

HEASY
mood lighting control.

REL-LT

Relay Module

This installation manual has been written by the manufacturer and it is considered integrating part of this product.

The information included are intended for the expert technicians who execute the installation and the extraordinary maintenance of the product.

The expert technicians must have specific competences and particular abilities in order to carry out correctly and safely their work.

The constant observance of the information included in this manual guarantees safety of men, energy saving and a longer duration of product operative-life.

In order to avoid wrong handling and the consequent risk of accidents, it is important to read this manual carefully, keeping scrupulously to guidelines according to the supplied information.

CONFORMITY DECLARATION

All the devices of the H/EASY® system are designed in order to comply with the requirements of the European EMC directive 89/336 and with the Low Voltage Directive 93/68.

All the devices of the H/EASY® system are tested and found to comply with the specification of the CE marking.



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DESCRIPTION

The REL-LT modules is equipped with an integrated programmable microcontroller used to control in on/off mode of 8 different lighting sources, using 8 relay outputs.

The module allows the control and the management of lighting circuits at 12/24/110/220V AC/DC with a maximum absorbtion of 16A for each output. It can also be used to activate dry contact devices.

The module has 8 programmable dry contact inputs that can be used with push-buttons or sensors, allowing to create global scenes.

The module can be used in stand-alone mode or connected to other modules of the H/EASY® home automation system, through the use of the BUS system H/BUS. It can be easily programmed allowing to create global scenes controlled by push-buttons and/or integrated to be controlled by smartphone/tablet or touch screen.

FEATURES

8 Unipolar relay outputs

Each channel allows the management of light sources, extractors, TV lifts and all the devices where an on/off functionality is needed both under tension or dry contact.

8 Programmable dry contact inputs

The module allows single outputs or light scenes control using the 8 dry contact inputs where push-buttons or sensors can be connected. The inputs are programmable using the H/EASY® software Neo.

H/BUS communication

The module is able to communicate with other devices of the H/EASY® home automation system when connected inside a H/BUS network. The removable H/BUS connecting block is used to link the module to the other modules of the same H/BUS network.

Neo programming software

The module can be programmed, managed and monitored using the H/EASY® software Neo.

Stand-alone mode

The module has a standard programming that allows to manage outputs and light presets, connecting push-buttons or sensors to the dry contact inputs.

Monitoring and control top board

The front panel LEDs board allows to control and monitoring the module's outputs and inputs status.

