



Duct Temperature Sensor

TDL LPT

Jan.08



TDL LPT

Features

- LON Works compatible temperature sensor
- High quality fast response sensing element
- Only 2-wire connection required
- Power taken from bus for LPT-version
- Connects anywhere on network
- Conforms to industry standard interoperable temperature sensor profile
- LEDs show status of sensor, when a value is transmitted
- With LNS ActiveX plug-in
- Head mounted electronics

Technical Data

Sensor type	Thermistor 10Kohm
Measurement range	-10...+60°C
Accuracy	±0.2°C
Microprocessor	Neuron 3120
Transceiver	LPT-10A
Clock speed	5 MHz
Network speed	78 kBits/sec
Network connection	Twisted pair unshielded cable 20AWG Polarity independent
Max. cable length	500 m without physical layer repeater
Connectors	2 part rising cage terminals for 0,5-1,5 mm ² cable
Power supply LPT	Derived from the bus
Power taken from bus	7mA @ 42Vdc
Ambient range temp	-10...+80°C
Ambient range hum	25 to 90%RH non-condensing
Enclosure class	IP65
Weight	0,4 kg
Installation aids	Service pin & service LED
Commissioning aids	Status LED

This product meets the demand of CE-approval

Application

The duct temperature sensor TDL is used to sense temperature in HVAC systems.

Typical examples being:

- Return or supply air temperature control.
- Supply air high or low limit.

Function

A duct mounting temperature sensor with LonWorks network connectivity.

Use of an LPT10 standard transceiver enables the device to be powered via the 2-wire communications connection.

The TDL LPT conforms to the LON Mark sensor profile and can therefore be easily configured and used in multi-vendor systems.

The sensing element is a high quality curve-matched thermistor housed in a brass probe.

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

Exposed directly to the airflow for fast response.

NTC - increasing resistance by decreasing temperature.

DESIGN Features

The sensor housing with removable cover, 20 mm conduit entry and a brass duct probe.

The sensing element is positioned at the end of the probe.

For airtight mounting there is a rubber seal which is compressed when fixing to the duct.

Ordering Codes

TDLLPT	Duct Temperature Sensor LPT, 150 mm
/250	Supplement for 250mm probe
TDDFP	Duct flange plate for adjust length of probe

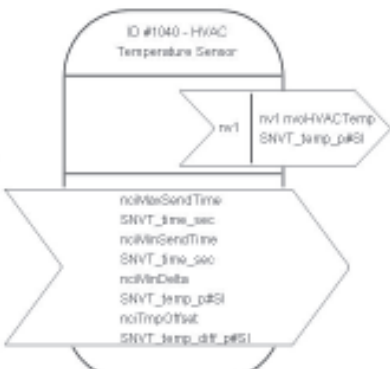
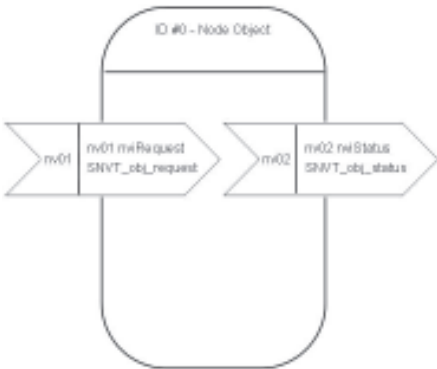
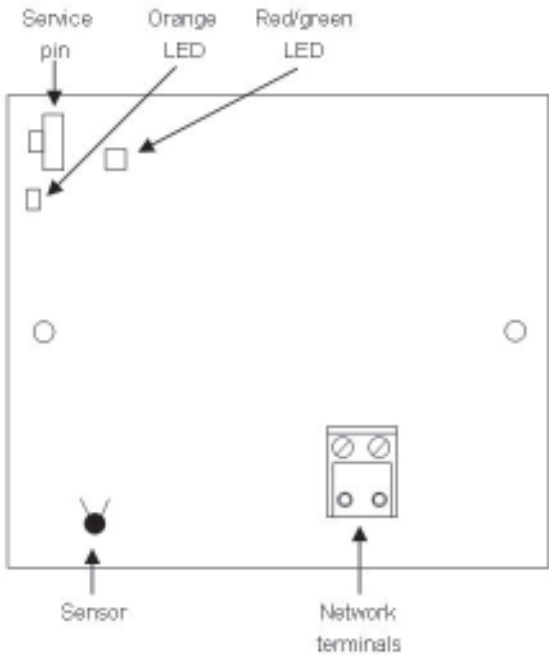
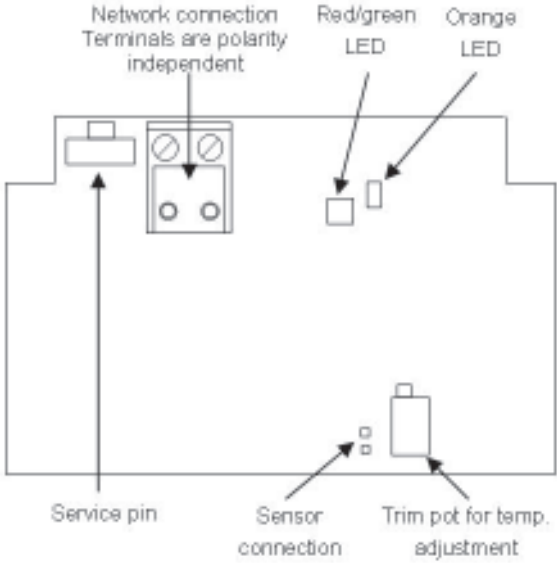


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Connections



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 |
| disabled | self_test_in_progress |
| out_of_limits | locked_out |
| open_circuit | manual_control |
| out_of_service | in_alarm |
| mechanical_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