## PRODUCT OVERVIEW

## Ellios



| $\qquad$ iNELS RF Wireless electroinstallation <br> iNELS BUS Wired electroinstallation Design switches \& sockets |
| :---: |
|  |  |
|  |  |
|  |  |



## ELKO EP

## We have been your partner in the field for 30 years, manufacturing and developing the highest quality electrical devices..

ELKO EP employs 330 people across 15 foreign branches that exports its products to more than seventy countries. Company of the Year of the Zlín Region, Visionary of the Year and Global Exporter of the Year are just some of the awards we have received throughout the years as we consistently strive to move forward in the field of innovation and development.

Millions of relays, hundreds of smart homes and thousands of satisfied customers. This is ELKO EP; a traditional company based in the center of Europe, where development, production, logistics, and service are at the forefront of our focus. Building automation systems, smart city facilities and the Internet of Things (IoT) devices are solutions we can offer.

## Facts and stats





## WE ARE



## DEVELOPERS

In the new R\&D centre, more than 30 engineers develop new products and extend the functionality of existing product.

## PRODUCERS

Modern antistatic spaces,
$2 \times$ fully automated SMD
production lines with
2 shift operations.

## SUPPORT

24 hours / 7 days / 360
days we not only provide
technical support but also logistics.

SELLERS
Personal access to more than 70 sales representatives in

ELKO EP Holding
providing impeccable services and superior products at an affordable price.


Timers/Relays
www.elkoep.com/relays
Time relays, auxiliary relays, installation contactors, memory and bistable relays, staircase switches, time switches, twilight and light switches, dimmers and light intensity controllers, power supplies and bell transformers, controlling and signalling devices.

## Monitoring/Protection relays

www.elkoep.com/monitoring
Voltage relays 1-phase and 3 -phase (undervoltage, overvoltage, phase failure, phase asymmetry and phase sequence), current relays, level relays, thermostats, light indicator of voltage, power factor and frequency monitoring.
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## Wireless electro-installation iNELS RF

www.elkoep.com/wireless
Components of smart wireless system can be easily and quickly used in existing buildings where it is not desirable to cut holes for cables (e.g. add/change a light switch when changing room layouts). However, it is also possible to assemble a complete system for apartment or house control, intelligent control of heating, blinds or scene settings. When using the eLAN-RF gateway, the entire installation can also be controlled by an application from a mobile phone, tablet or television.

Hotel Wireless Retrofit (HRESK)
www.elkoep.com/retrofit
Hotel Room Energy Saving Kit - is a complete solution designed primarily for existing hotel rooms and is based on the iNELS RF wireless system. It focuses on the following areas: "Energy savings": switching off all appliances when leaving the room or not overheating/not overcooling, "Comfort" - all out of bed and "Safety": bell, guest in the room, maid, visitor.


Hospitality Hotel (GRMS)
www.elkoep.com/hospitality
Guest Room Management System - is a comprehensive solution designed primarily for new hotels, guesthouses or wellness and is based on the iNELS BUS system. In the room, it resolves the control of lighting, access, temperature control and audio/ video distribution. It features glass panels with touch buttons that can be combined in various ways (numbers, shape, and colours) and customized (description, logo).


Building management system
www.elkoep.com/building
Building Management System is the supervisor above the iNELS BUS, resp. wireless system iNELS RF. It enables not only the control of several central units (CU) or gateways (eLAN), but also the connection to other protocols that the technology brings in the building (Modbus, Bacnet, KNX, etc.).


Lighting control
www.elkoep.com/lighting
iNELS offer a variety of lighting control solutions for all types of light sources: from simple (dimmers from the RELAY range), through wireless (iNELS RF) to sophisticated control within the iNELS BUS installation, which (except conventional R-L - C LED dimmers) also includes units for light control via DALI and DMX bus.


## Switches and sockets

www.elkoep.com/logus90
Switches, sockets and a complete range of devices and accessories - this is the Logus90 series from the Portuguese manufacturer Efapel. This range is complemented by both standard plastic frames and luxury frames made of purely natural materials: real wood, metal, granite or tempered glass. Be exceptional!



Main parameters

| Supply voltage (frequency) | AC/DC 12-240V <br> (AC $50-60 \mathrm{~Hz}$ ) | AC/DC 12-240V <br> (AC $50-60 \mathrm{~Hz}$ ) | $\begin{aligned} & \text { AC } 24-240 \mathrm{~V} \\ & \text { and DC } 24 \mathrm{~V} \\ & \text { (AC } 50-60 \mathrm{~Hz} \text { ) } \end{aligned}$ | AC/DC 12-240V or AC 230 V only (AC $50-60 \mathrm{~Hz}$ ) | AC/DC 12-240V or AC 230 V only (AC $50-60 \mathrm{~Hz}$ ) | AC/DC 12-240V <br> (AC $50-60 \mathrm{~Hz}$ ) | AC/DC 12-240V <br> (AC $50-60 \mathrm{~Hz}$ ) | AC/DC 12-240V or AC 230 V only (AC $50-60 \mathrm{~Hz}$ ) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Time Range | 0.1 s - 100 hrs | 0.1 s - 100 hrs | 0.1 s - 10 hrs | 0.1 s - 10 days | 0.1 s - 10 days | 0.05 s - 30 days | 0.05 s - 30 days | 0.1 s - 100 days, $0.1-1 \mathrm{~s}$ |
| Contact Configuration and Rating | $\begin{aligned} & \text { SPDT ( } 1 \times \mathrm{C} / \mathrm{O} \text { ) } \\ & 16 \mathrm{~A} / 250 \mathrm{~V} \end{aligned}$ | $\begin{gathered} \text { 3PDT (3x C/O) } \\ 8 \mathrm{~A} / 250 \mathrm{~V} \end{gathered}$ | $\begin{aligned} & \text { SPDT ( } 1 \times \mathrm{C} / \mathrm{O} \text { ) } \\ & 8 \mathrm{~A} / 250 \mathrm{~V} \end{aligned}$ | $\begin{aligned} & \text { SPDT ( } 1 \times \mathrm{C} / \mathrm{O} \text { ) } \\ & 16 \mathrm{~A} / 250 \mathrm{~V} \end{aligned}$ | $\begin{aligned} & \text { 3PDT (3x C/O) } \\ & 8 \mathrm{~A} / 250 \mathrm{~V} \end{aligned}$ | $\begin{gathered} 1 \times \text { SPDT ( } 1 \times \mathrm{C} / \mathrm{O} \text { ) } \\ 16 \mathrm{~A} / 250 \mathrm{~V} \end{gathered}$ | $\begin{aligned} & \text { 3PDT (3x C/O) } \\ & 8 \mathrm{~A} / 250 \mathrm{~V} \end{aligned}$ | $\begin{gathered} 2 \times \text { SPDT }(2 \times \mathrm{C} / \mathrm{O}) \\ 16 \mathrm{~A} / 250 \mathrm{~V} \end{gathered}$ |
| $2^{\text {nd }}\left(3^{\text {rd }}\right)$ contact mode selection | no | no | no | no | no | no | yes | no |

## Functions

| Number of function | 1 | 1 | 6 | 10 | 10 | 11 | 10 | 1 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| List of function |  | ZR-ON DELAY <br> ZN - INTERVAL ON BL - FLASHER - ON first | ON DELAY, INTERVAL ON, FLASHER ON first, OFF DELAY, ON/OFF delay, MEMORY LATCH with delay, ON DELAY with control signal | ON DELAY, INTERVAL ON, FLASHER-OFF first, FLASHER ON first, OFF DELAY, SINGLE SHOT, SINGLE SHOT falling edge, ON/OFF DELAY, MEMORY LATCH, PULSE GENERATOR 0.5 s |  | ON DELAY, INTERVAL ON, FLASHER ON/OFF first, MEMORY LATCH, OFF DELAY, SINGLE SHOT, PULSE GENERATOR $0.5 \mathrm{~s}, \mathrm{ON} /$ OFF DELAY | ON DELAY, INTERVAL ON, FLASHER-ON/ OFF first, MEMORY LATCH, OFF DELAY, SINGLE SHOT, PULSE GENERATOR 0.5 s , ON/OFF DELAY | STAR/DELTA |
| New functions |  | OD - OFF DELAY |  | - | - | WATCHDOG, INTERVAL ON/OFF, MEMORY LATCH with delay | WATCHDOG, INTERVAL ON/OFF | - |

## General information




| AC/DC 12-240V or AC 230 V only (AC $50-60 \mathrm{~Hz}$ ) | AC/DC 12-240V <br> (AC $50-60 \mathrm{~Hz}$ ) | AC/DC 12-240V <br> (AC $50-60 \mathrm{~Hz}$ ) | AC/DC 12-240V <br> (AC $50-60 \mathrm{~Hz}$ ) | AC/DC 12-240V <br> (AC $50-60 \mathrm{~Hz}$ ) | AC/DC 12-240V <br> (AC $50-60 \mathrm{~Hz}$ ) | AC/DC 12-240V <br> (AC $50-60 \mathrm{~Hz}$ ) | AC/DC 12-240V <br> (AC $50-60 \mathrm{~Hz}$ ) | AC/DC 12-240V (AC $50-60 \mathrm{~Hz}$ ) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 0.1 s - 100 days | $0.05 \mathrm{~s}-30$ days | 0.05 s - 30 days | 0.05 s - 30 days | $0.05 \mathrm{~s}-30$ days | $0.05 \mathrm{~s}-30$ days | $0.05 \mathrm{~s}-30$ days | $0.05 \mathrm{~s}-30$ days | $0.05 \mathrm{~s}-30$ days |
| SPDT ( $1 \times \mathrm{C} / \mathrm{O}$ ) 16 A/250 V | SPDT ( $1 \times \mathrm{C} / \mathrm{O}$ ) 16 A/250 V | SPDT ( $1 \times \mathrm{C} / \mathrm{O}$ ) $16 \mathrm{~A} / 250 \mathrm{~V}$ | $2 \times$ SPDT ( $2 \times \mathrm{C} / \mathrm{O}$ ) 16 A/250 V | $\begin{aligned} & 2 \times \text { SPDT }(2 \times \mathrm{C} / \mathrm{O}) \\ & 16 \mathrm{~A} / 250 \mathrm{~V} \end{aligned}$ | $\begin{aligned} & 2 \times \text { SPDT }(2 \times \mathrm{C} / \mathrm{O}) \\ & 16 \mathrm{~A} / 250 \mathrm{~V} \end{aligned}$ | $\begin{gathered} 2 \times \text { SPDT }(2 \times \mathrm{C} / \mathrm{O}) \\ 16 \mathrm{~A} / 250 \mathrm{~V} \end{gathered}$ | $\begin{aligned} & 2 \times \text { SPDT }(2 \times \mathrm{C} / \mathrm{O}) \\ & 16 \mathrm{~A} / 250 \mathrm{~V} \end{aligned}$ | $\begin{aligned} & 2 \times \text { SPDT }(2 \times \mathrm{C} / \mathrm{O}) \\ & 16 \mathrm{~A} / 250 \mathrm{~V} \end{aligned}$ |
| no | no | no | yes | yes | yes | yes | yes | yes |


| 2 | 11 | 11 | 10 10 | 10 10 | 10 10 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| ASYMMETRIC FLASHER - ON FIRST or ASYMMETRIC FLASHER - OFF FIRST | ON DELAY, INTERVAL ON, FLASHER-ON/ OFF first, MEMORY LATCH, OFF DELAY, SINGLE SHOT, PULSE GENERATOR 0.5 s , ON/OFF DELAY <br> WATCHDOG, INTERVAL ON/OFF, MEMORY LATCH with delay | WITH CONTROL SIGNAL: ON DELAY, INTERVAL ON, FLASHER-ON first, FLASHER-OFF first, OFF DELAY, SINGLE SHOT, PULSE GENERATOR 0.5 s , ON/ OFF DELAY <br> WATCHDOG, <br> INTERVAL ON/OFF, <br> MEMORY LATCH WITH DELAY | ON DELAY, INTERVAL ON, FLASHER - ON/ OFF first, OFF DELAY, SINGLE SHOT, PULSE GENERATOR 0.5 s , ON/OFF DELAY, MEMORY LATCH <br> WATCHDOG, INTERVAL ON/OFF | ON DELAY, INTERVAL ON, FLASHER - ON/ OFF first, OFF DELAY, SINGLE SHOT, PULSE GENERATOR 0.5 s , ON/OFF DELAY, MEMORY LATCH <br> WATCHDOG, INTERVAL ON/OFF | ON DELAY, INTERVAL ON, FLASHER-ON/ OFF first, OFF DELAY, SINGLE SHOT, PULSE GENERATOR 0.5 s , ON/OFF DELAY, MEMORY LATCH with delay <br> WATCHDOG, INTERVAL ON/OFF |


| 35 mm DIN rail (IEC 60715) |  |  | 11 Pin Octal Socket |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Operating: $-20^{\circ} \mathrm{C}$ to $+55^{\circ} \mathrm{C}\left(-4^{\circ} \mathrm{F}\right.$ to $\left.131^{\circ} \mathrm{F}\right)$ Storing: $-30^{\circ} \mathrm{C}$ to $+70^{\circ} \mathrm{C}\left(-22^{\circ} \mathrm{F}\right.$ to $\left.158^{\circ} \mathrm{F}\right)$ |  |  |  |  |  |  |  |  |
| Electrical: 100,000 operations Mechanical: 10,000,000 operations |  |  |  |  |  |  |  |  |
| Between power supply and output contact: 4 kV AC |  |  | Between power supply and output contact: 2.5 kV AC |  |  |  |  |  |
| $61 \mathrm{~g}(2.15 \mathrm{oz})$ | $72 \mathrm{~g}(2.57 \mathrm{oz})$ | $61 \mathrm{~g}(2.17 \mathrm{oz})$ | $108 \mathrm{~g}(3.85 \mathrm{oz})$ | 107 g (3.82 oz) | $108 \mathrm{~g}(3.85 \mathrm{oz})$ | $107 \mathrm{~g}(3.82 \mathrm{oz})$ | $108 \mathrm{~g}(3.85 \mathrm{oz})$ | $107 \mathrm{~g}(3.82 \mathrm{oz})$ |
| $90 \times 17.6 \times 64 \mathrm{~mm}$ | $90 \times 17.6 \times 64 \mathrm{~mm}$ | $90 \times 17.6 \times 64 \mathrm{~mm}$ | $48 \times 48 \times 89 \mathrm{~mm}$ | $48 \times 48 \times 79 \mathrm{~mm}$ | $48 \times 48 \times 89 \mathrm{~mm}$ | $48 \times 48 \times 79 \mathrm{~mm}$ | $48 \times 48 \times 89 \mathrm{~mm}$ | $48 \times 48 \times 79 \mathrm{~mm}$ |
| $3.5^{\prime \prime} \times 0.7^{\prime \prime} \times 2.5^{\prime \prime}$ | $3.5{ }^{\prime \prime} \times 0.7^{\prime \prime} \times 2.5^{\prime \prime}$ | $3.5^{\prime \prime} \times 0.7^{\prime \prime} \times 2.5^{\prime \prime}$ | $1.7{ }^{\prime \prime} \times 1.7^{\prime \prime} \times 3.5^{\prime \prime}$ | $1.7^{\prime \prime} \times 1.7^{\prime \prime} \times 3.1{ }^{\prime \prime}$ | $1.7{ }^{\prime \prime} \times 1.7^{\prime \prime} \times 3.5^{\prime \prime}$ | $1.7^{\prime \prime} \times 1.7^{\prime \prime} \times 3.1{ }^{\prime \prime}$ | $1.7{ }^{\prime \prime} \times 1.7^{\prime \prime} \times 3.5^{\prime \prime}$ | $1.7{ }^{\prime \prime} \times 1.7^{\prime \prime} \times 3.1{ }^{\prime \prime}$ |

