Latching and installation relays
E260/E290/E297 Range

- Save space and energy
- High number of lamps switched
- Easy to assemble
- Low-noise switching and low consumption coils for maximum comfort
- Long lifetime endurance

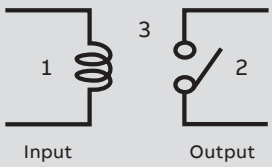
ABB is the world's leading provider of products for electrical installation in buildings. A comprehensive domain knowledge, global experience and continous innovation enable us to provide optimal solutions for residential, commercial as well as industrial environments. Our solutions help to make your buildings safer, more energy efficient and equipped for the future.

Table of contents

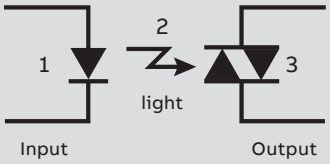
Latching and installation relays
Maximum performance in lighting control

What is a relay in general?

A relay is an electrical switch that opens and closes under command control of another separated electrical circuit. It's primarily used to control a system which has more than one or two switches or rather push-buttons.



Electromechanical relay
Including a coil (1), a simple switching mechanism (2), and in between a galvanic separated connection between the both (3). When a command is initiated by a push-button or switch, the coil generates a magnetic field which then actuates via a mechanical connection the switch.



Electronic relay
With no mechanical components, it consists of semiconductors and electrical switching elements. There are various ways of implementation, but for the ease of understanding, LED (1) and photo-diodes (3) are used here. On the input side a LED is used. It transmits its current data which is either on or off via light (2) to a photo-diode. The photo-diode receives this data and controls the output accordingly. According to IEC standard we differentiate between bistable and monostable electronic relays.

Latching relay / bistable relay
Works with just an impulse on the input, which switches the device to its previous position and then remains mechanically in that position until the next impulse comes.
It has two secured positions.

Installation relay / monostable relay
Needs a continuous voltage on the coil in order to maintain the not stable position.
It has only one stable position.

Scan with your smart device to access the command and signaling ELSB master catalogue section

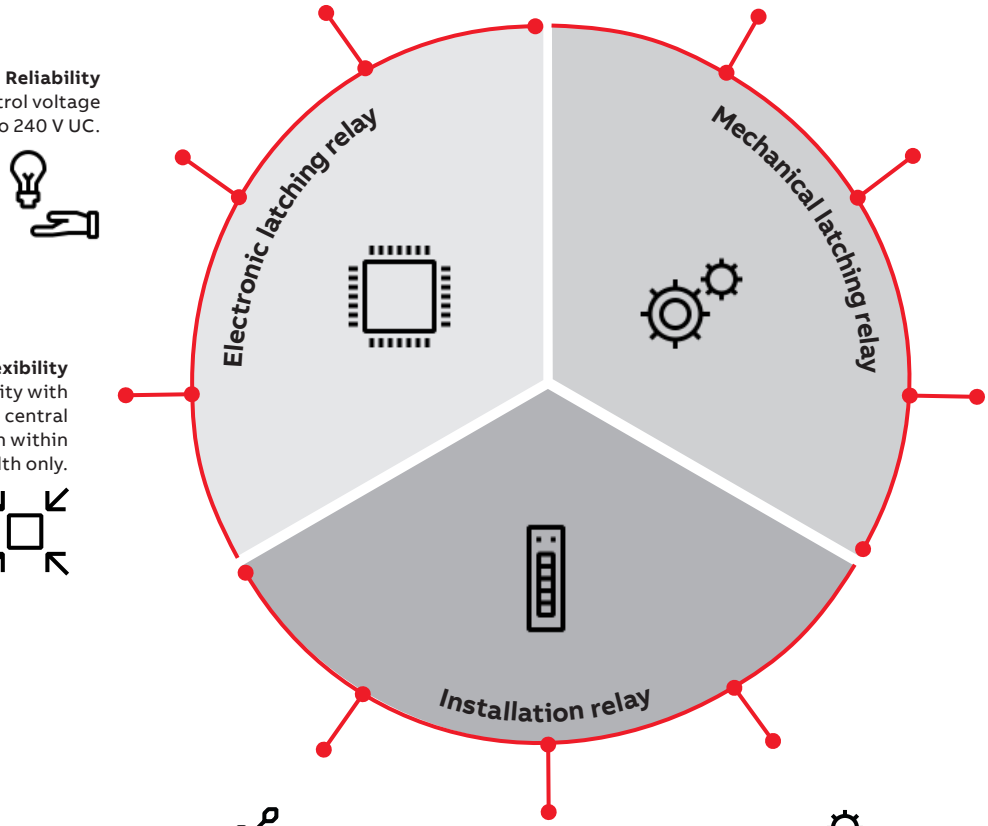
Check out the command and signaling webpage

Visit our dedicated latching and installation relays webpage

Low-noise switching
Best choice when a silent device is required, such as in residential or commercial buildings.

