USER MANUAL

Longo programmable controller
LPC-2.NL2
LON Network module

Version 2

Written by SMARTEH d.o.o.

User Manual

Document Version: 002
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STANDARDS AND PROVISIONS: Standards, recommendations, regulations and provisions of the country in which the devices will operate, must be considered while planning and setting up electrical devices. Work on 100 .. 240 V AC network is allowed for authorized personnel only.

DANGER WARNINGS: Devices or modules must be protected from moisture, dirt and damage during transport, storing and operation.

WARRANTY CONDITIONS: For all modules LONGO LPC-2 – if no modifications are performed upon and are correctly connected by authorized personnel – in consideration of maximum allowed connecting power, warranty of 24 months is valid from the date of sale to the end buyer, but not more than 36 months after delivery from Smarteh. In case of claims within warranty time, which are based on material malfunctions the producer offers free replacement. The method of return of malfunctioned module, together with description, can be arranged with our authorized representative. Warranty does not include damage due to transport or because of unconsidered corresponding regulations of the country, where the module is installed.

This device must be connected properly by the provided connection scheme in this manual. Misconnections may result in device damage, fire or personal injury.

Hazardous voltage in the device can cause electric shock and may result in personal injury or death.

NEVER SERVICE THIS PRODUCT YOURSELF!

This device must not be installed in the systems critical for life (e.g. medical devices, aircrafts, etc.).

If the device is used in a manner not specified by the manufacturer, the degree of protection provided by the equipment may be impaired.

Waste electrical and electronic equipment (WEEE) must be collected separately!

LONGO LPC-2 complies to the following standards:
•EMC: EN 61000-6-3:2007 + A1:2011, EN 61000-6-1:2007, EN 61000-3-2:2006 + A1:2009 + A2: 2009, EN 61000-3-3:2013
•LVD: IEC 61010-1:2010 (3rd Ed.), IEC 61010-2-201:2013 (1st Ed.)

Smarteh d.o.o. operates a policy of continuous development. Therefore we reserve the right to make changes and improvements to any of the products described in this manual without any prior notice.

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Longo programmable controller LPC-2.NL2

1 DESCRIPTION

LPC-1.NL2 LON adapter is intended to connect LPC-2 standalone composition to LON network.

Module uses a TP/FT-10 physical channel which is further described in *FTT-10 Free Topology Transceiver User's Guide (www.echelon.com).*

The module allows any type of network topology: loop, star or free.

The use of these modules requires knowledge of and experience with the LonWorks® network installation and maintenance tools.

NOTE: For proper system configuration and data allocation please refer to *LPC Composer* software help menu.
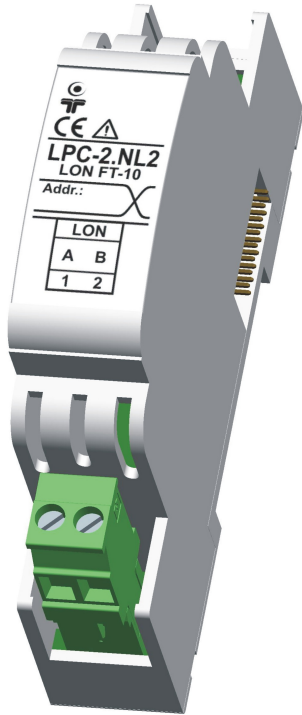
2 FEATURES

Figure 1: LPC-2.NL2 communication module.

Table 1: Technical data
TP/FT-10 physical channel
multiple network topology: singly, doubly terminated; star, loop, mixed topology

