LON analogue input modules

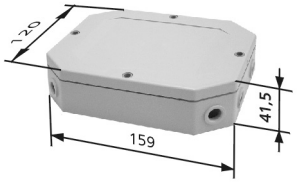
LNV 4 IP65

24 V AC/DC, 4 x 0 ... 10 V DC, 4 x Ni1000

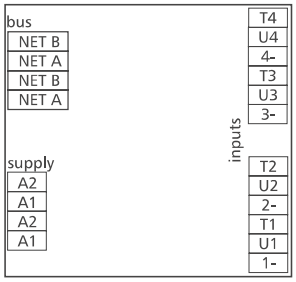
Part Number

110 405 13 32-IP

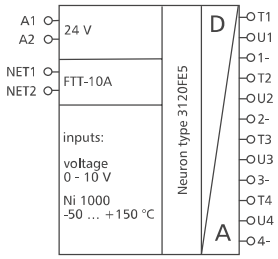
Dimensions - IP65 housing



Wiring



Wiring Diagram



Use

LON module with 4 temperature and 4 voltage inputs. Suitable to collect temperature and voltage values, e.g. elctrical vent and mixing valves, valve positions etc.

Functional description

In a LON installation all 8 inputs can be scanned simultaneously by standard network variables SNVT. Furthermore it is possible to change from standard Ni1000 to Ni1000 TK 5000 temperature sensor.

LON interface

transceiver	FTT10A free topology
neuron	3120, 3k EEPROM
file format	standard network variables (SNVT)
transmission rate	78 kBit/s
max. length (see page 7)	
line topology	2700 m / 64 nodes
free topology	500 m / 64 nodes
cabling	twisted pair

Application software

Software updates only possibly by factory.

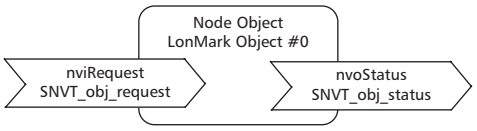
Technical data

Housing	dimensions w*h*l	159 x 41.5 x 120 mm
	weight	300 g
	mounting position	any
	mounting	directly to a smooth surface 8 cable entries for M12 and M16 fittings
	material	housing ASA+ polycarbonate terminal blocks polyamide cover polycarbonate
	type of protection (DIN 40050)	IP65
Terminal blocks	supply and bus	1.5 mm² pluggable
	analogue inputs	1.5 mm² pluggable
Supply	operating voltage range	20 ... 28 V AC/DC
	current consumption	67 mA (AC) / 24 mA (DC)
	duty cycle	100 %
	recovery time	550 ms
Input	temperature input for	nickel 1000 and nickel 1000 TK5000
	temperature range	-50 °C ... +150 °C
	resolution	0.1 K
	error	about ±0.1 °C
	voltage input	0 ... 10 V DC
	maximal	11 V DC
	resolution	10 mV (0.0 ... 100 %)
	error	about ±100 mV
	input impedance	10 kΩ
Temperature range	operation	-5 °C ... +55 °C
	storage	-20 °C ... +70 °C
Protective circuitry	operating voltage	polarity reversal protection
Display	operation	green LED
	function	yellow LED for status (service)

LON analogue input modules

Description of the LonMark objects and network variables

LNV 4
LNV 4 IP65



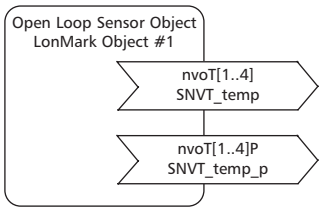
Node Object

The Node Object monitors and controls the functions of the different objects in the device. It supports the basic functions Object Status and Object Request required by LonMark.

Application Objects

The objects contain the functions status record of the analogue inputs and data exchange.

T Object (temperature)



T Object (Temperature)

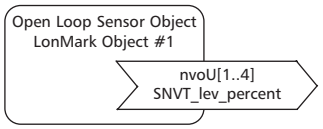
nvoT[1..4] (index 2..5)

SNVT type	SNVT_lev_temp
Function	Nickel 1000 and Nickel 1000 TK temperature values between -50.0 and +150.0 °C are measured at the inputs and issued to the LON bus.

nvoT[1..4]P (index 6..9)

SNVT type	SNVT_lev_temp_p
Function	Same as nvoT[1..4] but issue 0.01 K

U Object (voltage)

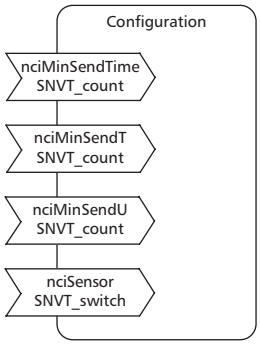


U Object (Voltage)

nvoU[1..4] (index 10..13)

SNVT type	SNVT_lev_percent
Function	Voltages between 0 and 10.0 Volt DC are measured at the inputs and issued to the LON bus.

Configuration Variables



Configuration Variables

nciMinSendTime (index 14)

SNVT type	SNVT_count
Function	All output variables described above are issued event without status change at the end of a preset period of time. Thus the device reports periodically to the system.
Time settings	0 timer function off-state 1 .. 60 timer function time in seconds (factory setting 0)

nciMinSendT (index 15)

SNVT type	SNVT_count
Function	Guaranteed interval between two temperature values.
Time settings	0 timer function off-state 1 .. 60 timer time in seconds (factory setting 0)

nciMinSendU (index 16)

SNVT type	SNVT_count
Function	Guaranteed interval between two voltage values.
Time settings	0 timer function off-state 1 .. 60 timer time in seconds (factory setting 0)

nciSensor (index 17)

SNVT type	SNVT_switch
Function	Setting for temperature sensor Nickel 1000 or Nickel1000 TK 5000.
nciSensor = 0.0 0	Nickel 1000 temperature sensor
nciSensor = 100.0 1	Nickel 1000 TK 5000 temperature sensor

Attention!

The variables AbC and AbM are specified for the balance of the input and therefore are not allowed for use.