USER MANUAL

Longo programmable controller
LPC-2.ID1 special module

Version 7

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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 230 VAC 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, we offer warranty for 24 months from date of sale to end buyer. 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 61000-6-2 (EN 50082), EN 61000-6-4 (EN 50081)
- LVD: IEC 61131-2
- Vibrations and climatic-mechanical: EN 60068-2-6, EN 60068-2-27, EN 60068-2-29

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.ID1 special module

1 DESCRIPTION

LPC-2.ID1 card reader (RFID identification) special module is used for a room door unlock.

On room entrance the identification card (ID card) must be approached to the identification module. In case that ID card is read correctly (correct RFID key standard) the green LED switches on and a short whistle appears. If ID card for correspondent room is valid (valid ID card number), the green LED switches on again and a short whistle appears. After few moments the electric lock will be opened (use LPC Manager for function logics). If the ID card number is wrong, the red LED switches on and a longer whistle appears (refer to the Table 5).

LPC-2.ID1 module is also used to present messages “OCCUPIED”, “DO NOT DISTURB”, “ROOM SERVICE” and “SOS” - use LPC Manager for function logics - (refer to the Table 5).

LPC-2.ID1 is connected to the main control unit RS485 port using interconnection cable (e.g. SIC4-7) which must be ordered together with LPC-2.ID1 reader. When more special modules (e.g. LPC-2.ID1, LPC-2.ID2, LPC-2.P01) are connected to one main control unit, splitter (e.g. SPL-2) is also required (refer to the Figure 2).

In case that other (magnet or contact – chip) card system is used for door unlock, LPC-2.ID1 module can be used to show messages.

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

LPC-2.ID1 module can be modified on customer request (front label changed, push buttons added, LEDs added). Please contact manufacturer for more information.

2 FEATURES

Figure 1: LPC-2.ID1 special module

Table 1: Technical data
RFID identification
4 LEDs for “OCCUPIED”, “DO NOT DISTURB”, “ROOM SERVICE” and “SOS” status
OK “ ✓ ” LED
FAULT “ X ” LED
Power LED
Internal fault LED
Digital input
Relay output