$\left.\begin{array}{l}\text { GALVANICALLY } \\ \text { SEPARATED INPUT }\end{array}\right\}$ 3 CONTROL INPUTS $\vdots{ }^{2 N 0}$ CONTACT MODE SELECTION



3 CONTROL INPUTS


|  | multifunction, economy version of CRM-91H | multifunction $1 x$ output contact | $\qquad$ <br> multifunction $3 x$ output contacts | multifunction with external potentiometer | novation <br> energy saving relay |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Technical parameters | CRM-161 | CRM-91H | CRM-93H | CRM-91HE | CRM-101 |
| Output | $1 \mathrm{xCO}, 8 \mathrm{~A}$ | $1 \mathrm{CCO}, 16 \mathrm{~A}$ | $3 \mathrm{xCO}, 8 \mathrm{~A}$ | $1 \mathrm{CCO}, 16 \mathrm{~A}$ | $1 \mathrm{xCO}, 16 \mathrm{~A}$ |
| Housing | 1-MODULE |  |  |  |  |
| Supply voltage (frequency) | $\begin{gathered} \mathrm{AC} 24-240 \mathrm{~V} \\ \text { and } \mathrm{DC} 24 \mathrm{~V}(\mathrm{AC} 50 / 60 \mathrm{~Hz}) \end{gathered}$ | AC/DC 12-240 V or <br> AC 230 V (AC $50-60 \mathrm{~Hz}$ ) | AC/DC $12-240 \mathrm{~V}$ or AC $230 \mathrm{~V}(50-60 \mathrm{~Hz})$ | $\begin{aligned} & \text { AC/DC } 12-240 \mathrm{~V} \\ & (\mathrm{AC} 50-60 \mathrm{~Hz}) \end{aligned}$ | $\begin{aligned} & \text { AC/DC 12-240 V } \\ & \text { (AC } 50-60 \mathrm{~Hz}) \end{aligned}$ |
| Time range | 0.1 s-10 hrs (6 ranges) | 0.15 - 10 days (10 ranges) | 0.1 s - 10 days (10 ranges) | $0.1 \mathrm{~s}-10$ days (10 ranges) | t 1 : 1 - $60 \mathrm{~min}, \mathrm{t2}$ : 0-120 s |
| Number of functions | 6 | 10 | 10 | 10 | 4 |
| Dimensions | $90 \times 17.6 \times 64 \mathrm{~mm}$ ( $\left.3.5^{\prime \prime} \times 0.7^{\prime \prime} \times 2.5^{\prime}\right)$ |  |  |  |  |
| Order code | 8161 | UNI: 7521 230V: 7078 | UNI: 7561 230V: 7562 | 8145 | 8411 |
|  | Economy version of CRM91 H . Only the 6 most used functions, 8 A changeover contact, miniUNI power supply AC / DC 24-240 V $+D C 24 \mathrm{~V}$. | The most used multifunctional time relay for universal use in automation, control and regulation or in house installations. 10 functions, 10 time ranges, multifunctional LED signalling, universal power supply in a wide range of AC / DC 12-240 V. |  | As a CRM-91H, but with the possibility of time control by an external potentiometer. The potentiometer is mounted in a panel, hole diameter 25 mm . | Relay for automatic switching of electricity using connected sensors (motion detector and magnetic door contact) in the room. |

TIME RELAYS \| multifunction, on DIN rail

|  |  | multifunction $3 x$ output contacts 2nd \& 3rd contact selection | multifunction galvanically separated control input |  | OFF DELAY after power supply failure |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Technical parameters | CRM-111H | CRM-113H | CRM-121H | CRM-131H | CRM-82TO |
| Output | $1 \mathrm{xCO}, 16 \mathrm{~A}$ | $3 \mathrm{xCO}, 8 \mathrm{~A}$ | 1xCO, 16 A | $1 \mathrm{xCO}, 16 \mathrm{~A}$ | $2 \mathrm{xCO}, 8 \mathrm{~A}$ |
| Housing |  |  | 1-MODULE |  |  |
| Supply voltage (frequency) | AC/DC 12-240 V (AC $50-60 \mathrm{~Hz}$ ) | AC/DC 12-240 V (AC $50-60 \mathrm{~Hz}$ ) | $\begin{aligned} & \text { AC/DC 12-240V } \\ & \text { AC } 50-60 \mathrm{~Hz}) \end{aligned}$ | AC/DC 12-240 V <br> (AC $50-60 \mathrm{~Hz}$ ) | AC/DC 12-240 V (AC $50-60 \mathrm{~Hz}$ ) |
| Time range | $50 \mathrm{~ms}-30$ days (10 ranges) | $50 \mathrm{~ms}-30$ days (10 ranges) | $50 \mathrm{~ms}-30$ days (10 ranges) | $50 \mathrm{~ms}-30$ days (10 ranges) | $0.15 \mathrm{~s}-10 \mathrm{~min}$ (4 ranges) |
| Number of functions | 11 | 10 | 11 | 11 | 2 |
| Dimensions | $90 \times 17.6 \times 64 \mathrm{~mm}\left(3.5{ }^{\prime \prime} \times 0.7^{\prime \prime} \times 2.5^{\prime}\right)$ |  |  |  |  |
| Order code | 7554 | 8063 | 7555 | 7556 | 7580 |
|  | All functions initiated by the supply voltage, except for the flasher function, can use the control input to inhibit the delay (pause). | All functions initiated by the supply voltage, except for the flasher function, can use the control input to inhibit the delay (pause). <br> 2nd \& 3rd contact mode selection. | Galvanically separated control input (Power Trigger) for control with external voltage in the range at $\mathrm{AC} /$ DC 12-240 V. | Three control inputs START, INHIBIT, RESET. All functions start with triggering of control input START. | Relay is timing after power supply failure and is switched off after set time period. Two time functions: a-TRUE OFF DELAY e-ON DELAY |


|  | choose from 4 functions $1 x$ output contact | choose from 4 functions $3 x$ output contacts | STAR / DELTA timer | asymmetric flasher 1x output contact | asymmetric flasher with two external potentiometers | 2-channel ON DELAY function $2 x$ output contacts |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Technical parameters | CRM-181J | CRM-183J | CRM-2T | CRM-2H | CRM-2HE | SJR-2 |
| Output | $1 \mathrm{CCO}, 16 \mathrm{~A}$ | $3 \mathrm{xCO}, 8 \mathrm{~A}$ | $2 \mathrm{CCO}, 16 \mathrm{~A}$ | $1 \mathrm{CCO}, 16 \mathrm{~A}$ | $1 \mathrm{CCO}, 16 \mathrm{~A}$ | $2 \mathrm{CCO}, 16 \mathrm{~A}$ |
| Housing | 1-MODULE |  |  |  |  |  |
| Supply voltage (frequency) | AC/DC 12-240 V <br> (AC $50-60 \mathrm{~Hz}$ ) | $\begin{aligned} & \text { AC/DC } 12-240 \mathrm{~V} \\ & (\mathrm{AC} 50-60 \mathrm{~Hz}) \end{aligned}$ | $\begin{aligned} & \text { AC/DC } 12-240 \mathrm{~V} \\ & \text { or AC } 230 \mathrm{~V} \\ & \text { or AC } 24-480 \mathrm{~V} \end{aligned}$ | $\begin{aligned} & \text { AC/DC } 12-240 \mathrm{~V} \\ & \text { or AC } 230 \mathrm{~V} \\ & \text { (AC } 50-60 \mathrm{~Hz} \text { ) } \end{aligned}$ | AC/DC 12-240 V <br> (AC $50-60 \mathrm{~Hz}$ ) | $\begin{aligned} & \text { AC/DC } 12-240 \mathrm{~V} \\ & \text { or AC } 230 \mathrm{~V} \\ & (\mathrm{AC} 50-60 \mathrm{~Hz} \text { ) } \end{aligned}$ |
| Time range | 0.1 s - 100 hrs (10 ranges) 0 | 0.1 s - 100 hrs (10 ranges) | $\mathrm{t} 1: 0.1 \mathrm{~s}-100$ days, $\mathrm{t} 2: 0.1 \mathrm{~s}-1 \mathrm{~s}$ | 0.15 - 100 days (10 ranges) | $0.15-100$ days ( 10 ranges) | $0.15-10$ days (10 ranges) |
| Dimensions | $90 \times 17.6 \times 64 \mathrm{~mm}\left(3.5^{\prime \prime} \times 0.7^{\prime \prime} \times 2.5^{\prime}\right)$ |  |  |  |  |  |
|  | ZR: ON DELAY <br> CRM-181J/UNIZR:8038\| <br> ZN: INTERVAL ON <br> CRM-181J/UNIZN:8039 \| <br> BL: FLASHER - ON first CRM-181J/UNIBL: 8040 \| <br> OD: OFF DELAY <br> CRM-181J/UNIOD:8041 \| | CRM-183J/UNIZR: 8061 <br> CRM-183J/UNIZN: 8060 <br> \| CRM-183J/UNI BL: 8058 <br> \|CRM-183J/UNIOD: 8059 $\square$ | CRM-2T/UNI: 7669 <br> CRM-2T/230V: 8381 <br> CRM-2T/24-480V: 4530 <br> Time t1 $\boldsymbol{\lambda}$ (star) 0.1 s do 100 days. <br> Time t2 (delay) $\boldsymbol{\lambda / \Delta}$ $0.1 \mathrm{~s}-1 \mathrm{~s}$. | CRM-2H/UNI: 7668 <br> CRM-2H/230V: 8395 <br> Asymmetric flasher with independently adjustable output closing and opening time. <br> 2 time functions: <br> - asymmetric flasher ON first <br> - asymmetric flasher OFF first. | CRM-2HE/UNI: 8144 <br> Asymmetric flasher with possibility of time control with external potentiometers. <br> 2 time functions: <br> - asymmetric flasher ON first <br> - asymmetric flasher OFF first. | SJR-2/UNI: 7670 <br> SJR-2/230V: 8396 <br> It is used for gradual (cascade) switching. 2 x independent ON DELAY outputs. Time adjustable from 0.1 s to 100 days. |
| TIME RELAYS \| multifunction, PLUG-IN |  |  |  |  |  | NEN |





## TIME RELAYS \| flush/cover mounted

|  |  | multifunction 3-wire (without NEUTRAL) on input: incandescent bulb |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Technical parameters | SMR-K | SMR-T | SMR-H | SMR-B |
| Output | 1x triac | 1x triac | 1x triac | $1 \mathrm{CO}, 16 \mathrm{~A}\left(\mathrm{AgSnO}_{2}\right)$ |
| Housing | BOX | BOX | BOX | BOX |
| Resistive load | 10-160 VA | 10-160 VA | 0-200 VA | $0-4000 \mathrm{VA}$ |
| Inductive load | 10-100 VA | 10-100 VA | 0-100 VA | 0-2000 VA |
| Supply voltage (frequency) | AC $230 \mathrm{~V}(50-60 \mathrm{~Hz}$ ) | AC $230 \mathrm{~V}(50-60 \mathrm{~Hz}$ ) | AC $230 \mathrm{~V}(50-60 \mathrm{~Hz}$ ) | AC $230 \mathrm{~V}(50-60 \mathrm{~Hz}$ ) |
| Number of functions | 9 | 9 | 9 | 10 |
| Dimensions |  | $49 \times 49 \times 13 \mathrm{~mm}\left(1.9{ }^{\prime \prime} \times 1.9^{\prime \prime} \times 0.5^{\prime}\right)$ |  | $49 \times 49 \times 21 \mathrm{~mm}$ (1.9" $\left.{ }^{\prime \prime} 1.9^{\prime \prime} \times 0.8^{\prime}\right)$ |
| Order code | 4517 | 2910 | 2911 | 3556 |
| flush mounted | Multifunction time relay for installation in an installation box for 3 -wire connection (does not require NEUTRAL). An LED bulb or energy saver can be connected in parallel to the control input. | Like the SMR-K, but in parallel to the control input, unlike the SMR$K$, neither an LED bulb nor an energy saver can be connected, only other types of loads. Glow-lamps are supported. | Multifunction time relay for installation in an installation box for 4-wire connection (requires Neutral). Not suitable for switching LED bulbs. | Multifunction time relay for installation in an installation box for 4 -wire connection (requires Neutral). Thanks to the switching contact $\mathrm{AgSnO}_{2}$, it is also suitable for switching LED bulbs or savings. |




## INSTALLATION CONTACTORS


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The state of the output contacts changes with the coil pulse. They are used mainly for switching and control of luminaires, heating, ventilation and other devices - with buttons connected in parallel.
All relays can be controlled manually using the lever on the front panel ( $1-0$ ), which also serves as a status signal. In addition, the BR-220 and BR-232 have a switch for disconnecting the coil, as a result of which it can then only be operated with a slide switch on the front panel.
In steady state (ON or OFF) it has zero consumption.

