

THERMOSTATS - ELECTRONIC

SENSORS / ADJUSTERS / DISPLAYS FOR ETE.. THERMOSTATS / E13.. CONTROLLERS

E10..

■ NTC sensors, adjusters & displays for use with ETE.. Electroic Thermostats / Thermometers & E13.. Temperature Controllers.

Enclosure Flammability:
E10-D, I, S, X = UL94-V0
E10-H, R, V = L94-HB
E10-T = UL94-V2



Type	Function	Description	Dimensions	Protection
E10-B	Bead sensor	With 2 way terminal strip	-	IP00
E10-C	Cable Sensor	With 2mm cable	Sensor 7.1 mm dia x 40	IP65
E10-D	Duct sensor	Probe length 160mm	Approx 80 dia x 55	IP65
E10-DA	Duct Averaging	Probe length 160mm (use 2 x E10-DA for averaging)	Approx 80 dia x 55	IP65
E10-H	Black bulb sensor	For radiant tube heaters	85H x 85W x 30D + bulb 16mm	IP30
E10-I	Immersion sensor	ORDER POCKET SEPARATELY Probe length 120mm	Approx 80 dia x 55	IP65
E10-K	Fan coil sensor	With duct flange & 2m cable	Duct tube 80mm long	IP65
E10-R	Room sensor	Can be mounted on square or round outlet box	85H x 85W x 30D	IP30
E10-RA	Room sensor	As E10-R (use 2 x E10-RA for averaging)	85H x 85W x 30D	IP30
E10-S	Strap-On sensor	Includes fixing strap for up to 6" dia. Pipe. 2m cable	Approx 80 dia x 55	IP65
E10-V	Room sensor + Knob	With knob adj $\pm 4^{\circ}\text{C}$ above & below main set point knob setting	85H x 85W x 30d + knob	IP30
E10-X	Outside sensor	Weather proof	Approx 80 dia x 55	IP65
E10-P50	Setpoint adjuster	$-10/+50^{\circ}\text{C}$ Front panel mouting	48H x 48W	
E10-P95	Setpoint adjuster	$25/95^{\circ}\text{C}$ Front panel mounting	48H x 48W	
E10-P4	Setpoint adjuster	$\pm 4^{\circ}\text{C}$ Front panel mounting. For minor adjustment of main set point knob setting	48H x 48W	
E10-T	Digital display	Selectable $-10/+50^{\circ}\text{C}$ or $25/95^{\circ}\text{C}$ 230 VAC supply. Front panel mounting 48H x 96W x 104D Panel cut-out Only for use with ETE.. Thermostats or E13.. Temperature Controllers	44H x 91W	IP00
OPTIONAL E10-T.. ONLY		L24 = 24VAC supply		

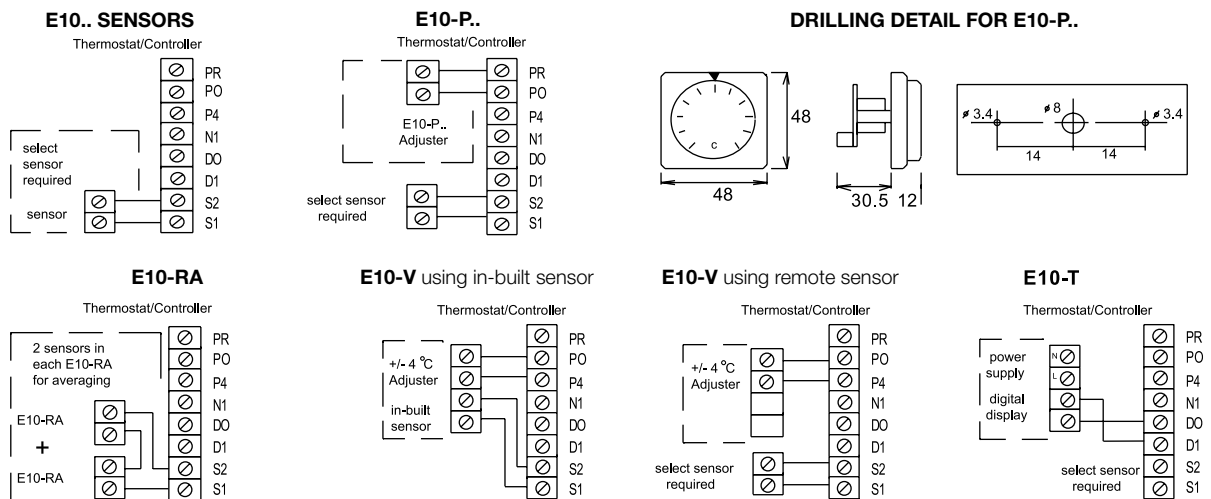
Temperature $^{\circ}\text{C}$:	-10	-5	0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95
Resistance K Ω :	54	40	30	25	20.5	15.2	12	10	7.8	6.2	5	4	3.3	2.7	2.2	2	1.6	1.4	1.1	1	0.9	0.8