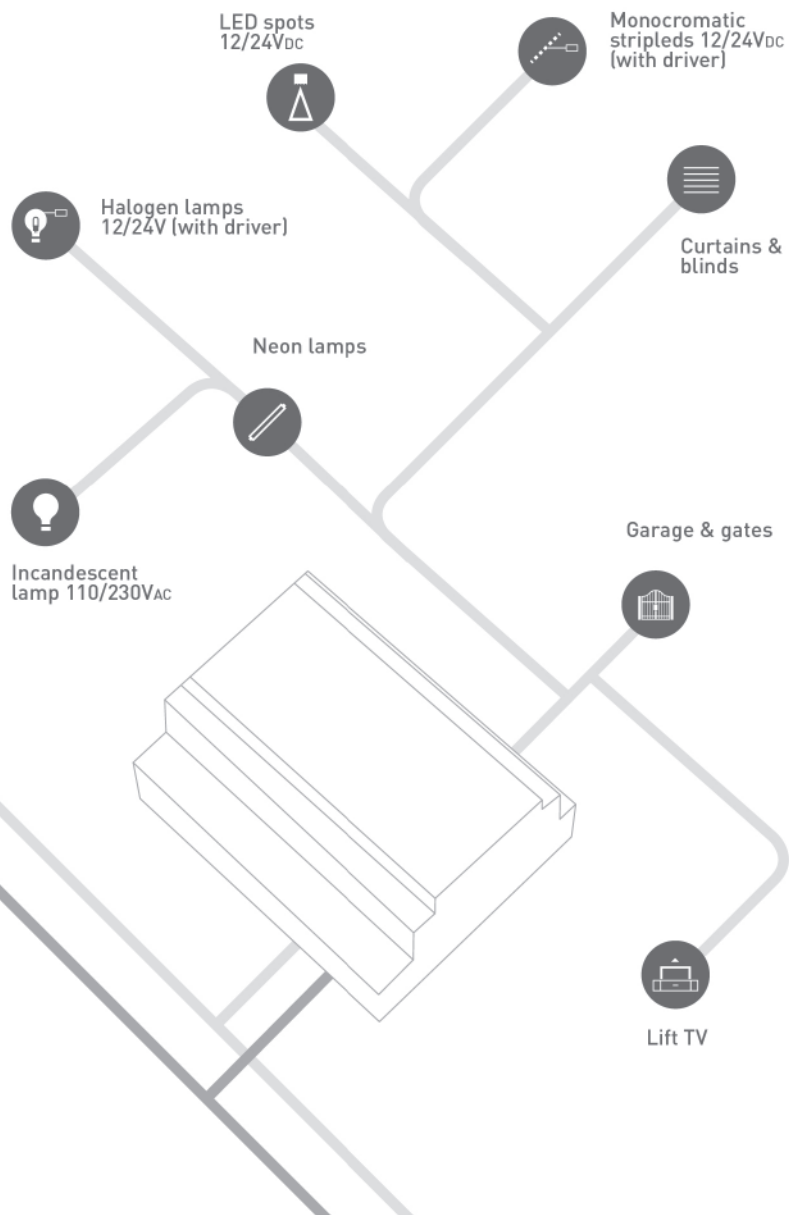
DIN rail installation

The REL-LT module can be installed into an electrical switchboard using DIN rail. Once installed and the switchboard closed, the module's front panel, with control buttons and monitoring LEDs, is still accessible.

Clip-on connections

All H/EASY® devices have clip-on connections that allow a simple, fast and safe cabling. The power supply and BUS connectors are detachable to easy exclude the module from the network in case it's necessary.

