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ENGLISH



### Single-function time relay

- 1RT80A - ON delay
  - 1RT80B - INTERVAL ON
  - 1RT80C - OFF delay
  - 1RT80E - FLASHER - ON first
- 1 mod. DIN



## ! INFORMATION AND SAFETY PRECAUTIONS



It is advisable to read the installation and user instructions carefully and to keep them for future reference. The manufacturer reserves the right to make all the technical and construction changes it deems necessary without prior notice.



Important: the installation, electrical connection and commissioning of devices and equipment must be performed by qualified personnel and in compliance with regulations and applicable laws.



**Before starting the installation and maintenance of the device, disconnect the 230V ~ mains power supply.**

- Do not connect or power the unit if any part is visibly damaged.
- Once installation is complete, inaccessibility to the terminals without the use of special tools must be guaranteed.
- The manufacturer assumes no responsibility concerning the use of products that must comply with specific environmental and/or installation regulations.
- This unit must be intended only for the use for which it was built. Any other use must be considered improper and dangerous.

### IMPORTANT

Device is constructed for connection in 1-phase AC/DC 12-240V main alternating current voltage and must be installed according to norms valid in the state of application. Connection according to the details in this direction. Installation, connection, setting and servicing should be installed by qualified electrician staff only, who has learnt these instruction and functions of the device. This device contains protection against overvoltage peaks and disturbances in supply. For correct function of the protection of this device there must be suitable protections of higher degree (A, 8, C) installed in front of them. According to standards elimination of disturbances must be ensured. Before installation the main switch must be in position "OFF" and the device should be deenergized. Don't install the device to sources of excessive electro-magnetic interference.

By correct installation ensure ideal air circulation so in case of permanent operation and higher ambient temperature the maximal operating temperature of the device is not exceeded. For installation and setting use screw-driver cca 2 mm. The device is fully-electronic.

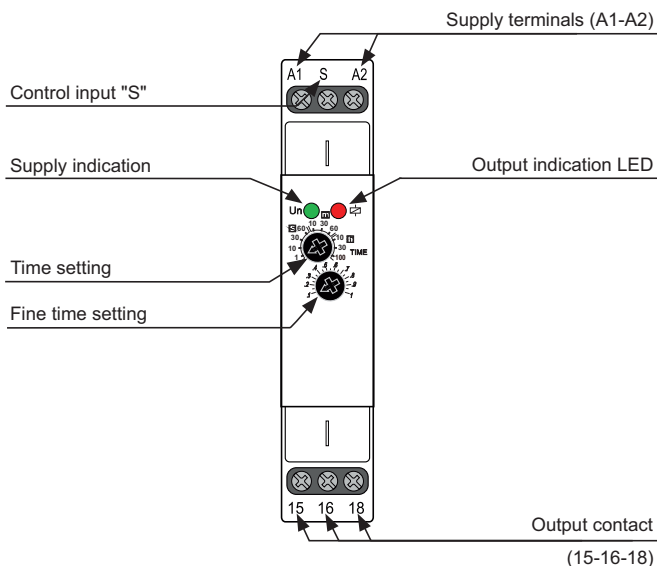
Installation should be carried out according to this fact. Non-problematic function depends also on the way of transportation, storing and handling. In case of any signs of destruction, deformation, non-function or missing part, don't install and claim at your seller it is possible to dismount the device after its lifetime, recycle, or store in protective dump.



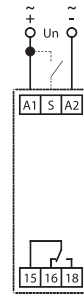
### DISPOSING OF OLD ELECTRICAL AND ELECTRONIC EQUIPMENT

This symbol on the product or on its packaging indicates that this product cannot be treated as household waste. On the contrary, it must be taken to a specific collection centre for recycling electrical and electronic equipment, such as: - outlets, if a similar product to the one being disposed of is being purchased - local collection centres (waste collection centres, local recycling centres, etc.). By making sure the product is disposed of correctly, you will help prevent potential negative consequences for the environment and human health, which could otherwise be caused by inadequate disposal of this product. Recycling materials will help conserve natural resources. For more detailed information about recycling this product, please contact the local office in your area, the household waste disposal service in your area or the shop where you purchased this product.

## Description

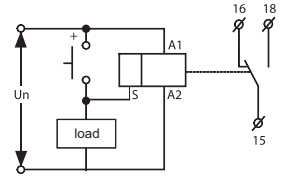


## Connection



### Possibility to connect load onto controlling input

It is possible to connect the load (e.g.: contactor) between terminals S-A2, without any interruption of correct relay function:



## Technical parameters

### Supply

Supply terminals	A1 - A2
Voltage range	AC/DC 12-240V (AC 50-60Hz)
Power input (max.)	2VA / 1.5W
Supply voltage tolerance	-15%; +10%
Supply indication	green LED

### Function

Time ranges	0.1s - 100h
Time setting	rotary switch and potentiometer
Time deviation	5 % - mechanical setting
Repeat accuracy	0.2 % - set value stability
Temperature coefficient	0.01 % / °C

### Output

Output contact 1	1x changeover / SPDT (AgNi)
Current rating	16A / AC1
Breaking capacity	4000VA / AC1, 384W / DC
Electrical life (AC1)	50.000 cycles
Switching voltage	250V AC / 24V DC
Max. power dissipation	1.2 W
Output indication	multifunction red LED
Mechanical life	10.000.000 cycles

