



CTS

Accuracy		
NTC	±0,2°C	0...70°C
PT 100a	±0,35°C	0...100°C
PT 1000a	±0,35°C	0...100°C
NI 1000a	±0,35°C	0...100°C

Technical Data

Connection	2-wire screened cable screw terminals 0,5 to 2,5mm ²
Accuracy	±0,35% (0...100°C) Nickel, Platina ±0,20% (0...70°C) NTC
Ambient range temp.	-10...+60°C
Ambient range hum.	5-95% RH
Protection class	IP30
Housing	ABS (flame retardant)
Dimensions	
Housing	85 x 85 x 50 mm
Bulb	17,5x37mm dia
Weight	120gram

Comfort Temperature

Comfort temperature measurement is best achieved by taking into account the radiant effect of surfaces within controlled space.

The comfort temperature is specified as average of conductive temperature and the radiant temperature

$$T_{\text{comfort}} = T_{\text{radiant}} + T_{\text{conductive}}$$

Features

- Attractive housing
- Improved airflow over sensing elements
- Ambient range -10...+60°C
- Sensors with high quality thermistor, platina or nickel sensing element
- Other sensing elements on request
- Wide range of elements
- Polarity independent

Application

The room temperature sensor CTS is a black bulb temperature sensor used for radiant heat indoor spaces.

Black bulb temperature sensors are used to calculate comfort temperature and radiant temperature.

Units contains either a high quality thermistor, Platinum or Nickel sensing element.

Sensor types compatible with most control manufacturers equipment are available.

Function

The sensing elements change their resistance value with respect to temperature:

PT100, PT1000, NI1000 - increasing resistance by increasing temperature.

NTC - increasing resistance by decreasing temperature.

Ordering Codes

CTSNTC	Unitron, Trend, Honeywell T8120B, Elesta Aquatrol, Johnson, Seachange, Satchwell
CTSHON	Honeywell NTC 20K
CTS PT100	Serck, Siemens, ABB, Honeywell, Sauter
CTS PT1000	Unitron, Johnson, Saia, Kieback & Peter Exomatic, Honeywell, Serck, Danfoss
CTSTA	TAC
CTS NI1000	Sauter, Exomatic
CTSLGNI	Siemens QAA 23,24,25,27,64, QAD 21
CTSALE	Satchwell DDU1804, Honeywell TE200AD6
CTSAND	Andover, York <40°C, Siebe, Trane, Carrier
CTSSAT1	Satchwell DRT, DU, DUS, DUSF
CTSSAT2	Satchwell DD, DR, DW 1202, DWS 1201
CTSSAT3	Satchwell DW 1204, DW 1202
CTSST1	Staefa T1, Siemens QAA 2040
CTS ST30	Staefa T30

Mounting Notes

- The sensor is suited for a wall mounting on a recessed conduit box.
- It may not be mounted in recesses or shelves, not behind curtains or doors and not near heat sources.
- Direct solar radiation and draughts must be avoided.
- The permissible ambient climatic conditions must be observed.
- The end of the conduit at the room unit must be sealed to prevent false measurement due to draughts through the conduit.
- The room sensor should be mounted approximately 1,8 m above floor level.
- Undo the tamperproof screw at the bottom of the housing and gently pull the front panel from the base.
- Using the base as a template mark the holes centres and fix the wall suitable screws.

Alternatively the base plate can be mounted on to a conduit box or a standard recessed back box.

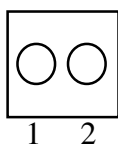
- Feed cable through the 22mm knockout in the base of the housing and terminate the cores at the terminal block as required.

Leaving some slack inside the unit.

- Replace the housing to the base plate.
- Fit the tamperproof screw (if required) through the lug at the bottom of the base plate.

Connections

Resistive output



Connections are made via the 2-way terminal block.

Connections for thermistor/platinum and nickel elements are polarity independent.

Installation and Connection Details

All connections to DDC controllers, data recorders etc. should be made using screened cable.

Normally, the screen should be earthed at one end only (usually the controller end) to avoid earth hum loops which can create noise.

Low voltage signal and supply cables should be routed separately from high voltage or mains cabling.

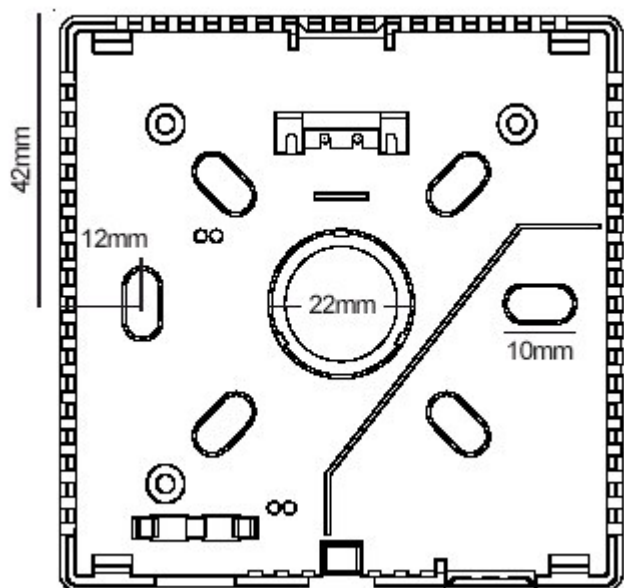
Separate conduit or cable trays should be used.

Where possible, the controller's earth should be connected to a FUNCTIONAL EARTH, rather than the mains safety earth.

This will provide better immunity to high frequency noise.

Most modern buildings have a separate earth for this purpose.

Dimensions



We reserve the right to make changes and improvements in our products which may effect the accuracy of the information contained in this leaflet.