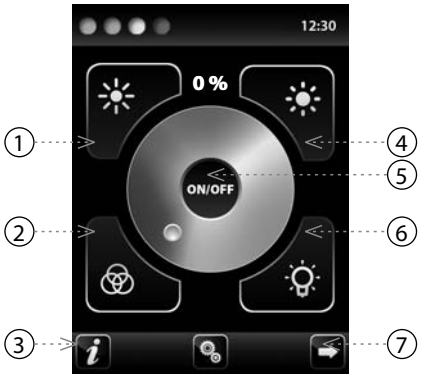
EST3

EN Control unit with touch screen

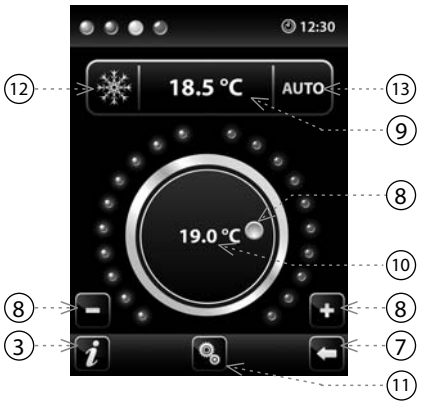
Characteristics

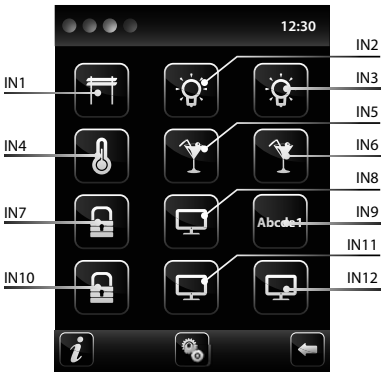
- The control unit with touch screen EST3 is a suitable control element of the iNELS system in places where it is necessary to control multiple devices. The unit replaces several drivers and enables minimizing the number of switches on the wall.
- EST3 features a 3.5 „color touchscreen with an aspect ratio of 3:4. The basic display resolution is 240 x 320 pixels. The color depth of 16.7 million colors (24 bit color, True Color).
- Use the touch sensing surface to control configured buttons and symbols on the screen just by a light touch of a finger. Individual symbols on the screen are in the „Press" animated by the associated output in the system.
- EST3 can have a combination of these screens:
  - Buttons screen
  - Temperature control screen
  - Control RGB/RGBY/RGBW light sources screen.
- Selecting the default screen is possible from the iDM3 software.
- For screen of buttons one of four different matrixes buttons can be used - 2x2, 2x3, 3x3 and 3x4. Matrix selection can be done from the iDM3 software. On the screen can then be used up to 12 buttons to control appliances or scenes.
- In the menu settings, directly on the EST3 component one of 48 prepared symbols (for control of lighting, shading, scenes and other technologies) can be assigned to each button or the buttons can be used to enter text (number of characters depends on the matrix of buttons and therefore the size of the buttons).
- The temperature regulation screen enables coordination of the temperature of the selected heating circuit in a range of ±3, ±4 or ±5 °C (in relation to settings in iDM3).
- The virtual wheel can be used for temperature correction, where you can drag your finger across the screen to control the temperature by half a degree Celsius.
- The temperature correction can also be used instead of the virtual wheel symbols „+ „ and „- „ .
- EST3 units do not have an integrated temperature sensor, or terminals for connection to an external temperature sensor. Within the iDM3 software, it is possible to assign any unit of heat input system iNELS.
- The control RGB/RGBY/RGBW light sources screen allows you to comfortably control your RGB/RGBY/RGBW light sources and adjust the luminous atmosphere as needed.
- For these RGB/RGBY/RGBW light sources , it is possible to use the controls on the screen to adjust the color and brightness. It is also possible to directly set the RGB/RGBY/RGBW illumination light source into white color.
- Located in the left upper corner of the screen are 4 indicators that can signal the status of any logical input / output in the iNELS system.
- In iDM3 it is possible to define the displayed screen, the default screen, matrix of buttons, type RGB/RGBY/RGBW and a correction range for the temperature control.
- In the settings menu directly on the device EST3 it is possible to select the menu language, screen saver, sleep mode, brightness adjustment and symbols and texts for each button.
- EST3 are designed as LOGUS^{90} devices (EST3 however cannot be placed into multi-frames with other devices in this design) and are intended for mounting to installation box.