Easy operation
The handle indicates the status of the contact and it's possible to manually manage contacts and test of functionality.

Reliability
Universal control voltage from 8 to 240 V UC.



Simple solution that saves time
Thanks to the flexibility of combining the devices directly on the field, there are less order codes to manage.

Flexibility
Maximum flexibility with an adjustable central control function within 18mm width only.

Cost saving
No power consumption in stand-by.

Environmental care
Thanks to their ability to control more lamps than contactors of the same nominal current, they save energy, space and costs.

Wide application range
Product designed for lighting control residential application.

Reduced power losses
An optimized coil ensures a clean and safe operation in the electrical distribution board.

Latching and installation relays
Benefits and value propositions

Simple, energy saving and efficient lighting control system, in all buildings which need the lights to be controlled. Reliable control system for both industrial and commercial or public buildings.

Completeness
Complete offer of relays for switching, control and manage in many ways the applications. Latching relays up to 32 A and installation relays up to 16 A, for 50Hz and 60Hz frequency.

Simple Solution
Connection diagrams coherent with the number written on the terminal and printing is always in the same place of the modular components.

Energy efficient
Product are designed to control and switch LED lamp loads to reduce energy consumption.

Approved and certified devices
Our devices are certified with the highest standards worldwide.

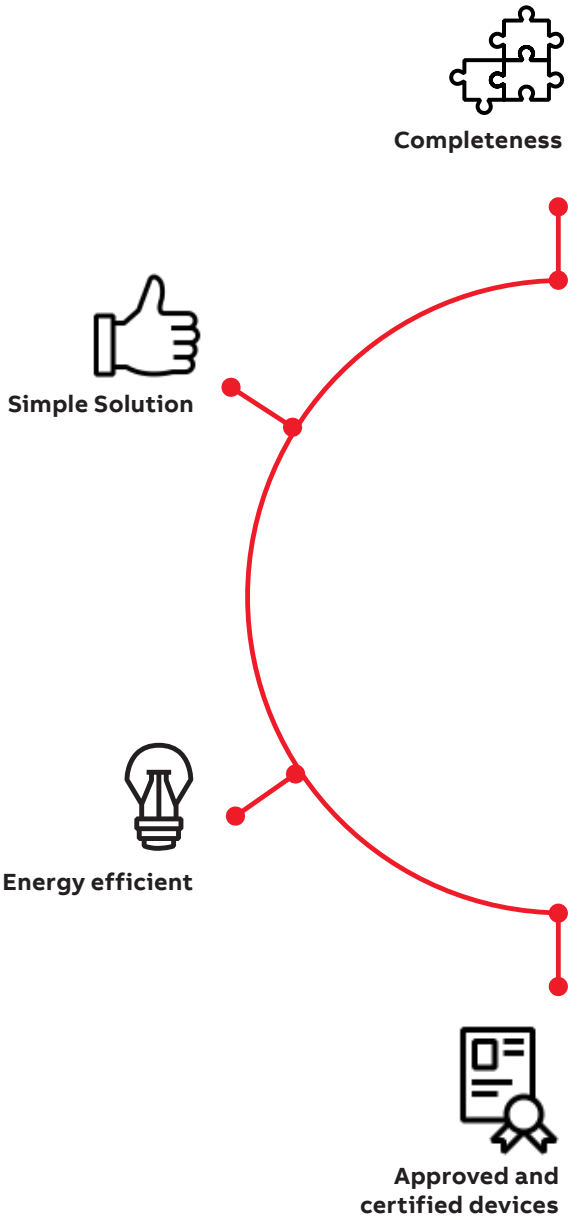


ABB range of latching and installation relays are specifically designed to control and switch LED lights from more than two points.

Latching and installation relays
Applications

In an office building or large building complex, latching relays can be used to achieve a flexible, modern and reliable lighting control system for the whole site.
Installation relays with their optimal switching capacity also makes them suitable for use in industrial environments and in situations where it is necessary to ensure control over more powerful consumers (such as e.g. multiple lighting systems).

Residential
Home automation ease with low noise actuators ensure comfort and energy saving application in houses, apartments and any residential environment.

Industrial
A wide application of relays can be found within the industrial field, where it is necessary to ensure control over more powerful consumers such as e.g. multiple lighting systems.

