ALARMTECH Systems

Relay module

Datasheet and installation manual — RM 12

DESCRIPTION

Relay module RM12 consists of 12 independent, parallel channels with input pulled-up by internal resistor and output relay following the state of the input. Pulled-up inputs can be directly driven by OC outputs w/o need of additional resistors and access to polarizing voltage. Output relay always follows the state of channel input – relay is energized when input of channel is connected to ground. The state of every channel is displayed in front panel by LED.

Unit contains additional SUM channel calculating logical sum of all 12 input channels. A value of logical sum is displayed in front panel by LED Σ and controls the state of 13th output relay SUM-OUT.

Operation mode of unit is programmed with the help of 2 shunts: LED and BUZZER. LED shunt defines 2 modes:

- **FOLLOW:**
  - LED1…LED12 is following the state of channel
  - SUM-OUT relay, LED Σ and buzzer is following actual state of logical sum of all inputs
- **LATCH:**
  - LED1…LED12 is latching-up the state of channel
  - SUM-OUT relay, LED Σ and buzzer is latching-up the state of logical sum of all inputs

Latched state can be cleared by RESET button in front panel. Buzzer can be disabled with BUZZER shunt.

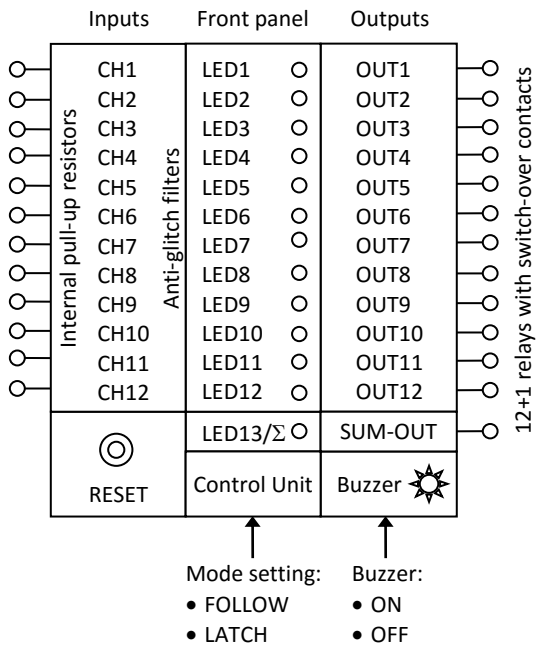
FEATURES AND PERIPHERALS

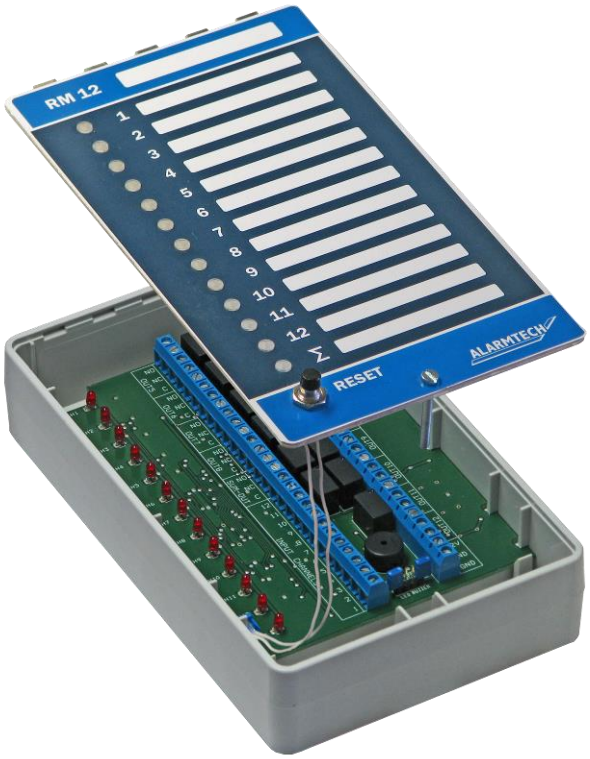
- Inputs:
  - 12 input channels internally pulled-up to work directly with OC outputs
  - Button in the front panel (RESET) resetting internal unit memory in LATCH mode
- Outputs:
  - 12 independent relays with C, NC and NO outputs following state of input channels
  - 12 LED's showing state of input channels
  - Piezoelectric buzzer for acoustic signalling
- Additional SUM channel calculating logical sum of all 12 input channels with LED and SUM-OUT relay
- FOLLOW and LATCH operating modes for LED's, SUM-OUT relay and buzzer
- Acoustic signalling of SUM channel state - can be switched off with shunt
- Plastic case with metal front panel
- Optional mounting – 3 screws or DIN rail