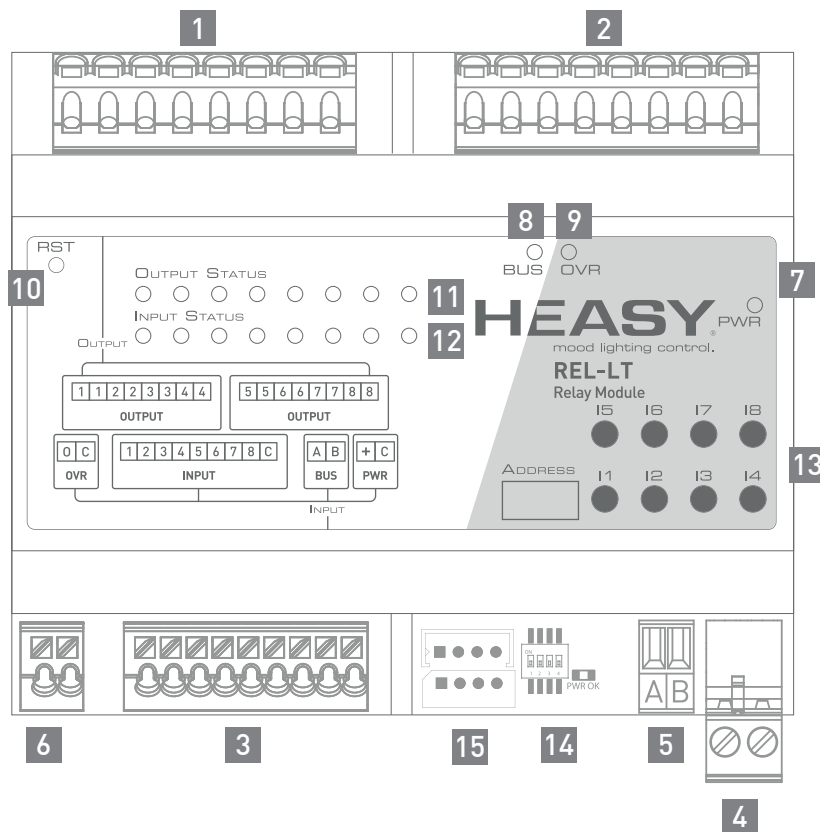
APPLICATIONS










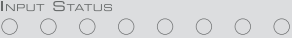
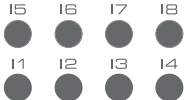
TECHNICAL SPECIFICATION



SPECIFICATION	DETAILS
Electronic power supply	20-28V _{DC}
Electronic requirements	3,6W (150mA @24V _{DC} , 300mA @12V _{DC})
Outputs power supply	Max 280V _{AC}
Outputs	8
Dry contact inputs	8
Load ratings	16A for channel
Default address	32
Working temperature	+5°/+50° C (41°/122° F)
Storage temperature	-40°/+70° C (-40°/+158° F)
Humidity	15%/90% non condensing
Heat dissipation (@Ta=40°C, maximum load)	4,6W
IP Protection	IP20
Enclosure	Noryl
Color	RAL 7053
Dimensions (LxAxP)	106x58x90 mm (6 DIN module spaces)
Weight	285 g

MODULE DESCRIPTION



#	CONNECTORS, LED, INDICATORS	DESCRIPTION
1		<p>8 poles clip-on connector; Maximum cable section: 2,5mm² (12AWG); Outputs 1-2-3-4 connector; C1: common contact 1; NO1: normally open contact 1; C2: common contact 2; NO2: normally open contact 2; C3: common contact 3; NO3: normally open contact 3; C4: common contact 4; NO4: normally open contact 4.</p>
2		<p>8 poles clip-on connector; Maximum cable section: 2,5mm² (12AWG); Outputs 5-6-7-8 connector; C5: common contact 5; NO5: normally open contact 5; C6: common contact 6; NO6: normally open contact 6; C7: common contact 7; NO7: normally open contact 7; C8: common contact 8; NO9: normally open contact 8.</p>
3		<p>9 poles clip-on connector; Maximum cable section: 1,5mm² (15AWG); 8 dry contact inputs connector; 1-8: inputs; C: common.</p>
4		<p>2 poles clip-on connector; Maximum cable section: 2,5mm² (12AWG); Electronic power supply connector; +: positive 20-28Vdc; C: negative 20-28Vdc. Be sure that all the negative poles of all the power supplies used for electronic are in parallel.</p> <p>NOTE: we suggest to use a dedicated power supply for the electronic of all the modules inside a switchboard. It's important that modules installed into different switchboards connected have negative poles in parallel (the use of H/EASY® SEP-2CH is suggested).</p>

#	CONNECTORS, LED, INDICATORS	DESCRIPTION
5		2 poles clip-on connector; Maximum cable section: 1,5mm² (15AWG); H/BUS connector; A: BUS A pole; B: BUS B pole. Be sure that cabling of BUS connector is consistent for all the modules in the network. This avoid bad working of the system.
6		2 poles clip-on connector; Maximum cable section: 1,5mm² (15AWG); Override connector; O: override contact; C: common. In case of short circuit between C and O the module starts Override mode: all the output are forced to 100%. The module can't be controlled by the inputs or Neo.
7		Blu LED, PWR. On if electronic power supply is given.
8		Orange LED, BUS. <i>LED Blinking:</i> the module is connected to other modules in a H/BUS network and is not the master module. Blinking frequency depends on the address of the module; <i>LED On:</i> the module could be the master of a H/BUS system with other modules or could fail to communicate with the rest of the network ⁽²⁾ .
9		Orange LED, OVR. On if the module is in Override mode.
10		Recessed button to reset micro-controller of the module, RST. The outputs will be switched off and the value of outputs and memories set to factory values.
11		Orange LED, OUTPUT STATUS. On if the corresponding output is set to 100%.
12		Green LED, INPUT STATUS. On if the corresponding input is pressed.
13		Buttons used to control the corresponding output, following "On/Off Toggle" function⁽³⁾.

