Datasheet and mounting instruction — RC 230



DESCRIPTION

RC 230 enables control of a high voltage load up to 2000 VA with a magnetic contact or low voltage detector. It has a built-in programmable timer function for ON or OFF control. The timer is programmed with a DIP-switch. RC 230 is also equipped with a low voltage output 12V/50 mA for supply of a detector. The high voltage relay has a changeover function that can switch 250 V AC max 8 A. Relay circuit is protected with 10 A fuse. It is a class B device that fulfill all safety and EMC rules.

DIP SWITCH SETTINGS

Timer function activating relay is programmed with the help of DIP switch:

- DIP1 – DIP4: time of relay activation, OFF or from 10 s to 8 h
- DIP5: time units, seconds or minutes
- DIP6: state of input triggering timer function

The timer function is switched OFF for:

- DIP1=DIP2=DIP3=DIP4=DIP5 = OFF

When timer is switched OFF, relay follows the state of input according to the settings of DIP6.

DIP1 – DIP4: Timer setting

#	DIP1	DIP2	DIP3	DIP4	Timer [s]	Timer [min]
0	OFF	OFF	OFF	OFF	Timer OFF	3
1	ON	OFF	OFF	OFF	10	4
2	OFF	ON	OFF	OFF	20	5
3	ON	ON	OFF	OFF	30	6
4	OFF	OFF	ON	OFF	40	7
5	ON	OFF	ON	OFF	50	8
6	OFF	ON	ON	OFF	60	9
7	ON	ON	ON	OFF	70	10
8	OFF	OFF	OFF	ON	80	15
9	ON	OFF	OFF	ON	90	20
10	OFF	ON	OFF	ON	100	30
11	ON	ON	OFF	ON	110	60 (1 h)
12	OFF	OFF	ON	ON	120	120 (2 h)
13	ON	OFF	ON	ON	130	240 (4 h)
14	OFF	ON	ON	ON	140	480 (8 h)

DIP5: Time units

#	DIP5	Time unit
0	OFF	Seconds
1	ON	Minutes

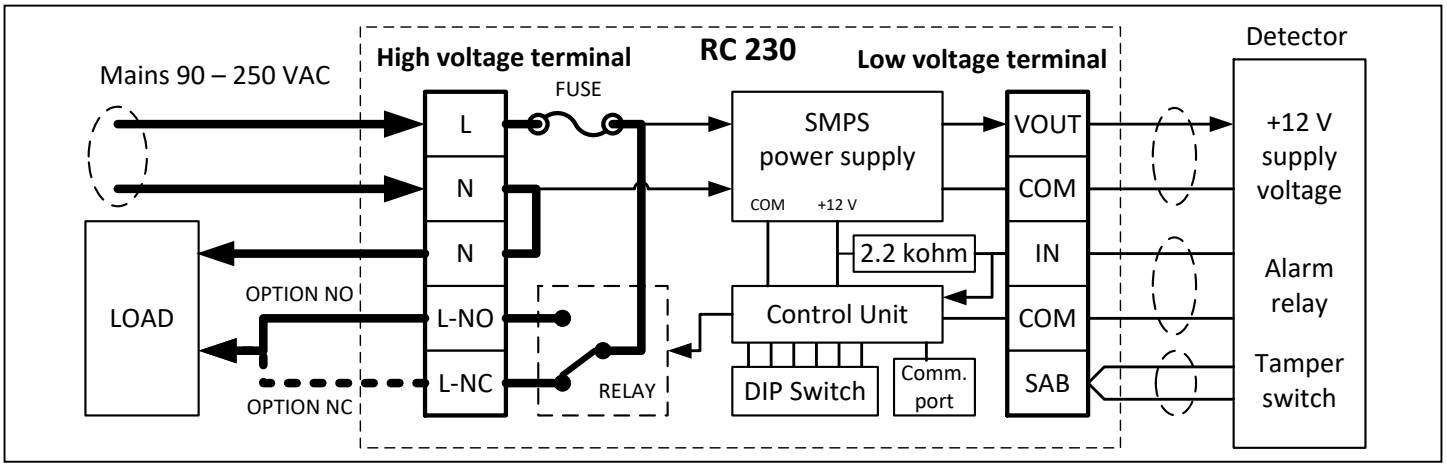
DIP6: Trigger settings

#	DIP6	Activation of relay and timer trigger
0	OFF	Input CLOSED + timer CLOSED -> OPEN
1	ON	Input OPEN + timer OPEN -> CLOSED

