EAN code
CU3-01M: 8595188132220
CU3-02M: 8595188132398

Technical parameters	CU3-01M, CU3-02M
LED Indication	
Green LED RUN:	Flashing - communication with BUS, ON - no communication
Red LED ERR:	Flashing - no project, ON - unit STOP
OLED display	displays the current status and settings
Type:	color OLED
Resolution:	128x128 / 1:1 aspect ratio
Visible area:	26x26 mm
Controlling:	using arrows
The internal real-time clock:	accuracy: 1s/day at 23 °C
Inputs	
Inputs:	4x NO or NC to GND (-)
	2x analogue inputs 0÷30
Outputs	
Output:	relay output- NO/GND
Number of connected units	
(directly to the CU3-01M (02M):	max. 64 (2x32)
Expansion possibilities	up to 576 units
external BUS master:	(CU3-01M (02M) and 8x MI3-02M)
Communication	
BUS	
Maximum number of units:	max. 32 units to one BUS line
Maximum cable length:	max. 550 m (depends on power loss)
System BUS EBM	
Maximum cable length:	max. 500 m
Number of connected ext. masters:	up to 8 (regards to increasing the cycle turns)
Ethernet	
Connector:	RJ45 on the front panel
Communication speed:	100 Mbps
Indication of the Ethernet:	green - Ethernet communication
	yellow - Ethernet speed 100 Mbps
The default IP address:	192.168.1.1 (the IP address can be changed in the
	menu using the display and buttons)
Power supply	
Supply voltage / tolerance:	27 V DC, -20 / +10 %
Rated current:	110 mA (at 27V DC)
Operating conditions	
Working temperature:	-20 to +55 °C
Storage temperature:	-25 to +70 °C
Humidity:	max. 80%
Degree of protection:	IP20 devices, IP40 with cover in the switchboard
Overvoltage category:	II.
Degree of pollution:	2
Operating position:	any
installation:	to the switching board on the EN60715 DIN rail
Design:	6-MODULE
Terminal:	max. 2.5 mm²
Dimensions and weight	
Dimensions:	90 x 105 x 65 mm
Weights:	250 g

- CU3-01M and CU3-02M are central units' of the iNELS system and mediators, between user software interface and controllers, units and actuators connected to the BUS.
- It's possible to directly connect up to 2 lines of BUSes in to CU3-01M and CU3-02M, and on each BUS we can connect up to 32 iNELS3 units.
- The main difference between CU3-02M and CU3-01M is that CU3-02M is moreover equipped by RF module which enables communication with selected units from iNELS RF Control system.
- Central units CU-01M (02M) support also peripheral units from iNELS2 thanks to external master MI3-02M/iNELS2.
- User´s project and retentive data are stored in a non-volatile internal memory hereby data are backed up without the supply voltage. Real time clock (RTC) backup for 10 days.
- Power supply controlling system - network voltage and the status of the backup battery.
- Possibility of setting time synchronization via NTP server.
- The RJ45 Ethernet port's connector is located on the front panel of the unit, the transmission speed is 100 Mbps.
- For CU3-01M (02M) it is possible to use 4 potential-free inputs for connecting external controllers (buttons, switches, sensors, detectors, etc.) and 2 analog inputs 0 - 30V.
- CU3-01M (02M) comes with OLED display that shows the current status and enables settings (network settings, date, time, service) of the central unit CU3-01M (02M).
- Movement in the menu CU3-01M (02M) using arrows on the front panel.
- CU3-01M (02M) in 6-MODULE are designed for mounting into a switchboard on the EN60715 DIN rail.

iNELS RF Control interface for CU3-02M

Communication protocol:	RF Touch Compatible
Transmitting frequency:	866 MHz / 868 MHz / 916 MHz
Signal transmission methods:	bidirectionally addressed message
Output for RF antenna:	SMA connector*
RF antenna:	1 dB (part of package)
Free space range:	up to 100 m

* Max Tightening Torque for antenna connector is 0.56 Nm.

