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DESCRIPTION

The PCP-04 multifunction relay is designed for timing function implementation in automatics and control systems. Both power supply voltage and control input trigger the relay. The PCP-04 relay is capable of operating in 8 independent modes which may be triggered by means of either power supply voltage or external trigger impulse (from either L or N wires). It is possible to adjust time within very wide range. The device is fitted with the relay state indicator – the LED. It is possible to mount the device in the 60 mm junction box.

FEATURES

- ☞ 8 operating modes,
- ☞ Relay state and time counting indicator – LED,
- ☞ Triggered by means of power supply voltage or control input in dependence of set operating mode,
- ☞ High accuracy of time measure,
- ☞ Relay output – one changeover contact, 5 A maximum load,
- ☞ Casing designed for mounting in a junction box.



The timer should be connected to a single-phase system accordingly to current standards. The device connections will be described in this manual. Only qualified electricians are allowed to assembly, connect and adjust the timer. It is necessary to read this manual before the timer mounting. Do not disassembly the timer casing or you will lose any warranty rights and expose yourself to the electric shock hazard. Before mounting operation make sure of disconnecting the connection wires from the electric network. The timer should be carried, stored and used in an appropriate way. Do not mount the timer in case of any device parts lack, damage or deformation. In case of malfunction please notify the manufacturer.

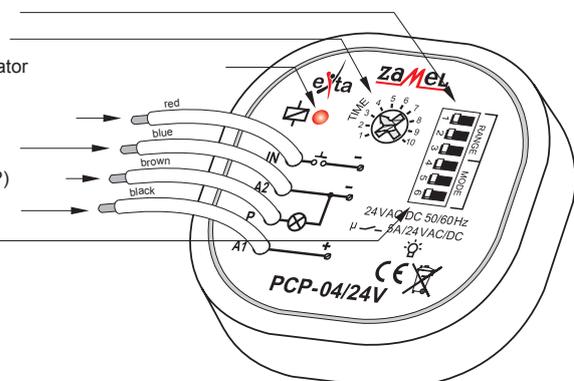
TECHNICAL DATA

PCP- 04/24V	
Power terminals:	(+) (black), (-) (blue)
Rated voltage:	24 V DC
Rated voltage tolerance:	-10 ÷ +10 %
Rated current:	20 mA
Load Power:	(+) (brown)
External trigger terminal:	IN (red) - triggered from (-)
Op modes quantity:	8
t time adjustment range:	0,1 s ÷ 10 days (servo + continuous)
Time measure accuracy:	0,2 %
Relay state and time measure indicator:	red LED
Relay contacts parameters:	1NO 5 A / 24 V DC (voltage contact) 120VA
Connection terminals / leads quantity:	4
Connection wire section:	1 mm ²
Operating temperature:	-20 ÷ +60 °C
Operating position:	optional
Casing fastening:	60 mm junction box
Casing IP:	IP20 (PN-EN 60529)
Protection class:	II
Overvoltage category:	II
Pollution level:	2
Dimensions:	50 x 50 x 15 mm
Weight:	30 g
Standard conformity:	PN-EN 60669-1 PN-EN 60669-2-1 PN-EN 61000-4-2,3,4,5,6,11

DESCRIPTION

Time range selection
ON-time setting
Load / time measure indicator

Trigger lead (IN) -
Power lead (N) -
Load power supply lead (P)
Power lead (L) +
Operating mode selection



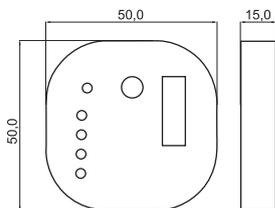
ASSEMBLY

1. Disconnect the electric network by means of an appropriate cut-off, current-limiting circuit-breaker or separator.
2. **Check if there is no any voltage between power leads by means of an appropriate gauge.**
3. Mount the **PCP-04** device in the 60 mm junction box.
4. Connect wires according the electrical diagram.
5. Connect power supply circuit.
6. Select the op mode by means of the **MODE** switch.
7. Select time by means of the **TIME** handwheel and the **RANGE** switch, where $t = \text{TIME} \times \text{RANGE}$.

LOAD



CASING DIMENSIONS



OPERATION

Power supply voltage trigger:

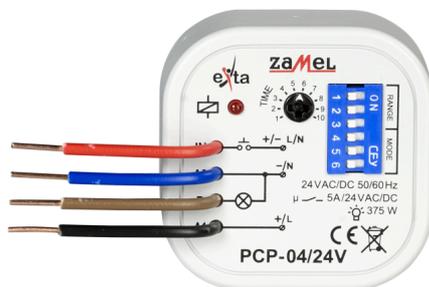
	A U	DELAYED SWITCH-ON – t time will be measured after power supply voltage has been switched ON. When the t time is over, the relay will be ON. The op mode will be triggered again after power supply voltage switching OFF and ON again.
	B U	DELAYED SWITCH-OFF – the relay will be ON just after power supply voltage switching ON and the t time will be measured. When the t time is over the relay will be OFF. The operating mode will be triggered again after power supply voltage switching OFF and ON again.
	C U	CYCLIC SWITCHING (starts from the OFF state) – t time will be measured after power supply voltage has been switched ON. When the t time is over, the relay is ON. Then the relay will be switched alternatively in t time cycles. The operating mode will be OFF when power supply is OFF.

External impulse trigger:

	D S	TIME IMPULSE TRIGGERED WITH RISING EDGE – when supplied, the module will switch ON the relay when trigger impulse rising edge comes. Then the preset time will be measured. When t time is over, the relay will be OFF. Trigger impulse duration is irrelevant.
	E S	TIME IMPULSE TRIGGERED WITH TRAILING EDGE – when supplied, the module will switch ON the relay when trigger impulse trailing edge comes. Then the preset time will be measured. When t time is over, the relay will be OFF. Successive trigger impulse decays during t time duration will not cause time counting reset (non-retriggerable circuit).
	F S	DELAYED SWITCHING ON / OFF – when supplied, the module will not switch ON the relay and will start t time measure when trigger impulse rising edge comes. When t time is over, the relay will be ON t time will be counted once again when trigger impulse trailing edge comes. When t time is over, the relay will be OFF. If the impulse duration is shorter than t time, the relay will be ON for t time only.
	G S	BISTABLE RELAY WITH TIME LIMIT – when supplied, the module will switch ON the relay and start t time measure when trigger impulse rising edge comes. The relay will be switched OFF when the next trigger impulse rising edge comes or after t time has been over if the trigger impulse do not come. The impulse duration is irrelevant for the circuit operation.
	H S	TIME IMPULSE TRIGGERED WITH RISING EDGE WITH DELAYED SWITCH OFF (retriggerable) – when supplied, the module will switch ON the relay when trigger impulse rising edge comes. When trigger impulse trailing edge comes, t time will be measured and when the time is over, the relay will be OFF. Successive trigger impulse trailing edge will cause t time counting reset and measure from the beginning (retriggerable).

Multiplier:

	0,1 s		1 s		10 s		1 min.
	10 min.		1 hour		10 hours		1 day



CONNECTIONS

