system performance for any applications. A tighter differential can be achieved (eg. 1F or 1C) than conventional electromechanical controls
- Selectable decimal point or unit resolution
- LED indicates output relay status
- Anti-Short Cycle Delay to ensure the output relay remains off for up to 254 secs. This would avoid unnecessary hard start and equipment wear
- Cooling applications include automatic defrost timing as well as manual defrost
- User selectable Celsius or Fahrenheit scales
- Adjustable temperature offset to compensate any deviation from the real temperature value
- Lockout switch to prevent tempering by unauthorized personnel
- Remote temperature sensor which can be extended to 500ft.
- Easy installation



DST-900PR/902PR/922PR

APPLICATIONS:

The DST-900/DST-902/DST922 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..

TECHNICAL SPECIFICATIONS

- Setpoint range: -39 to 248°F (-39 to 120°C)
- Differential: 0 to 18°F (0 to 10°C)
- Anti Cycling Delay: 0 to 254 sec.
- Display: High intensity Green LED, 3 digits, 13.2 mm
- Data storing: on EEP-ROM not volatile memory
- Operating temperature: 23 to 122 °F (-5 to +50 °C)
- Relative humidity: 30 to 90 % (not condensing)
- Storage temperature: -4 to 158°F(-20 to +70°C)
- Input: one NTC sensor PT-01, semiconductor type
- Output: 1 SPDT 250VAC 16A max resistive (1HP),
+ 1 SPDT 250VAC 8A max resistive (0.5HP) only
for DST-902 and DST-922
- Resolution: 0.1°C (0.2°F) or 1°C (1 or 2°F)
- Accuracy: ± 1°F
- Power supply: 115VAC ± 10%, 50/60Hz

DST-900PR/DST902PR/DST-922PR

- Housing: self-extinguish UL94V0 ABS plastics, white colour
- Protection degree: Ip64 for the frontal panel (enclosure IP31)
- Size: frontal 45 x 71 mm; depth 58 mm (4 DIN modules)
- Mounting: DIN rail for panel boards

DST-900E/DST902E/DST-922E

- Premium grade aluminum enclosure with blue powder coated cover. Included a junction connector terminal block.
- Size: 8" x 4" x 2"

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 DST series setpoint controllers 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 (9.5mm OD x 20.6mm)
- Weight: 0.02lb (10g)
- Operating range: -60 to 255°F (-50 to 125°C)
- Sensor: 10K ohm @ 77°F (25°C ± 1%) thermistor

MODEL	DESCRIPTION
DST-900PR	Single stage setpoint control with sensor probe P-01 and DIN rail
DST-902PR	Single stage setpoint control with two relay switches with sensor probe P-01 and DIN rail
DST-922PR	Two stage setpoint control with sensor probe P-01 and DIN rail
DST-900E	Single stage setpoint control in aluminum enclosure. Sensor probe P-01 included.
DST-902E	Single stage setpoint control with two relay switches in aluminum enclosure. Sensor probe P-01 included.
DST-922E	Two stage setpoint control in aluminum enclosure. Sensor probe P-01 included.

WIRING DIAGRAM