Commercial
Relays can be used as lighting system of art galleries, shopping malls or hotels and resorts to simply switch various independent lighting areas on and off.

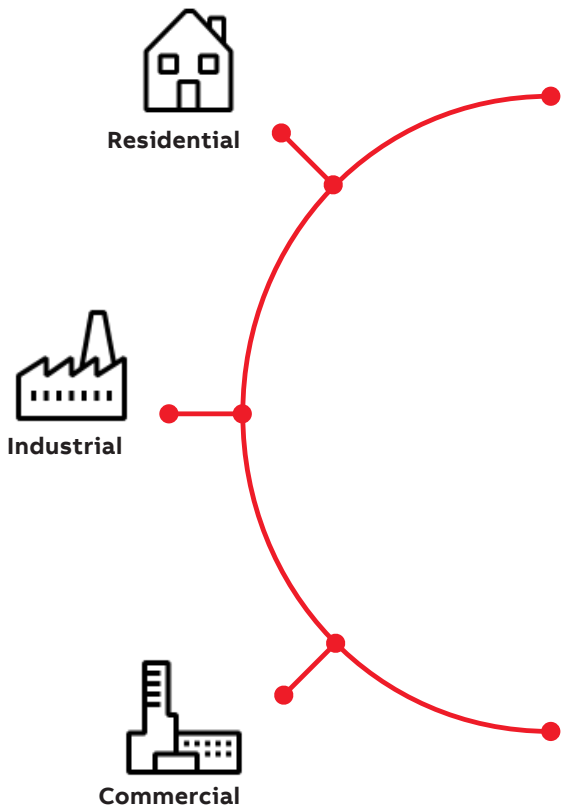


ABB range of latching and installation relays gives maximum performances in lighting control in residential, commercial and industrial applications and avoids expensive wiring.

Explore ABB relays ranges

E260 Electronic latching relay

Reliable, low-noise and flexible

Electronic latching relays guarantees maximum reliability, service life and quiet operation.

A wide range of state-of-the-art product features combined in only few SKUs allows the customer to use them in various applications like fan, lighting and AC systems.

E290 Mechanical latching relay

Simplicity, energy saving and efficiency

The E290 range from ABB can be used to realize a simple, energy saving and efficient lighting control system.
Save space and energy in the distribution board since the coil of the latching relay is supplied with a short impulse.
The devices are designed for rated currents of 16 and 32A. Through the combinable accessories the main modules can be used in nearly all market applications.

E297 Installation relay

Lighting up every application

The installation relay coil is consumption optimized which allows using a smaller transformer so we can reduce the size of the distribution board. Installation relays are electromagnetically operated miniature contactors in the standard DIN width of 18 mm. Installation relays and the accessories are available in different versions in order to easily satisfy the various market requirements. Their optimal switching capacity also makes them suitable for use in industrial environments and in situations where it is necessary to ensure control over more powerful consumers (such as e.g. multiple lighting systems).

Ranges comparison

	Electronic latching relay 	Mechanical latching relay 	Installation relay 
	E260	**E290**	**E297**
TECHNICAL PROPERTIES			
Switching current max. 16A	■	■	■
Switching current max. 32A		■	
Universal control voltage	■		
Bistable relay	■	■	
Monostable device			■
Standby power consumption	■	■	
Switch position indicator		■	■
Central ON/OFF control included in 18mm	■		
Low-noise switching	■		
LED load switching	■	■	■
VDE certificate	■	■ (for 50Hz devices only)	■
RINA certificate	□	■ (for 60Hz devices only)	
FUNCTIONS			
Choice of priority	■		
Additional main contacts		■	■
Central ON/OFF control	■	■	
Auxiliary contacts		■	■
Group control	■	■	
Permanent signal module		■	
Compensator module		■	
APPLICATIONS			
Operated with push-buttons	■	■	
Operated with switches			■
Central control of interior lighting	■	■	
Primarily used in industrial plants			■
Consumer unit located inside apartment	■		
Stable position in case of a voltage failure	■	■	
Emergency stop systems			■
Marine vessel	□	■	

E260 Electronic latching relay
Low-noise and energy efficient

The electronic latching relays with universal control voltage from 8 to 240 V UC guarantees maximum reliability, service life and low-noise operation.
The E260C version has an integrated central control function (ON/OFF), which is also adjustable on the E260CA unit types.