EAN code
CU3-03M: 8595188132404

Technical parameters	CU3-03M
LED Indication	
Green LED RUN:	Indication of the operating state of the unit
Red LED ERR:	Unit error indication
TFT display	displays the current status and settings
Type:	color TFT
Resolution:	240x240 / 1:1 aspect ratio
Visible area:	26x26 mm
Controlling:	using arrows
The internal real-time clock:	accuracy: 1s/day at 23 °C
Inputs	
Inputs:	8x DIN GS 12-230V AC / DC
	(over common COM terminal)
	4x DIN voltage or current
	(with adjustable switching in current mode)
	7x AIN / DIN voltage or current
	(with adjustable switching in current mode)
Communication	
BUS	
Maximum number of units:	max. 32 units to one BUS line
Maximum cable length:	max. 550 m (depends on power loss)
3x Ethernet	
Connector:	RJ45 on the underside of the product
Communication speed:	100 Mbps
Indication of the Ethernet:	3x green - Ethernet communication
	3x yellow - Ethernet speed 100 Mbps
The default IP address	192.168.1.1 (the IP address can be changed in the
(EHT3):	menu using the display and buttons)
DALI master:	up to 64 master units, max. 64 slave units
Maximum number of units:	max. 64 mA (external source connection possible)
Internal power supply:	Bus power supply
Power supply	
Supply voltage / tolerance:	27 V DC, -20 / +10 %
Rated current:	110 mA (at 27V DC)
Operating conditions	
Working temperature:	-20 to +55 °C
Storage temperature:	-25 to +70 °C
Humidity:	max. 80%
Degree of protection:	IP20 devices, IP40 with cover in the switchboard
Overvoltage category:	II.
Degree of pollution:	2
Operating position:	any
installation:	to the switching board on the EN60715 DIN rail
Design:	6-MODULE
Terminal:	max. 2.5 mm²
Dimensions and weight	
Dimensions:	90 x 105 x 65 mm
Weights:	257 g

- CU3-03M is a new, enhanced version of CU3-01M and CU3-02M.
- The new HW equipment allows communication with the DALI bus to connect up to 64 electronic ballasts (the internal power supply of the CU3-03M is capable of supplying connected ballasts up to a nominal value of 64 mA).
- RF Communication Interface for Controlling Wireless Receivers iNELS RF Control (the current list of supported receivers is available in the iNELS Installation Guide).
- The CU3-03M is equipped with three Ethernet ports, one for Ethernet (100 Mbps) connections and two for CU3-03M controllers.
- The CU3-03M has a TFT display that shows the current status and allows some basic unit parameters such as network setup, date, time, or service.
- The movement in the CU3-03M menu is possible by using the directional buttons on the front panel.
- CU3-03M in 6-MODULE are designed for mounting into a switchboard on the EN60715 DIN rail.

iNELS RF Control interface for CU3-03M

Communication protocol:	RF Touch Compatible
Transmitting frequency:	866 MHz / 868 MHz / 916 MHz
Signal transmission methods:	bidirectionally addressed message
Output for RF antenna:	SMA connector*
RF antenna:	1 dB (part of package)
Free space range:	up to 100 m

DIN = digital input
AOUT = analogue output
AIN = analogue input
GS = galvanically isolated

* Max Tightening Torque for antenna connector is 0.56 Nm.

Installation BUS:

• Two-wired BUS with an arbitrary topology (not only to be as closed circle).

• With its own modulated communications on the DC voltage supply.

• One line of BUS allows you to connect up max. 32 units of iNELS3, or iNELS2 if you use external master MI3-02M/iNELS2.

• The current load of one line is max. 1A.

• maximum length of the BUS is approximately 550 m (depends on the voltage drop).

• Recommended cable:
  - iNELS BUS Cable - Twisted pair of copper wires with size of AWG20 wire (diameter of 0.812 mm, cross-section of 0.5190 mm^2).

System BUS EBM:

• Used to connect the CU3-01M (02M) central unit with MI3-02M external masters, MI3-02M/iNELS2, GSM communicator GSM3-01M or converter DALI/DMX EMDC-64M.

• EBM has strictly linear topology and wires are connected to terminals EBM + and EBM-, wires can not be interchanged.

• Max. length of the line of BUS is 500 m.

• The EBM BUS has to be terminated at both ends.

• This part adapted to be inserted between terminals is included into central units packages and it is necessary to insert between terminals EBM+ and EBM-.

• Reccomended cabling:
  - CAT5e UTP and higher, or FTP CAT5e and higher or STP CAT5e and higher.

• The configurations of units and the whole system are done via Ethernet, through configuration software - iNELS3 Designer & Manager (iDM3), which is designed for operating systems Windows 7, Windows 8 and Windows 10.

• The central unit features two communication protocols:
  - ELKONET - to communicate with iMM and Connection Server or directly with the application iHC.
  - ASCII - communication with third systems and integration with BMS (Building Management Systems), for example Niagara 4.

• Supported Software:
  - Parameterization, configuration, control and visualization: iNELS3 Designer & Manager (iDM3).

• By means of iDM3, you can update firmware of central units and peripheral units connected by BUS.