



TOS

Accuracy		
NTC	±0,20 °C	0...70 °C
PT100a	±0,35 °C	0...100 °C
PT1000a	±0,35 °C	0...100 °C
NI1000a	±0,35 °C	0...100 °C

## Technical Data

<b>Connection</b>	2-wire screened cable screw terminals 0,5 till 2,5mm <sup>2</sup>
<b>Ambient range temp.</b>	-40...+90 °C
<b>Ambient range hum.</b>	5-95% RH
<b>Housing</b>	IP65, ABS (flame reterdant type VO) 55 x 90 mm

## Design Features

The TOS is housed in an IP65 rated enclosure, with a 10 mm diameter brass cap containing the sensing element located externally in the shadow of the lid to avoid solar gain in most applications.

Outside air sensors should always be situated in a sheltered position on a north facing wall.

## Features

- Polarity independent
- High quality sensing element
- Simple 2-wire connection
- IP65 protection
- Other sensing elements on request

## Application

The outside temperature sensor TOS is used to sense the outside temperature.

Typical examples being:

- Used in conjunction with a compensator DDC-controller to schedule the temperature of the flow water to a heating system with respect to outside air temperature.
- Used in conjunction with a reset controller to schedule the return air temperature of an air conditioning system to obtain summer/winter shift.

## 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

<b>TOSNTC</b>	Unitron, Trend, Honeywell Aquatrol, Thorn, Elesta, Siox, Seachange
<b>TOS PT100</b>	Inu, Serck, IVT, Satt, Siox
<b>TOS PT1000</b>	Unitron, Johnson, IVT, Bastec, Exomatic, Honeywell, Serck, Diana, KTC
<b>TOSTA</b>	TAC
<b>TOS NI1000</b>	Sauter
<b>TOSLGN1</b>	Siemens Landis & Staefa QAA 23, QAD21
<b>TSALE</b>	Alerton, Satchwell (DDU 1804), Honeywell TE 200AD-6
<b>TOSAND</b>	Andover, York <40 °C, Siebe TS serie
<b>TOSSAT1</b>	Satchwell see schedule
<b>TOSSAT2</b>	Satchwell see schedule
<b>TOSSAT3</b>	Satchwell DW1204,1202
<b>TOSSAT4</b>	Satchwell DO2202
<b>TOS ST30</b>	Staefa T30
<b>TOS ST1</b>	Staefa T1
<b>TOSSIE</b>	Siebe

## Mounting

Avoid mounting the sensor in direct sunlight.

It is recommended that the unit be mounted with the cable entry at the bottom.

If the cable is fed from above then into the cable gland at the bottom, it is recommended that a rain loop be placed in the cable before entry into the sensor.

Remove the front cover by twisting the lid and separating from the main body to make the electrical connection.

Fix the sensor into the pocket and secure with the grup screw provided with the pocket.

Feed the cable through the waterproof gland and terminate the cores at the terminal block.

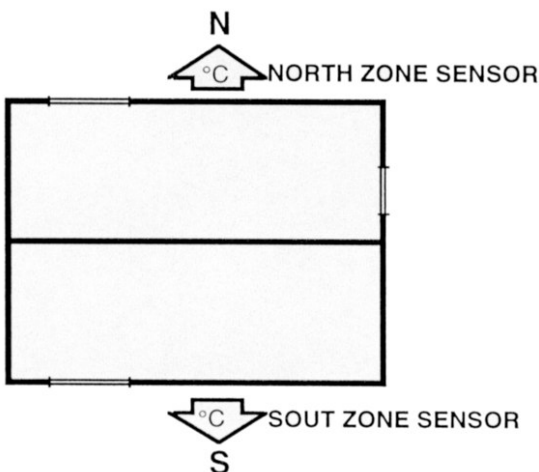
Leaving some slack inside the unit, tighten the cable gland onto the cable to ensure watertightness.

Replace the lid after the electrical connections have been made.

## Locating

If a single heating system is employed one sensor mounted on the north aspect is necessary.

If zoning is employed individual transmitters should be sited on representative aspects of each zone.



## 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.

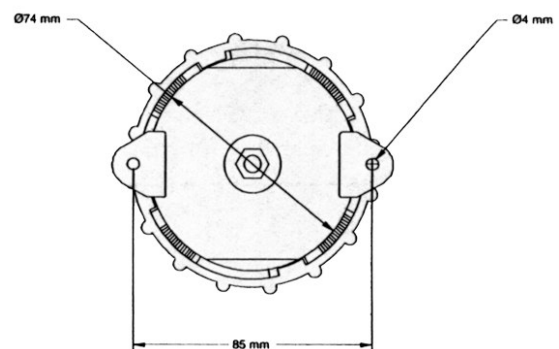
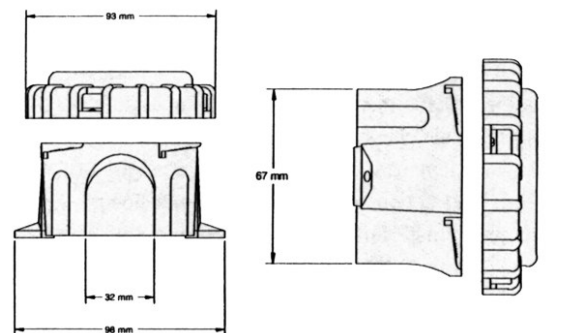
Separate conduit or cable trays should be used.

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



## Connection

Connections are made via a 2-way terminal block. The connections for a thermistor or an nickel/platina element are polarity independent.