3 INSTALLATION

3.1 Connection scheme

Figure 2: Connection scheme

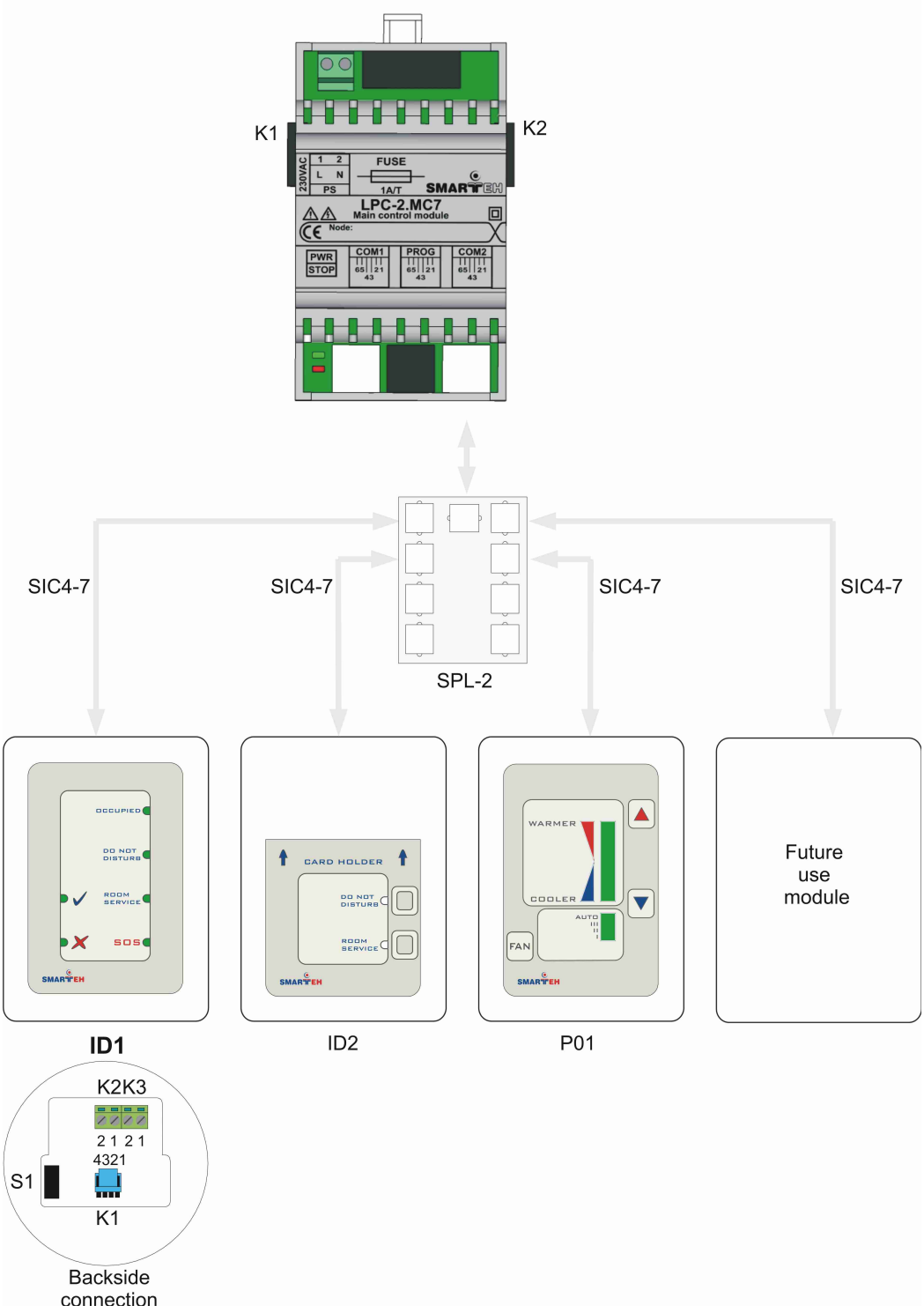


Table 2: K1		
K1.1	GND	Ground
K1.2	9 VDC	Power supply input
K1.3	Standard RS485 A	Data receive/send line A
K1.4	Standard RS485 B	Data receive/send line B

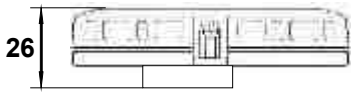
Table 3: K2		
K2.1	SPST relay contact	Make contact (NO)
K2.2	SPST relay contact	Make contact (NO)

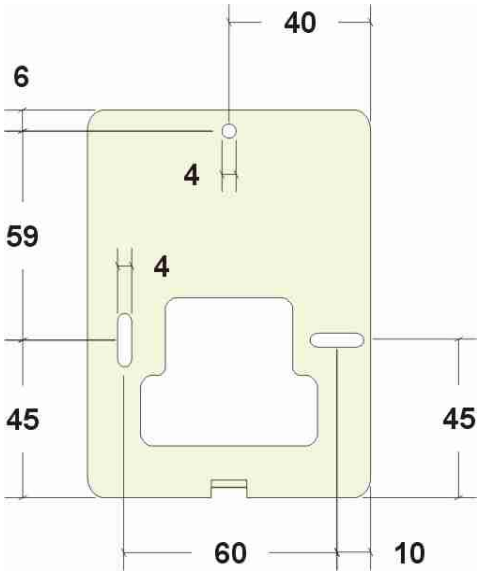
Table 4: K3		
K3.1	9 VDC	Power supply output
K3.2	Digital input, 0 .. 9 VDC	9 VDC digital input

Table 5: LEDs & Buttons		
Power LED (on the upper side of the module)	Green LED: indicates power supply status	On: power supply OK Off: power supply missing or power off
Internal fault LED (on the upper side of the module)	Red LED: indicates LPC-2.ID1 communication state	On: RS485 communication fault Off: RS485 communication OK
OCCUPIED, DO NOT DISTURB, ROOM SERVICE, SOS	Green LED: indicates correspondent signal presence	On: signal present Off: signal not present
OK “ ✓ ” LED	Green LED: indicates RFID key standard and number	On: RFID key standard OK and ID card number valid
FAULT “ X ” LED	Red LED: indicates RFID key standard and number	On: RFID key standard NOK and ID card number wrong

3.2 Mounting instructions

Figure 3: Housing dimensions





- Dimensions in millimeters.

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

The LPC-2.ID1 module should be positioned on the wall outside the room. It is advised to avoid direct sunlight or position near heating/cooling source object. Round flush-mounting box (e.g. Gewiss GW 24232), Φ60 mm is recommended for installation. A box must be installed with screw holes in the horizontal position!