Similar to the Bistable BR relay, but thanks to the electronic design, the switching is almost noiseless.
The relays remember their state even after the power failure is restored (the output is always OFF in the event of a power failure, after the power supply is restored it automatically returns to the state before the power failure).
MR-42: 2nd output option:
$\begin{array}{ll}\text { a) Parallel contact } & \text { b) step relay }\end{array}$


TWILIGHT SWITCHES |


digital
with build-in time switch and external sensor

for outdoor use with built-in sensor

external photosensor

| Technical parameters | SOU-1 |  | SOU-2 | SOU-3 | SKS-100, SKS-200 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Output | $1 \mathrm{xCO}, 16 \mathrm{~A}$ |  | $1 \mathrm{xCO}, 8 \mathrm{~A}$ | $1 \times \mathrm{NO}, 12 \mathrm{~A}$ | SKS-100: for use with SOU-1, LIC-1, LIC-2 |  |
| Housing | 1-MODULE |  | 2-MODULE | box with IP65 |  |  |
| Supply voltage (frequency) | $\begin{aligned} & \text { AC/DC 12-240 V } \\ & (\mathrm{AC} 50-60 \mathrm{~Hz}) \end{aligned}$ | $\begin{aligned} & \text { AC } 230 \mathrm{~V} \\ & (50-60 \mathrm{~Hz}) \end{aligned}$ | $\begin{aligned} & \text { AC } 230 \mathrm{~V} \\ & (50-60 \mathrm{~Hz}) \end{aligned}$ | $\begin{aligned} & \text { AC } 230 \mathrm{~V} \\ & (50-60 \mathrm{~Hz}) \end{aligned}$ | SKS-200: for use with SOU-2 |  |
| Sensor | external, SKS-100 |  | external, SKS-200 | built-in |  |  |
| Adjustable light intensity | 1-50000 lx (in 2 ranges) |  | 10-50000 lx | 1-100 000 lx (in 3 ranges) |  |  |
| Dimensions | $90 \times 17.6 \times 64 \mathrm{~mm}\left(3.5^{\prime \prime} \times 0.7^{\prime \prime} \times 2.5^{\prime}\right)$ |  | $90 \times 35 \times 64 \mathrm{~mm}\left(3.5^{\prime \prime} \times 1.4^{\prime \prime} \times 2.5^{\prime}\right)$ | $98 \times 62 \times 34 \mathrm{~mm}\left(3.9^{\prime \prime} \times 2.4^{\prime \prime} \times 1.3^{\prime}\right)$ | $\varnothing 24 \times 58 \mathrm{~mm}$ |  |
| Order code | 8046 | 7551 | 8234 | 4056 | 8073 | 8233 |
|  | Twilight switch (1-100 lx ) or (10050000 Ix ), which closes the output when the level falls below the set level. External sensor SKS-100 included in the package. |  | Digital twilight switch with timer, i.e. the lighting level can be blocked in real time. <br> External sensor SKS-200 included in the package. | Twilight switch (1-1000 Ix), which closes the output when falling below the set level or light switch ( $100-100.000 \mathrm{Ix}$ ), which closes the output when the level is exceeded. | New external photosensor SKS-100 and SKS-200 for panel or wall mounting, via the included bracket. |  |


flush／cover mounted regulated 12－24V output voltage

12 or 24 V

| Technical parameters | PS1M |  | PS2M |  | PS3M |  | PS4M |  | PSB－10 |  | PS－30R |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Output voltage | DC 12 V | DC 24 V | DC 12 V | DC 24 V | DC 12 V | DC 24 V | DC 12V | DC 24 V | DC 12 V | DC 24 V | DC 12－24V |
| Max．load | 1．2 A／15 W | 0．62 A／15 W | $2 \mathrm{~A} / 24 \mathrm{~W}$ | 1．2 A／30W | 4．5 A／54 W | $2.5 \mathrm{~A} / 60 \mathrm{~W}$ | 7．1 A／85 | 3．8 A／92 W | 0．8 A／10W | 0．4 A／10W | 2．5－1．2 A／30 W |
| Housing | 1－MODULE |  | 2－MODULE |  | $3-M O D U L E$ |  | 4－MODULE |  | BOX |  | 3－MODULE |
| Supply voltage （frequency） | $\begin{gathered} \text { AC } 100-240 \mathrm{~V} \\ (50-60 \mathrm{~Hz}) \end{gathered}$ |  |  |  |  |  |  |  | $\begin{gathered} \text { AC } 110-250 \mathrm{~V} \\ (50-60 \mathrm{~Hz}) \end{gathered}$ |  | $\begin{gathered} \text { AC } 100-250 \mathrm{~V} \\ (50-60 \mathrm{~Hz}) \end{gathered}$ |
| Protective circuits | overload，overvoltage and short circuit |  |  |  |  |  |  |  | short circuit，current and temperature overload（from 120\％of rated power） |  |  |
| Dimensions | $\begin{aligned} & 90 \times 18 \times 58 \mathrm{~mm} \\ & \left(3.5^{\prime \prime} \times 0.7^{\prime \prime} \times 2.6^{\prime}\right) \end{aligned}$ |  | $\begin{aligned} & 90 \times 35 \times 58 \mathrm{~mm} \\ & \left(3.5^{\prime \prime} \times 1.4^{\prime \prime} \times 2.3^{\prime \prime}\right) \end{aligned}$ |  | $\begin{gathered} 90 \times 52.5 \times 58 \mathrm{~mm} \\ \left(3.5^{\prime \prime} \times 2.1^{\prime \prime} \times 2.3^{\prime \prime}\right) \end{gathered}$ |  | $\begin{aligned} & 90 \times 70 \times 58 \mathrm{~mm} \\ & \left(3.5^{\prime \prime} \times 2.8^{\prime \prime} \times 2.3^{\prime \prime}\right) \end{aligned}$ |  | $\begin{aligned} & 49 \times 49 \times 21 \mathrm{~mm} \\ & \left(1.9^{\prime \prime} \times 1.9^{\prime \prime} \times 0.8^{\prime}\right) \end{aligned}$ |  | $\begin{gathered} 90 \times 52 \times 65 \mathrm{~mm} \\ \left(3.5^{\prime \prime} \times 2^{\prime \prime} \times 2.6^{\prime \prime}\right) \end{gathered}$ |
|  | PS1M－15／12V： 8047 PS3M－54／12V： 8051 <br> PS1M－15／24V： 8048 PS3M－60／24V： 8052 <br> PS2M－24／12V： 8049 PS4M－85／12V： 8053 <br> PS2M－30／24V： 8050 PS4M－92／24V： 8054 <br> Switching stabilized power supply with output voltage 12 or 24 V DC． <br> High efficiency up to $90 \%$ ．Low ripple and noise． |  |  |  |  |  |  |  | $\begin{aligned} & \text { PSB-10-12: } 4502 \\ & \text { PSB-10-24: } 4378 \end{aligned}$ <br> 誓回 |  | PS－30－R： 5158 <br> Adjustable output voltage in the range of $12-24 \mathrm{~V}$ ． $\square$ <br> 至票 <br>  |

POWER SUPPLIES \｜AC \＆DC

## BELL TRANSFORMERS




|  | universal dimmer 4-wires (with NEUTRAL) | dimmer 3-wires (without NEUTRAL) | lighting intensity controller, controls the source directly <br> lighting intensity controller, controls the $0-10 \mathrm{~V}$ ballast |  | universal dimmer 6-channels $6 \times 150$ VA ( 230 V ) |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Technical parameters | SMR-M | SMR-S | LIC-1 | LIC-2 |  | 6M |
| Dimmable loads | R-L-C-ESL-LED | R-L-LED | R-L-C-ESL-LED | voltage output $0(1)-10 \mathrm{~V}$ | R-L- | - LED |
| Output | 2 M MOSFET | 1x triac | 2 x MOSFET | $1 \mathrm{NNO}, 16 \mathrm{~A}$ |  |  |
| Output loads | 160 VA | R: 10-300 VA, L: 10-150 VA | 300 VA | 4000 VA | 6 x 150 VA (2 | $\times 75$ VA (120V) |
| Protections | overheating and overload | fuse | overheating and overload | - | overheat | overload |
| Housing |  | x | 1-MO | ULE |  |  |
| Supply voltage (frequency) | AC $230 \mathrm{~V}(50 \mathrm{~Hz})$ | AC $230 \mathrm{~V}(50 \mathrm{~Hz})$ | AC $230 \mathrm{~V}(50 \mathrm{~Hz})$ | AC 100-250 V ( 50 Hz ) | $230 \mathrm{~V}(50 \mathrm{H}$ | $120 \mathrm{~V}(60 \mathrm{~Hz})$ |
| Dimensions | $49 \times 49 \times 21 \mathrm{~mm}$ ( $\left.1.9^{\prime \prime} \times 1.9^{\prime \prime} \times 0.8^{\prime}\right)$ | $49 \times 49 \times 13 \mathrm{~mm}\left(1.9^{\prime \prime} \times 1.9{ }^{\prime \prime} \times 0.5{ }^{\prime \prime}\right)$ | $90 \times 17.6 \times 64 \mathrm{~mm}$ | $\left.3.5^{\prime \prime} \times 0.7^{\prime \prime} \times 2.5^{\prime}\right)$ | $90 \times 105 \times 65$ | $5^{\prime \prime} \times 4.1^{\prime \prime} \times 2.6{ }^{\prime \prime}$ |
| Order code | 4377 | 2351 | 4493 | 4531 | 230V: 8205 | 120V: 8209 |
| BOX <br> flush mounted | The type of light source is set with a switch on the instrument panel. | 3-wire connection (without NEUTRAL), but minimum load 10 W . | It automatically maintains the intensity of artificial lighting in the room according to an external outdoor light sensor SKS-100. | As LIC-1, but at the output a continuous analog signal 0 (1)-10 V for controlling electric ballasts. | Universal 6-ch output of 900 be connected ply the power number of o wired buttons | dimmer with an he outputs can allel and multiexpense of the Control with eless iNELS RF. |



USS-ZM
Basic module

## USS

Designated for switching, control and signaling of auxiliary and power circuits.
USS - "Do-it-yourself" = various types of switching and signaling units can be "snapped" in the basic module.
Units are supplied separately, individual configurations are assembled by the user. It is possible to place up to two units into 1-MODULE (for example $2 x$ switch, $2 x$ signalling lights or combinations) $=$ when compared with competitors it is saving place in a switch board.
Operating temperature -20 to $+55^{\circ} \mathrm{C}$


## Example of combinations



USS-01 + USS-03


USS-13 + USS-10


USS-07 + USS-11


USS-11 + USS-01


USS-07 + USS-00

Types of controlling and signaling units


| Name | USS-01 | USS-02 | USS-03 | USS-04 | USS-05 | USS-06/S | USS-06/R |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Order code | 2462 | 2463 | 2464 | 2465 | 2466 | 2467 | 3637 |



| Signalling LED <br> flashing (red) | Signalling LED <br> flashing (blue) | Used to fill an <br> empty position <br> in the front panel |
| :---: | :---: | :---: |
| USS-14 | USS-15 | USS-0 |
| 2489 | 2437 | 2461 |