The E260 series is designed for direct installation in sub-distribution systems. Due to the quite switching operation, the devices do not need to be heavily noise-insulated but can be installed easily and without hesitation.
Particularly suitable for households, hotels, workplaces or areas where people want to be undisturbed and sub-distribution system are nearby.
The basic version is designed for the most common voltages and has up to two switching contacts. In addition, there is a device with a central command on-off built in.
The E260 series has the capability to switch LED loads of up to 200W. Each unit can be used with a universal input voltage anywhere from 8 up to 240V AC/DC, which is unique and enable a flexible use in any application.
A wide range of state-of-the-art product features combined in only few stock selling units allows the customer to use them in various applications like fan, lighting and AC systems - Especially in residential and commercial sectors.

- Quiet and reliable in every application
- Maximum flexibility with an adjustable central control function within 18mm width only
- Wide range of switching sequences
- Universal control voltage from 8 to 240 V UC
- Certified with the highest standards worldwide

Relays are the best solution for a simple and efficient lighting control system. They are perfect for all rooms whose lights need to be controlled from more than one place.

E260 Electronic latching relay
Benefits

Reduced installation time
Front screws and open terminals ensure the quickest installation ever.

QR-Code
Simple access to product data and documents.

Simple solution
Connection diagrams coherent with the number written on the terminal and printing is always in the same place of the modular components.

Customizable area
Space to add label on product front.

Approved and certified
According to IEC/EN 60669-1 and IEC/EN 60669-2-1 covering a wide application range.

Easy to install
Wiring diagram printed on the product.

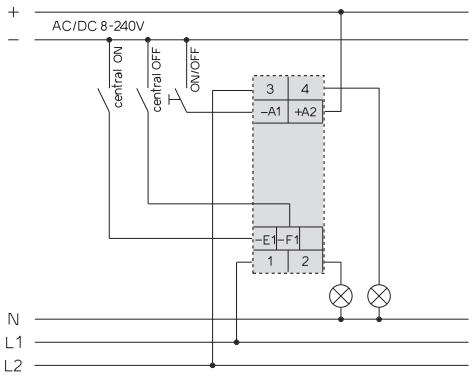
Increased functionality
With only 8 device most of the needs of your customers are covered.

Clear visualization
Indication of the operating state of the output contacts.

E260 Electronic latching relay
Application

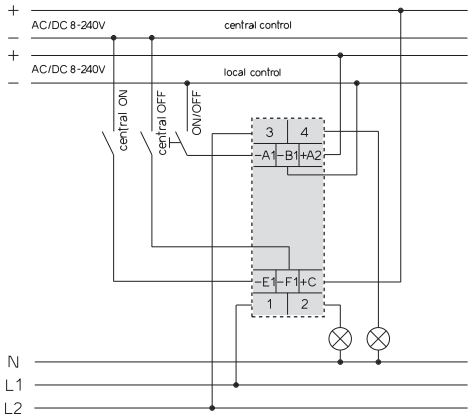
E260C-16-20 - ELECTRONIC LATCHING RELAY WITH CENTRAL ON/OFF CONTROL

The light control can be performed locally on site via the regular button. The central ON/OFF button permits a general switching state change from a central location.



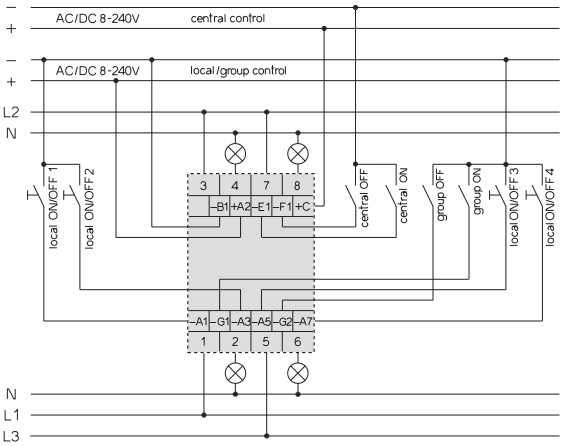
E260CA-16-11 - ELECTRONIC LATCHING RELAY WITH ADJUSTABLE CENTRAL ON/OFF CONTROL

With the front rotary switches the switching sequences are flexible adjustable to enable a wide range of requirements and application. The light control can be performed locally on site via the regular button. The Central ON/OFF button permits a general switching state change from a central location.
In case a local pushbutton is triggered for more than 10s the front LED starts flashing.



E260CA-16-40 - ELECTRONIC LATCHING RELAY WITH ADJUSTABLE CENTRAL ON/OFF AND GROUP CONTROL

It enables fixed groups of latching relays to be created and controlled in combination with central on-off control system.
For example, various control circuits in an office building can be interconnected. As a result, groups of offices can be controlled by floor or even throughout the whole building using a central on-off control system.



