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## DESCRIPTION

PCM-11 is a multi-functional time relay for timer-based automatic control. The product can cyclically switch the wired system on for a preset time  $t_1$  and off for a preset time  $t_2$ . The product can also switch the wired system on and off with a preset delay and generate pulses of specific duration. Key benefits include a very wide range of time settings, and the product can be switched on or off continuously. The operating mode can be switched to a different one before it ends.

## FEATURES

- Independent switch on and off time settings.
- A wide time setting range: from 0.1 s to 10 days.
- Can generate pulse of specific duration.
- Continuous on/off functions.
- Relay output: one 16 A max. switchable contact.
- Single-module housing.
- DIN-Rail mountable.



Connect this product to a single-phase power system according to applicable electrical and safety standards and regulations. See this Manual for the wiring instructions. Installation, wiring and adjustment/setting shall only be done by qualified electricians who have read and understood this User Manual and the functions of the product. Do not open or otherwise disassemble the product housing; otherwise the product warranty will be void and an electrocution hazard may occur. Prior to installing and wiring this product, make sure that the wiring to be connected is not live. The conditions and methods of transport, storage and operation of this product may affect its performance. Do not install the product if any of its components are missing, the product is damaged or deformed in any way. If any malfunctions are found, consult the manufacturer.



Do not dispose of this device with other waste! In order to avoid harmful effects on the environment and human health, the used device should be stored in designated areas. For this purpose, you can dispose of household waste free of charge and in any quantity to a collection point set up, as well as to the shop when you buy new equipment.

## TECHNICAL DATA

PCM-11	
Power input terminals:	L; N
Rated supply voltage:	230 V AC
Supply voltage tolerance:	-15 ÷ +10 %
Rated mains frequency:	50 / 60 Hz
Rated current load:	10 mA
Time $t$ setting range:	0.1 s ÷ 10 days (in increments or stepless)
Time measurement accuracy:	± 3 s / 24h max. at 25 °C
Relay contact ratings:	1NO/NC-16 A/250 V AC1 4000 VA
Wiring terminals:	5
Wiring size:	0.2 ÷ 2.50 mm <sup>2</sup>
Operating temperature:	-10 ÷ +55 °C
Installation orientation:	any
Housing mounting:	DIN-Rail
Housing protection rating:	IP20
Overvoltage category:	II
Pollution class:	2
Surge voltage:	2 kV
Dimensions:	single module (17.5 mm) 90x17.5x66 mm
Weight:	0.076 kg

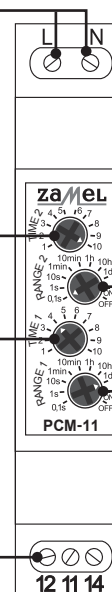
## APPEARANCE

Power input terminals

Stepless time  $t_2$  setting

Stepless time  $t_1$  setting

Relay output terminals  
(12, 11, 14)



Time  $t_2$  range selection

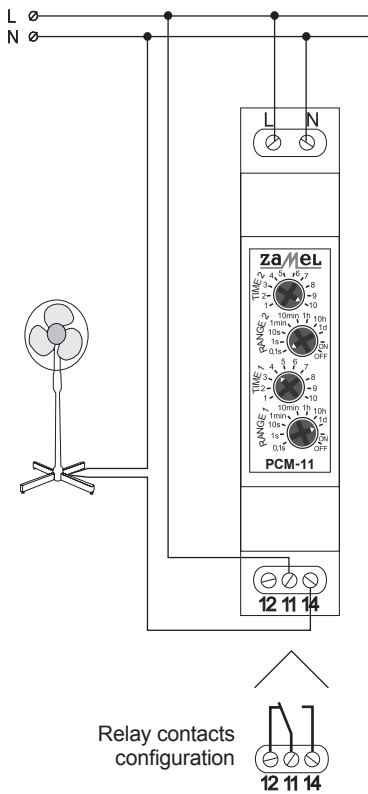
Time  $t_1$  range selection



## INSTALLATION

1. Isolate from power the wiring system to be connected with this product with its circuit breaker, overcurrent device or disconnector, as applicable.
2. Use a suitable tester to verify that the isolated power input wiring is not live.
3. Install the PCM-11 on a DIN-Rail in the respective switchboard.
4. Connect the wiring to the terminals, see the applicable wiring connection diagram.
5. Turn on the power of the connected wiring system.
6. Operate the **TIME** and **RANGE** potentiometers to set the required operating mode and switch on/off times, respectively, of the time relay. Note:  
 $t1 = \text{RANGE 1} \times \text{TIME 1}$ ,  
 $\text{and } t2 = \text{RANGE 2} \times \text{TIME 2}$ .