## PROTECTION AND MONITORING RELAYS

## Voltage monitoring relays - overview

| Type | $\begin{aligned} & \text { 드N } \\ & 0 \\ & 0 \end{aligned}$ |  | Features |  |  |  | Phase |  |  | Setting |  |  | Description |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | $\begin{aligned} & \tilde{\sim} \\ & \frac{\pi}{2} \\ & \frac{\pi}{2} \end{aligned}$ |  | $\cdots$ | $\stackrel{\rightharpoonup}{v}$ |  | $\begin{aligned} & \text { 凹 } \\ & \stackrel{0}{0} \\ & \stackrel{\rightharpoonup}{0} \\ & \sim \end{aligned}$ |  | $\frac{\pi}{0}$ | $\begin{aligned} & \frac{n}{n} \\ & \frac{0}{2} \\ & \stackrel{H}{x} \\ & \underset{x}{2} \end{aligned}$ |  |  |
| HRN-33 | 1-M | monitored voltage | 1 | AC 48-276V | $\bullet$ | $\bullet$ | x | x | x | - | x | x | For all types, the delay is adjustable from $0-10$ seconds (to eliminate short-term outages or peaks). <br> The lower voltage level (Umin) is set in \% of the upper level (Umax). |
| HRN-63 | 1-M | monitored voltage | 1 | AC 48-276V | $\bullet$ | $\bullet$ | x | x | x | $\bullet$ | x | $x$ |  |
| HRN-35 | 1-M | monitored voltage | 1 | AC 48-276V | $\bullet$ | $\bullet$ | x | x | x | $\bullet$ | x | $x$ |  |
| HRN-34 | 1-M | monitored voltage | 1 | DC 6-30V | $\bullet$ | $\bullet$ | x | x | x | - | x | x |  |
| HRN-37 | 1-M | monitored voltage | 1 | AC $24-150 \mathrm{~V}$ | $\bullet$ | $\bullet$ | x | x | x | - | x | x |  |
| HRN-67 | 1-M | monitored voltage | 1 | AC $24-150 \mathrm{~V}$ | $\bullet$ | $\bullet$ | x | x | x | - | x | x |  |
| HRN-34 | 1-M | monitored voltage | 1 | DC $6-30 \mathrm{~V}$ | $\bullet$ | $\bullet$ | x | x | x | $\bullet$ | x | $x$ |  |
| HRN-64 | 1-M | monitored voltage | 1 | DC 6-30V | $\bullet$ | $\bullet$ | x | x | x | $\bullet$ | x | x |  |
| HRN-41/230 V <br> HRN-41/400 V <br> HRN-41/24V | 3-M | $\begin{gathered} \mathrm{AC} 230 \mathrm{~V} \\ \mathrm{AC} 400 \mathrm{~V} \\ \mathrm{AC} / \mathrm{DC} 24 \mathrm{~V} \end{gathered}$ | 1 | AC/DC 50 V AC/DC 160 V AC/DC 500 V | $\bullet$ | $\bullet$ | x | x | x | $\bullet$ | $\bullet$ | $\bullet$ | Second relay function (independent or parallel). Galvanically separated power supply from measuring inputs. |
| HRN-42/230 V <br> HRN-42/24V | 3-M | $\begin{gathered} \mathrm{AC} 230 \mathrm{~V} \\ \mathrm{AC} / \mathrm{DC} 24 \mathrm{~V} \end{gathered}$ | 1 | AC/DC 50 V AC/DC 160 V AC/DC 500 V | $\bullet$ | $\bullet$ | x | x | x | - | $\bullet$ | $\bullet$ |  |
| HRN-55 | 1-M | monitored voltage | 3 | AC $3 \times 300-500 \mathrm{~V}$ | x | x | $\bullet$ | $\bullet$ | x | - | x | x | Power supply from all phases, i.e. the relay function is preserved even if one phase fails. |
| HRN-55N | 1-M | monitored voltage | 3 | AC $3 \times 172-287 \mathrm{~V}$ | x | x | $\bullet$ | $\bullet$ | x | $\bullet$ | x | x | Power supply L1-N, i.e. the relay also monitors the neutral wire interruption. |
| HRN-57 | 1-M | monitored voltage | 3 | AC $3 \times 300-500 \mathrm{~V}$ | $\bullet$ | $\bullet$ | - | x | x | - | x | x | Power supply from all phases, i.e. the relay function is preserved even if one phase fails. |
| HRN-57N | 1-M | monitored voltage | 3 | AC $3 \times 172$-287V | $\bullet$ | $\bullet$ | - | x | x | - | x | x | Power supply L1-N, i.e. the relay also monitors the neutral wire interruption, replacement for HRN-52. |
| HRN-54 | 1-M | monitored voltage | 3 | AC $3 \times 300-500 \mathrm{~V}$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | x | - | x | x | If the supply voltage falls below $60 \%$ of Un (OFF lower level), the relay will immediately disconnects with no delay. Power supply from all phases, i.e. the relay function is preserved even if one phase fails. |
| HRN-54N | 1-M | monitored voltage | 3 | AC $3 \times 172-287 \mathrm{~V}$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | x | $\bullet$ | x | x | If the supply voltage falls below $60 \%$ of Un (OFF lower level), the relay will immediately disconnects with no delay. Power supply L1-N, i.e. the relay also monitors the neutral wire interruption. |
| HRN-43/230 V HRN-43/400 V HRN-43/24V | 3-M | $\begin{gathered} \mathrm{AC} 230 \mathrm{~V} \\ \mathrm{AC} 400 \mathrm{~V} \\ \mathrm{AC} / \mathrm{DC} 24 \mathrm{~V} \end{gathered}$ | 3 | AC $3 \times 84-480 \mathrm{~V}$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | 2 output relays, functions of the second relay may be selected (independent/parallel). <br> Galvanically separated power supply. |
| HRN-43N/230 V HRN-43N/400 V HRN-43N/24V | 3-M | $\begin{gathered} \mathrm{AC} 230 \mathrm{~V} \\ \mathrm{AC} / \mathrm{DC} 24 \mathrm{~V} \end{gathered}$ | 3 | AC $3 \times 48-276 \mathrm{~V}$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ |  |
| HRN-56/208 HRN-56/240 HRN-56/400 | 1-M | monitored voltage | 3 | AC $3 \times 125-276 \mathrm{~V}$ AC $3 \times 144-276 \mathrm{~V}$ AC $3 \times 240-460 \mathrm{~V}$ | x | $\bullet$ | - | $\bullet$ | x | - | x | x | Thanks to the power supply from all three phases, the relay is operational even if one phase fails. |
| HRN-56/480 HRN-56/575 | 3-M | monitored voltage | 3 | $\begin{aligned} & \text { AC } 3 \times 228-550 \mathrm{~V} \\ & \mathrm{AC} 3 \times 345-660 \mathrm{~V} \end{aligned}$ | x | $\bullet$ | $\bullet$ | $\bullet$ | x | $\bullet$ | x | x |  |
| HRN-100 | 2-M | monitored voltage | 3 | $\begin{aligned} & \mathrm{U}_{\mathrm{LN}}=3 \sim 155-500 \mathrm{~V} \\ & \mathrm{U}_{\mathrm{LL}}=3 \sim 90-288 \mathrm{~V} \end{aligned}$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | Configurable 3 or 4-wire connection. <br> Extensive setting options. <br> Each output can be configured individually. |


$1 \times$ common output contact for overvoltage and undervoltage.
Adjustable delay 0-10 s to eliminate short-term peaks in the network.
$2 x$ independent output contacts, separately for overvoltage and undervoltage. Adjustable delay $0-10 \mathrm{~s}$ to eliminate shortterm peaks in the network.
$1 \times$ output contact for overvoltage and undervoltage
Adjustable delay 0-10 s to eliminate short-term peaks in the network.

VOLTAGE RELAYS \| 1-phase, DC


1-phase, AC or DC

|  | DC voltage 6-30 V batteries and accumulators overvoltage and undervoltage $=1 \mathrm{x}$ output | DC voltage 6-30 V batteries and accumulators overvoltage and undervoltage $=1 \mathrm{x}$ output | $1 P$ <br> with three input ranges for AC / DC monitoring in 1-phase network Umin = \% of set Umax | with three input ranges for AC / DC monitoring in 1-phase network $U \min =$ \% of nominal input |
| :---: | :---: | :---: | :---: | :---: |
| Technical parameters | HRN-34 | HRN-64 | HRN-41 | HRN-42 |


| Type of monitored voltage | DC |
| :--- | :---: |
| Monitored levels | UNDervoltage and overvoltage |
| Functions | HINDOW |
| Monitored range | $6-30 \mathrm{~V}$ |
| Supply voltage | $1 \times \mathrm{CO}, 16 \mathrm{~A}$ |
| Housing | 1-MODULE |
| Power supply | from monitored voltage |
| Dimensions | $90 \times 17.6 \times 64 \mathrm{~mm}\left(3.5^{\prime \prime} \times 0.7^{\prime \prime} \times 2.5^{\prime}\right)$ |


| undervoltage and overvoltage |  |
| :---: | :---: |
| WINDOW |  |
| 3 inputs: $10-50 \mathrm{~V} ; 32-160 \mathrm{~V} ; 100-500 \mathrm{~V}$ |  |
| $2 \mathrm{CCO}, 16 \mathrm{~A}$ |  |
| 3-MODULE |  |
| AC/DC $24 \mathrm{~V}, 230 \mathrm{~V}, 400 \mathrm{~V}$ | AC/DC $24 \mathrm{~V}, 230 \mathrm{~V}$ |
| $90 \times 52 \times 65 \mathrm{~mm}\left(3.5^{\prime \prime} \times 2\right.$ " $\left.2.66^{\prime}\right)$ |  |
| HRN-41/24V: 4041 | HRN-42/24: 4723 |
| HRN-41/230V: 4721 | HRN-42/230V: 4725 |
| HRN-41/400V: 4722 |  |

Independent supply voltage galvanically separated from the measured one, optional function of the 2nd relay, optional hysteresis $5 \% / 10 \%$, Memory function.



| Technical parameters | HRN-55 | HRN-55N | HRN-57 | HRN-57N | HRN-54 | HRN-54N | HRN-43 | HRN-43N |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Phase failure | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | - | - | - | - |
| Phase sequence | - | - | x | x | - | - | - | - |
| Adjustable overvoltage | $\times$ (fixed) | $\times$ (fixed) | - | - | - | - | - | - |
| Adjustable undervoltage | $x$ (fixed) | $x$ (fixed) | - | - | - | - | - | - |
| Asymmetry | $x$ | $x$ | $x$ | x | $x$ | $x$ | - | - |
| Monitored range | AC $3 \times 300-500 \mathrm{~V}$ | AC $3 \times 172-287 \mathrm{~V}$ | AC $3 \times 300-500 \mathrm{~V}$ | AC $3 \times 172-287 \mathrm{~V}$ | AC $3 \times 300-500 \mathrm{~V}$ | AC $3 \times 172-287 \mathrm{~V}$ | AC $3 \times 84-480 \mathrm{~V}$ | AC $3 \times 48-276 \mathrm{~V}$ |
| Output | 1xCO, 8 A |  |  |  |  |  | $2 \mathrm{CCO}, 16 \mathrm{~A}$ |  |
| Housing | 1-MODULE |  |  |  |  |  | 3-MODULE |  |
| Power supply | from monitored voltage |  |  |  |  |  | AC/DC $24 \mathrm{~V}, \mathrm{AC} 230 \mathrm{~V}, \mathrm{AC} 400 \mathrm{~V}$ |  |
| Dimensions | $90 \times 17.6 \times 64 \mathrm{~mm}\left(3.5{ }^{\prime \prime} \times 0.7^{\prime \prime} \times 2.5^{\prime}\right)$ |  |  |  |  |  | $90 \times 52 \times 65 \mathrm{~mm}\left(3.5^{\prime \prime} \times 2^{\prime \prime} \times 2.6^{\prime}\right)$ |  |
| Order code | 7512 | 7513 | 7514 | 7515 | 7498 | 7511 | $\begin{aligned} & \text { 24V: } 4731 \\ & \text { 230V: } 4729 \\ & \text { 400V: } 4730 \end{aligned}$ | $\begin{gathered} 24 \mathrm{~V}: 4731 \\ 230 \mathrm{~V}: 4733 \\ 400 \mathrm{~V}: 4734 \end{gathered}$ |
|  |  |  |  |  |  |  |  |  |

## VOLTAGE RELAYS \| 3-phases



| Technical parameters | PRI-32 |
| :---: | :---: |
| Voltage type | AC |
| Monitored levels | overcurrent |
| Monitored range | 1-20 A ( $50-60 \mathrm{~Hz}$ ) |
| Output | $1 \mathrm{xCO}, 8 \mathrm{~A}$ |
| Housing |  |
| Supply voltage (frequency) | AC 24-240 V, DC 24 V <br> (AC $50-60 \mathrm{~Hz}$ ) |
| Dimensions | $90 \times 17.6 \times 80.5 \mathrm{~mm}\left(3.5{ }^{\prime \prime} \times 0.7^{\prime \prime} \times 3.2^{\prime}\right)$ |
|  | PRI-32: 2196 <br> Monitor current level in single-phase AC circuits. The device has also in-built current transformer on the front panel. |
|  |  |

PRI-35: 8271
Serves to protect a motor of a pump (submersible pump) against dry running.

monitors overcurrent on measuring terminals in 7 ranges

monitors the overcurrent of the conductor through the hole in the body of the device

## CURRENT RELAYS \| 1-phase, AC

1-phase, AC or DC
3-phase, AC

multifunction current monitoring, 8 functions selectable by rotary switch

with three input ranges for AC/DC current $\operatorname{Imin}=\quad \operatorname{Imin}=$ $\%$ of set Imax $\%$ of nominal input

monitors overcurrent or undercurrent in 3-phases circuits $2 x$ output contacts

| Technical parameters | PRI-34 | PRI-41 | PRI-42 | PRI-53 |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Voltage type | AC | AC / DC |  | AC |  |
| Monitored levels | overcurrent and undercurrent | overcurrent and undercurrent |  | overcurrent or undercurrent |  |
| Function | eight, selectable by rotary switch | WINDOW |  |  |  |
| Monitored range | $0.1-16 \mathrm{~A}(50-60 \mathrm{~Hz})$ in 3 ranges | 3 inputs: 0.32-1.6 A, 1-5 A, 3.2-16 A (AC 50-60 Hz) |  | 0.4-1,2 A ( $50-60 \mathrm{~Hz}$ ) | $2-6 \mathrm{~A}(50-60 \mathrm{~Hz})$ |
| Output | $1 \mathrm{xCO}, 16 \mathrm{~A}$ | $2 \mathrm{CCO}, 16 \mathrm{~A}$ |  | $2 \mathrm{CO}, 8 \mathrm{~A}$ |  |
| Housing | 1-MODULE | 3-MODULE |  | 6-MODULE |  |
| Power supply | AC/DC $24-240 \mathrm{~V}$ ( $\mathrm{AC} 50-60 \mathrm{~Hz}$ ) | AC/DC $24 \mathrm{~V}, \mathrm{AC} 110 \mathrm{~V} ; \mathrm{AC} 230 \mathrm{~V} ; \mathrm{AC} 400 \mathrm{~V}$ ( $\mathrm{AC} 50-60 \mathrm{~Hz}$ ) |  | AC/DC $24-240 \mathrm{~V}$ (AC $50-60 \mathrm{~Hz}$ ) |  |
| Dimensions | $90 \times 17.6 \times 64 \mathrm{~mm}\left(3.5^{\prime \prime} \times 0.7^{\prime \prime} \times 2.5^{\prime \prime}\right)$ | $90 \times 52 \times 65 \mathrm{~mm}\left(3.5^{\prime \prime} \times 2{ }^{\prime \prime} \times 2.6{ }^{\prime \prime}\right)$ |  | $90 \times 105 \times 64 \mathrm{~mm}\left(3.5^{\prime \prime} \times 4.1^{\prime \prime} \times 2.6{ }^{\prime \prime}\right)$ |  |
| Order code | 2A: 8282, 5A: 8283, 16A: 8284 | 24V: 4741 230V: 4743 | 24V: 4747 230V: 4745 | 4213 | 4214 |

Measures true root mean square value - TRUE RMS. Option to select functions with error state memory (Latch). Possibility to extend the current range using an external CT. Power supply and monitoring circuits are not galvanically separated.

Independent supply voltage galvanically separated from the measured one, optional function of the 2nd relay, optional hysteresis 5\% / 10\%, Memory function.