TECHNICAL SPECIFICATION

Unit	RC 230
Relay	SPDT relay
Relay contact rating	2000 VA, 250 VAC, 8 A
Supply voltage	90 – 250 VAC , 47 – 63 Hz (100 – 350 VDC)
Detector input	NC/NO, polarized to +12 V by 2.2 kohm
Det. supply output	+12 Vdc, 50 mA max with current limiter
Time control	Time is set with a 6 pin DIP-switch for ON/OFF or from 10 s to 8 hours
Fulfil safety norms	EN 60950-1
Fulfil EMC norms	EN 50130-4, EN 55022, EN 55024
Environmental class	EN 50130-5, Class II
Dimensions	90 x 66 x 35.3 mm
Weight	100 g
Operating temp.	-20 °C to +55 °C
Compliance	CE, RoHS 2002/95/EC

BLOCK DIAGRAM



I/O TERMINALS

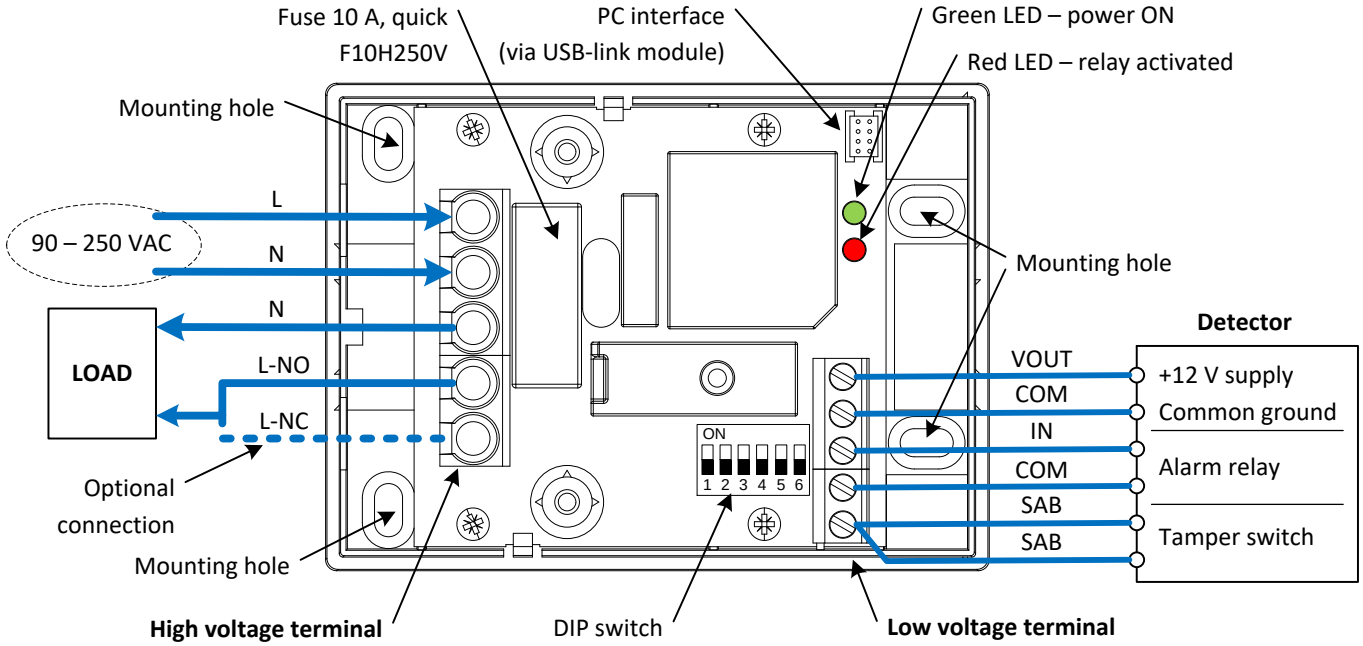
High voltage terminal

Marking	Function	
L	230 VAC line input	
N	230 VAC neutral input	Connected inside across terminal
N	230 VAC neutral output to load	
L-NO	230 VAC line output to load – normally open	
L-NC	230 VAC line output to load – normally closed	

