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DESCRIPTION

The one mode time relay PCM-01/U has a delayed switch on function (reverse) 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.



The device is designed for one-phase installation and must be installed in accordance with standards valid in a particular country. The device should be connected according to the details included in this operating manual. Installation, connection and control should be carried out by a qualified electrician staff, who act in accordance with the service manual and the device functions. Disassembling of the device is equal with a loss of guarantee and can cause electric shock. Before installation make sure the connection cables are not under voltage. The cruciform head screwdriver 3,5 mm should be used to instal the device. Improper transport, storage, and use of the device influence its wrong functioning. It is not advisable to instal the device in the following cases: if any device part is missing or the device is damaged or deformed. In case of improper functioning of the device contact the producer.

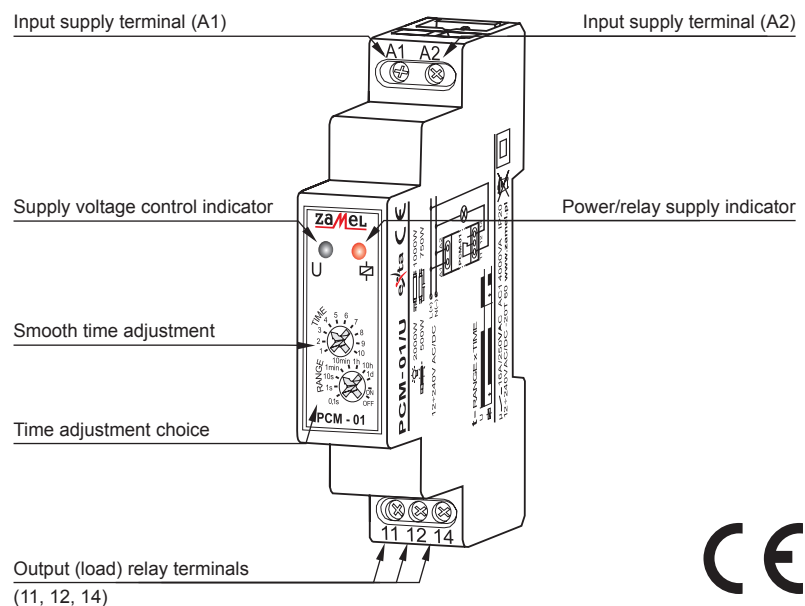


The symbol stands for selective collection of electrical and electronic devices. Placing used devices with other waste is not allowed

TECHNICAL PARAMETERS

PCM-01/U	
Input (supply) terminals:	A1, A2
Input rated voltage:	12 ÷ 240 V AC/DC
Input voltage tolerance:	-5%, +10 %
Supply voltage control indicator:	LED green
Nominal frequency:	50 / 60 Hz
Rated power consumption:	15 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 ²
Ambient temperature range:	from -20 to +60 °C
Operating position:	free
Mounting:	TH 35 rail (PN-EN 60715)
Protection degree:	IP20 (PN-EN 60529)
Protection class:	II
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:	0,09 kg
Reference standards:	PN-EN 60730-1 PN-EN 60730-2-7 PN-EN 61000-4-2,3,4,5,6,11

APPEARANCE



MOUNTING

1. Disconnect the power supply from the mains by the phase fuse, the circuit breaker or the switch disconnecter that are joined to the proper circuit,
2. Check if there is no voltage on connection cables by means of a special measuring equipment,
3. Install PCM-01/U 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		
	relay switched off (closed contacts 11-12) counting time on		