AC/DC $24-240 \mathrm{~V}$ power supply galvanically separated from the circuit of the monitored current. Selectable function: UNDER or OVER current.
2 types according to the rated current In (1A, $5 A)$.

 or two levels

for monitoring one or two levels in IP65 protection

for monitoring one or two levels, or pumping of tanks

for monitoring up to 6-levels each probe has its own output contact

| Technical parameters | HRH-5 | HRH-7 | HRH-8 | HRH-9 |
| :---: | :---: | :---: | :---: | :---: |
| Output | $1 \mathrm{CCO}, 8 \mathrm{~A}$ | $1 \mathrm{xCO}, 16 \mathrm{~A}$ | $2 \mathrm{CO}, 16 \mathrm{~A}$ | $6 \mathrm{NNO}, 10 \mathrm{~A}$ |
| Sensitivity | $5-100 \mathrm{k} \Omega$ | 5-100 k | $5-100 \mathrm{k} \Omega$ | 10-470 k $\Omega$ |
| Functions | 2 | 2 | 8 | 10 |
| Housing | 1-MODULE | BOX | 3-MODULE | 6 -MODULE |
| Supply voltage (frequency) | 24-240 V AC/ DC (AC $50-60 \mathrm{~Hz}$ ) | 24-240 V AC/DC (AC $50-60 \mathrm{~Hz}$ ) | $\begin{gathered} \text { AC/DC } 24 \mathrm{~V} ; \mathrm{AC} 110 \mathrm{~V} ; \mathrm{AC} 230 \mathrm{~V} ; \\ \mathrm{AC} 400 \mathrm{~V}(\mathrm{AC} 50-60 \mathrm{~Hz}) \end{gathered}$ | AC/DC $24-240 \mathrm{~V}$ (AC $50-60 \mathrm{~Hz}$ ) |
| Dimensions | $90 \times 17.6 \times 64 \mathrm{~mm}\left(3.5^{\prime \prime} \times 0.7^{\prime \prime} \times 2.5{ }^{\prime}\right)$ | $139 \times 139 \times 56 \mathrm{~mm}\left(5.5 \times 5.5 \times 2.2^{\prime \prime}\right)$ | $90 \times 52 \times 65 \mathrm{~mm}\left(3.5^{\prime \prime} \times 2\right.$ " $2.6{ }^{\prime \prime}$ ) | $90 \times 105 \times 65 \mathrm{~mm}\left(3.5^{\prime \prime} \times 4.1^{\prime \prime} \times 2.6{ }^{\prime}\right)$ |
| Order code | 8093 | 4947 | 230V: 5542 24V: 5556 | 8133 |
|  | The relay is designed for monitoring the level of conductive fluids with the option of selecting functions: pump-up or pump-down. Optionally set configurations: single-level or double level switch. | Suitable to operate/work in harsh conditions due to the high degree of protection IP65. The same functions as for HRH-5. | Within one device, the following configurations can be selected: <br> - $2 x$ one-level monitoring (in separate tanks) <br> - 1x two-level monitoring (in one tank) <br> - pumping from one tank to another. | Each of the six probes has its own output contact. <br> Optional function of each probe independently: <br> - pump-up <br> - pump-down <br> - including optional delay. <br> Automatic and manual calibration. |
| LIQUID LEVEL RELAYS \| |  | LIQUID LEVEL SETS \| |  | PROBES AND CABLES \| |



## Technical parameters HRH-6/DC HRH-6/AC

| Output | $1 \mathrm{xNO}, 10 \mathrm{~A}$ |  |
| :---: | :---: | :---: |
| Sensitivity | 10-200k |  |
| Functions | 2 |  |
| Housing | box IP65 |  |
| Supply voltage (frequency) | $\begin{aligned} & \text { DC 12-24 V } \\ & (\mathrm{AC} 50-60 \mathrm{~Hz}) \end{aligned}$ | $\begin{gathered} \mathrm{AC} 230 \mathrm{~V} \\ (\mathrm{AC} 50-60 \mathrm{~Hz}) \end{gathered}$ |
| Dimensions | $110 \times 130 \times 72 \mathrm{~mm}\left(4.3^{\prime \prime} \times 5.1^{\prime \prime} \times 2.8^{\prime \prime}\right)$ |  |
| Order code | 3740 | 3699 |

Device monitors 5 levels by using six probes (one probe is common). Level indication by six LED's on the front panel of the device.

HRH-4/230V 209970800023
It is a complete unit consisting of HRH-5 level relay and VS425 contactor
Designated for an automatic operation in 1 -phased and 3 -phased pumps.


SHR-1-M: 209970800002 brass sensor.
SHR-1-N: 209970800001 stainless steel sensor. SHR-2: 209970800003
Stainless steel sensor in PVC housing with hanging cord. Seal with IP67 grommet.
SHR-3: 209970800004
Stainless steel sensor. for use in harsh and industrial environments.

D03VV-F 3x0.75/3.2: 209970500106
Cable for probes SHR-1 and SHR-2,
$3 \times 0.75 \mathrm{~mm}^{2}$
D05V-K 0.75/3.2: 6594
Wire for probes SHR-1 and SHR-2, $1 \times 0.75 \mathrm{~mm}^{2}$

All types (excluding SHR-3) meet the requirements for continuous contact with a drinking water.

\begin{tabular}{|c|c|c|c|c|c|c|c|c|c|c|c|}
\hline  \&  \&  \&  \& single－ thermo \&  \&  \&  \&  \&  \& thermostat for monitoring temperature of motor winding \& digital thermostat with build in time switch \\
\hline Technical parameters \& TER－3A \& TER－3B \& TER3－C \& TER－3D \& TER－3E \& TER－3H \& TER－3F \& TER－3G \& TER－4 \& TER－7 \& TER－9 \\
\hline Monitored range \& -30 to \(10^{\circ} \mathrm{C}\) \& 0 to \(40^{\circ} \mathrm{C}\) \& 30 to \(70^{\circ} \mathrm{C}\) \& 0 to \(60^{\circ} \mathrm{C}\) \& 0 to \(60^{\circ} \mathrm{C}\) \& -15 to \(45^{\circ} \mathrm{C}\) \& 0 to \(60^{\circ} \mathrm{C}\) \& 0 to \(60^{\circ} \mathrm{C}\) \& -40 to \(110^{\circ} \mathrm{C}\) \& 1．8－3．3 k \(\Omega\) \& -40 to \(110^{\circ} \mathrm{C}\) \\
\hline Thermosensor type \& \& \& external， \& ，TC／TZ \& \& \& built－in \& Pt100 \& external，TC／TZ \& external，PTC \& external，TC／TZ \\
\hline Output \& \& \& \& \(1 \times \mathrm{NO}\) ， \& \& \& \& \& \(2 \times \mathrm{CO}, 16 \mathrm{~A}\) \& \(2 \mathrm{CCO}, 8 \mathrm{~A}\) \& \(2 \mathrm{CCO}, 8 \mathrm{~A}\) \\
\hline Housing \& \& \& \& 1－MODU \& \& \& \& \& 3－MODULE \& 1－MODULE \& 2－MODULE \\
\hline Supply voltage （frequency） \& \& \& \& AC／DC 24 （AC 50－6 \& \[
\begin{aligned}
\& 4-240 \mathrm{~V} \\
\& 60 \mathrm{~Hz})
\end{aligned}
\] \& \& \& \& \begin{tabular}{l}
AC／DC \(24 \mathrm{~V}, \mathrm{AC} 230 \mathrm{~V}\) \\
（AC \(50-60 \mathrm{~Hz}\) ）
\end{tabular} \& AC／DC \(24 \mathrm{~V}-240 \mathrm{~V}\) （AC \(50-60 \mathrm{~Hz}\) ） \& AC／DC 24V，AC 230 V （AC \(50-60 \mathrm{~Hz}\) ） \\
\hline Dimensions \& \& \& \(90 \times 17.6\) \& \(6 \times 64 \mathrm{~mm}\) \& （3．5＂\(\times 0.7\) \& 2．5＇） \& \& \& \[
\begin{aligned}
\& 90 \times 52 \times 65 \mathrm{~mm} \\
\& \left(3.5^{\prime \prime} \times 2^{\prime \prime} \times 2.6^{\prime}\right)
\end{aligned}
\] \& \[
\begin{aligned}
\& 90 \times 17.6 \times 64 \mathrm{~mm} \\
\& \left(3.5^{\prime \prime} \times 0.7^{\prime \prime} \times 2.5^{\prime}\right)
\end{aligned}
\] \& \[
\begin{aligned}
\& 90 \times 35 \times 64 \mathrm{~mm} \\
\& \left(3.5 \times 1.4 \times 2.5^{\prime \prime}\right)
\end{aligned}
\] \\
\hline Temperature sensors TC／TZ／PT100 more on page 23 \& \begin{tabular}{l}
TER－3A 38 \\
TER－3B 38 \\
TER－3C 38 \\
TER－3D： 38 \\
Simple ther to \(+70^{\circ} \mathrm{C}\) ． temperatur
\end{tabular} \& \begin{tabular}{l}
339 \\
40 \\
41 \\
842 \\
rmostat for Possibility re sensors
\end{tabular} \& \begin{tabular}{l}
r monitoring \(y\) of setting th TC／TZ with d

$\square$
$\square$ <br>


 \& and regula the＂heating double insul \& ting the tem ＂／＂cooling ation in stan \& 

TER－3E： <br>
TER－3F： <br>
TER－3G： <br>
TER－3H： <br>
mperature <br>
g＂function <br>
andard leng
07
$\square$ <br>
回宜

 \& 

3843 <br>
3844 <br>
3845 <br>
： 3846 <br>
in 8 ranges ．Choice of ths of 3， 6 and

 \& from－30 external nd 12 m ． \& 

TER－4／230V： 5539 TER－4／24V： 4749 <br>
Double thermostat for monitoring and regulating the tem－ perature． 2 inputs for TC／TZ sensor． Galvanically isola－ ted power supply．

 \& 

TER－7： 3716 <br>
It monitors motor winding tempera－ ture．PTC sensor built－in in motor winding is used as a sensing element．

 \& 

TER－9／230V： 4698 TER－9／24V： 4699 <br>
Digital thermostat with 6 functions．
\end{tabular} <br>

\hline
\end{tabular}

## THERMOSTATS \｜with IP65 protection



two－level thermostat in IP65 protection

single－level thermostat in IP65 protection

single－level thermostat in IP65 protection

single－level thermostat for outdoor use with IP65 protection

| Technical parameters | TEV－1 | TEV－2 | TEV－3 | TEV－4 |
| :---: | :---: | :---: | :---: | :---: |
| Monitored range | -20 to $+20^{\circ} \mathrm{C}$ | -20 to $+20^{\circ} \mathrm{C}$ | +5 to $+35^{\circ} \mathrm{C}$ | -30 to $+60^{\circ} \mathrm{C}$ |
| Thermosensor type | external TC／TZ |  |  | built－in |
| Output | $1 \mathrm{CCO}, 16 \mathrm{~A}$ |  |  | $1 \times \mathrm{NO}, 12 \mathrm{~A}$ |
| Housing | enclosure IP65 |  |  | IP65 |
| Supply voltage（frequency） | AC $230 \mathrm{~V}(50-60 \mathrm{~Hz})$ |  |  | AC $230 \mathrm{~V}(50-60 \mathrm{~Hz})$ |
| Dimensions | $110 \times 135 \times 66 \mathrm{~mm}\left(4.33^{\prime \prime} \times 5.3^{\prime \prime} \times 6.6^{\prime \prime}\right)$ |  |  | $153 \times 62 \times 34 \mathrm{~mm}\left(6^{\prime \prime} \times 2.44^{\prime \prime} \times 1^{\prime \prime}\right)$ |
| Order code | 2912 | 2925 | 2926 | 4057 |
|  | Window function $=$ monitors temperature between two set levels | Transparent cover to see setting and wiring． | Selectable function：cooling／ heating． <br> Setting of the monitored tem－ perature on enclosure | Selectable function：cooling／ heating． <br> Option of voltage or potential－ free contact |



|  | programmable multifunction chronothermostat | multifunction thermostat | hygrothermostat optional functions | hygrostat |
| :---: | :---: | :---: | :---: | :---: |
| Technical parameters | 21235 | 21236 | RHT-1 | RHV-1 |
| Monitored temperature range | -9 to $+35^{\circ} \mathrm{C}$ | -9 to $+35^{\circ} \mathrm{C}$ | 0 to $+60^{\circ} \mathrm{C}$ | - |
| Monitored humidity range | - | - | 50 to $90^{\circ} \mathrm{C}$ | 0 to $90 \%$ |
| Output | 1xCO, 16 A | 1x CO, 16 A | $1 \mathrm{NOO}, 16 \mathrm{~A}$ | $1 \mathrm{NOO}, 12 \mathrm{~A}$ |
| Housing | LOGUS ${ }^{90}$ | LOGUS ${ }^{90}$ | 1-MODULE | IP65 |
| Supply voltage (frequency) | AC 100-240 V ( $50-60 \mathrm{~Hz}$ ) | AC 100-240 V (AC $50-60 \mathrm{~Hz}$ ) | AC/DC $24-240 \mathrm{~V}$ (AC $50-60 \mathrm{~Hz}$ ) | AC $230 \mathrm{~V}(50-60 \mathrm{~Hz})$ |
| Dimensions | KU68 box | KU68 box | $90 \times 17.6 \times 64 \mathrm{~mm}\left(3.5^{\prime \prime} \times 0.7^{\prime \prime} \times 2.5^{\prime}\right)$ | $153 \times 62 \times 34 \mathrm{~mm}\left(6^{\prime \prime} \times 2.4{ }^{\prime \prime} \times 1.3^{\prime \prime}\right)$ |
| Order code | 21235 | 21236 | 5045 | 4058 |
|  | Allows you to manually or automatically control heating or air conditioning in relation to the daily or weekly program and the set temperature. | Controls heating or air-conditioning systems depending on the selected temperature. It is possible to connect a floor temperature sensor to automatically detect and connect to it. | Hygro-thermostat for temperature monitoring and control - range 0 to $+60{ }^{\circ} \mathrm{C}$ and relative humidity - range $50 . .90 \%$. Sensor is part of device - designated for measuring in switchboard. | A basic hygrostat to monitor and control the relative humidity 0-90 \%. Outdoor version IP65, box for wall mounting, removable lid without screws. |
| THERMO-VALVES |  | TEMPERATURE SENSORS |  |  |


