LON
door installation modules

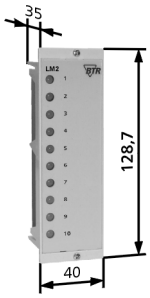
Logline® LON

LS1

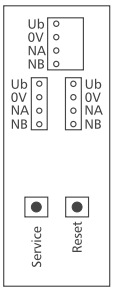
switch module, 24 V DC

Part number
110 394 25

Dimensions - housing E19



Wiring



Use

Switch and indicator module for 19" frames. Suitable as manual control facility in cabinet doors or remote control panels.

Functional description

In a LON installation the different LEDs and the two switches are actived and analysed by the network variables SNVT.

LON interface

transceiver	FTT10A free topology
neuron	3120, 3k EEPROM downloadable
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

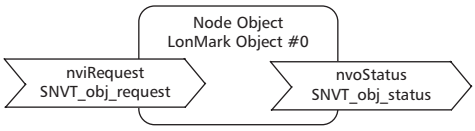
Housing	dimensions b x h x w	40 x 128.7 x 35 mm (3HE; 8 TE)
	weight	68 g
	mounting position	any
	mounting	in 10" or 19" frames according to IEC 297-3 (accessories page 88 P/N 110361 or 110362)
	material	housing ABS
	type of protection (DIN 40050)	IP20
Terminal blocks	supply and bus	1.5 mm² pluggable jumper plug (included to packing)
Supply	operating voltage range	24 V DC ±15 %
	current consumption	46 mA
	duty cycle	100 %
	recovery time	500 ms
Temperature range	operation	-5 °C ... +55 °C
	storage	-20 °C ... +70 °C
Protective circuitry	operating voltage	polarity reversal protection
Display		6 LEDs, adjustable to red, green or yellow

If a LED is adjusted to yellow for acknowledgment (17,0 0) the system will identify this as a maintenance signal and interprete it accordingly at the LM1 module (annunciator module for message collection). If a LED is adjusted to flash red, to acknowledge and to unlock (52,5 0) this is identified as a failure message and interpreted accordingly at the LM1 module.

LON door installation module

Description of the LonMark objects and network variables

LS1



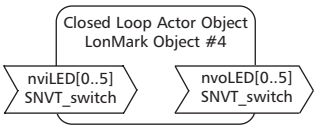
Node Object

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.

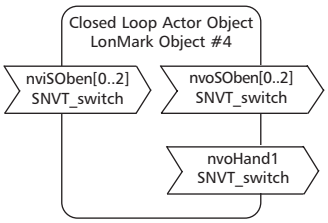
Application Objects

The objects contain the functions switch analysis and status visualization.

LED Object



K1 Object (channel 1)



LED Object

nviLED[0..5] (index 2 .. 7)

SNVT type	SNVT_switch
Function	switching of the LEDs
nviLED[0..5] = 0.0 0	the LEDs adopt the status defined by nciLEDaus[0..5]
nviLED[0..5] = 100.0 1	the LEDs adopt the status defined by nciLEDan[0..5]

nvoLED[0..5] (index 8 .. 13)

SNVT type	SNVT_switch
Function	feedback to nviLED[0..5], value of nviLED[0..5] is transmitted

K1 Object (channel 1)

nviSOben[0..2] (upper switch) (index 14, 15, 16)

SNVT type	SNVT_switch
Function	In switch position automatic (11 o'clock) the input variables nviSOben[0..2] are directly transmitted to nvoSOben[0..2]. In all other switch positions nviSOben[0..2] produce no effect.

nvoSOben[0..2] (index 17, 18, 19)

SNVT type	SNVT_switch
Function	In switch position automatic (11 o'clock) the input variables nviSoben[0..2] are directly transmitted to nviSOben[0..2].

In switch position 1 (12 o'clock)

nvoSOben[0] gets the value 100.0 1
nvoSOben[1] gets the value 0.0 0
nvoSOben[2] gets the value 0.0 0

In switch position 2 (1 o'clock)

nvoSOben[0] gets the value 0.0 0
nvoSOben[1] gets the value 100.0 1
nvoSOben[2] gets the value 0.0 0

In switch position 3 (3 o'clock)

nvoSOben0] gets the value 0.0 0
nvoSOben[1] gets the value 0.0 0
nvoSOben[2] gets the value 100.0 1

nvoHand1 (manual feedback) (index 20)

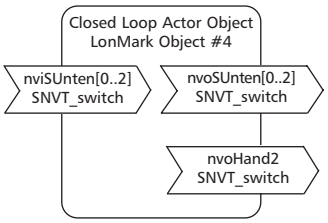
SNVT type	SNVT_switch
Function	In switch position automatc (11 o'clock) nvoHand1 has the value 100.0 1. In all other positions it is 0.0 0.