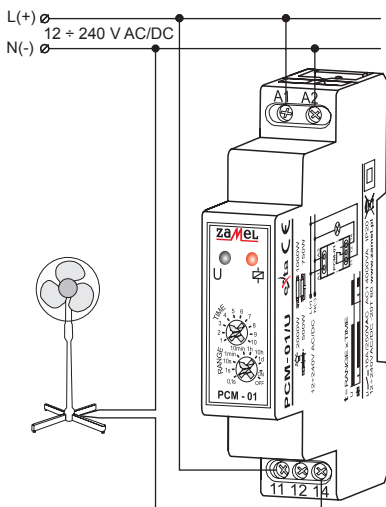
$$t = \text{TIME} \times \text{RANGE}$$

$$t = 8 \times 1 d = 8 d$$

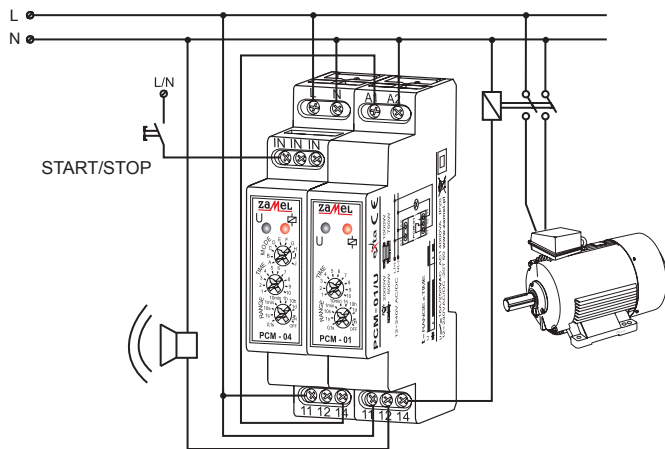
$$t = \text{TIME} \times \text{RANGE}$$

$$t = 3 \times 1 h = 3 h$$

CONNECTING



EXAMPLE OF INSTALLATION



Warning system before the motor starts up.

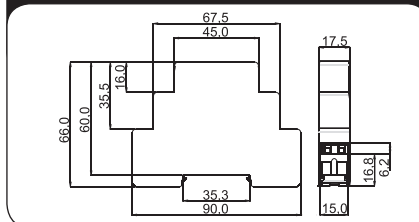
PCM-01/U time relay works in the system where after pushing the START/STOP button a warning acoustic signal is heard to inform the motor is just to start up. This relay cooperates with PCM-04 in bistable relay mode with limited time (MODE=I), it enables to switch on/off the engine by means of one button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

PRODUCT FAMILY

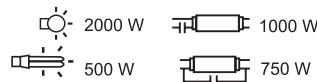
PCM-01/U time relay belongs to PCx time relay product family.

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

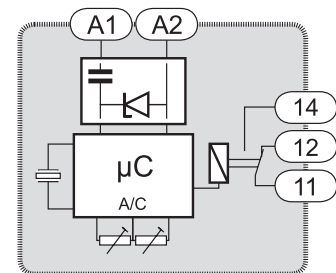
DIMENSIONS



RELAY CAPACITY



INNER DIAGRAM



GUARANTEE CARD

There is 24 months guarantee on the product

Salesman stamp and signature, date of sale

1. ZMIE ZAMEL SP. J. assures 24 months guarantee for the product.
2. The manufacturer's guarantee does not cover any of the following actions:
 - a) mechanical damage during transport, loading / unloading or under other circumstances,
 - b) damage caused by incorrect product mounting or misuse,
 - c) damage caused by unauthorised modifications made by the PURCHASER or any third parties to the product or any other devices needed for the product functioning,
 - d) damage caused by Act of God or any other incidents independent of the manufacturer.
3. The PURCHASER shall lay any claims in writing to the dealer or ZMIE ZAMEL SP. J.
4. ZMIE ZAMEL SP. J. is liable for processing any claim according to current Polish legislation.
5. ZMIE ZAMEL SP. J. shall process the claim at its own discretion: product repair, replacement or money return.
6. The manufacturer's guarantee is valid in the Republic of Poland.
7. The PURCHASER's statutory rights in any applicable legislation whether against the retailer arising from the purchase contract or otherwise are not affected by this warranty.