

# exta

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# zameL

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## DESCRIPTION

The one mode time relay PCM-01 has a delayed switch on function (reversible) in automation and control systems. The relay is released by power supply voltage. It has a wide time adjustment range from 0,1 s to 10 days. Additional ON/OFF functions enable constant switch on, switch off of the output (load). The system has the indicators of power supply voltage, relay mode, and time measure with the help of red LED diode.

## FEATURES

- Operating mode: switch on delay (input voltage release),
- supply voltage control indicator - LED green,
- power/relay supply indicator and time measure - LED red,
- time measure accuracy,
- wide time adjustment range,
- constant switch on, switch off function,
- relay output - 1 change-over contact (NO/NC) contact max 16 A capacity,
- TH 35 DIN rail installation.



### NOTE

The device should be connected to a one-phase network in accordance with legally binding standards. The connection method is described in this manual. Any activities related to installation, connection, and adjustment should be performed by qualified electricians who have read this user's manual and familiarised themselves with device functions. Removing the enclosure voids the warranty and poses a risk of electric shock. Before installation, make sure that there is no voltage on connection cables. To install the device, use a cross-head screwdriver with a diameter of 3.5 mm. The proper operation of the device is affected by how the device is transported, stored, and used. It is not advisable to install the device in the following cases: lack of any components, damage to or deformation of the device. If the device operates improperly, please contact the manufacturer.

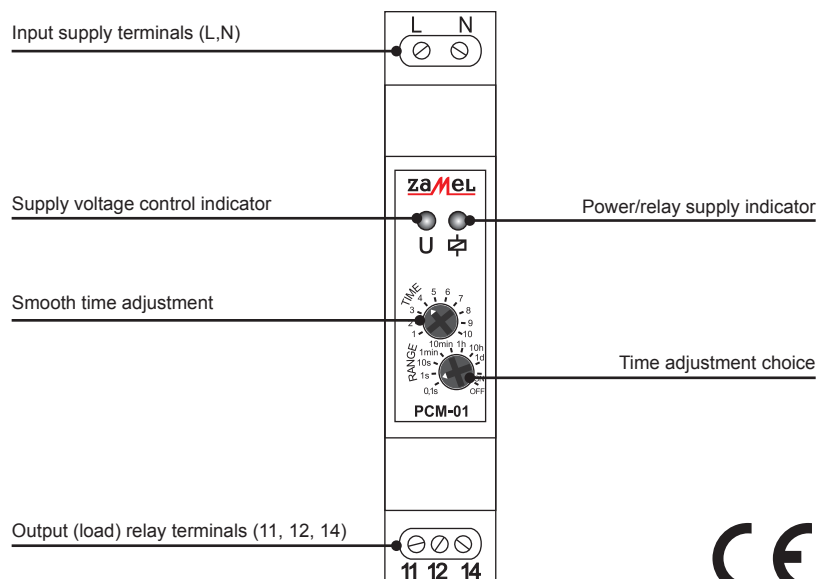


Do not dispose of this device together with other waste! To avoid harmful effects on the environment and human health, the worn-out device should be stored in designated areas. Electrical waste from households may be handed over to the waste collector established for this purpose free of charge and in any amount, as well as to the store when purchasing new equipment.

## TECHNICAL PARAMETERS

PCM-01	
Input (supply) terminals:	L, N
Input rated voltage:	230 V AC
Input voltage tolerance:	-15 ÷ +10 %
Supply voltage control indicator:	LED green
Nominal frequency:	50 / 60 Hz
Rated power consumption:	25 mA
Operating mode number:	1 (switch on delay)
Time adjustment range t:	from 0,1 s to 10 days
Time measure accuracy:	0,2 %
Time adjustment:	2x potentiometer (rotary + step)
Power/relay supply indicator and time measure:	LED red
Output relay parameters:	1NO/NC - 16 A / 250 V AC1 4000 VA
Number of terminal clamps:	5
Section of connecting cables:	from 0,2 to 2,50 mm <sup>2</sup>
Ambient temperature range:	from -20 to +60 °C
Operating position:	free
Mounting:	TH 35 rail (PN-EN 60715)
Protection degree:	IP20 (PN-EN 60529)
Overvoltage category:	II
Pollution degree:	2
Rated impulse withstand voltage:	2 kV (PN-EN 61000-4-5)
Dimensions (height / width / depth):	monomodular (17,5 mm) 90x17,5x66 mm
Weight:	0,08 kg

## APPEARANCE



## MOUNTING

1. Disconnect the power supply from the mains by the phase fuse, the circuit breaker or the switch disconnector that are joined to the proper circuit,
2. Check if there is no voltage on connection cables by means of a special measure equipment,
3. Install PCM-01 device in the switchboard on TH 35 DIN rail,
4. Connect the cables with the terminals according to installing diagram,
5. Switch on the power supply from the mains,
6. Adjust the time using the **TIME** and **RANGE** knobs, where  $t = \text{TIME} \times \text{RANGE}$ .

Switching on the power supply voltage causes the green LED luminosity. The cycle will be automatically initiated with the adjusted t time.