E290 Mechanical latching relay
Simplicity, energy saving and efficiency

Latching relays control more lamps than contactors of the same nominal current. Also we can save space and energy in the distribution board since the coil of the latching relay is supplied with a short impulse.

Latching relays are electromagnetically operated devices. They can be used to realize a simple, energy saving and efficient lighting control system.
These devices are mainly used in private houses, factory premises and commercial and public buildings as well as in industrial plants.
Latching relays controlled by means of impulse buttons are installed where it is necessary for lighting to be operated from at least three different places.
Mechanical latching relays are also referred to as "bistable relays". This technology enables to reduce the electrical power loss and current consumption of devices considerably.
The range of monostable and bistable relays enables various applications such as private houses, industrial plants, hotels, commercial and public buildings.

- Saves energy, space and money
- Reduces electrical power loss and current consumption
- E290 goes up to 32A rated current; for higher amount of lamps switchable per phase
- Auxiliary contact available
- Reliable switching with clear position indicator

E290 Mechanical latching relay
Possible mounting variations (50 Hz only)

E294/...
Central On/Off Control Module. With this snap-on device a priority central command (all off/all on) can be realized.

By snapping on an E294/... Central On-Off Control Module at the Main Module E290, it's not allowed to use an E292/... contact module or an E299/... auxiliary contact!

Always attach on the left side!
Only one type of Control Module can be attached.

E295-PS
Permanent Signal Module (use: Particularly useful if the latching relay is controlled by means of a timer, a twilight switch, a motion detector or another switch with a changeover contact.) permanent energising.

E290-16-11/230
Latching relay Main Module. Standard number of contacts:
1 NO contact,
2 NO contacts
or 1 NO contact
+ 1 NC contact.

1

Always attach on the right side!
One unit can be snapped on per E290 Main Module in each case.

E292-16-20
Main Contact Module (attachable: max. 1 unit)

1) If using a Contact Module, always attach it as the first component.

2

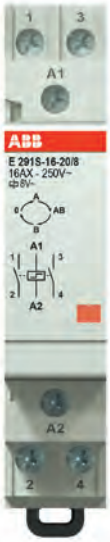
E299
Auxiliary Contact (attachable: max. 1 unit). A maximum of two additional snap-on modules can be mounted on the right side of the main device.

Neither additional fixing screws nor additional wiring are required in order to build the various combinations. All additional modules are also easy to remove.

2) If using an attachable Auxiliary Contact, it is to be attached directly to the latching relay or to the contact module installed first.

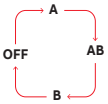
Safety information
If more than one latching Relay installed next to each other, it is recommended to use a intermediate piece (distance). This guarantees optimal heat dissipation by the main modules. The intermediate pieces (9 or 18mm wide) can be found in the order information as types ZLS725 or ZLS726 (the use depends on the application).

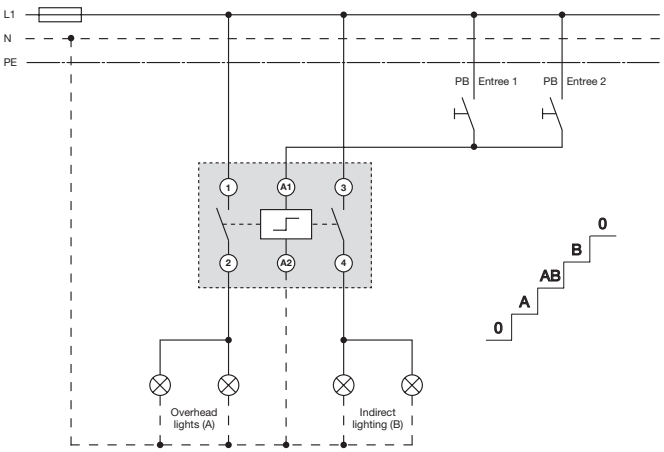
E290 Mechanical latching relay
Application