APPLICATIONS

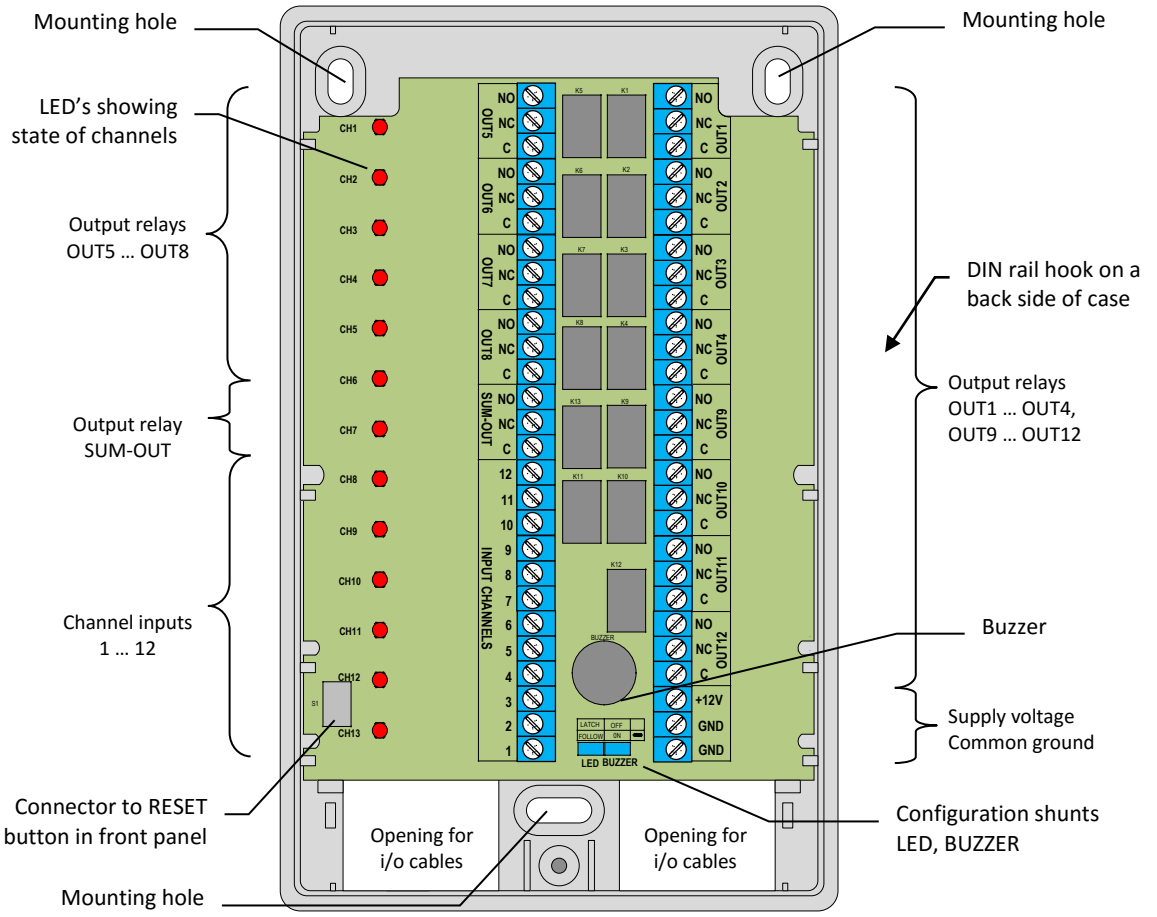
- Monitoring of up to logical 12 channels with follow or latching function
- 12-channel relay module controlled by external unit with OC outputs
- Door state display panel in access control systems
- Synoptic table

BLOCK DIAGRAM





INSTALLATION



OPERATION MODES

LED mode setting

LED mode shunt			
ON	FOLLOW	–	LED13/Σ, SUM-OUT relay and buzzer indicate the result of the logical sum of input channels (1…12)
OFF	LATCH	–	LED13/Σ, SUM-OUT relay and buzzer latch up the result of the logical sum of input channels (1…12)

Buzzer mode setting

BUZZER mode shunt			
ON	ON	–	buzzer is signalling active state of SUM-OUT relay and LED 13/Σ
OFF	OFF	–	buzzer is off

SPECIFICATION

Case:	plastic case with metal front panel with the possibility of mounting on a DIN rail
Operating environment:	-10°C…+55° C, RH up to 90%, non-condensing
Supply voltage:	10 … 15 V DC
Current consumption at 12 V DC:	ca. 3.5 mA – all relays OFF, LED's and buzzer OFF ca. 65 mA – all relays OFF, all LED's and buzzer ON max. 345 mA – all relays ON, all LED's and buzzer ON
Number of independent input channels:	12 with internal pull-up resistors
Internal pull-up resistor:	1 kohm
Number of output relays:	12+1 with potential-free contacts
Relay contacts rating:	30W, 30V DC/AC, 1A
Front panel peripherals:	12+1 LED's, 1 RESET button
Dimensions:	110 x 180 x 43 mm (W x H x D)
Weight:	0.35 kg
Compliance:	CE, RoHS 2002 / 95 / EC