## CONNECTION



**CAUTION!** Changing the operating mode or a time setting will (always) immediately reset the counted down time and restart the active operating mode.

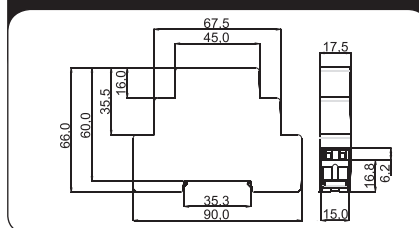
## OPERATION

	<p><math>t1 = \text{RANGE 1} \times \text{TIME 1}</math>  <math>t2 = \text{RANGE 2} \times \text{TIME 2}</math></p>	<p>CYCLIC SWITCHING (from the switch on operation) — once the supply voltage has been applied to the inputs, the relay switches on immediately (make outputs 11-14), and t2 countdown begins. Afterwards the time relay is switched OFF (make outputs 11-12) for the duration of t1, after which the time relay is ON again (make outputs 11-14). This cycle is repeated until the supply voltage is isolated.</p>
		<p>CONTINUOUS SWITCH ON MODE — once the supply voltage has been applied, the time relay remains switched ON (make outputs 11-14). The settings of t1 and t2 are ignored when enabling this operating mode.</p>
		<p>CONTINUOUS SWITCH OFF MODE — once the supply voltage has been applied, the time relay remains switched OFF (make outputs 11-12). The settings of t1 and t2 are ignored when enabling this operating mode.</p>
	<p><math>t1 = \text{RANGE 1} \times \text{TIME 1}</math></p>	<p>DELAYED SWITCH ON — once the supply voltage has been applied to the inputs, t1 countdown begins. Once the countdown ends, the time relay is switched ON (make outputs 11-14). The current mode starts again when the power supply voltage is cycled.</p>
	<p><math>t1 = \text{RANGE 1} \times \text{TIME 1}</math>  <math>t2 = 1 \text{ s} \times \text{TIME 2}</math></p>	<p>DELAYED PULSE GENERATION — once the supply voltage has been applied to the inputs, t1 countdown begins. Once the countdown ends, the time relay is switched ON (make outputs 11-14) for the duration of t2. The cycle is repeated when the supply voltage is cycled.</p>

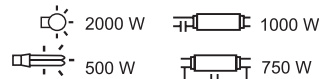
### Examples of time t settings

		<p><math>t = \text{TIME} \times \text{RANGE}</math>,  <math>t = 8 \times 1 \text{ d} = 8 \text{ d}</math></p>
		<p><math>t = \text{TIME} \times \text{RANGE}</math>,  <math>t = 3 \times 1 \text{ h} = 3 \text{ h}</math></p>

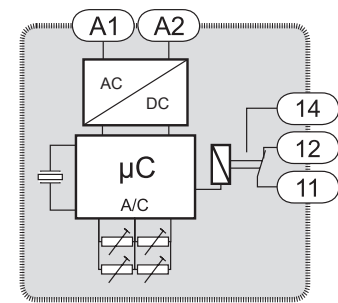
## DIMENSIONS



## CAPACITY



## INTERNAL DIAGRAM



## WARRANTY CARD

There is 24 months guarantee on the product

1. ZAMEL provides a two-year warranty for its products.
2. The ZAMEL warranty does not cover:
  - a) mechanical defects resulting from transport, loading / unloading or other circumstances
  - b) defects resulting from incorrect installation or operation of ZAMEL products;
  - c) defects resulting from any changes made by CUSTOMERS or third parties, to products sold or equipment necessary for the correct operation of products sold;
  - d) defects resulting from force majeure or other aleatory events for which ZAMEL is not liable;
  - e) power supply (batteries) to be equipped with a device in the moment of sale (if they appear);
3. All complaints in relation to the warranty must be provided by the CUSTOMER in writing to the retailer after discovering a defect.;
4. ZAMEL will review complaints in accordance with existing regulations.;
5. The way a complaint is settled, e.g. replacement of the product, repair or refund, is left to the discretion of ZAMEL.
6. Guarantee does not exclude, does not limit, nor does it suspend the rights of the PURCHASER resulting from the discrepancy between the goods and the contract.

Salesman stamp and signature, date of sale