The screenshots



1. Decrease brightness
2. Illumination in color based on RGB
3. Device Information
4. Increase brightness
5. Output ON/OFF button
6. Illumination in white
7. Button for moving between screens
8. Circuit temperature adjustment
9. Required temperature
10. Current temperature
11. Settings
12. Switch between modes: Heating - Cooling - OFF
13. Switching control: AUTO, Manual





Legend:

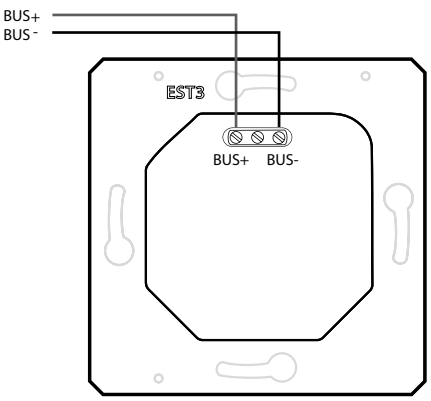
EST3 => settings menu => design selection => 2x2 - input IN1- IN4

EST3 => settings menu => design selection => 2x3 - input IN1- IN6

EST3 => settings menu => design selection => 3x3 - input IN1- IN9

EST3 => settings menu =>design selection => 3x4 - input IN1- IN12

Connection



Function

BUTTONS SCREEN
- Programming iNELS system functions on each button on the screen units EST3 is the same as programming other digital inputs or events for input or button units.
- Buttons can be configured as well as other inputs in the system, both for short and also long press (> 1.5 s).
- Buttons (icons) on the screen can be used instead of control outputs for visualization of one of the digital outputs of the system iNELS. This is made possible by assigning button to the desired output.
- In doing so, the button (icons) on the screen EST3 will become signal lamps (illuminated button), showing the state of the associated output.

HEATING CONTROL SCREEN
- On the temperature control screen, the temperature of the selected heating circuit can be corrected in the range of ±3, ±4 or ±5 °C.
- The virtual wheel can be used for temperature correction, where you can drag your finger across the screen to control the temperature by half a degree Celsius.
- The temperature correction can also be used instead of the virtual wheel symbols "+ " and "- " .

RGB LAMP AND LIGHT SOURCE CONTROL SCREEN
- The RGB light sources control screen contains controls for managing the desired color and brightness of the RGB light sources.
- RGB control screen function is set up so that the colors R, G, B are bound together and simulate the signal level on analog inputs R, G, B and the resulting brightness of the lamp is linked to a simulated analog input 0 to 100%.
- The RGB control display is comprised of several elements and buttons.
  - A long press (touch) on the ON/OFF controls the central setting of RGB components and lamp brightness - on/off.
  - Buttons in the upper half of the screen are for setting the lamp brightness from 0-100% in 5% increments (see adjustable brightness indicator in %).
  - Buttons in the lower half of the screen are for setting the color comfort and accelerated lamp RGB control. The buttons have a lock function. When pressing "white illumination" button, the analog inputs are automatically set to the maximum value of individual color components, which appears as a resulting white light at the RGB light source output when these components are mixed. Then simply adjust the brightness intensity at the output. When pressing (touching) the button "RGB-based color illumination", the "white illumination", button automatically unlocks, and the "RGB-based color illumination" settings button locks..Now the values of analog inputs of individual RGB color components are preset according to the set cursor in the color wheel of the RGB scale on the EST3.

ADDITIONAL INFORMATION
- Info gives information on the device and firmware version.
- Clicking the icon brings you to the settings menu, used to edit the EST3.
- The icon returns to the buttons panel.
- The system time is displayed in the upper right corner of the screen.
- All inputs and outputs on the EST3 unit can be freely programmed and parameterized using the iDM3 program.

Technical parameters

	EST3
Display	
Type:	colored TFT LCD
Aspect ratio:	3:4
Visible area:	52.5 x 70 mm
Backlight:	active
Touchpad:	4-wire resistive
Display:	3.5"
Number of points:	240 x 320
Color Depth:	16.7M (24 bit color)
Power supply	
Supply voltage / tolerance:	27 V DC, -20 / +10 %
Rated current:	150 mA (at 27V DC)
Connection	
Connection:	terminals
Connecting conductors profile:	max. 2.5 mm^2 / 1.5 mm^2 with sleeve
Operating conditions	
Operating temperature:	0 .. +55°C
Storing temperature:	- 20 .. +70°C
Protection degree:	IP20
Overvoltage category:	II.
Pollution degree:	2
Operating position:	any
Installation:	installation box
Dimensions and weight	
Dimensions:	94 x 94 x 36 mm
Weight:*	127 g

* Weight is listed with plastic frame.