| energy saving digital radiator thermo-valve |  | for range 0 to $70^{\circ} \mathrm{C}$ PVC insulation | for range -40 to $+125^{\circ} \mathrm{C}$ silicone insulation | for range - 30 to $+200^{\circ} \mathrm{C}$ double isolation |
| :---: | :---: | :---: | :---: | :---: |
| ATV-1 | TELVA-2 | TC | TZ | Pt100 |
| ATV-1: 6088 <br> This energy-saving digital radiator thermo-valve is a programmable regulation device for various heaters, but mainly radiators. Intervals of heating and energy-saving operation can be set using a freely adjustable time program. <br> 8 individually programmable switching times per day: -4 heating intervals - 4 energy-saving intervals. The device features very quiet operation and long battery life (up 5 years). Quick and easy installation. | TELVA-2 230V, NO: 8196 <br> TELVA-2 230V, NC: 8197 <br> TELVA-2 24V, NO: 8198 <br> TELVA-2 24V, NC.: 8199 <br> Thermodriver Telva-2 is a suitable control unit for a wide range of thermostatic valves. Visual indicator of valve position. <br> Design: <br> NO - without voltage open <br> NC - without voltage closed | NTC thermistor $12 \mathrm{k} \Omega$. <br> 4 cable lenghts: $10 \mathrm{~cm}, 3 \mathrm{~m}, 6 \mathrm{~m}$ and 12 m . <br> TC-0: 209970800010 <br> TC-3: 209970800011 <br> TC-6: 209970800012 <br> TC-12: 209970800013 | NTC thermistor $12 \mathrm{k} \Omega$. <br> 4 cable lenghts: $11 \mathrm{~cm}, 3 \mathrm{~m}, 6 \mathrm{~m}$ and 12 m . <br> TZ-0: 209970800014 <br> TZ-3: 209970800015 <br> TZ-6: 209970800016 <br> TZ-12: 209970800017 | PTC sensor. <br> 3 cable lenghts: $3 \mathrm{~m}, 6 \mathrm{~m}$ and 12 m . <br> PT100-3: 3613 <br> PT100-6: 3614 <br> PT100-12: 3615 |
|  |  |  |  |  |



for power factor monitoring in two levels

| COS-2 | HRF-10 |
| :---: | :---: |
| 3/1-phase | 1-phase |

$\operatorname{Cos} \varphi$ 0.1-0.99 $\quad 40-60 \mathrm{~Hz}, 48-72 \mathrm{~Hz}$, $320-480 \mathrm{~Hz}$ $2 \mathrm{xCO}, 8 \mathrm{~A}$

3-MODULE

| AC/DC $24 \mathrm{~V}, \mathrm{AC} 230 \mathrm{~V}, \mathrm{AC} 400 \mathrm{~V}$ |  |
| :---: | :---: |
| $(\mathrm{AC} \mathrm{50-60} \mathrm{Hz)}$ | AC $161-500 \mathrm{~V}$ |
| $(50 / 60 / 400 \mathrm{~Hz})$ |  | (AC $50-60 \mathrm{~Hz}$ )

$90 \times 52 \times 65 \mathrm{~mm}\left(3.5^{\prime \prime} \times 2^{\prime \prime} \times 2.6^{\prime \prime}\right)$

MPS-1: 4597
Used for optical signaling of the voltage level in 3-phases. 4-wire connection - L1, L2, L3, N. Monitors phase voltages against neutral wire. LED indicator - for every phase 1 LED.

COS-2/24V: 5544
COS-2/230V: 5543
COS-2/400V: 5236
Relay monitors phase off-set between current and voltage in 3-phase or also 1-phase networks - it evaluates $\cos -\varphi$.
The relay is predestined for motor overloading / relief monitoring.


HRF-10: 5011
The relay is designed for monitoring the frequency of AC voltage, eg in photovoltaic power plants and generators


RF
WIRELESS
ELECTRO-INSTALLATION




| SWITCHES |
| :--- |
| Shutters |


|  |  |  |  |  |  | Dimmer for LED (RGB strips) 3-channels |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Technical parameters | RFDAC-71B | RFDEL-71B-SL | RFDALI-32B-SL | RFDE | 71M | RFDA-73M/RGB | RFD | 7M |
| Output | $\begin{aligned} & 0(1)-10 \mathrm{~V} \\ & \text { contact } 16 \mathrm{~A} \end{aligned}$ | $\begin{gathered} \text { R-L-C-LED-ESL } \\ 160 \mathrm{VA} \end{gathered}$ | $\begin{gathered} 32 \times \text { DALI } \\ \text { units } \end{gathered}$ | $\begin{aligned} & \text { R-L-C } \\ & 600 \mathrm{VA} \end{aligned}$ | $\begin{aligned} & \text { ED - ESL } \\ & 300 \mathrm{VA} \end{aligned}$ | $3 \times 5$ A | $\begin{aligned} & R-L-C \\ & 6 \times 150 \mathrm{VA} \end{aligned}$ | $\begin{aligned} & \text { D-ESL } \\ & 6 \times 75 \mathrm{VA} \end{aligned}$ |
| Supply voltage (frequency) | $\begin{gathered} \text { AC } 110-230 \mathrm{~V} \\ (50-60 \mathrm{~Hz}) \end{gathered}$ | $\begin{gathered} \text { AC } 230 \mathrm{~V} \\ (50 \mathrm{~Hz}) \end{gathered}$ | $\begin{gathered} 100-230 \mathrm{~V} \\ (50 \mathrm{~Hz}) \end{gathered}$ | $\begin{gathered} \mathrm{AC} 230 \mathrm{~V} \\ (50 \mathrm{~Hz}) \end{gathered}$ | AC 120 V <br> ( 60 Hz ) | DC $12-24 \mathrm{~V}$ <br> stabilized | $\begin{gathered} \text { AC } 230 \mathrm{~V} \\ (50 \mathrm{~Hz}) \end{gathered}$ | $\begin{gathered} \text { AC } 120 \mathrm{~V} \\ (60 \mathrm{~Hz}) \end{gathered}$ |
| Design | BOX | BOX-SL |  | 3-MODULE |  |  | 6-MODULE |  |
| Dimensions | $49 \times 49 \times 21 \mathrm{~mm}$ | $43 \times 44 \times 22 \mathrm{~mm}$ |  | $90 \times 52 \times 65 \mathrm{~mm}$ |  |  | $90 \times 105 \times 65 \mathrm{~mm}$ |  |
| Protocol | RFIO2 |  |  | RFIO2 |  |  | RFIO2 |  |
| Order code | 4993 | 8361 | 8434 | 4897 | 5304 | 4916 | Universal six-channels dimmer with an output of 150 VA / 75 VA channel. The outputs can be connected in parallel and multiply the power at the expense of the number of outputs (up to $900 \mathrm{VA} / 230 \mathrm{~V}$ ) when connecting all 6 outputs together. |  |
|  | Used to control devices with analog control voltage 0(1) -10 V . Included is a relay contact to turn off the ballast light. | The light source is selected by a switch on the front panel, potentiometer for minimum brightness, input for wired button. | It should dimm up to 32 DALI drivers powered from DALI BUS. Configuration via bluetooth from the app. | As version "RFDEL-71B", but DIN rail designed inputs for external control by potentiometer or analog voltage 0 (1) - 10 V . |  | The dimmer for LED strips is used for independent control of 3 single-colour LED strips or one RGB LED strip. | Universal six-channels dimmer with an output of 150 VA / 75 VA channel. The outputs can be connected in parallel and multiply the power at the expense of the number of outputs (up to $900 \mathrm{VA} / 230 \mathrm{~V}$ ) when connecting all 6 outputs together. |  |

## SOCKETS \| dimming

## switching

|  | socket-plug | socket-plug | Switching unit for outdoor use |
| :---: | :---: | :---: | :---: |
| Technical parameters | RFDSC-71N | RFSC-61N | RFUS-61 |
| Type of load | R-L-C-LED-ESL max. $300 \mathrm{~W} / 150 \mathrm{~W}$ | $1 \times \mathrm{NO}, 16 \mathrm{~A} / \mathrm{AC}$ | 1x CO, $12 \mathrm{~A} / \mathrm{AC} 1$ |
| Supply voltage (frequency) | $\begin{aligned} & \text { AC } 230 \mathrm{~V} \\ & (50-60 \mathrm{~Hz}) \end{aligned}$ | $\begin{gathered} \text { AC } 230-250 \mathrm{~V} \\ (50-60 \mathrm{~Hz}) \end{gathered}$ | $\begin{gathered} \mathrm{AC} 230 \mathrm{~V} \\ (50-60 \mathrm{~Hz}) \end{gathered}$ |
| Design | socket-plug | socket-plug | IP65 |
| Dimensions | $63 \times 110 \times 74 \mathrm{~mm}$ | $63 \times 110 \times 74 \mathrm{~mm}$ | $136 \times 62 \times 34 \mathrm{~mm}$ |
| Protocol | RFIO2 | RFIO2 | RFIO2 |
|  | French: 8359 <br> Schuko: 8360 <br> British: 8358 | French: 8251 <br> Schuko: 8250 <br> British: 8252 | RFUS-61/120V: 5256 <br> RFUS-61/230V: 5853 <br> Switching component with 1 output channel in a box with increased coverage for outdoor environments. |


|  | Level switch | Flood | Twilight | Magnetic (Window/door) | Motion |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Technical parameters | RFSF-1B | RFSF-100 | RFSOU-1 | RFWD-100 | RFMD-100 |
| Battery power | $1 \times 3 \mathrm{~V}$ battery CR 2477 | 2 x batteries 1.5 V AAA | 2 x batteries 1.5 V AAA | $1 \times 3 \mathrm{~V}$ battery CR 2032 | 2 x batteries 1.5 V AAA |
| Design | BOX | disc box | IP65 | interior | interior |
| Dimensions | $49 \times 49 \times 13 \mathrm{~mm}$ | $\varnothing 89 \times 23 \mathrm{~mm}$ | $72 \times 62 \times 34 \mathrm{~mm}$ | $25 \times 75 \times 16 \mathrm{~mm} / 15 \times 75 \times 14 \mathrm{~mm}$ | $72 \times 62 \times 34 \mathrm{~mm}$ |
| Protocol | RFIO | RFIO2 | RFIO | RFIO2 | RFIO2 |
| Order code | 4860 | 7682 | 4707 | 5027 | 5029 |
| Liquid probe <br> External probe designed for Level sensor RFSF-1B for flood monitoring. 1 m cable can be extended by 30 m . | Conductivity probes (recommended FP-1) can be connected to the INPUT terminals to monitor flooding or the level in the tank. When activated, it sends a command to the actuator or eLAN. | The flood detector is used to detect water leaks - activation occurs when the contacts located on the bottom of the detector are flooded. | 2 functions in 1 unit: <br> Twilight switch for range 1-1.000 lx or <br> Light switch for the range 100-100,000 lx <br> Setting the values of the potentiometers inside. <br> Enclosure with increased IP65 protection for demanding environments. | Main device (wider part) and Magnet (narrower part) glued to the moving parts (door, window, gate ...). <br> Activation occurs when the detector is moved away from the magnet. | The motion detector PIR is used to detect persons moving inside the building interior. <br> Detection angle $105^{\circ}$ <br> Detection distance max: 12 m Working height: 2.4 m <br> Integrated light sensor and tamper against unwanted opening of the cover. |
| DRY CONTACTS CONVERTERS \| |  |  |  |  |  |
| 2 contacts converter <br> - permanent switching |  | s converter powered | 4 contacts converter AC 230 V powered | 1 contact converter - permanent switching |  |
| RFIM-20B | RFIM- | OB/BP-SL | RFIM-40B/230-SL | RFSG-1M | RFTM-1 |
| $1 \times 3 \mathrm{~V}$ battery CR2477 | batte | CR2032 | AC $230 \mathrm{~V}(50-60 \mathrm{~Hz}$ ) | AC 10-230 V ( $50-60 \mathrm{~Hz}$ ) | $2 \times 1.5$ batteries AAA |
| BOX |  | X-SL | BOX-SL | 1-MODULE | BOX |
| $49 \times 49 \times 13 \mathrm{~mm}$ | $43 \times 4$ | $\times 22 \mathrm{~mm}$ | $43 \times 44 \times 22 \mathrm{~mm}$ | $90 \times 17.6 \times 64 \mathrm{~mm}$ | $72 \times 62 \times 34 \mathrm{~mm}$ |
| RFIO |  | 102 | RFIO2 | RFIO2 | RFIO |
| 8281 |  | 406 | 8407 | 8240 | 4315 |
| Converts 2 potential-free inputs that can be permanently closed (switch, relay contact) to RF signal. <br> Converts 4 (buttons) or <br> RFIM-40B / B <br> RFIM-40B / 2 |  | ential-free inputs that can manently (switch, contac <br> LL: battery supply (CR 123A) <br> SL: mains supply (AC 230 | n be closed for a short time ) on the RF signal. | This wireless contact converter is especially appropriate for wireless transmission of information on switching HDO. Thanks to the network supply, it can also be used for partial transmission of information for control of an appliance or device. <br> Bidirectional communication RFIO2. | Allows conversion of pulses produced by energy meters. Via LS sensors (detects flashing LEDs on the meter)or MS (magnetic sensor for water meter handle or gas meter dial). It has a terminal for connecting the pulse output (open contact, S0 terminals of the electricity meter). |



TEMPERATURE CONTROL \| sensors and actuators




SMART KITS \| PREPROGRAMMED FOR EASY INSTALLATION

## WIRELESS SWITCH



WIRELESS SWITCH - LUXURY

- Glass touch controller SHARP design, white
- Switch unit with ON / OFF function (for lights, sockets, electric heating, gates,...)