E291S SEQUENCIAL LATCHING RELAY - STAND ALONE DEVICE

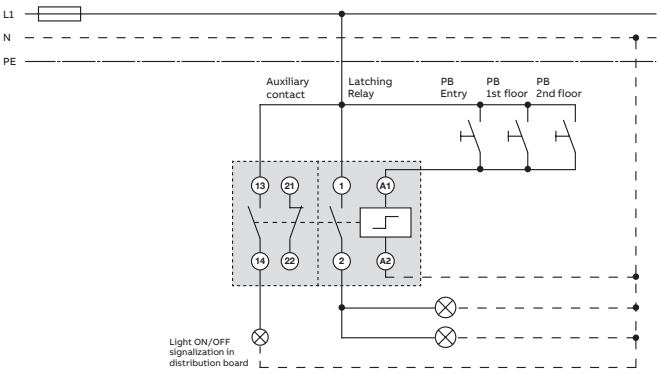
The sequential latching relay is an 18 mm wide device which has two NO contacts. The preset switching sequence for the main contacts enables the switching on and off, of different lighting sets to be "programmed".
The E291S has an easily visible switch position display on the front.
A parallel switching of several E291S is not allowed! No manual intervention possible!
Switching sequence:
OFF – A – AB – B – OFF





E290-16-10 + E299-11 – LATCHING RELAY WITH AUXILIARY CONTACT

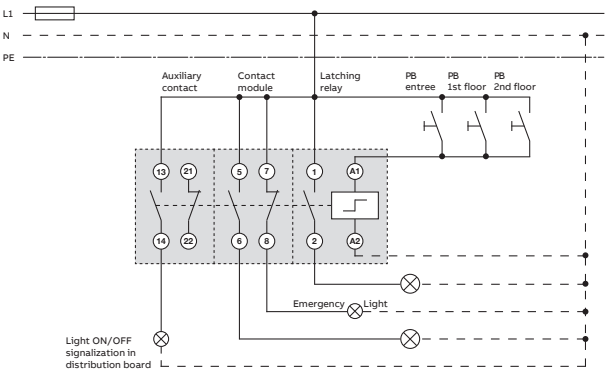
Application at a normal light control via different push buttons (PB):
The snapped-on auxiliary contact (E299-11) displays the current switching state of the light control (ON/OFF).



E290-16-10 + E292-16-11 + E299-11 – LATCHING RELAY WITH AUXILIARY CONTACT (50 HZ ONLY)

For latching relays with a frequency of 60Hz the combination of E290+E292+E299 is not possible (either E290+E292 or in a separate device combination E290+E299).

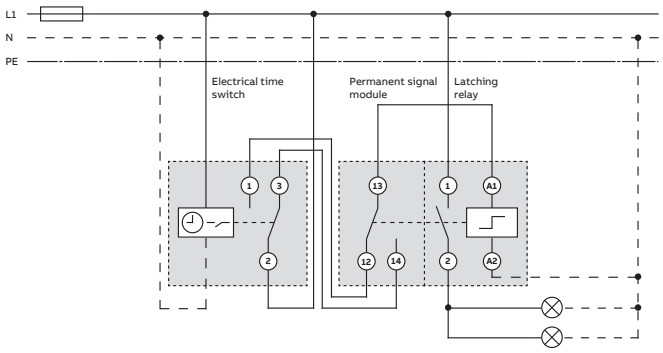
Latching relay E290 with attached contact module E292-16-11 (additional main contact tracks) plus an auxiliary contact to externally display the switching state of the main contacts (ON/OFF).



E290 Mechanical latching relay
Application

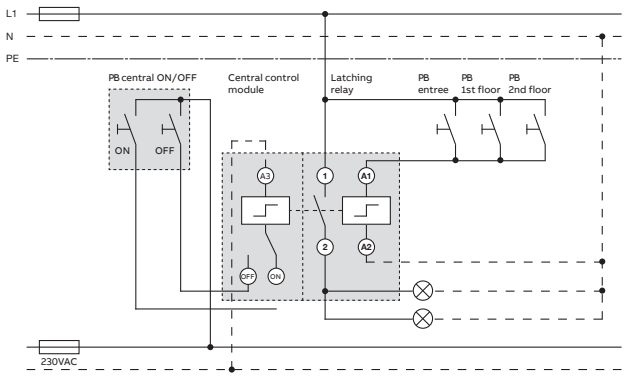
E290-16-10 + 295-PS – LATCHING RELAY WITH PERMANENT SIGNAL MODULE

This combination permits control of the E290 coil via a permanent signal (e.g. directly controlled by a timer or a twilight switch).
When using this accessory, manual switching at the main unit is not possible.



