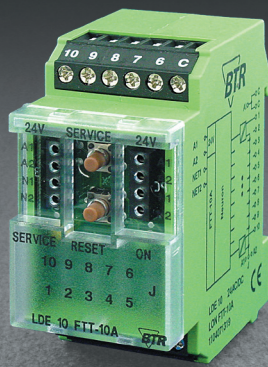


LON digital input modules



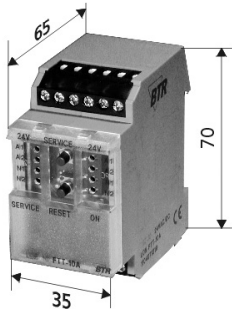
LDE 10, LDE 10 FT

24 V AC/DC, 10 digital inputs

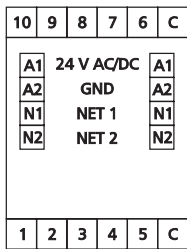
Part Numbers

110 407 13 19	LDE 10
110 807 13 19	LDE 10 FT

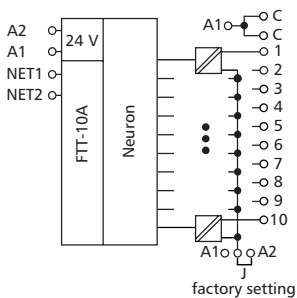
Dimensions - C12 housing



Wiring



Wiring Diagram



Use

LON module with 10 digital inputs. Suitable to record the status of potential free switches, e.g. electrical limit switches at vent valves or auxiliary contacts at power contactors.

Functional description

The inputs can be operated as contact and voltage inputs (A1, 24 VAC/DC, jumper J - A2) or with actuation to GND (A2, jumper J - A1), depending on the setting of the jumper J. In a LON installation these data points can be bound individually or as a whole.

LON interface

transceiver	FTT10A free topology
neuron	
LDE 10	3120, 2k EEPROM
LDE 10 FT	3150
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.

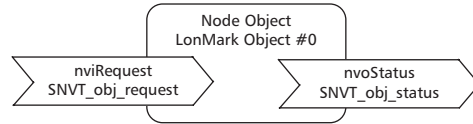
Technical data

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
	type of protection (DIN 40050)	cover plate polycarbonate
		housing IP40
		terminal blocks IP20
Terminal blocks	supply and bus	pluggable terminal block 1.5 mm ²
		(terminal block and jumper plug are included to each packing unit)
		2.5 mm ²
Supply	digital inputs	
	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.	
Accessory	Extension module HUB 1/5, see page 86	

LON digital input modules

Description of the LonMark objects and network variables

LDE 10
LDE 10 IP65



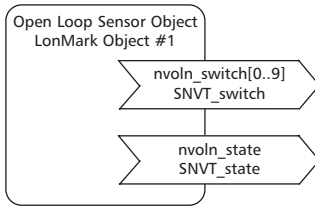
Node Object

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 digital inputs and data exchange.

DigitalIn Object



DigitalIn Object

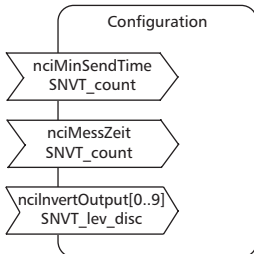
nvoln_switch[0..9] (index 2..11)

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 nvoln_switch[0..9] = 100.0 1
Open contact nvoln_switch[0..9] = 0.0 0

nvoln_state (index 12)

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 nvoln_state.bit0 = input 1 ... nvoln_state.bit9 = input 10
Closed contact nvoln_state.bit[0..9] = 1
Open contact nvoln_state.bit[0..9] = 0

Configuration Variables



Configuration Variables

nciMinSendTime (index 13)

SNVT type SNVT_count
Function The output variables nvoln_switch and nvoln_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 14)

SNVT type SNVT_count
Function The status of the inputs are scanned within the preset time. Then the output variables nvoln_switch and nvoln_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..9] (index 15..24)

SNVT type SNVT_lev_disc
Function Inversion of the input signal
nciInvertOutput[0..9] = ST_ON open input contact; nvoln_switch and/or nvoln_state = set
nciInvertOutput[0..9] = ST_OFF closed input contact; nvoln_switch and/or nvoln_state = set