2 WIRELESS SWITCHES CLASSIC

- On-wall button controllers duo - plastic, white
- 2 pcs switching unit with ON OFF function (for lights, sockets, electric heating, gates,...)


2 WIRELESS SWITCHES WITH KEY-FOB

- Pocket wireless controller 4-button, white
- 2 pcs switching unit with ON / OFF function (for lights, sockets, electric heating, gates,...)


WIRELESS SWITCH SOCKET - LUXURY

- Glass touch controller - ROUND design, black
- Wireless switch socket-plug

WIRELESS LIGHT DIMMER - LUXURY

- Glass touch controller - 4-button, SHARP design white
- Universal dimmer for light source control (R, L, C, ESL, LED)



WIRELESS SWITCH SOCKET - CLASSIC

- On-wall button controllers - plastic, white
- Wireless switch socket-plug

WIRELESS DIMMING SOCKET - LUXURY

- Glass touch controller - 4-button, ROUND design, black
- Wireless dimmable socket-plug

ess dimmable socket-plug

Glass touch controller -
4-button, ROUND design white

- Universal dimmer for light source control (R, L, C, ESL, LED)


2 WIRELESS LIGHT DIMMERS - LUXURY

- Glass touch controller - 4-button, SHARP design, black
- 2 pcs universal dimmer for light source control (R, L, C ESL, LED)


2 WIRELESS LIGHT DIMMERS - CLASSIC

- On-wall button controllers duo - plastic, white
2 pcs universal dimmer for light source control (R, L, C, ESL, LED)



Basic central control unit iNELS BUS


Extended central control unit iNELS BUS


Central unit for control of DALI ballasts

## CU3-09M/DALI



Superior central control unit projects using iNELS IP protocol

CU3-IPMASTER

## Order Code: 8010

- Cu3-07M is one of the basic system control units of iNELS BUS installations.
- The unit can work independently, as an autonomous project, or it can be controlled by the CU3--IPMASTER central unit as part of a larger project.
- The unit is equipped with one BUS to which it is possible to connect up to 32 elements from the iNELS BUS portfolio


## Order Code: 8440

- CU3-08M is one of the basic system control units of iNELS BUS installations.
- The unit can work independently, as an autonomous project, or it can be controlled by the CU3-IPMAS TER central unit as part of a larger project.
The unit is equipped with two BUS, to which it is possible to connect a total of up to 64 elements ( $2 \times 32$ ) from the iNELS BUS portfolio.


## Order Code: 8465

- CU3-09M/DALI is a special version of the minified central unit and is designed to control DALI electronic ballasts from the iNELS system.
The unit can work independently, as an autonomous project, or it can be controlled by the CU3-IPMASTER central unit as part of a larger project.
- The system unit is equipped with one BUS, one DALI bus and one RJ45 connector.
Up to 32 elements from the iNELS BUS portfolio can be connected to the BUS system.
The DALI system bus allows the control of up to 64 independent DALI ballast addre sses for fluorescent, LED and other lumi naires.



## Order Code: 8448

- The CU3-IPMASTER central unit is a high-performance control unit designed for controlling subordinate units compatible with the iNELS IP protocol
CU3-IPMASTER is designed for fully autonomous control of even very large projects consisting of 1000+ subordinate central or system units. Using the iNELS IP protocol, the unit communicates with the centralized iNELS Cloud environment, which can be used to connect multiple large projects into a centrally controlled project.
The iNELS IP protocol also allows the use of the iNELS mobile application to control all devices included in the project.
Communication and links between individual system elements are set up in the iNLES Designer Manager configuration software environment, which is designed for Window 7,8 and 10 systems.



## SYSTEM UNITS



PS3-30/iNELS: power 30 W, integrated bus separator BPS3-01M.
PS3-100/iNELS: power 100W,inputs for connecting backup batteries $2 \times 12 \mathrm{~V}$ and the possibility of recharging them with adjustable current.

This separator serve for impedance separation of BUS from supply voltage power.
BPS3-01M: allows you to connect one BUS with max. load 3 A.
BPS3-02M: allows you to connect two separate BUS1 and BUS2 with max. load 1 A for each line




## LIGHTING CONTROL

|  | DALS <br> iNELS-DALI/DMX | DALT <br> Combined detector | DALI <br> Luminescence sensor |
| :---: | :---: | :---: | :---: |
| Technical parameters | EMDC-64M | DMD3-1 | DLS3-1 |
| iNELS BUS/EBM | EBM | BUS | BUS |
| DALI/DMX BUS | 64 channels / 64 channels | yes/no | yes/no |
| Supply voltage | AC $230 \mathrm{~V}(50-60 \mathrm{~Hz})$, max. 100 mA | BUS 27 VDC | BUS 27 V DC |
| Rated current from BUS | - | 18 mA (at 27 V DC) | 12 mA (at 27 V DC) |
| Housing | 3-MODULE | ceiling mounting | IP65 box |
| Dimensions | $90 \times 52 \times 65 \mathrm{~mm}$ | $\varnothing 76 \times 73 \mathrm{~mm}$ | $96 \times 62 \times 34 \mathrm{~mm}$ |
| Order code | 5030 | 5751 | 5750 |
|  | The converter supplies the DALI BUS - 16 V , 250 mA . The EMDC-64M unit is designed to control electronic DALI ballasts and DMX receivers from the iNELS system. It allows controlling of up to 64 independent electronic DALI ballasts or 64 independent DMX receivers. | The motion detector is used to detect movement in the area using the passive infrared scanning spectrum for detection. Integrated luminescence sensor can be used for sensing current luminescence at the point of installation of the unit. This unit can be installed also on DALI BUS. | DLS3-1 is for sensing the current luminescence in the place of installation the unit. <br> The DLS3-1 is supplied in IP65 protection box and can be installed outdoors. The unit supports DALI BUS. |



|  | Analog-digital converter 6 inputs | Digital - analog converter 4 inputs |
| :---: | :---: | :---: |
| Technical parameters | ADC3-60M | DAC3-04M |
| Output | - | $4 \mathrm{x} 0(1)-10 \mathrm{~V} / 10 \mathrm{~mA}$ |
| Input | 1 x temperature, 6 x analog.; $0-10 \mathrm{~V} ; 0-20 \mathrm{~mA}$ | 1x temperature |
| Supply voltage | BUS 27 V DC | BUS 27 V DC |
| Rated current from BUS | 100 mA (at 27 V DC) | 50 mA (at 27 V DC) |
| Housing | 3-MODULE | 3-MODULE |
| Dimensions | $90 \times 52 \times 65 \mathrm{~mm}$ | $90 \times 52 \times 65 \mathrm{~mm}$ |
| Order code | 3301 | 3256 |
|  | Analog signal converter is iNELS3 device which converts analog to digital signal (e.g. for weather station connection), $6 x$ analog input, $2 x$ temperature input for TC or TZ sensor. | Converter from a digital signal to an analog voltage signal $0(1)-10 \mathrm{~V}$, for controlling electronic ballasts, thermo drives, etc, 4-channel, $1 \times$ temperature input for TC/TZ sensor. |



|  |  | $\bigcirc$ <br> 0 |  | $\begin{array}{lll}0 & 0 & 0000000 \\ 0 & 0 & 0000000\end{array}$ |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |
|  | Control unit with touch screen | Glass switch button controllers (SHARP edges) |  |  |  |  |  |
| Technical parameters | EST3 | GSB3-40 |  | GSB3-60 |  | GSB3-80 |  |
| Number of buttons | 2x2/2x3/3x3/3x4 |  |  |  |  |  |  |
| Supply voltage | BUS 27 V DC | BUS 27 VDC |  |  |  |  |  |
| Rated current from BUS | 150 mA (at 27 V DC) | 25-40 mA (at 27 VDC ) |  |  |  |  |  |
| Internal temp. sensor | - | yes |  |  |  |  |  |
| Inputs | - | $2 \times$ temperature or $2 \times$ digital |  |  |  |  |  |
| Dimensions | $94 \times 94 \times 36 \mathrm{~mm}$ | $94 \times 94 \times 36 \mathrm{~mm}$ |  |  |  |  |  |
| Order code | in the pricelist | 40/B: 3290 | 40/W: 3295 | 60/B: 3291 | 60/W: 3298 | 80/B: 3292 | 80/W: 3299 |

EST3 is equipped with a $3.5^{\prime \prime}$ color touch screen. On the screen you can have $2 \times 2,2 \times 3$, $3 \times 3$ or $3 \times 4$ buttons for controlling anything. In Logus ${ }^{90}$ design.

The glass switch with touch buttons in series GSB3 is a design element (controller) in the system iNELS3 with elegant and comfortable control options.
Controllers are available in black (e.g. GSB3-40/B, $60 / \mathrm{B}$ and $80 / B$ ) and white (e.g. GSB3-40/W, $60 / \mathrm{B}$ and $80 / B$ ) variants.





Glass card reader GCR3-11 is designed for reading smart cards, which are intended to enter the hotel room or any other part of the building. The GCR3-11 unit is a design component of the iNELS system and is available in elegant black (GCR3-11/B) and white (GCR3-11/W) variants.

Glass info panel GDB3-10 is part of a comprehensive series of glass iNELS control units for guest room management system (GRMS), and is used to indicate the requested status of guest room - "Do Not Disturb" and "Make Up Room".
It is available in elegant black (GCR3-11/B) and white (GCR3-11/W) variants.

The GSP3-100 is equipped with ten touch buttons whose functions can be easily adjusted Button symbols can be changed and adapted to the client's requirements upon a request The buttons can be backlit in red, green, blue yellow, pink, turquoise and white. The pane is available in elegant black (GSP3-100/B) and white variants (GSP3-100/W).


|  | - | * | - | - | 0 ¢ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | - | ¢ | - | ( | (1) $\pm$ | (-) |
|  | Glass switch button with symbols 2 buttons |  | Glass switch button with symbols 4 buttons |  | Glass switch button with symbols 6 buttons |  |
| Technical parameters | GSB3-20/S |  | GSB3-40/S |  | GSB3-60/S |  |
| Number of buttons | 2 |  | 4 |  | 6 |  |
| Supply voltage | BUS 27 V DC |  | BUS 27 V DC |  | BUS 27 V DC |  |
| Rated current from BUS | $27-35 \mathrm{~mA}$ (at 27 V DC) |  | 27-35 mA (at 27 V DC) |  | 27-35 mA (at 27 V DC) |  |
| Inputs | internal temperature and brightness sensor, 1x external input for TC/TZ |  | internal temperature and brightness sensor, 1x external input for TC/TZ |  | internal temperature and brightness sensor, 1x external input for TC/TZ |  |
| Dimensions | $94 \times 94 \times 36 \mathrm{~mm}$ |  | $94 \times 94 \times 36 \mathrm{~mm}$ |  | $94 \times 94 \times 36 \mathrm{~mm}$ |  |
| Order code | 20/SB: 5621 | 20/SW: 5622 | 40/SB: 5623 | 40/SW: 5624 | 60/SB: 3291 | 60/SW: 3298 |

The glass switch with touch buttons in series GSB3 is a design element (controller) in the system iNELS3 with elegant and comfortable control options. Controllers are available in black (e.g. GSB3-40/B, 60/B and 80/B) and white (e.g. GSB3-40/W, 60/B and 80/B) variants.

The glass switch with touch buttons with symbols in GSB3 series are equipped with two, four or six touch buttons, the functions of buttons can be easily adjusted. Button symbols can be changed and adapted to the client's requirements upon a request. The buttons can be backlit in red, green, blue, yellow, pink, turquoise and white. Touch panels are a design components of the iNELS3 system and are available in elegant black (GSB3-20/SB, GSB3-40/SB, GSB3-60/SB) and white variants (GSB3-20/SW, GSB3-40/SW, GSB3-60/SW).


## HOSPITALITY SOLUTION - GRMS




Configure bedside panel according to your request.

L (left option)
position 2 position 1


GBP3-60/WL/2F-26W-20W


GBP3-60/WL/1F-21W45W

## $R$ (right)



GBP3-60/BR/2F-26B-11B44B


GBP3-60/BR/1F-26B

Part number


## HOSPITALITY SOLUTION - GRMS



| Technical parameters | EHT3 | GRT3-50 | GCH3-31 |
| :---: | :---: | :---: | :---: |
| Input | - | - | 1 x changeover, 8 A |
| Number of buttons | touch screen | 7 | 3 |
| Supply voltage | BUS 27 V DC | BUS 27 V DC | BUS 27 V DC |
| Rated current from BUS | 150 mA (at 27 V DC) | 85 mA (at 27 V DC) | 100-120 mA (at 27 V DC) |
| Measurement | - | internal thermometer and humidity sensor, 1x external input for TC/TZ or 1x digital | brightness sensor |
| Dimensions | $94 \times 94 \times 36 \mathrm{~mm}$ | $94 \times 94 \times 36 \mathrm{~mm}$ | $142 \times 94 \times 36 \mathrm{~mm}$ |
| Order code | available in the price list | 50/B: 5630 50/W:5634 | 31/B: 5627 31/W: 3494 |
|  | The control unit with touch screen EHT3 is a suitable control element for iNELS3 in places where it is required to control multiple devices. The unit replaces multiple controllers and reduces the number of switches on the wall. In LOGUS ${ }^{90}$ design. | Glass room thermo-regulator GRT3-50 is part of a comprehensive range of glass iNELS3 control units for guest room management system (GRMS) and serves to regulate the temperature in the room. Thermo-regulator is also equipped with 3 symbols for controlling fancoil speed. | GCH3-31 serves for inserting the RFID card into the holder, whereby the system acquires the information about whether the hotel guest is present in the room. With this information it is possible to ensure for example exit function with relation to energy savings in the absence of a guest in the room. |

The control unit with touch screen EHT3 is a suitable control element for iNELS3 in places where it is required to control multiple devices. The unit replaces multiple controllers and reduces the number of switches on the wall. In LOGUS ${ }^{90}$ design.

converter IP
=>3x infrared transmitter

gateway for connecting protocols and devices by a third party

## eLAN-IR-003

## Home Assistant GW

## Order code: 3283

- The applications iHC-MAIR and iHC-MIIR provide universal control for all audio/ video devices (including air conditioning).
- The application directly control the eLAN-IR over the network.
- The intuitive application environment makes it simple for anyone to control.
- What all can you control? Home theater, TV, DVD or Blue-ray player, amplifier, settop box, satellite receiver, air-conditioning, projector and more
- It can control up to 100 arbitrary commands with various controllers that you normally have at home.
- The scenes function - you can perform multiple functions simultaneously by a single command (e.g. you are going to bed you and switch off all AV appliances in the entire home with a single press).
- It is possible to integrate into a single application an unlimited number of $\mathbb{R}$ boxes, meaning that in one application you can have eLAN-IR in the living room, children's rooms, etc.
- It is also possible to control remotely from anywhere using a Wi-Fi network (e.g. from work or vacation).
- Thanks to auto-IP acquisition from the DHCP server, you don't need to set up a network configuration again.
- You can connect three IR lenses to the smart IR box eLAN-IR-003 for three directions of controlling.