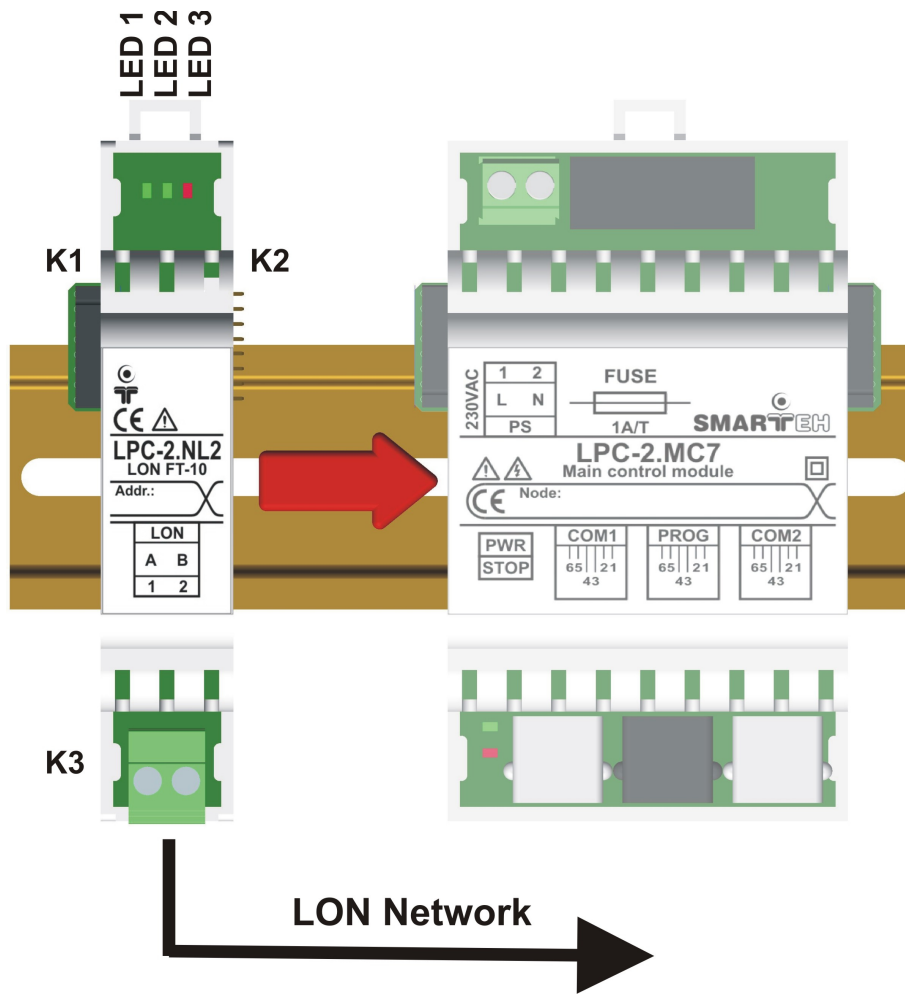# 3 INSTALLATION

3.1 Connection scheme example

LON Network

Table 1: K3 communication port		
LON.A (1)	LON TP/FT-10	Network port, polarity insensitive
LON.B (2)	LON TP/FT-10	

Table 2: internal bus

|		
K1	Data & DC power supply	Connection to other comm. module
K2	Data & DC power supply	Connection to main module or another comm. module

Table 3: marking and indication

LED1	RUN status	OFF: no power supply
		ON: power supply present,
		    UART communication to LPC-2.MC7 not active
		BLINK ON every 5s for 1s:
		    power supply present
		    UART communication to LPC-2.MC7 active

LED2	Rx	blink ON: packet received
LED3	Tx	blink ON: packet send

3.2 Mounting instructions

Figure 3: Housing dimensions
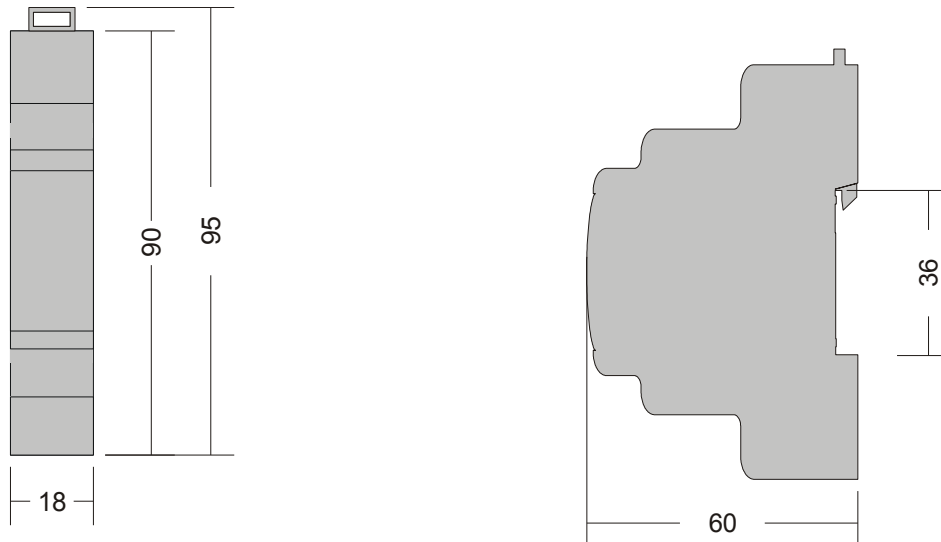
Dimensions in milimeters.