ACCESSORIES: EE-STK 1/2" BSP x 120mm Stainless Steel pocket for E10-I

Special Face Plates are available in Brass, White, Satin and others on request (see page G2)



WIRING:



INSTALLATION: Terminals 0.5 -2.5mm² Max length 100mm. Sensor cable size 7/0.2mm Screened cable is recommended. Keep away from power cables/units which may cause interference. The screen should be earthed at the controller end only.

ELECTRONIC THERMOSTAT - 1 STAGE DIGITAL

ETE-1D

<p>■ This product monitors the temperature of air or liquid in a heating system and controls heating or cooling units in response to temperature changes</p>		<p>LCD display. Digital set up of control mode, set point, night set back and differential. Volt free relay contacts. Ambient -10 to +50 deg C. Temperature resolution 0.5 deg C. °C/°F display (ETE-1D mode only). Night setback is standard via optional time switch. Compatible with the functions and accessories of the ETE-150 and ETE-195 range.</p>
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Type	Range Deg C	Differential Deg C	Night set Range C	Supply +- 10%	230VAC SPDT	Power Consumed	Protection
ETE-1D	-10/+95	0.5/10	0-40	230VAC	10(3)A	0.5W max	IP00

Add L24 for optional 24VAC supply.

A 120VAC version is available on request.

ACCESSORIES

See table for the valid accessories

Accessory type

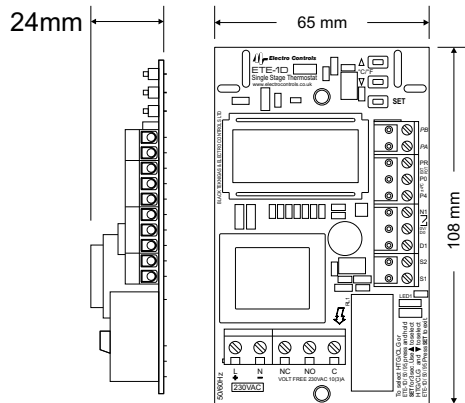
Accessory part number

Selected Product mode

Temperature sensors	E10-B/C/D/DA/G./H/I/K/R/RA/S/V/X	✓	✓	✓
Set point adjuster	E10-P4,E10-P50 and E10-P95	✓	✓	✓
Digital Set point adjuster	E10-S110	✓		
Digital room sensor	E10-RD	✓		
Analogue Display	E10-T		✓	✓
Digital display	E10-TD	✓		
Enclosure	EE-M1T	✓	✓	✓
DIN rail holder	EE-DR1	✓	✓	✓

ETE-1D ETE-150 ETE-195

DIMENSIONS/TERMINATIONS:

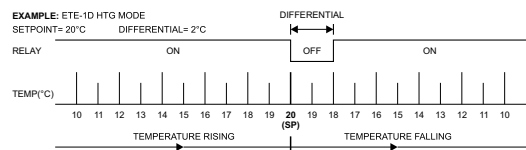
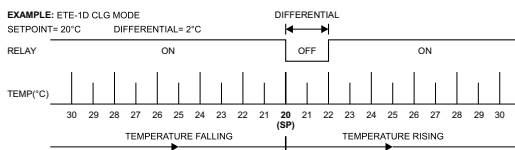


Connections

L and N	230VAC or 24VAC supply
NO,C,NC	Volt free relay connections
S1 and S2	Sensor
O and N1	Night setback
PA and PB	E10-S110 Remote set point adjuster
P4 and P0	E10-P4
P0 and PR	E10-P50 or E10-P95
D1 and D0	E10-T

TIMING DIAGRAM:

This diagram shows some examples of the relay state with rising and falling temperatures for the cooling and heating modes.