## Order Code: 8464

Third party integration server.

- Works as a server for connecting third-party devices and integrating them into the iNELS environment.
- The server uses the open Home Assistant platform, which contains more than 1000 existing integrations. The platform is supported by its own community and the number of integrations is constantly growing. Thanks to the Open Source architecture, it is possible to create your own integration driver for new devices if necessary
- The Home Assistant GW communicates via the iNELS IP protocol, so it can be controlled via the iNELS mobile application or the CU3-IPMASTER master.
- The Home Assistant GW uses Raspberry Pi hardware. The package also includes an SD card with a pre-installed Linux operating system and the necessary software.


## INTEGRATION


converter IP
=>RS-485/232

converter IP
=>RS-485/232
eLAN-RS-485/232

## Order code: 7026

-The eLAN-RS485/232 allows you to control air-condition from your smart phone, tablet, or it can read a data from electronic security systems (Jablotron, Paradox).

- The eLAN-RS485/232 is connected to the router or switch and communicates with a smartphone over the network.
- Intuitive application environment offers centralized control from one place.
- If you don't have a fixed IP address, the converter will automatically get it from the DHCP server.
- Power converter with 10-27 V DC adapter is included
- Possibility of PoE 24 V DC.
- You need a Connection Server (to communicate with the application) to install.
- Set up via web interface.

Connection Server

## Order code: 5803

- The connection server is providing a communication between iNELS BUS System with the third party devices, smartphone or tablet.
- The iHC application's environment enables us to control all these technologies from just one app.
- If Connection server is present in the installation, you can control your household with the smartphone app, check your CCTV system, regulate the air-conditioning, control Miele appliances or control recuperation.
- It also allows the communication with the domestic voice intercom 2 N . It can also arrange the information from the weather station GIOM or data from energy meters (electricity, water, gas), which is visualized in clear graphs.
- Connection server uses the Raspberry Pi hardware and the apps requires a license which is paired with the MAC address of the device.
- As a part of the package, we also included SD card where we previously installed Linux OS and its needed software equipment.
- The configuratution is happening on its own web interface, where the default IP address is not fixed. (The IP address is assigned from the DHCP server and it's needed to be known when we're connected to the network).


Music and internet radio player


Music and internet radio player with intercom and videophone features

| Technical parameters | LARA Radio | LARA Intercom |
| :---: | :---: | :---: |
| Power supply | Passive PoE 24 V DC/1.25 A | Passive PoE 24 V DC/1.25 A |
| Min./max. input | 1.4 W / 26 W (peak at maximum playback performance) | 1.4 W / 26 W (peak at maximum playback performance) |
| Display | Color OLED, Resolution: $128 \times 128$ pixels | Color OLED, Resolution: $128 \times 128$ pixels |
| Microphone | no | yes |

## Order code: LARA-R

- Music and internet radio player - all in the dimension of a switch and a luxurious LOGUS ${ }^{90}$ design.
- LARA Radio - when connected to the Internet, it can play streaming radio stations and you can store up to 40 of them. But you can also select from thousands of radio stations from across the globe, which provide data for correct connection.
- LARA Radio can play content from an external music source, which can be an smart phone or e.g. an MP3 player. These devices are connected to a 3.5 mm stereo jack audio input, located underneath the front panel.
- LARA Radio can also play audio files from central data storage.


## Order code: LARA-IC

- LARA Intercom offers users 5 different functions and expands even more options to LARA Radio - music players and internet radio stations within the range of LOGUS ${ }^{90}$ switch designs.
- LARA Intercom provides an extra functionality and videophone intercom. - Thanks to videophone function, now it is possible to have a voice communication between LARA and IP intercoms. So if someone ring the doorbell, you can see the picture of the visitor on the screen. Controlling of electronic door lock from LARA is the easiest thing.
- LARA Intercom is equipped with an OLED colored display with the size of $1.5^{\prime \prime}$, which is used to transfer images and sounds from the door camera properly.



## Wiring example



The application allows you to easily control connected devices such as switch sockets, dimming lights, controlling blinds or garage doors, heating circuits and compatible air conditioning. Of course there is a display of the available values such as temperature, motion status, window, door or flood detectors, or the current status of all controlled devices.
It now brings a clear Dashboard where it is possible to view the most used devices, previews of connected cameras or created scenes. With one click, you can control several devices at once.

The iNELS application will be gradually supplemented automatically with the possibility to connect new devices, new system and central units and third-party devices. With the new iNELS mobile application, enter a completely new world in the expansion of functions and integration possibilities with the iNELS 2022 system.

## Electroinstallation

inti ines


Audio

$3^{\text {rd }}$ party


Energy management


## Voice assistants

|  | Automation |
| :--- | :--- |
|  | Notification |
|  | Widgets |
|  | Favourites/overview |
|  | Log history |
| eLAN-IR |  |
|  | Geolocation |
|  | Weather data |
|  | Home Assistant |
|  | Users management |

Google Home
Amazon Alexa

| $\checkmark$ | $\checkmark$ | $\checkmark$ |
| :---: | :---: | :---: |
| $\times$ | $\checkmark$ | $\checkmark$ |
| $\times$ | $\vee$ | $\checkmark$ |
| $\times$ | $\times$ | $\vee$ |

## Energy dashboard

History report (charts \& graphs)


Weather station
Intercoms
Home appliances


Automation
frication
Widgets
Favourites/overview

Log history
eLAN-IR
Geolocation

Users management

| $\times$ | $\checkmark$ | $\checkmark$ |
| :---: | :---: | :---: |
| $\times$ | $\checkmark$ | $\checkmark$ |
| $\times$ | $\checkmark$ | $\checkmark$ |
| $\checkmark$ | $\checkmark$ | $\checkmark$ |
| $\times$ | $\checkmark$ | $\checkmark$ |
| $\times$ | $\checkmark$ | $\checkmark$ |
| $\times$ | $\checkmark$ | $\checkmark$ |
| $\times$ | $\checkmark$ | $\checkmark$ |
| $\checkmark$ |  | $\checkmark$ |



## 

Luxurious design for any interior


## DESIGN LINES

We offer you switches, sockets and accessories in standard design, plastic or metallic, but you are also sure to be enchanted by the luxurious designs of frames made from natural materials: solid wood, metal, granite or hardened glass - crystal.

The frame is complemented by a button cover in the shades of pearl, aluminum or e.g. dark gray or ice - where many combinations come alive based on the customer's wishes and personal taste. Not just their refined design, but also long service life and resilience are the hallmarks of these switches.

You will see quality not only in the visible parts of the covers, but also in the switch mechanism itself. The mechanisms excel for their many features that make installation quick and easy, and guarantee safe operation. Thanks to their special design, they can even deal with potential wall unevenness.

## BASE

Smart finish. Discrete shape of function.


## AQUARELLA

Distinct colors.
Shades that characterize the space.


BB-White/White


MM - Ivory/lvory


TS - Brick/Gray


PG - Black/lce


PS - Black/Gray


IS-Gray


DG - Green/lce


BS - Wine/Gray


RR-Black/Černá

cs - Cristal/Gray


EA-Glass-black/
Aluminium


ES - Glass-black/
Gray $\begin{gathered}\text { EP - Glass-black/ } \\ \text { Black }\end{gathered}$


QS-Nik/Gray


US - Aluminium/
Gray


RS - Chrome/Gray


OU - Gold/Gold

ARBORE
Selection of natural materials. Warm shades of wood with their varying structures create a room full of happiness and sincere comfort.

## PETRA

The beauty and stability of nature. Stone with its uneven patterns, shaped by time and nature, represent the sense of firm and unending existence.


The entire design series are available from 1 frame up to 4 frames. The BASE and AQUARELLA series are available from 1 frame up to 5 frames. Horizontal or vertical position of the frame is possible thanks to their symmetrical shape.

Device covers in red, orange, green for hospital environments.

## DEVICES OVERVIEW



UNITS OF THE iNELS SYSTEM IN LOGUS ${ }^{90}$ DESIGN
 controller


Multifunction unit


Digital room temperature controller

## DEVICES OVERVIEW

- switches
- switches with lock
- time switches
- over-switches
- rotary switches
- dimming switches
- two-pole switch
- pushbuttons
- switch, pulling switch
- orientation lighting
- shutters controllers
- shutters controllers with IR sensor
- digital time switch motion detectors
- card switch
- standard socket
- sockets Schuko, EURO-USA
- RJ45 connectors
- data sockets Cat 5, Cat 6
- sockets radio, TV, satellite, data
- telephone sockets
- double button (2NO+2NC)
- programmable thermostat (space/floor)
- simple thermostat (space/floor) with infrared control automatic relay for controlling blinds
- multimedia sockets


## ADVANTAGES MECHANISMS

Mechanism are made of special alloy of non-flammable plastics that prevent in destruction or damage of device body thanks to their strenght and elasticity. The plastic design of the mechanism simultaneously ensures safe insulation from conductive parts of installation. The mounting frame is an integral part of the device. The device is compact, lightweight and enables easy and quick installation without using any tools.


Quick Clips allow installation to adjust the frame on an uneven wall (two positions for the "snap" frame). Inequality walls will allow the deal and floating fingerboard.


Depth 20 mm only alows mounting to instrumentation device / box.


Ability to test electrical functionality of your device without disassembly.


Screwless terminals provide fast and quality connection without need of instrument usage. Double terminals on every pole provide multiple connection withoutneed of extra terminals usage.


Shaped edge of the body mechanism to align the mounting multiple devices


Ability to test electrical functionality of your device without disassembly.

|  |  | Order code | Box (Un) |  |  | Order code | Colour | Box (Un) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Card-System Timer Switch 16 A-100-240 V~ | 21033 | 1 |  | Cover Plate for Card-System Timer Switch | 90733 T | BR MF GEPEALIS PM DU | 1 |
|  | Timer Switch 16 A-100-240 V~ | 21040 | 1 | OFF | Rocker for Timer Switch | 90745 T | BR MF GE PE AL IS PM DU | 1 |
|  | Motion Detector - Wall Installation 1000 W <br> - Power: 100-240 V~ - 50-60 Hz; <br> - Compatible with any kind of load <br> - Possibility of two external inputs: ON/AUTO and Timed <br> Motion Detector - Wall <br> Installation 400 W <br> - Power: 100-240 V~ - 50-60 Hz; <br> - Compatible with any kind of load <br> - Possibility of two external inputs: ON/AUTO and Timed. | $21403$ $21404$ | 10 <br> 10 |  | Cover Plate for Motion Detector - Wall Installation | 90403 T | BR MF GE PE AL IS PM DU | 1 |
|  | Rotary Thermostat <br> - Power: 100-240 V~ - 50-60 Hz; <br> - Maximum load: 16A (3680W, $\cos \varphi=1$ ); <br> - Compatible with any kind of load <br> - Systems Control: Heating and/or Cooling; <br> - Temperature settings: $5^{\circ} \mathrm{C}$ to $30^{\circ} \mathrm{C}$; <br> - Possibility of connecting theTC-03 | 21234 | 1 |  | Cover Plate for Rotary Thermostat | 90746 T | BR MF GE PE AL IS PM DU | 1 |
|  | RLC Dimmer Press Switch 100-240 V~ | 21218 | 1 |  | Rocker for RLC Dimmer Press Switch | 90747 T | BR MF GE PEALIS PM DU | 1 |
|  | White Orientation Light <br> - Two lighting levels: <br> L1-0,2 W; L2-0,4 W <br> $-230 \mathrm{~V} \sim-50-60 \mathrm{~Hz}$ <br> White Orientation Light with battery <br> - Two operating functions <br> - $230 \mathrm{~V} \sim-50-60 \mathrm{~Hz}$ | 21388 | 10 <br> 10 |  | Cover Plate for Orientation Light | 90782 T | BR MF GE PEALIS PM DU | $\begin{gathered} 20 \\ 2 \end{gathered}$ |
|  | Double USB Charger Type A with Output at $20^{\circ}$ <br> - Voltage: $100-240 \mathrm{~V}$. <br> - Frequency: $50-60 \mathrm{~Hz}$. <br> - Output voltage: 5 V . <br> - Output current: 2.4 A. <br> - Two USB type A outlets. | 21384 | 1 |  | Cover Plate for Double USB Charger Type A with outlets at $20^{\circ}$ | 90673 T | BR MF GEPEALIS DU PM | 1 |



## Actuators




## Headquarters

ELKO EP Holding SE, Czech

## Branches

ELKO EP Germany, GmbH, Germany
ELKO EP Hungary Kft., Hungary
ELKO EP Poland, sp. z.o.o., Poland
ELKO EP RUS LLC, Russia

ELKO EP UKRAINE LLC, Ukraine
ELKO EP UK, United Kingdom
ELKO EP Serbia, Serbia
ELKO EP SLOVAKIA, s. r. o., Slovakia

## $\bigcirc$ Franchises

ELKO EP Bulgaria, Bulgaria
ELKO EP Kuwait, Kuwait
ELKO EP Saudi Arabia, Saudi Arabia
ELKO EP España, S.L., Spain
iNELS BALTIC


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