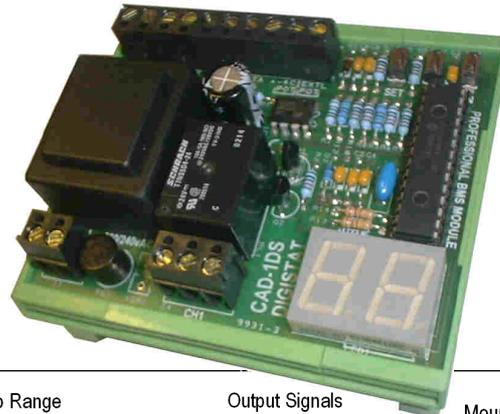


A versatile and feature-rich Din-rail Mounted electronic control module. Monitors air or liquid temperature, and controls one User Programmable switching Relay channel in response.

1 CHANNEL DIGITAL ELECTRONIC THERMOSTAT

Features

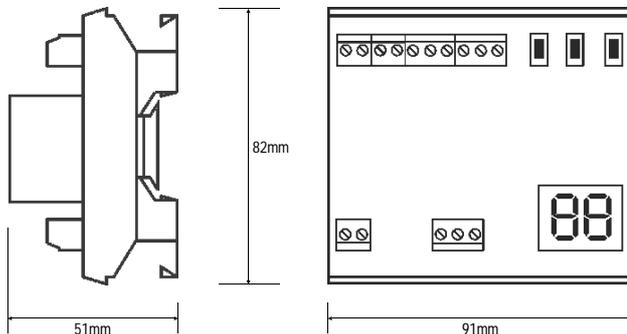
- m One unit covers entire -5°C to +95°C Range
- m Separate Day and Night Set-Points
- m 1-10°C Programmable Differential
- m Heating or Cooling Function
- m Digital LED Display with Temperature
- m Connections for External Temperature Controls
- m Digital Data Output for Remote Display/Options
- m DIN-Rail Mountable, small footprint



SPECIFICATIONS

Type CAD-1DS	Input Supply +/- 15% 24V AC/DC 35mA (max) 230/240VAC 1VA	Sensor Type CAD...	Temp Range -5°C to +95°C -9°C to +99°C w/Ext Pot 1-10°C Differential	Output Signals 1 x C/O Relay Contact 10(5)A@240v SamTalk (data output only)	Mounting DIN Rail (included)	Enclosure IP00
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DIMENSIONS

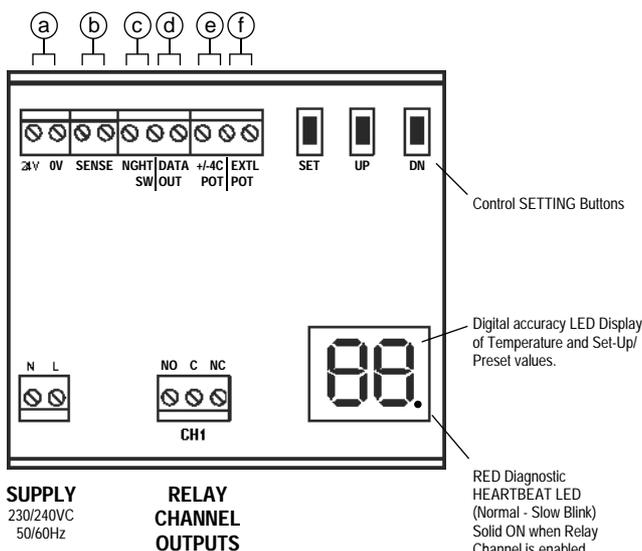


DIAGNOSTIC CODES

To aid installation and for your added convenience, a range of comprehensive Diagnostic aids are built-in:

- SE** **SENSOR ERROR.** The Temperature Sensor readings are outside acceptable parameters. Check (a) that the Sensor is properly connected, or (b) that the Sensor or it's Cable is not Short Circuit or Open Circuit.
- Lo** **TEMPERATURE TOO LOW.** When displaying the Temperature, shows when the Temperature drops below -9°C and is unable to be displayed on the LED's.
- Hi** **TEMPERATURE TOO HIGH.** When displaying the Temperature, shows when the Temperature rises above +99°C and is unable to be displayed on the LED's.
- Er** **SYSTEM ERROR.** This code is only displayed if an internal error is detected - Call for Assistance.

CONNECTION/SETUP



- (a) 24V AC/DC SUPPLY.** If DC is used, then connect the Negative rail to 0V, and Positive to 24V Terminal. The 24V Supply can be used in place of, or simultaneously with the 230/240VAC Supply (for failsafe dual supply)
- (b) SENSOR.** Connect Sensor to these two Terminals only. Sensor type is CAD...
- (c) NIGHT SWITCH.** This must be a Volt-Free contact. Connect between Centre and Outer Terminal as marked. When Open, the DIG/STAT uses the DAY Set-Point. When closed, the NIGHT Set-Point is used.
- (d) DATA OUT.** This is a Digital Data stream compatible with the SamTalk protocol. Connect Remote Displays or other protocol compatible devices to this port.
- (e) +/- 4°C POT.** Connect the POT between the Centre and Outer Terminal. If fitted, allows +/-4°C adjustment away from the DAY Set-Point. This allows the range of the DIG/STAT to be extended from -9°C to +99°C.
- (f) EXTL (EXTERNAL) POT.** Connect the POT between the Centre and Outer Terminal. If fitted, allows the DAY Set-Point to be over-ridden by the POT setting. Ensure the correct RANGE for the attached Pot is programmed into the DIG/STAT Set-Up presets (see over-leaf).