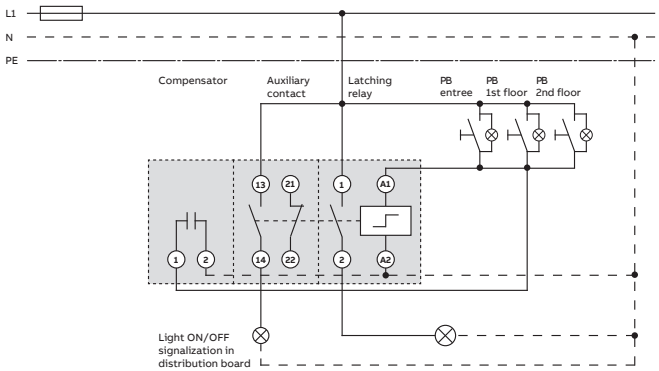
E290-16-10 + E294/230 – LATCHING RELAY WITH CENTRAL CONTROL MODULE

When a E294/... accessory is snapped on, this Central ON/OFF device uses a different voltage source for coil control. The light control can be performed locally on site via the regular button. The Central ON/OFF button permits a general switching state change from a central location.



E296CP + E290-16-10 + E299-11 – LATCHING RELAY WITH AUXILIARY CONTACT PLUS COMPENSATOR

The compensator E296-CP is used every time a certain number of lit local buttons is exceeded.



E290 60Hz mechanical latching relay
High flexibility to project specifications

E290 Mechanical latching relays with a frequency of 60Hz have been designed to serve specific applications. For instance, these 60Hz devices can be found in cabin distribution boards in the marine industry.

E290 60Hz latching relay

Latching relays are electromechanically operating devices that can be used to realize a simple, energy saving and efficient lighting control system.

- Save energy and space in the distribution board
- Reliable switching with clear position indicator
- Can be installed in 60Hz frequency environments and goes up to 32A rated current
- Accessories and additional devices for combinations are available

In an office building or large building complex, latching relays can be used to achieve a flexible, modern and reliable lighting control system for the whole site.

- Commercial, public buildings as well as industry plants
- Ships specifically designed for the carriage of passengers, including pleasure-boats like yachts or mega yachts up to the giant cruise ships

Approvals

RINA Rules Type Approved Products

Shipping register approval RINA

IEC 60669-1
IEC 60669-2-2

E290 60Hz mechanical latching relay
Possible mounting variations

Attach maximum 1 additional module (left or right side).

E294-60/...
Central On/Off Control Module. With this snap-on device a priority central command (all off/all on) can be realized.

By snapping on an E294/... Central On-Off Control Module at the Main Module E290, it's not allowed to use an E292/... contact module or an E299/... auxiliary contact!

Always attach on the left side!
Only one type of control module can be attached.

E290-16-11/230-60
Latching relay Main Module. Standard number of contacts:
1 NO contact,
2 NO contacts
or 1 NO contact
+ 1 NC contact.

E295-PS
Permanent Signal Module (use: Particularly useful if the latching relay is controlled by means of a timer, a twilight switch, a motion detector or another switch with a changeover contact.) permanent energising.

1

2

Always attach on the right side!
Only one type of accessory can be snapped on.

E292-16-20-60
Main Contact Module (attachable: max. 1 unit)

1) If using a Contact Module, always attach it as the first component.

E299-60/...
Auxiliary Contact (attachable: max. 1 unit). Enables the individual indication or signaling of the current operating state of the main module.
A maximum of two additional snap-on modules can be mounted on the right side of the main device.

Neither additional fixing screws nor additional wiring are required in order to build the various combinations. All additional modules are also easy to remove.

2) If using an attachable Auxiliary Contact, it is to be attached directly to the latching relay or to the contact module installed first.

Safety information
If more than one latching relay installed next to each other, it is recommended to use a intermediate piece (distance). This guarantees optimal heat dissipation by the main modules. The intermediate pieces (9 or 18mm wide) can be found in the order information as types ZLS725 or ZLS726 (the use depends on the application).

E297 Installation relay
Lighting up every application

Installation relays save energy since they control more lamps than contactors of the same nominal current. The installation relay coil is consumption optimized which allows for using a smaller transformer so we can reduce the size of the distribution board.

Installation relays are electromagnetically operated miniature contactors in the standard DIN width of 18 mm.
A reliable control system can be designed using these installation relays.
They are mainly used in industrial plants but also in commercial and public buildings.
As a rule, installation relays operated by means of a control switch (maintained contact) are installed where it is necessary to operate lighting, an air-conditioning system, a fan or suchlike.
Their optimal switching capacity also makes them suitable for use in industrial environments and in situations where it is necessary to ensure control over more powerful consumers (such as e.g.multiple lighting systems).
Suitable for use in public buildings and in private houses.

- Clean and safe operation thanks to using an optimized coil
- Low level of switching noise
- Flexible thanks to different versions of installation relays and accessories
- Optimal switching capacity: Control over more powerful consumers
- Clearly indicated current switching position

E297 Installation relay
Possible mounting variations

E298-16-20
Main Contact Module
(attachable: max. 1 unit).