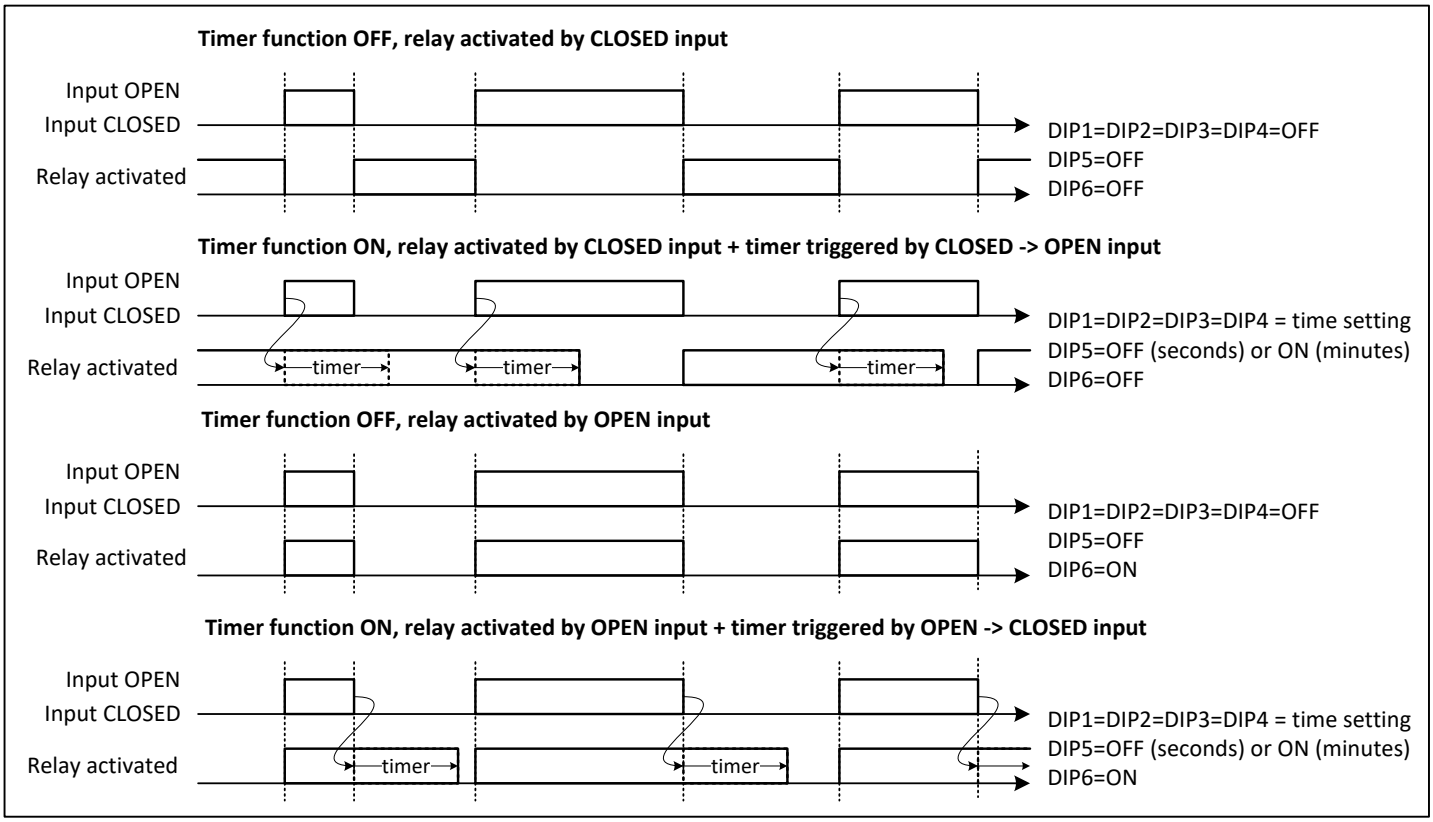
Low voltage terminal

Marking	Function
SAB	Potential free terminal
COM	Common ground
IN	Detector relay input
COM	Common ground
VOUT	+12 Vdc / 50 mA output