SET UP:

Turn on the power. Momentarily the display will show all the screen characters then the Product mode ETE1D (ETE-1D), ETE150 (ETE-150) or ETE195 (ETE-195) and will settle to show HTG/CLG, TEMP and the actual temperature. This is the main menu or Temperature screen. To select HTG/CLG and one of the Product modes ETE-1D, ETE-150 or ETE-195 press the set button for 3 sec. HTG/CLG and the last selected Product mode will flash. Use ↓ button to select either ETE1D, ETE150 or ETE195. Use ↑ button to select either HTG or CLG. Press SET briefly to exit. Briefly press SET repeatedly to select the required parameters of SETPOINT, NIGHT SET and DIFFERENTIAL. The numerical values of these parameters will be blinking and the ↑↓ buttons can be used to set the numerical value required. Whilst setting any parameter if the buttons are left for 10 sec the screen will return to the Temperature screen. In the Temperature screen use of the ↑↓ buttons will toggle between °C and °F if required.

DIAGNOSTIC MESSAGES

SENOP	Sensor open circuit.
SENSH	Sensor short circuit
LG/H	Set temperature below or above product range
ERRPR	E10-S110 short circuit (ETE-1D only). Once this problem has been addressed press SET to revert to normal operation.

INSTALLATION:

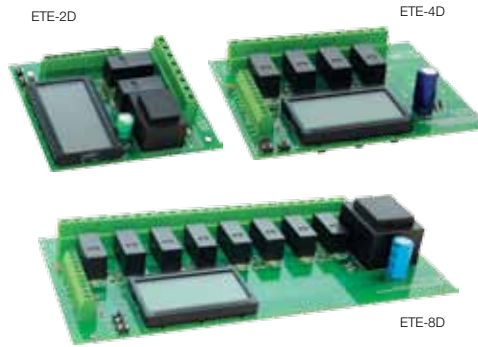
Observe the local regulations regarding electrical installations. Size the power supply cables according to the load. The minimum sensor cable size is 7/0.2mm with a max length of 100m. Screened cable is recommended and the screen should be earthed at the controller end only. Keep supply and sensor cables away from other power cables and devices which may cause interference.

THERMOSTATS - ELECTRONIC

ELECTRONIC THERMOSTAT - 2-4-6-8 STAGE DIGITAL

ETE-..D

These products monitor the temperature of air or liquid in a heating system and control heating or cooling units in response to temperature changes.



LCD display.
Digital set up of control mode, Set Point, Night Setback, Time Delay, Differential per Stage and Difference between Stages.
Volt free relay contacts.
Ambient -10 to +50 deg C.
Temperature resolution 0.5 deg C.
°C or °F selection (ETE-2D, 4D, 6D or 8D only).
Time delay 1-200 seconds all models.
Night Setback is standard via optional time switch.
Compatible with the functions and accessories of the ETE-(2/4/6/8)50 and ETE-(2/4/6/8)95.

Type	Stages	Range (°C)	Differential per Stage (°C)	Difference b/w Stages (°C)	Night Set Range (°C)	Supply +- 10%	230VAC SPDT	Power Consumed
ETE-2D	2	-10/+95	0.5/5 adj	1/15 adj	0-40	230VAC	10(3)A	2VA max
ETE-4D	4	-10/+95	0.5/3 adj	1/6 adj	0-40	230VAC	10(3)A	3VA max
ETE-6D	6	-10/+95	0.5/3 adj	1/3 adj	0-40	230VAC	10(3)A	5VA max
ETE-8D	8	-10/+95	0.5/3 adj	1/3 adj	0-40	230VAC	10(3)A	5VA max