#	CONNECTORS, LED, INDICATORS	DESCRIPTION
14		DIP switches to set some standard programming⁽³⁾. DIP switch 4 not used. 000-: the module uses the programming downloaded on the microcontroller. Following DIP switches setting cause programming downloaded on microcontroller stop working. 010-: standard programming. Other configuration are not used.
15		4 poles connector⁽³⁾ to manage the module (or the whole system) using the H/EASY® GTW-ETH o INT-232 modules (not included).

⁽¹⁾ See PROBLEM SOLVING paragraph.

⁽²⁾ See STANDARD PROGRAMMING paragraph.

⁽³⁾ Contact H/EASY® to receive the dedicated interface cable to be used.

INSTALLATION

Important notes

The following information are intended for the expert technicians who execute the installation and the extraordinary maintenance of the product. The installation and the maintenance of the module must be executed by qualified technicians, respecting the Norm of the installation country.

The expert technicians must have specific competences and particular abilities in order to carry out correctly and safely their work.

The constant observance of the information included in this manual guarantees safety of men, energy saving and a longer duration of product operative-life. Keep this manual and notes included.

In order to avoid wrong handling and the consequent risk of accidents, it is important to read this manual carefully, keeping scrupulously to guidelines according to the supplied information.

Electrical tension may cause shock and severe burns. Be sure to turn off the electrical supply before carrying out any type of work on the connectors. Omission of observation of these safety measures may cause death or severe lesions to people as well as great material damages.

Before preceeding with the use of the modules, make sure that electric installation, carried out by a qualified technician in conformity with the Technical Norms, corresponding to the class of homologation of the electrical system, is provided with the devices prescribed for the protection against direct and indirect contacts and electrical surcharges.

The modules of the H/EASY® must be exclusively used in connection with other modules and external components which are conformed to the Norms comparative to the product.

Do not use the module if, upon visual inspection, it shows deterioration of the enclosing box or if the screening wraps of the feeding cables show any wear and tear or damage.

The H/EASY® system may not be used to carry out safety and accident prevention functions since it does not have the redundancy requirements lawfully requested.

The installer must verify the correct installation and operation of the product.
It is prohibited to use the product for improper purposes or purposes different from those provided

V.Y.C. Srl shall not be held liable for any damage of any sort or kind in case of module used or installed incorrectly.

It is prohibited to tamper or to modify the product.

Before starting

Place the module inside a switchboard and follow carefully the following wiring diagrams. The module can be installed on DIN rail.

Always switch off the electronic and outputs power supply before carrying out any type of electrical connection on the module.

NOTE: use a dedicated power supply for electronic modules installed into a switchboard. If into an H/BUS network more than one power supply is used (for instance, one power supply for each switchboard containing H/EASY® modules) be sure that all the negative poles of all the power supplies are in parallel (it is suggested to use H/EASY® SEP-2CH).

The module is intended for internal use. Install it in dry place in order to respect the specification described in the TECHNICAL SPECIFICATIONS paragraph of this manual.

Blackout management

The H/EASY® modules manage the states of lack of power supply both for the electronic and the power in case of dimming modules

Lack of electronic power supply (all modules).

In case of lack of this tension the module switches off. After the blackout the outputs come back to their latest values before the blackout.

Lack of power supply for outputs (dimmer modules).

In case of lack of power supply for the outputs, the dimmer module shows this with a blinking of FUSE PROTECTION LED. After the blackout, if no problem occurs, the outputs come back to their latest values.