General instrucions

CONNECTION INTO THE SYSTEM

Connect the product to the system according to the connection diagram listed with each product. The wires of data BUS of iNELS system are connected to the terminals BUS + (standard red wire for single-pair wiring, red and yellow for two-pair wiring) and BUS- (standard black wire for single-pair wiring, black and white for two-pair wiring), and it is not possible to change the terminals. A twisted pair of wires must be used for the data BUS with a wire diameter at least 0.8 mm. Data communications and power supply to the units are led in a single pair of wires, and you must observe the power cable size with regard to voltage loss on the wire and the maximum power draw.

CAPACITY AND CENTRAL UNIT

It is possible to connect to the central unit CU3-01M or CU3-02M two independent BUSes BUS by means of terminals BUS1+, BUS1- and BUS2+, BUS2-. It is possible to connect to each BUS up to 32 units, so it is possible to connect directly to the central unit a total of 64 units. It is necessary to comply with the requirement of a maximum load of one BUS line – maximum up to 1000 mA current. It is the sum of the rated currents of the units connected to the BUS line, other units can be connected using the units MI3-02M, which generate further BUSes. These are connected to the CU3 unit via the system BUS EBM and you can connect a total of 8 units via EBM BUS to the central unit MI3-02M.

COMMUNICATION BUS OF THE SYSTEM

The BUS must have a cable created by a twisted pair of wires for data BUS of the system with a minimum wire diameter of 0.8 mm. A shielded cable must be used in case of installation of cables of the BUS in an environment with the possibility of electromagnetic interference (e.g. when running along power lines, near electric machines and devices, during LV passage through a distributor, etc.). We highly recommend using the cable JYSTY 2x2x0.8 for BUS. The BUS cable is installed in accordance with its mechanical properties given by the producer (into a pipe/bar, under plaster, underground, suspended, etc.) To increase the mechanical resistance of cables, we always recommend installing the cable into an electrical insulation pipe of the appropriate diameter. The total length of wires of the BUS for CU3-01M (CU3-02M), or MI3-02M, can be 1100 m (550 m for each BUS). The topology of the communications BUS is open with the exception of topology of the circuit. It is necessary to use the cable FTB CAT5e or higher for the system BUS EBM - one pair of wires is connected to the terminals EBM+ and EBM- and the second pair of wires can be curled and connected to GND terminal (just on the one side of EBM BUS). The typology of EBM system BUS is strictly linear and must be terminated at both ends with a nominal resistance value of 120Ω. It is the installer's responsibility to follow all instructions in the manual and all installation requirements for the RS485 BUS.

SUPPLYING THE SYSTEM

For supplying power to system units, it is possible to use the power sources of ELKO EP titled PS3-100/iNELS. We recommend backing up the system with backup batteries connected to the source of PS3-100/iNELS (see sample diagram of connecting the control system).

GENERAL INFORMATION

To operate the unit, it is necessary that the unit is connected to a central unit CU3 series, connected to the central unit of the system CU3, or to a system that already contains this unit as its expansion to include further system.

All unit parameters are set through the central unit CU3 in the software iDM3.

There is LED diode on the PCB for indication of supply voltage and communication with the central unit series CU3. In case that the RUN diode flashes at regular intervals, so there is standard communication between the unit and BUS. If the RUN diode lights permanently, so the unit is supplied from BUS, but there is no communication between BUS and unit. In case that RUN diode is OFF, so there is no supply voltage on the terminals BUS+ and BUS-.

Warning

Before the device is installed and operated, read this instruction manual carefully and with full understanding and Installation Guide System iNELS3. The instruction manual is designated for mounting the device and for the user of such device. It has to be attached to electro-installation documentation. The instruction manual can be also found on a web site www.inels.com. Attention, danger of injury by electrical current! Mounting and connection can be done only by a professional with an adequate electrical qualification, and all has to be done while observing valid regulations. Do not touch parts of the device that are energized. Danger of life-threat! While mounting, servicing, executing any changes, and repairing it is essential to observe safety regulations, norms, directives and special regulations for working with electrical equipment. Before you start working with the device, it is essential to have all wires, connected parts, and terminals de-energized. This instruction manual contains only general directions which need to be applied in a particular installation. In the course of inspections and maintenance, always check (while de-energized) if terminals are tightened.