### Control

Control terminals	A1-S
Load between S-A2	Yes
Impulse length	min. 25 ms / max. unlimited
Recovery time	max . 150ms

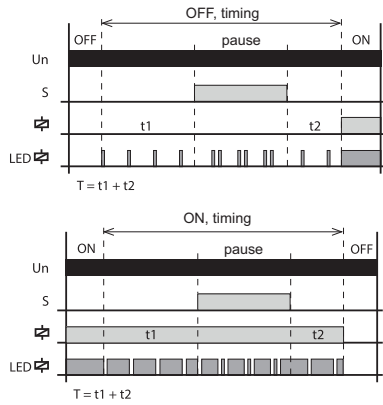
### Other information

Operating temperature	-20°C to +55°C (-4°F to 131°F)
Storage temperature	-30°C to +70°C (-22°F to 158°F)
Dielectric strength	4kV AC (between the power terminals and the output terminals)
Use	domestic / tertiary / industrial
Type of installation	barra DIN EN 60715
Protection degree	IP20 / Ip40 on back of box
Overtension categoryIII	III
Pollution degree 2	2
Max. section cables to terminals (mm²)	1 x 2,5 o 2 x 1,5 mmq 1 x 2,5 with cable lug
Dimensions (L x P x H)	90 x 17.6 x 64 mm
Weight	61g
Standards	EN 61812-1

## Characteristic

- Single-function time relays are suitable for applications where there is a clear function requirement in advance and are suitable for universal use in automation, control and regulation or in house installations.
- Choice of four types: A,B,C,E
- All functions initiated by the supply voltage can use the control input to inhibit the ongoing delay (pause).
- Universal supply voltage AC/DC 12 - 240 V.
- Time scale 0.1 s - 100 hrs divided into 10 ranges: (0.1s-1s / 1s-10s / 3s-30s / 6s-60s / 1min-10min / 3min-30min / 6min-60min / 1h-10hrs / 3hrs-30hrs / 10hrs-100hrs).
- Output contact: 1 x changeover / SPDT 16A
- Multifunction red LED flashes or shines depending on the operating status.

## Indication of operating states



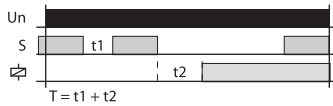
## Functions

### A : ON DELAY



When the supply voltage is applied, the time delay T begins. When the timing is complete, the relay closes and this condition continues until the supply voltage is disconnected.

#### ON DELAY with Inhibit



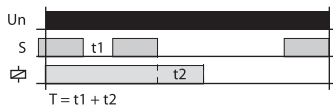
If the control contact is closed and the supply voltage is connected, the relay is opened and timing does not start until the control contact opens. When the timing is complete, the relay closes. If the control contact is closed during timing, the timing is interrupted and continues only after the control contact opens.

### B : INTERVAL ON



After supply voltage relay closes and starts the delay time T. After the end of the timing relay opens and this state lasts until the supply voltage is disconnected.

#### INTERVAL ON with Inhibit



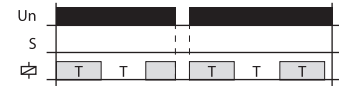
If the control contact is closed and the supply voltage is connected, the relay will close and the timing will start only after the control contact has been opened. When the timing is complete, the relay opens. If the control contact is closed during timing, the timing is interrupted and continues only after the control contact opens.

### C : OFF DELAY



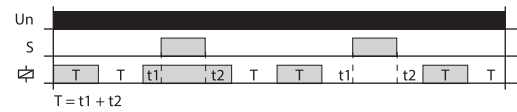
When the supply voltage is applied, the relay is open. When the control contact is closed, the relay closes. When the control contact opens, the time delay T begins. If the control contact is closed during timing, the time is reset and the relay remains closed. When the control contact opens, the time delay T starts again and opens when the relay closes.

### E : FLASHER - ON first



If the control contact is closed and the supply voltage is connected, the relay will close and the timing will start only after the control contact has been opened. When the timing is complete, the relay opens.

#### FLASHER - ON first with Inhibit



If the control contact is closed during an active timer setting, the timing is interrupted and continues only after the control contact opens again.

### IMPORTANT!

A, B and E functions are initiated by connecting the supply voltage to the product, i.e. In the event of a failure and recovery of the supply voltage, the relay automatically performs 1 cycle.

## More accurate setting of timing for long periods of time

Example of time setting to 8 hours period:

For rough setting use time scale 1-10s on the potentiometer.

For fine time setting aim for 8s on potentiometer, then recheck accuracy (using stopwatch etc).

On rough time setting, set potentiometer to originally desired scale 1-10 hours, leave a fine setting as it is.

Lasttyp	$\cos \varphi \geq 0,95$								
	AC1	AC2	AC3	AC5a	AC5a	AC5b	AC6a	AC7b	AC12
Kontaktmaterial AgNi, Kontakt 16 A	250V / 16A	250V / 5A	250V / 3A	250V / 3A (690VA)	X	800W	X	250V / 3A	250V / 10A
Lasttyp									
	AC13	AC14	AC15	DC1	DC3	DC5	DC12	DC13	DC14
Kontaktmaterial AgNi, Kontakt 16 A	250V / 6A	250V / 6A	250V / 6A	24V / 16A	24V / 6A	24V / 4A	24V / 16A	24V / 2A	24V / 2A