1) If using a Contact Module, always attach it as the first component.

1

Always attach on the right side!
One unit can be snapped on per E297 Main Module in each case.

2

E297-16-11/230
Installation relay
Main Module.
Standard number of contacts:
1 NO contact,
2 NO contacts
or 1 NO contact
+ 1 NC contact.

E299
Auxiliary Contact
(attachable: max. 1 unit).
Enables the individual indication or signaling of the current operating state of the main module. Neither additional fixing screws nor additional wiring are required in order to complete the combination.
All additional modules are also easy to remove.

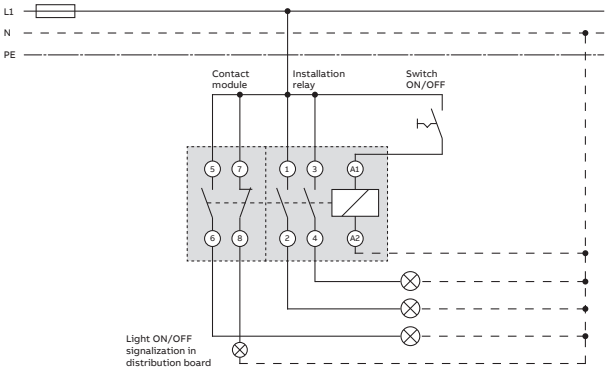
2) If using an attachable Auxiliary Contact, it is to be attached directly to the installation relay or to the Contact Module installed first.

Safety information
If more than one Installtion relay installed next to each other, it is recommended to use a intermediate piece (distance). This guarantees optimal heat dissipation by the main modules. The intermediate pieces (9 or 18mm wide) can be found in the order information as types ZLS725 or ZLS726 (the use depends on the application).

E297 Installation relay
Application

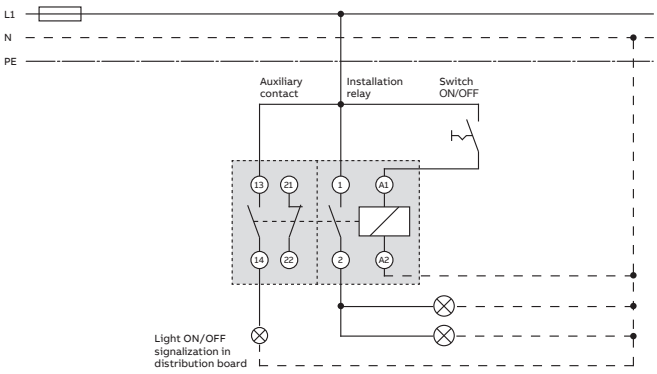
E297-16-20 + E298-16-11 – INSTALLATION RELAY WITH CONTACT MODULE

Light control via an installation relay E297 with connected Contact Module E298-16-11 (additional main contacts) to externally signal the switching state of the main contacts (ON/OFF).



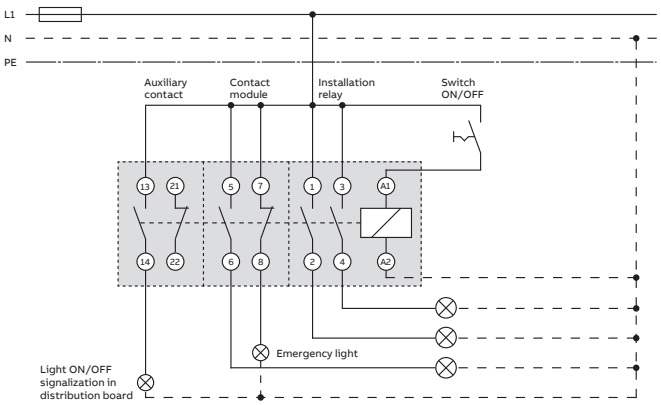
E297-16-10 + E299-11 – INSTALLATION RELAY WITH AUXILIARY CONTACT

Application with a normal light control via an ON/OFF switch. The current condition indication of the light control (ON/OFF) is implemented, e.g., in the distribution board, with the help of the auxiliary contact (E299-11).



E297-16-20 + E298-16-11 + E299-11 – INSTALLATION RELAY WITH CONTACT MODULE AND AUXILIARY CONTACT

Combination of an installation relay E297 with an attached Contact Module E298-16-11 (additional main contacts) plus an Auxiliary Contact to clearly indicate the switching state of the main contacts (ON/OFF).



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