⚠️ All connections, module attachments and assembling must be done while module is not connected to the main power supply.

Mounting instructions:

1. Switch OFF main power supply.

2. Mount LPC-2.NL2 module to the provided place inside an electrical panel (DIN EN50022-35 rail mounting) to the left side of the LPC-2 main module.

3. Mount other LPC-2 modules (if required). Mount each module to the DIN rail first, then attach modules together through K1 and K2 connectors.

4. Connect communication cable according to the connection scheme in Figure 2.

5. Switch ON main power supply.

6. LED1 should switch on according to the Table 3 (module in unconfigured state by manufacturer).

Dismount in reverse order. For mounting/dismounting modules to/from DIN rail a free space of at least one module must be left on the DIN rail.

NOTE: LPC-2 main module should be powered separately from other electrical appliance connected to LPC-2 system. Signal wires must be installed separately from power and high voltage wires in accordance with general industry electrical installation standard.
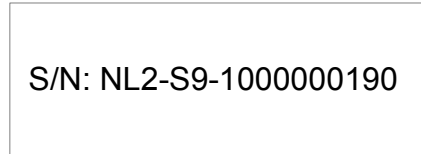
3.3 Module labeling

Figure 4: Labels on housing

Label 1(LPC-2.NL2 module sample):

LPC-2.NL2
P/N:225NL207001001
D/C: 35/11
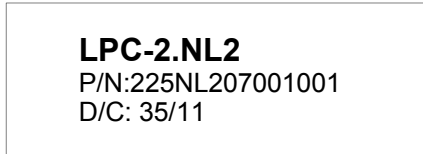
Label 2(LPC-2.NL2 module sample):

S/N: NL2-S9-1000000190

Label 1 description:

1. **LPC-2.NL2** is the full product name.
2. **P/N:225NL207001001** is the part number.
   - **225** – general code for LPC-2 product family,
   - **NL2** – short product name,
   - **07001** – sequence code,
     - 07 – year of code opening,
     - 001 – derivation code,
   - **001** – version code (reserved for future HW and/or SW firmware upgrades).
3. **D/C:35/11** is the date code.
   - **35** – week and
   - **11** – year of production.

Label 2 description:

1. **S/N:NL2-S9-1000000190** is the serial number.
   - **TH1** – short product name,
   - **S9** – user code (test procedure, e.g. Smarteh person xxx),
   - **1000000190** – year and current stack code,
     - 10 – year (last two cyphers),

00000190 – current stack number; previous module would have the stack number 00000189 and the next one 00000191.

4 TECHNICAL SPECIFICATIONS

Table 5: Technical specifications	
Power supply	from internal BUS
Power consumption	0.5 W
Connection type	screw type connectors for stranded wire 0.75 to 2.5 mm[24]
Dimensions (L x W x H)	90 x 18 x 60 mm
Weight	50 g
Ambient temperature	0 to 50 °C
Ambient humidity	max. 95 %, no condensation
Maximum altitude	2000 m
Mounting position	vertical
Transport and storage temperature	-20 to 60 °C
Pollution degree	2
Protection class	IP 30

5 CHANGES

The following table describes all the changes to the document.

Date	V.	Description
1.7.2012	002	CGP General update .
9.1.2011	001	The initial version, issued as *LPC-2.NL2 module UserManual*.

6 NOTES