NOTES

Min Sensor Cable 7/0.2mm. Keep away from Power Cables or sources of interference. Screened cable is recommended to eliminate electrical interference. Terminals 0.5-2.5mm² with wire clamps. Max cable length 100m. This module is designed for either LOW VOLTAGE isolated supply connection or 230/240vAC 50/60Hz Line. If connecting to DC supply, -ve supply to 0v, +ve supply to 24v. Both supplies can be connected simultaneously. Ambient Temp -20°C/+50°C dry bulb.

For Technical Support in the first instance contact your distributor. Installation should be checked by qualified electrician before applying any voltage. Always ensure devices switches correctly at the desired temperature. If failure of device can cause damage, ensure a suitable safety backup is fitted. Observe all relevant safety precautions, regulations and electrical ratings. Observe all precautions for handling electrostatic sensitive devices. Specifications for guidance only and subject to change without notice. E&OE.

PROGRAMMING

The CAD-1DS DIGISTAT is factory shipped with the following defaults preset:

Day Set-Point	22°C	adjustment Range -5°C to +95°C
Night Set-Point	16°C	adjustment Range -5°C to +95°C
Differential	2°C	adjustment Range 1°C to 10°C
Heating/Cooling Mode	HEATING	select HEATING or COOLING
External Pot Range	LOW	Low Range covers -5°C to +45°C High Range covers +25°C to +95°C
Display Mode	OFF	Permanent Display - select ON or OFF

These presets can be user reprogrammed with new settings:



Depress and HOLD-DOWN the SET Button. This will cause the DIGISTAT to jump into Menu Set-Up Mode. (Note: Whilst in the Menu Mode, Temperature sensing and the Output Relay will be switched OFF).

The UP and DN (Down) Buttons enable you to change the displayed preset to a new value.



The LED's display 'dy' to indicate **DAY SET-POINT**. Release the SET button, and the display will now change to show the current value in degrees Celsius. Use the UP and DN (Down) Buttons to change the value to your desired setting. Once complete, depress and hold SET once again. This will SAVE the new value and advance to the next preset item.

The **DAY SET-POINT** can be changed in the range -5°C to +95°C.



The LED's now change to display 'nt' to indicate the **NIGHT SET-POINT**. Release the SET button, and again the display will now show the NIGHT value in degrees Celsius. Use UP and DN to change the value as required. Press and hold SET to save the value and continue to the next preset item.

The **NIGHT SET-POINT** can be changed in the range -5°C to +95°C.



LED's show 'df' for **DIFFERENTIAL**. Release the SET button, and again the display will now show the DIFFERENTIAL value in degrees Celsius. Use UP and DN to change the value as required. Press and hold SET to save the value and continue.

The **DIFFERENTIAL** can be changed in the range 1°C to 10°C.



LED's show 'HC'. This is the selection for **HEATING** or **COOLING**. Releasing the SET Button will display either 'HE' (Heating) or 'Co' (Cooling). HEATING is where the Relay switches ON when the temperature *drops* below your Set-Point minus the Differential. COOLING is where the Relay switches ON when the temperature *rises* above the Set-Point plus the Differential. Use the UP/DN Buttons to switch between Heating and Cooling function. Press SET to Save the value and continue.

The **HEATING** and **COOLING** Mode can be toggled between HE (Heating) and Co (Cooling).



Next the LED's show 'rA' for **RANGE**. Release the SET Button and the LED's will display either 'Hi' (for High Range) or 'Lo' (for Low Range). This selects the scale of the External Pot that is connected (if any). Low Range has an External Pot with a scale between -5°C and 45°C, whilst High Range has an External Pot whose scale is between +25°C and +95°C. If no External Pot is connected, then this setting is not relevant.

The **RANGE** Mode for the External Pot can be switched between Lo (Low) and Hi (High).

The Low Range is between -5°C to +45°C.
The High Range is between +25°C and +95°C.



Finally, the LED's display 'di' for **DISPLAY**. Release the SET Button and the LED's will display either 'On' or 'OF'. 'OF' is the factory default. This means the display of temperature will blank (for minimum power consumption) after about 20 seconds following Power-On, or after any of the Buttons being pressed. Changing this setting to 'On' will permanently toggle the LED's between displaying the temperature (prefixed by 'tE'), and the Set-Point (prefixed by 'SP').

The **DISPLAY** Mode can be toggled between On and OF.

Pressing SET once more will save this final setting and return to Normal Operation. Note: If at any time the DIGISTAT is left in Menu Mode for more than 20 seconds without any Buttons being pressed, it will revert automatically to Normal Operation WITHOUT SAVING the current preset being edited.

Note, after returning to Normal Operation (or at initial Switch-On), the DIGISTAT will display the current temperature for about 20 seconds. Thereafter the Heartbeat LED will periodically blink to indicate correct operation. Pressing either of the UP or DN Buttons will also cause the temperature to be displayed for about 20 seconds.

NOTES

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