Addressing

Each H/EASY® module placed into a H/BUS network must have a unic address. The default address for all H/EASY® modules is 32 and Max Address 33. Before connect the BUS connectors of more modules in the same net, be sure that they have a different address. I

It is possible to change the address of a module using the H/EASY® programming software Neo.

NOTE: a madule cannot communicate with others modules in the same net if its Address is upper than the Max Address of the others (see Neo manual).

Surf the following link to download the software:

<http://www.heasy.it/h-system/software/neo/>

WIRING DIAGRAM

Shown below different wiring diagrams that can be used when installing a REL-LT module.

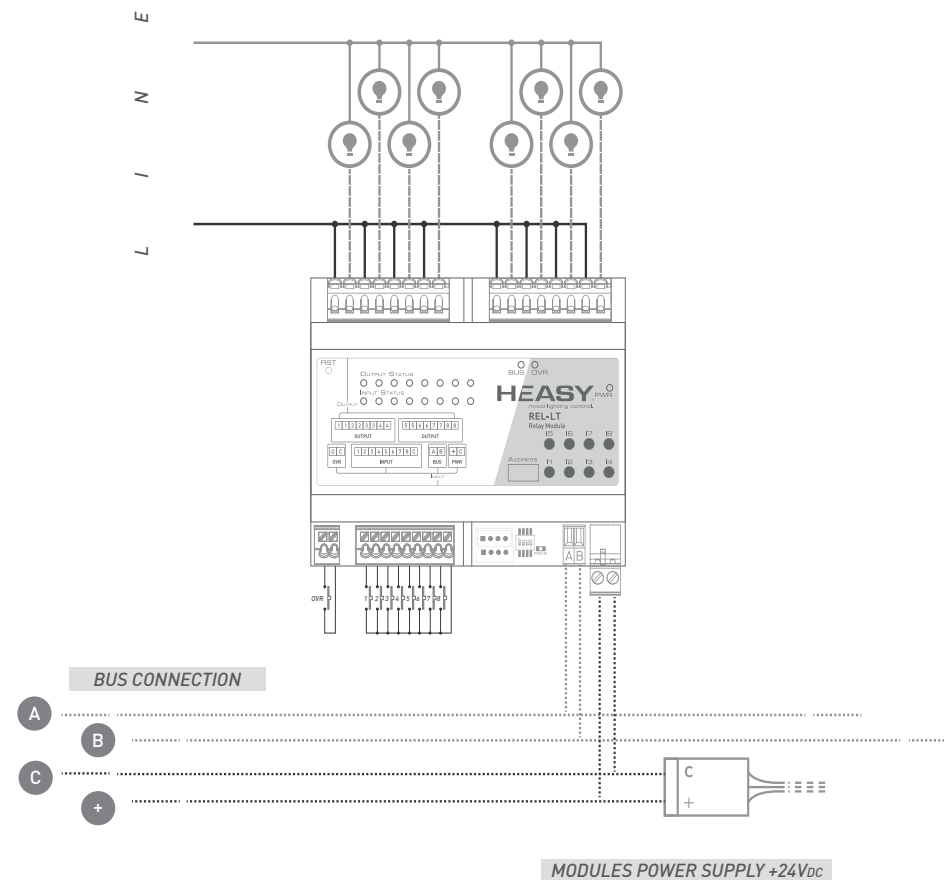
NOTE: all the H/EASY® modules installed in a H/BUS network must have the negative pole of electronic power supply in parallel. If this specification is not verified unexpected behaviour of the system can happen.

NOTE: it is not possible to wire a H/BUS network in a ring. If this specification is not verified unexpected behaviour of the system can happen.

To link different switchboards with H/EASY® modules inside it is suggested to use SEP-2CH module.

For particular wiring ask for H/EASY® assistance.

SCHEME 1: Direct wiring to the module



PROGRAMMING

STANDARD PROGRAMMING

Each REL-LT module has a standard programming that allows it to be used with its 8 dry contact inputs. Each input is associated with a particular functionality. The functionalities of the inputs can be tested using Neo.