LON door installation module

Description of the LonMark objects and network variables

LS1

K2 Object (channel 2)



K2 Object (channel 2)

nviSUnten[0..2] (lower switch) (index 21, 22, 23)

SNVT type	SNVT_switch
Function	In switch position automatic (11 o'clock) the input variables nviSUnten[0..2] are directly transmitted to nvoSUnten[0..2]. In all other switch positions nviSUnten[0..2] produce no effect.

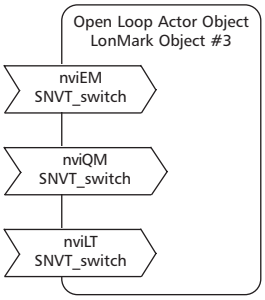
nvoSUnten[0..2] (index 24, 25, 26)

SNVT type	SNVT_switch
Function	In switch position automatc (11 o'clock) the input variables nviSUnten[0..2] are directly transmitted to nvoSUnten[0..2].
In switch position 1 (12 o'clock)	
	nvoSUnten[0] gets the value 100.0 1
	nvoSUnten[1] gets the value 0.0 0
	nvoSUnten[2] gets the value 0.0 0
In switch position 2 (1 o'clock)	
	nvoSUnten[0] gets the value 0.0 0
	nvoSUnten[1] gets the value 100.0 1
	nvoSUnten[2] gets the value 0.0 0
In switch position 3 (3 o'clock)	
	nvoSUnten[0] gets the value 0.0 0
	nvoSUnten[1] gets the value 0.0 0
	nvoSUnten[2] gets the value 100.0 1

nvoHand2 (manual feedback) (index 27)

SNVT type	SNVT_switch
Function	In switch position automatic (11 o'clock) nvoHand2 has the value 100.0 1. In every other position it is 0.0 0.

Extern Object
(external signals)



Extern Object (external signals)

nviEM (unlock signal) (index 28)

SNVT type	SNVT_switch
Function	If nviEM gets the value 100.0 1 the LS1 is unlocked and nvoBTR.bit13 is set.

nviQM (acknowledgement signal) (index 29)

SNVT type	SNVT_switch
Function	If nviQM gets the value 100.0 1 the LS1 is acknowledged and nvoBTR.bit14 is set.

nviLT (lamp test) (index 30)

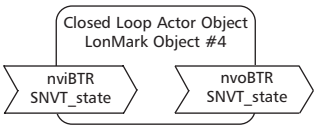
SNVT type	SNVT_switch
Function	If nviLT gets the value 100.0 1 a lamp test is carried out at the LS1 and nvoBTR.bit15 is set.

LON door installation module

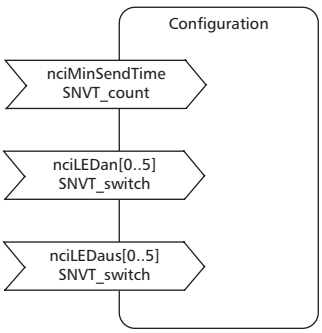
Description of the LonMark objects and network variables

LS1

BTR Object



Configuration variables



BTR Object

nviBTR (index 31)

SNVT type	SNVT_state
Function	System object for Logline LON door installation modules to provide simple connection to the annunciator module for signal collection LM1.
Bit0 .. Bit8	not used
Bit9	automatic operation in the system = 1; manual operation in the system = 0
Bit10	new failure signal in the system = 1; no or acknowledged failure in the system = 0
Bit11	new failure signal in the system = 1; no or unlocked failure in the system = 0
Bit12	maintenance signal in the system = 1; no or acknowledged maintenance in the system = 0
Bit13	unlocking signal of the LM1, is set to 1 by unlocking tact switch
Bit14	acknowledgement signal of LM1; is set to 1 by the acknowledgement tact switch
Bit15	request of the LM1 for lamp testing; is set to 1 by the lampt test tact switch

nvoBTR (index 32)

SNVT type	SNVT_state
Function	feedback to nviBTR, value of nviBTR transmitted If a LED that is specified as maintenance signal (yellow LED requiring acknowledgement) is set by nviLED[x], nvoBTR Bit12 changes to 1. If a LED that is specified as failure signal (flashing red LED requiring acknowledgement and unlocking) is set by nviLED[x], nvoBTR Bit10 and Bit11 change to 1.

Configuration variables

nciMinSendTime (index 33)

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

nciLEDan[0..5] (index 34 .. 39)

SNVT type	SNVT_switch
Function	Setting of status and colour of each LED at nviLED[0..5] = 100.0 1.
LED settings	nciLEDan[0..5].value = a + b + c + d nciLEDan[0..5].state = 0

a - colour	b - flash	c - acknowledge	d - unlock
0,5 red	0 = no	0 = no	0 = no
1 yellow	4 = yes	16 = yes	32 = yes
1.5 green			

Examples see chart page 76.

nciLEDaus[0..5] (index 40 .. 45)

SNVT type	SNVT_switch
Function	Setting of status and colour of each LED at nviLED[0..5] = 0.0 0.
LED settings	see nciLEDan[0..5] for example LED off nciLEDaus[0..5] = 0.0 0