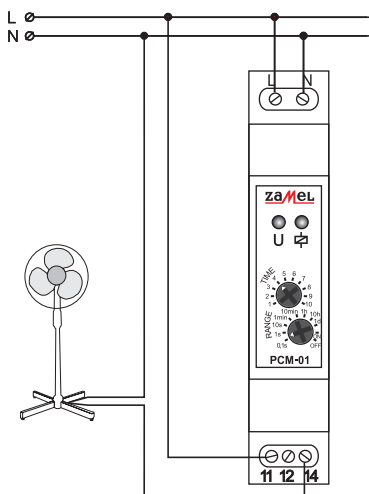
## FUNCTIONING



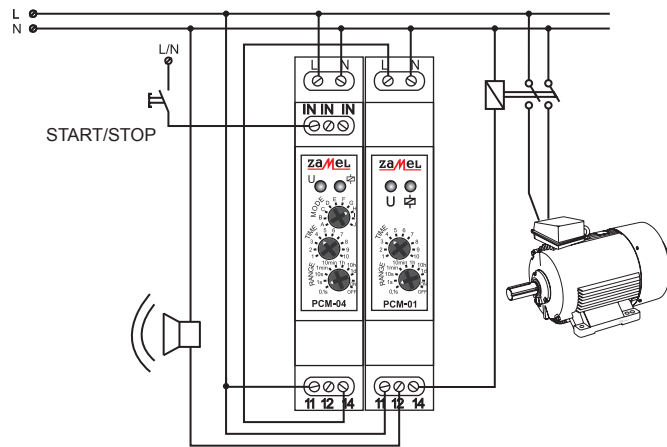
SWITCH ON DELAY - after the supply voltage [U] has been applied the time measure t starts. After the time is over the relay switches on (pos. 11-14).

U	Diodes' function description	Time adjustment example t	
	relay switched on (closed contacts 11-14), counting time off		$t = \text{TIME} \times \text{RANGE}$ $t = 8 \times 1 d = 8 d$
	relay switched off (closed contacts 11-12) counting time on		$t = \text{TIME} \times \text{RANGE}$ $t = 3 \times 1 h = 3 h$

## CONNECTING



## EXAMPLE OF INSTALLATION



### Warning system before the motor starts up.

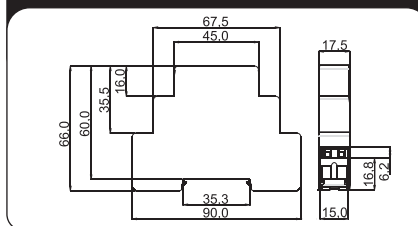
PCM-01 time relay works in the system where after pushing the START/STOP button a warning acoustic signal is heard to inform the motor is just to start up. This relay cooperates with PCM-04 in bistable relay mode with limited time (MODE=I), it enables to switch on/off the engine by means of one button as well as to set max possible working time.

## PRODUCT FAMILY

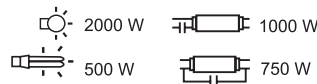
PCM-01 time relay belongs to PCx time relay product family.

PCX-xx (I/x)	Voltage type:
	24V - 24 V AC/DC
	U - 12-240 V AC/DC; available for PCM-01, PCM-02, PCM-03, PCM-06
	U - 24+250 V AC; 30+300 V DC; available for PCM-07
	Device type:
	01 - 1 operating mode - switch on delay
	02 - 1 operating mode - switch off delay
	03 - 1 operating mode - cyclic change over
	04 - 8 (PCP-04) or 10 (PCM-04) operating modes
	06 - 2 operating modes - switch on/ switch off delay
	07 - 25 operating modes, digital, two ranges of time operation
	10 - 10 operating modes, two ranges of time operation
	Casing type:
	M - modular version (TH 35 DIN rail)
	P - flush junction box Ø60 version
	Device symbol

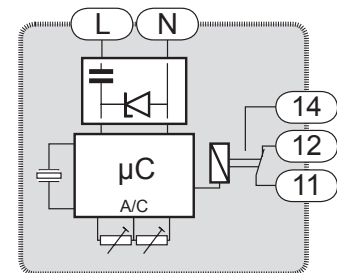
## DIMENSIONS



## RELAY CAPACITY



## INNER DIAGRAM



## GUARANTEE CARD

There is 24 months guarantee on the product

Salesman stamp and signature, date of sale

1. ZAMEL Sp. z o.o. shall offer a 24-month warranty on the products sold.
2. The warranty provided by ZAMEL Sp. z o.o. shall not cover:
  - a) mechanical damage caused during transport, loading/unloading or in other circumstances,
  - b) damage caused by incorrect installation or operation of products manufactured by ZAMEL Sp. z o.o.,
  - c) damage resulting from any changes made by the BUYER or third parties in the products sold or equipment necessary for the proper operation of the products sold,
  - d) damage resulting from force majeure or other fortuitous events for which ZAMEL Sp. z o.o. is not liable.
3. Any warranty claims shall be made by the BUYER at the point of sale or to ZAMEL z o.o. in writing after defects have been identified.
4. ZAMEL Sp. z o.o. undertakes to handle complaints in accordance with the applicable provisions of Polish law.
5. The choice of the form of complain resolution, e.g. replacement of a product with a product free from defects, repair, or reimbursement of money, shall lie with ZAMEL Sp. z o.o.
6. The warranty does not exclude, limit, or suspend BUYER's rights under the statutory warranty for defects in the item sold.