NOTE

The 8 buttons on the top board do the "On/Off Toggle" function: a short press switch on and off the output.

CONFIGURATION 000-: CUSTOM PROGRAMMING

If the DIP switches are in this configuration, the module executes the custom programming created with H/EASY® Neo software.

CONFIGURATION 010-: STANDARD PROGRAMMING

This programming allows the activation of each output by pressing of the relative input.

# IN	FUNCTION NAME	DESCRIPTION
1-2-3-4 5-6-7-8	On-Off Toggle	A press changes the status of the output.

Programming with NEO

The module can be programmed using the H/EASY® software Neo. Read the manual of the software for all the information needed about Neo and the module programming.

For programming examples surf the link www.heasy.it

For advanced programming requested contact H/EASY® technical department if needed.

PROBLEM SOLVING

PROBLEM	POSSIBLE CAUSE	POSSIBLE SOLUTION
Module doesn't switch on	The module doesn't receive power supply on the electronic power supply connector	Check that dedicated power supply is working properly, providing right output voltage according specification written in this manual.
	Positive and negative cabling poles inverted	Check that dedicated power supply positive and negative poles are connected in the right way.
The module has the BUS LED always on but its address is not the lowest used in the net	The module has address higher than the MAX ADR of the module with lowest address in the net.	Check the MAX ADR value of the module with lowest address in the network. Set the address of the module according to that value.
	Communication BUS card damaged	Communication BUS card needs to be replaced (ask help to H/EASY® technician).
	Problem on the BUS cable	Check the cabling of all the BUS chains connected to the same loop of the module. Short circuit or inversion on A-B poles can be present.
Nothing happens while pressing a button connected to an input of the module	The module is in Override mode	Check that OVR input is not activated.
	The input has no functionality programmed	Use Neo software to check the programming of the module, in particular for the not working input.
	Broken cable problem	Check that while pressing the button the corresponding green LED on the front panel switches on. Check cabling in case it doesn't happen.

REPAIR AND WARRANTY POLICIES

Merchandise returns

No V.Y.C. Srl merchandise may be returned for credit, exchange or service without prior authorization from V.Y.C. Srl. To obtain warranty service for V.Y.C. Srl products, contact V.Y.C. Srl or an authorized dealer. Request for an RMA (Return Merchandise Authorization) and fill it in properly all the fields, before returning the module. Shipments arriving freight collect or without RMA number shall be subject to refusal.

Return freight charges following repair of items under warranty shall be paid by V.Y.C. Srl, shipping by standard ground carrier. In the event repairs are found to be non-warranty, return freight costs shall be paid by the purchaser. V.Y.C. Srl will provide repairing costs in case the merchandise is not under warranty.

V.Y.C. Srl limited warranty

V.Y.C. Srl warrants H\EASY® control modules to be free from manufacturing defects in materials and workmanship under normal use for a period of five (5) years from the date of purchase. This warranty extends to products purchased from an authorized H\EASY® dealer.

V.Y.C. Srl shall not be liable to honor the terms of warranty if the product has been used in any application other than that for which it was intended or if it has been subject to misuse, accidental damage, modification or improper installation procedures. Furthermore, this warranty does not cover any products that has had the warranty void label altered, defaced or removed.

V.Y.C. Srl shall, at its option, repair or replace any product found defective, without charge for parts or labor. Repaired or replaced equipment and parts supplied under this warranty shall be covered only by the unexpired portion of the warranty.

Except as expressly set forth in this warranty, V.Y.C. Srl makes no other warranties, expressed or implied, nor authorizes any other party to offer any warranty, including any implied warranties of merchantability or fitness for a particular purpose. Any implied warranties that may be imposed by law are limited to the terms of this limited warranty.

This warranty statement supersedes all previous warranties.

