LON digital input modules

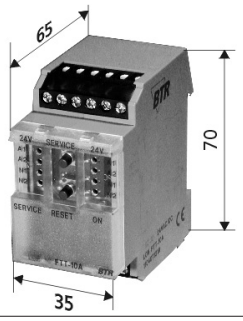
LDE 4

24 V AC/DC, 4 contact inputs

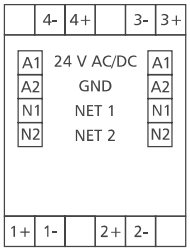
Part Number

110 411 13 19

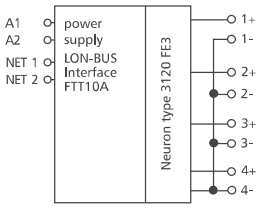
Dimensions - C12 housing



Wiring



Wiring Diagram



Use

LON module with 4 digital inputs. Suitable to record the status of potential free switches, e.g. electronic limit switches at vent valves or auxiliary contacts at power contactors.

Functional description

The input terminal blocks 1+ to 4+ are connected to the terminal blocks 1- to 4- by potential free switches or contacts. In a LON installation these data points can be bound individually or as a whole.

LON interface

transceiver	FTT10A free topology
neuron	3120, 2k EEPROM
data 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

XIF and NXE files are available as downloads under **www.btr-electronic-systems.de**.

Technical data

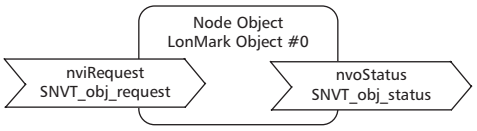
Housing	dimensions w*h*l	35 x 70 x 65 mm
	weight	83 g
	mounting position	any
	mounting	DIN rail according to EN 50022
	material	housing + terminal blocks polyamide 6.6 V0 cover plate polycarbonate
	type of protection (DIN 40050)	housing IP40 terminal blocks IP20
Terminal blocks	supply and bus	pluggable terminal block 1.5 mm² (terminal block and jumper plug are included to each packing unit)
	digital inputs	2.5 mm²
Supply	operating voltage range	20 ... 28 V AC/DC
	current consumption	63 mA (AC) / 21 mA (DC)
	duty cycle	100 %
	recovery time	550 ms
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)
	input status	yellow LEDs

Note The modules can be mounted in series without interspace. The max. number of modules connected in series is 15, each group needs an external power supply.

LON digital input modules

Description of the LonMark objects and network variables

LDE 4
LDE 4 IP65



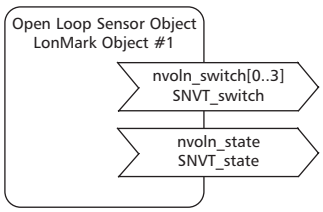
Node Object

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 statzs record of the digital inputs and data exchange.

DigitalIn Object



DigitalIn Object

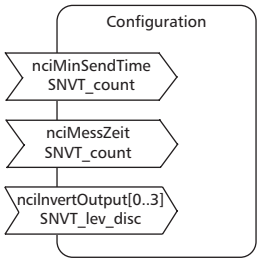
nvoIn_switch[0..3] (index 2..5)

SNVT type	SNVT_switch
Function	Status of the inputs. The output variables are issued after a change of the input status, at the end of the preset obligatory update time (nciMinSendTime) or after a module reset.
Closed contact	nvoIn_switch[0..3] = 100.0 1
Open contact	nvoIn_switch[0..3] = 0.0 0

nvoIn_state (index 6)

SNVT type	SNVT_state
Function	Status of the inputs. The output variable is issued after a change of the input status, at the end of the preset obligatory update time (nciMinSendTime) or after a module reset.
Assignment	nvoIn_state.bit0 = input 1 … nvoIn_state.bit3 = input 4
Closed contact	nvoIn_state.bit[0..3] = 1
Open contact	nvoIn_state.bit[0..3] = 0

Configuration Variables



Configuration Variables

nciMinSendTime (index 7)

SNVT type	SNVT_count
Function	The output variables nvoIn_switch and nvoIn_state are issued after a preset period of time even without a change of the input status.
Time settings	0 timer turned off 1 .. 60 timer period in seconds (factory setting 0)

nciMessZeit (measuring time) (index 8)

SNVT type	SNVT_count
Function	The status of the inputs are scanned within the preset time. Then the output variables nvoIn_switch and nvoIn_state are set and issued at the end of the preset update time (nciMinSendTime).
Time settings	0 timer turned off 120 ... 60,000 timer period in ms (factory setting 0)

nciInvertOutput[0..3] (index 9..12)

SNVT type	SNVT_lev_disc
Function	inversion of the input signal
nciInvertOutput[0..3] = ST_ON	open input contact; nvoIn_switch and/or nvoIn_state = set
nciInvertOutput[0..3] = ST_OFF	closed input contact; nvoIn_switch and/or nvoIn_state = set