Add L24 for optional 24VAC/DC supply. A 120VAC version is available on request

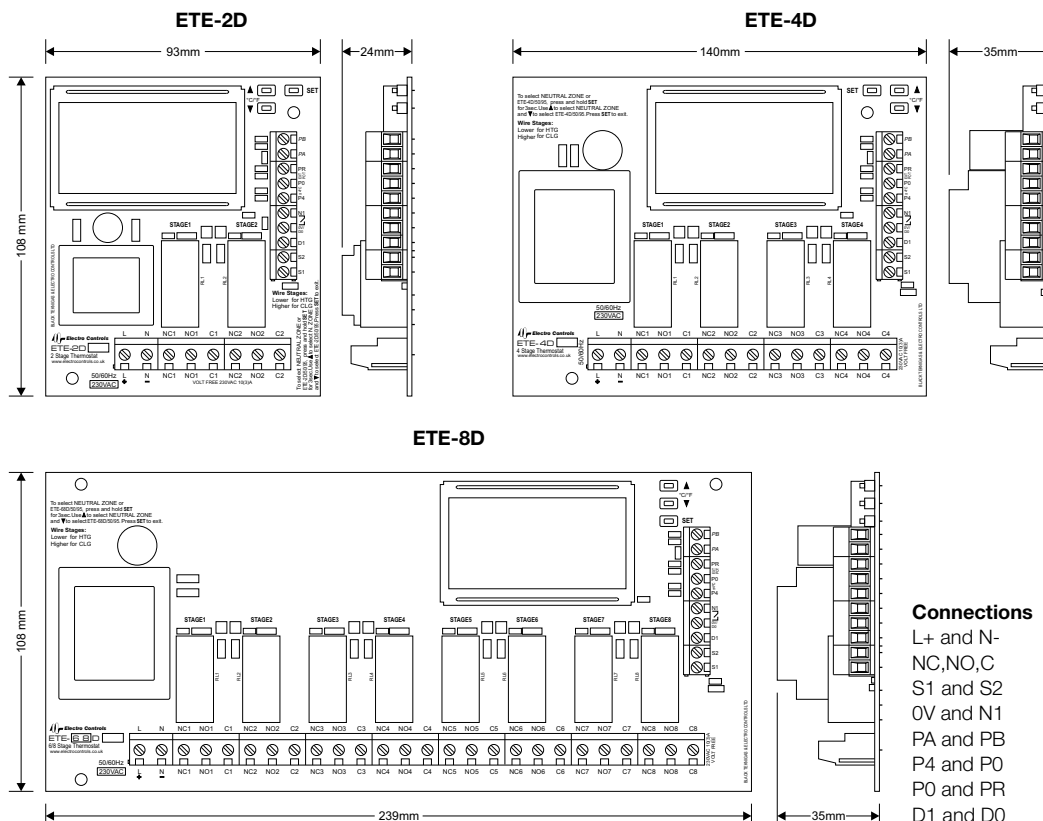
ACCESSORIES

See table below for the valid accessories

Accessory type	Accessory part number	Selected Product mode		
		ETE-2D,4D,6D or 8D	ETE-250,450,650 or 850	ETE-295,495, 695 or 895
Temperature sensors	E10-B/C/D/DA/G./H/I/K/R/RA/S/N/X	✓	✓	✓
Set point adjuster	E10-P4,E10-P50 and E10-P95		✓	✓
Digital Set point adjuster	E10-S110	✓		
Digital room sensor	E10-RD	✓		
Analogue Display	E10-T		✓	
Digital display	E10-TD	✓		

EE-M2T Enclosure for ETE-2D	EE-DR6 Din rail holder for ETE-2D
EE-M3T Enclosure for ETE-4D	EE-DR7 Din rail holder for ETE-4D
EE-M5T Enclosure for ETE-6D and 8D	EE-DR5 Din rail holder for ETE-6D and 8D

DIMENSIONS/TERMINATIONS:



Connections

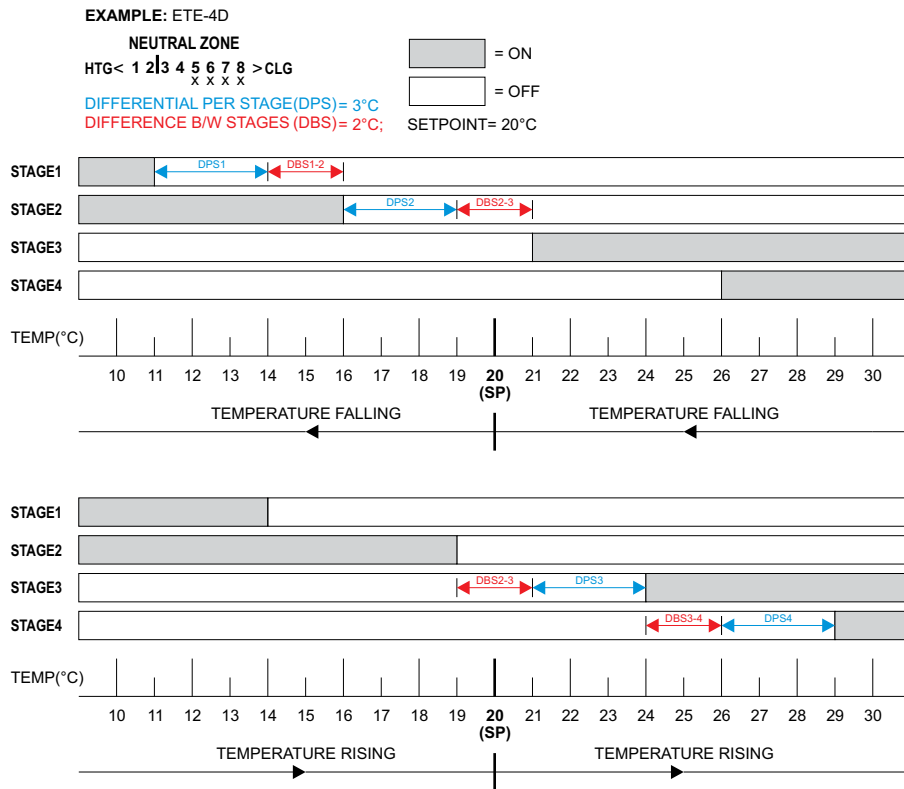
- L+ and N- 230VAC or 24VAC/DC supply
- NC,NO,C Volt free relay connections
- S1 and S2 Sensor
- OV and N1 Night setback
- PA and PB E10-S110 Remote set point adjuster
- P4 and P0 E10-P4
- P0 and PR E10-P50 or E10-P95
- D1 and D0 E10-T

MOUNTING DIMENSIONS:

Type
ETE-2D 2 holes on diagonal at 117.15mm centres
ETE-4D 2 holes on diagonal at 134.5mm centres
ETE-6D and 8D 3 holes, X dim 215mm centres, Y dim 100mm centres

TIMING DIAGRAM:

The diagram below shows an example on the ETE-4D relay states with rising and falling temperatures for the situation with the Neutral Zone set at 2 stages of heating and 2 stages of cooling.



SET UP:

Turn on the power. Momentarily the display will show all the screen characters then the Product mode ETE4D (if the product is ETE-4D), ETE5D or ETE95 and will settle to show the **NEUTRAL ZONE**, **TEMPERATURE** and the actual temperature. This is the main menu or Temperature screen.
 To select the **NEUTRAL ZONE** (the number of HTG/CLG stages) and one of the Product modes ETE4D, ETE5D or ETE95, press the **SET** button for 3 sec. The **NEUTRAL ZONE** cursor (**|**) and the last selected Product e.g. if the product is ETE-4D, ETE4D mode will blink.
 Use **▲** button to select the **NEUTRAL ZONE** required.
 Use **▼** button to select either ETE4D, ETE5D or ETE95.
 Press **SET** briefly to exit.
 Briefly press **SET** repeatedly to select the required parameters of **SET POINT**, **NIGHT SETBACK**, **TIME DELAY**, **DIFFERENTIAL PER STAGE** and **DIFFERENCE B/W STAGES**. The numerical values of these parameters will be blinking and the **▲ ▼** buttons can be used to set the numerical value required.
 Whilst setting any parameter if the buttons are left for 10 sec the screen will return to the Temperature screen.
 In the Temperature screen use of the **▲ ▼** buttons will toggle between °C and °F if required.

- SENOP Sensor open circuit.
- SENSH Sensor short circuit
- LQ/H, Set temperature below or above product range
- ERRPR E10-S110 short circuit (ETE-2/4/6/8D only). Once this problem has been addressed press **SET** to revert to normal operation.

Observe the local regulations regarding electrical installations.
 Size the power supply cables according to the load.
 The minimum sensor cable size is 7/0.2mm with a max length of 100m. screened cable is recommended and the screen should be earthed at the controller end only.
 Keep supply and sensor cables away from other power cables and devices which may cause interference.

