Comfort Temperature Sensor

CTS FTT

Jan.08

CTS FTT

Technical Data

Measuring range	0 to +40°C
Supply voltage	24Vac +/- 10%
Accuracy	±0,2°C
Sensor type	Thermistor 10K
Microprocessor	Neuron 3120
Clock speed	5 MHz
Transceiver	FTT-10A
Network speed	78kBits/sec
Netwotk compatibility	TP/FT-10
Network bus polarity	Polarity indepedent
Network wiring	22 to 16AWG twisted pair; see Echelon FTT-10 User guide for qualified cable types
Connectors	Terminals for 0,5-1,5mm2 cable
Ambient range temp.	-10…+60°C
Ambient range hum.	25-90%RH@50°C, non-condensing
Installation aids	Pin & Service LED
Commisioning aids	Status LED
Housing	
Material	ABS (flame retardant)
Dimension	85x85x30
Protection Class	IP30
Black bulb	
Material	Anodised aluminium
Dimensions	17,5x37mm dia.

Features

- **Attractive housing**
- **Improved airflow over sensing elements**
- **Connects anywhere on network**
- **LONWork compatible sensor**
- **LNS ActiveX Plug-in**

Design

The CTS FTT is a wall mounting temperature sensor with LonWorks network connectivity used for the detection of mean radiant/comfort temperature sensor in a space, utilising a black bulb.

Use of FTT-10A standard receiver enables the device to be installed into TP/FT-10 LonTalk network segments.

The CTS FTT utilises two part connectors for ease of installation and accepts 24Vac power supply.

Designed to be compliant with LonMark version 3.2 interoperability guidelines, the CTS FTT can be easily configured and used in multi-vendor system, open systems

Application

The room temperature transmitter CTS FTT 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.

Comfort Temperature

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

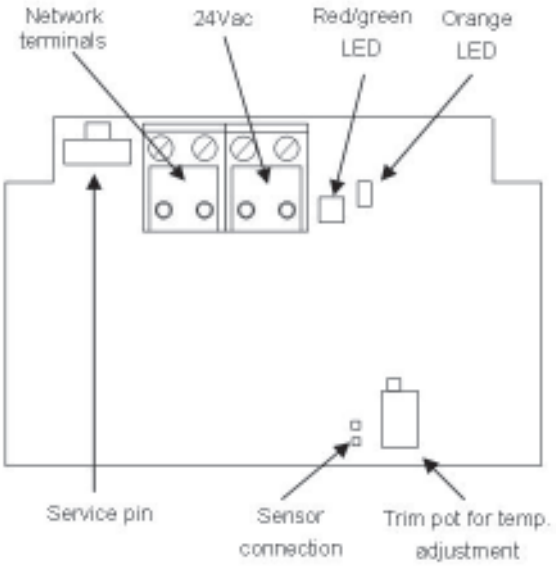
The comfort temperature is specified as average of conductive temperature and the radiant temperature

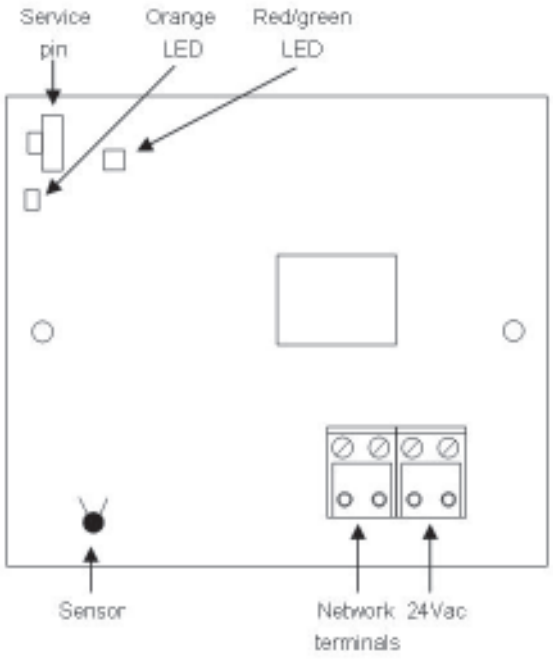
$$T_{comfort} = \frac{T_{radiant} + T_{conductive}}{2}$$

Ordering Code

CTS FTT	Black Bulb Temperature Sensor FTT

Connections





Commissioning Information

When the service pin is pressed the unit will transmit its Neuron ID, and the orange LED will flash.

On increasing and decreasing temperature,the green LED will flash once every 6 seconds.
The red LED will flash if there is no sensor element.

Object Details

node object nvi0 nviRequest (SNVT_obj_request) requests supported:

RQ_NULL
RQ_NORMAL
RQ_DISABLED
RQ_UPDATE_STATUS
RQ_SELF_TEST
RQ_UPDATE_ALARM
RQ_REPORT_MASK
RQ_OVERRIDE
RQ_ENABLE
RQ_RMV_OVERRIDE
RQ_CLEAR_STATUS
RQ_CLEAR_ALARM
RQ_ALARM_NOTIFY_ENABLED
RQ_ALARM_NOTIFY_DISABLED
RQ_MANUAL_CTRL
RQ_REMOTE_CTRL
RQ_PROGRAM

node object nvo1 nviStatus (SNVT_obj_status) states supported:

object_id	unable_to_measure
invalid_id	comm_failure
invalid_request	self_test_test
disabled	self_test_in_progress
out_of_limits	locked_out
open_circuit	manual_control
out_of_service	in_alarm
mechical_fault	in_overrdie
feedback_failure	report_mask
over_range	programming_mode
under_range	programming_fail
electrical_fault	alarm_notify_disabled

HVAC Temperature Sensor object

nvo6 nvoHVACTemp SNVT_temp_p
nciMaxSendTime SNVT_time_sec
nciMinSendTime SNVT_time_sec
nciMinDelta SNVT_temp_p#SI
nciTmpOffset SNVT_temp_diff_p#SI