

RM8 8-way relay module

Overview

The RM8 allows a single analogue signal to control eight relay outputs. There are two operating modes which enable the unit to provide eight stages of switching or eight outputs in sequence or a combination of the two.

Each stage has LED status indication and link selectable *On*, *Off* or *Auto* giving manual control to aid commissioning

Applications include boiler sequencing.



Specifications

Operating characteristics

Input signals	0-10V
Hysteresis	±0.06V
Output contacts	10A (6A inductive) at 230VAC
Operating modes	<i>Stage</i> mode: 8 stage switching <i>Sequence</i> mode: 1 of 8 sequencing A combination of staging and sequencing is possible
Operating conditions	-10 to +40°C 0-90% RH (non-condensing)

Electrical specifications

Supply voltage	24V AC or DC ±15%
Max operating current	250mA DC
10V input current draw	1mA max
Terminal type	Rising cage connectors for 0.5-2.5mm ² cable
LED status	On when relay powered
Installation category	IEC 664 Category II
Pollution degree	IEC 664 Degree 1

Mechanical details

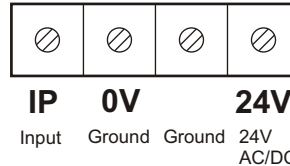
Dimensions	77 x 170 x 50mm
Mass	260g

Features

- 8 relay outputs
- 0-10V input
- 1mA draw on input
- 24V AC/DC powered
- LED status indication
- On / Off / Auto override links
- DIN rail mounting
- Hysteresis between stages

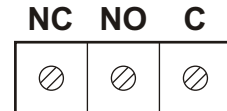
Connection diagrams

Input:



Note: both grounds are common to both signal and power

Outputs:



Normally closed Normally open Common

Mode selection



Each relay has its own link illustrated here in *Stage* position. Note that there are two *off* positions

Cleaning

Under normal circumstances, relay modules should not require cleaning. However, they can be cleaned by disconnecting and wiping with isopropanol. They must be completely dry before reconnection

Alphaglen Laboratories Limited

Unit 13, Millbrook Business Park, Jarvis Brook, Crowborough, East Sussex TN6 3JZ, United Kingdom
Tel: 01892 664224 Email: info@alphaglen.co.uk Web: www.alphaglen.co.uk

Installation

- 1 The RM8 operates from a 24V AC/DC supply such as a 24V DC power supply or a 24V transformer. One side of the supply is common to the signal ground from the BEMS controller
- 2 The relay outputs are Single Pole Changeover ie they can be wired as Normally Open or Normally Closed
- 3 The input signal requires 1mA and is therefore compatible with all BEMS controllers that have 0-10V outputs
- 4 Ensure that the PCB is not stressed when fitting to the DIN rail. If releasing from the DIN rail, use a flat bladed screwdriver to release the DIN clips
- 5 Connections to BEMS controllers should be made using screened cable. The screen should be earthed at one end only and preferably to a Functional Earth rather than the mains safety earth. Signal cables should be routed separately from power cables.

Operating voltages

Stage mode

Input voltage	Relay 1	Relay 2	Relay 3	Relay 4	Relay 5	Relay 6	Relay 7	Relay 8
0.0	Off	Off	Off	Off	Off	Off	Off	Off
1.2	On	Off	Off	Off	Off	Off	Off	Off
2.4	On	On	Off	Off	Off	Off	Off	Off
3.6	On	On	On	Off	Off	Off	Off	Off
4.8	On	On	On	On	Off	Off	Off	Off
6.0	On	On	On	On	On	Off	Off	Off
7.2	On	On	On	On	On	On	Off	Off
8.4	On	On	On	On	On	On	On	Off
9.6	On	On	On	On	On	On	On	On

Sequence mode

Input voltage	Relay 1	Relay 2	Relay 3	Relay 4	Relay 5	Relay 6	Relay 7	Relay 8
0.0	Off	Off	Off	Off	Off	Off	Off	Off
1.2	On	Off	Off	Off	Off	Off	Off	Off
2.4	Off	On	Off	Off	Off	Off	Off	Off
3.6	Off	Off	On	Off	Off	Off	Off	Off
4.8	Off	Off	Off	On	Off	Off	Off	Off
6.0	Off	Off	Off	Off	On	Off	Off	Off
7.2	Off	Off	Off	Off	Off	On	Off	Off
8.4	Off	Off	Off	Off	Off	Off	On	Off
9.6	Off	Off	Off	Off	Off	Off	Off	On

Relays can be operated in a combination of these modes if required.

Switching occurs at voltages approximately half way between the inputs recommended above

Safety

The RM8 must be installed only by a suitably qualified electrician and may not be safe if installed incorrectly. The RM8 must be used only in an installation which incorporates a switch or circuit breaker. Terminals must be disconnected from hazardous voltages before screwing or unscrewing. A 5A fuse on the 24V supply is recommended. When switching hazardous voltages, the RM8 must be mounted inside a cabinet and must not be accessible from the outside with a 100mm long probe

Alphaglen Laboratories Limited

Unit 13, Millbrook Business Park, Jarvis Brook, Crowborough, East Sussex TN6 3JZ, United Kingdom
Tel: 01892 664224 Email: info@alphaglen.co.uk Web: www.alphaglen.co.uk