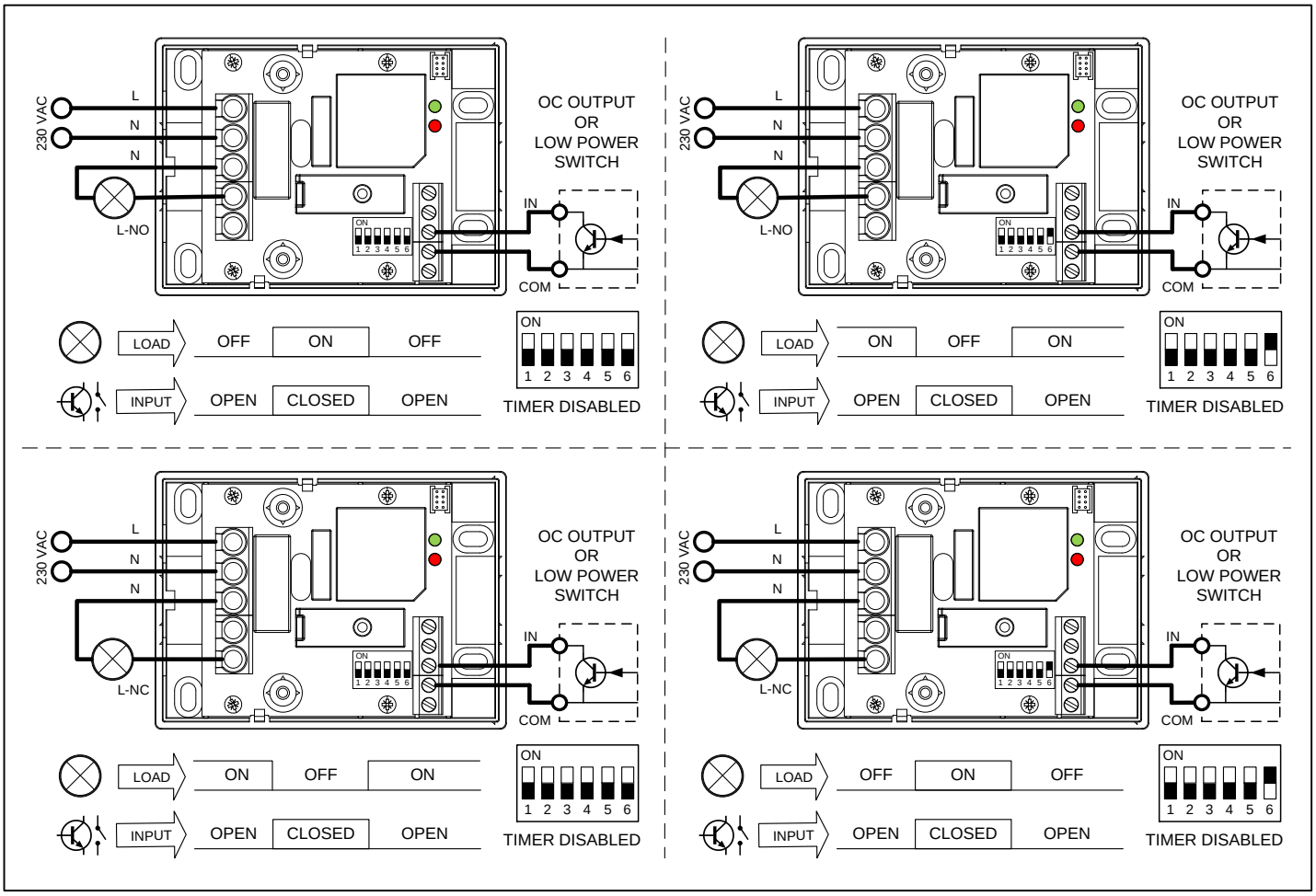
MOUNTING AND CONNECTION DIAGRAM



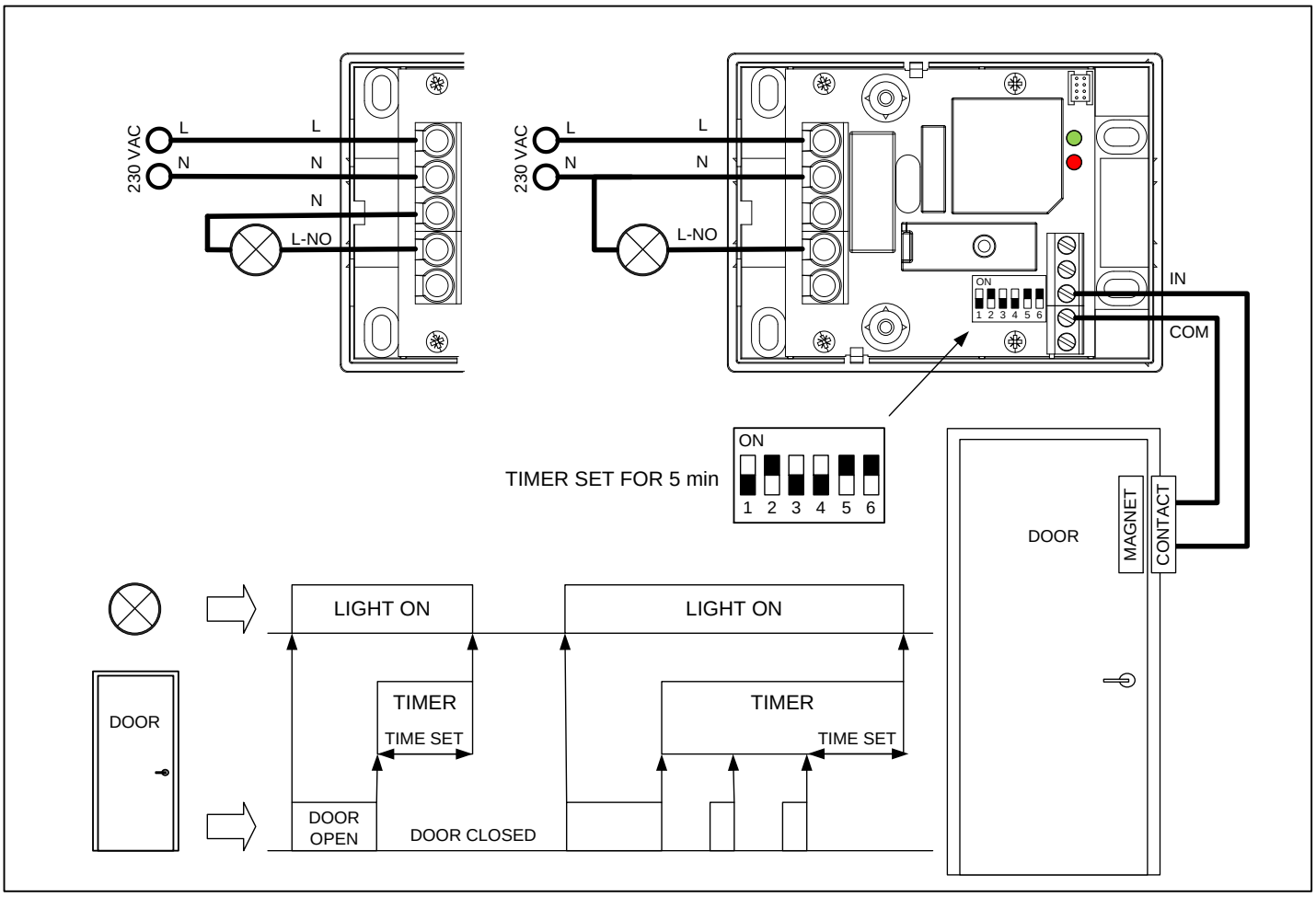
WAVEFORMS



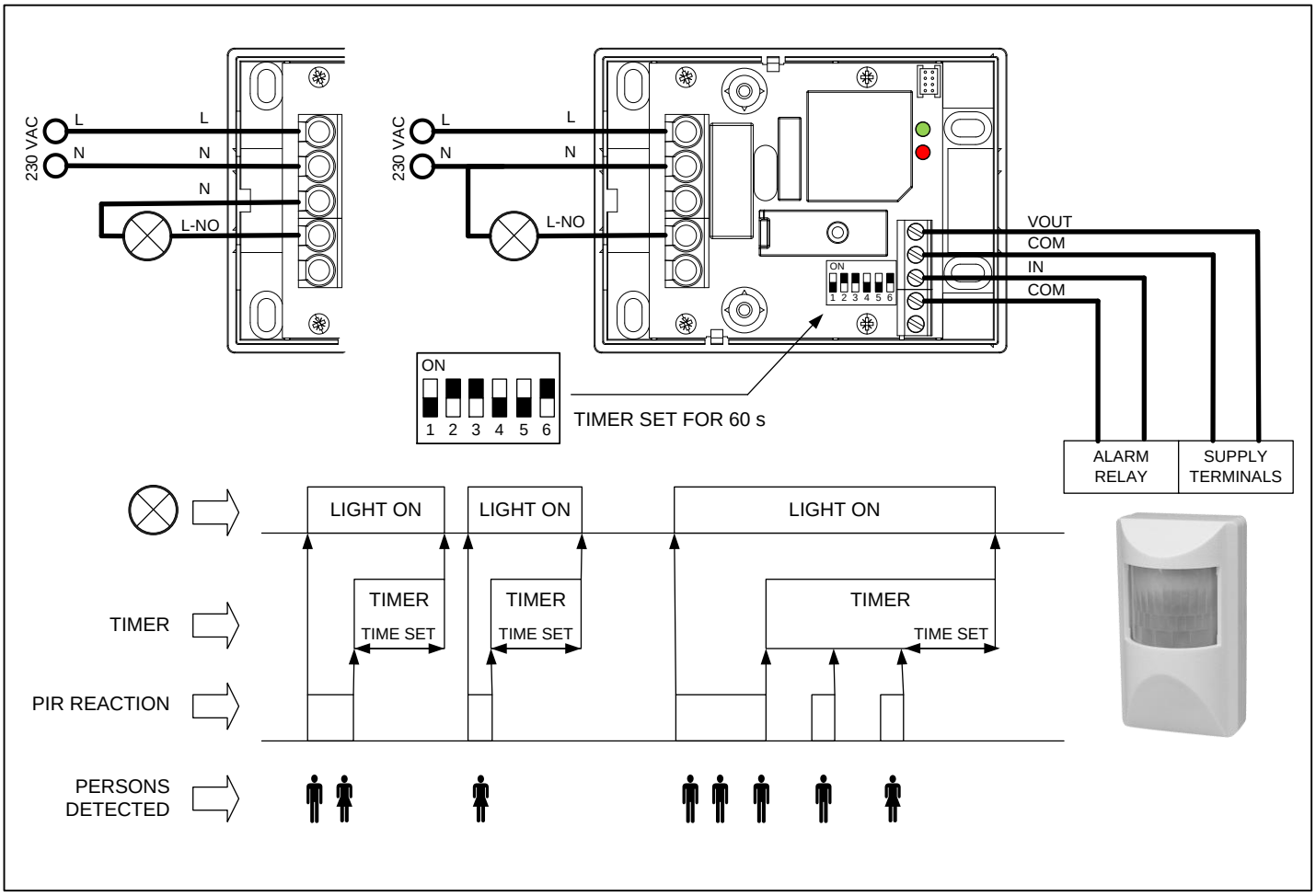
APPLICATION EXAMPLE #1 – Open collector (OC) or low power switch driving up to 2000 VA AC load



APPLICATION EXAMPLE #2 – Door contact switch on light for limited time after door opening-and-closing



APPLICATION EXAMPLE #3 – PIR turns on light for limited time



APPLICATION EXAMPLE #4 – Temperature regulation using SAS TS212 sensor