Mounting instructions:

1. Mount LPC-2.ID1 module back plate to the provided leveled place on the wall.
2. Fasten 2 screws (DIN 7981 or similar, Φ3 mm, **max. head height 3 mm**) to fix LPC-2.ID1 module to its place.
3. Connect interconnection cable to the interconnection connector K1. Max. allowed tractive force is 30 N.
4. Power (PWR) green LED should switch on according to the Table 5.
5. Mount LPC-2.ID1 module front plate to the back plate.

   IMPORTANT: Front plate must be placed in order that switch S1 (according to the Figure 2) is pressed (normally is released).
6. Fasten the screw in the bottom carefully (not too strong), to fix the front plate to the back plate.

NOTE:

LPC-2.MC3 main control 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.

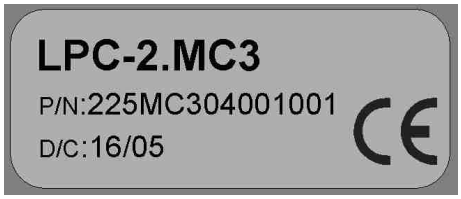
Several RFID panels should not be mounted close to each other. Minimum distance to next panel is at least 30 cm. This restrict also applies in case of mounting panels on both sides of the same wall. Adequate shielding material and provisions should be used to avoid interference between panels.

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 5: Labels on housing

Label 1(MC3 sample):



Label 2 (MC3 sample):

Label 1 description:

1. **LPC-2.MC3** is the full product name.
2. **P/N:225MC3040001001** is the part number.
   - **225** – general code for product family,
   - **MC3** – short product name,
   - **04001** – sequence code,
     - 04 – year of code opening
     - 001 – derivation code
   - **001** – version code (reserved for future HW and/or SW firmware upgrades).
3. **D/C:16/05** is the date code.
   - **16** – week and
   - **05** – year of production.

Label 2 description:

1. **S/N:MC3-S9-0500000190** is the serial number.
   - **MC3** – short product name,
   - **S9** – user code (test procedure, e.g. Smarteh person xxx),
   - **0500000190** – year and current stack code,
     - 05 – 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 main control unit (LPC-2.MC7)
Interconnection connector type		Berg M
Power consumption		0.5 W
RFID type		Manchester 64, read only
Max. reading distance		8 cm
K2 output:	Number of outputs	1 SPST – NO relay output
	Nominal switching capacity	2 A 30V DC
	Max. switching power	60 W
	Max. switching voltage	220 V DC
	Max. switching current	2 A
	Min. switching capacity	10 uA, 10 mV DC
	Insulation	Basic, do not connect mains voltage
Dimensions (L x W x H)		80 x 110 x 26 mm
Weight		80 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 PROGRAMMERS GUIDE

Variables

There are 22 bytes available for reading and writing from/to ID1 module. While whole frame of 26 bytes is transferred at a time, LPC Manager variables described in the table below are accessed separately.

VBOOL8 (#N)	
variable	range
Comm. status	0..1
New ID received	
BIT2	
BIT3	
BIT4	
BIT5	
Remove switch status	
Door switch status	

VBOOL8 (#N+1)*	
variable	range
BIT0	0..1
BIT1	
BIT2	
BIT3	
BIT4	
BIT5	
BIT6	
BIT7	

* Pushbuttons and LEDs can be added on the customer request.

VBOOL8 (#N+2)	
variable	range
Relay output command	0..1
BIT1	
BIT2	
BIT3	
Received ID OK command	
Received ID Fault command	
BIT6	
BIT7	

VBOOL8 (#N+3)*	
variable	range
OCCUPIED LED	0..1
DO NOT DISTURB LED	
ROOM SERVICE LED	
SOS LED	
BIT4	
BIT5	
Reserved	
Reserved	

* Pushbuttons and LEDs can be added on the customer request.

VWORD16 (#N+4)	
variable	range
Received ID WORD1	0..1
Received ID WORD2	
Received ID WORD3	
WORD4	
WORD5	
WORD6	
WORD7	
WORD8	
WORD9	
WORD10	

6 CHANGES

The following table describes all the changes to the document.

Date	V.	Description
1.7.2012	007	CGP General update.
2.8.2007	006	- updated K2 output specs - updated description about connecting to main control unit
26.4.2007	005	- updated connection scheme - updated power supply source
15.3.2006	004	- Added output isolation description - Added output protection type description - Pollution degree changed to 2
27.3.2005	003	The initial version, issued as *LPC-2.ID1 module User Manual*.

7 NOTES