

## B.M.S INPUT - OUPUT MODULES 4 STAGE RELAY, SEQUENCE, BINARY 0-10VDC

E4RM

These products accept a 0-10vdc input and produce a 4 stage relay output which can be used for external plant switching. Suitable for staging (**which can be reversed**) or sequencing operation. For multi-stage heating & cooling, two of these units or other relay modules can be used with the E13.. temperature controllers or similar.

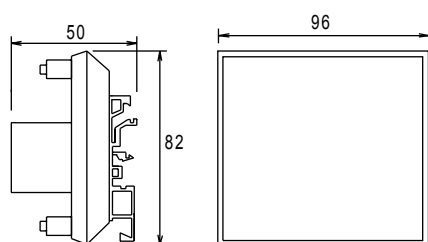


ON-OFF-AUTO Manual Override links on each relay: -  
ON = Energised  
OFF = De-energised  
AUTO = Controller operated  
LED's indicate relay status  
Volt free contacts Input current > 1mA  
Din-Rail mounting Consumption 100mA  
Max Ambient -10 /+50°C  
Flammability = UL94-V0

Type	Supply ±15%	Input Signal	Switch Rating 230VAC SPDT	Time Delay	Compatibility	Enclosure
<b>E4RM</b>	24VAC/DC	0-10VDC	4 x 10(3)A	0-200s	Most BMS Controllers	IP00

**UP TO 10 STAGED SWITCHING ACROSS 0-10VDC CAN BE ACHIEVED WHEN THIS PRODUCT IS USED WITH THE E6RM**

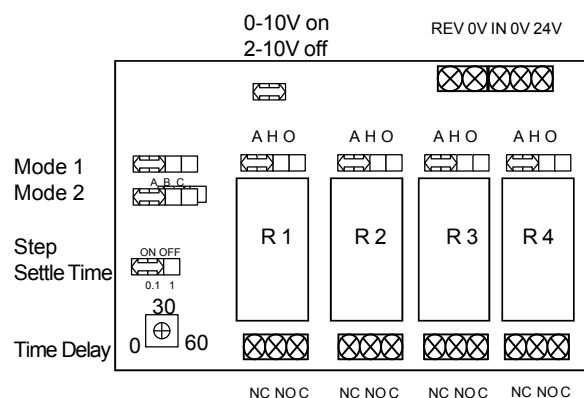
**DIMENSIONS:**



MODE RESET LINK : Remove link before changing modes and re-fit the link to reset the operation.

TIME DELAY : Allows a time period between each stage switching on or off.

**WIRING:**



**INSTALLATION:**

STAGED MODE JP1 = A JP2 = A  
Relays 1-4 switch on as the input signal increases

	RLY 1	RLY 2	RLY 3	RLY 4
0v	OFF	OFF	OFF	OFF
2.4v	<b>ON</b>	OFF	OFF	OFF
4.8v	<b>ON</b>	<b>ON</b>	OFF	OFF
7.2v	<b>ON</b>	<b>ON</b>	<b>ON</b>	OFF
9.6v	<b>ON</b>	<b>ON</b>	<b>ON</b>	<b>ON</b>

SEQUENCED MODE JP1 = A JP2 = B  
Only one relay is on at any time

INPUT	RLY 1	RLY 2	RLY 3	RLY 4
0v	OFF	OFF	OFF	OFF
2.4v	<b>ON</b>	OFF	OFF	OFF
4.8v	OFF	<b>ON</b>	OFF	OFF
7.2v	OFF	OFF	<b>ON</b>	OFF
9.6v	OFF	OFF	OFF	<b>ON</b>

STAGED MODE JP1 = A JP2 = A  
Relays 4-1 switch on as the input signal increases when terminals R-R are closed via a volt free contact.

INPUT	RLY 1	RLY 2	RLY 3	RLY 4
0v	OFF	OFF	OFF	OFF
2.4v	OFF	OFF	OFF	<b>ON</b>
4.8v	OFF	OFF	<b>ON</b>	<b>ON</b>
7.2v	OFF	<b>ON</b>	<b>ON</b>	<b>ON</b>
9.6v	<b>ON</b>	<b>ON</b>	<b>ON</b>	<b>ON</b>

STAGED MODE + E6RM = 10 STG. JP1 = B JP2 = A  
Connect 0-10VDC to both E6RM and E4RM.  
No time delay or reverse action.

INPUT	RLY 1	RLY 2	RLY 3	RLY 4
6v	OFF	OFF	OFF	OFF
7v	<b>ON</b>	OFF	OFF	OFF
8v	<b>ON</b>	<b>ON</b>	OFF	OFF
9v	<b>ON</b>	<b>ON</b>	<b>ON</b>	OFF
10v	<b>ON</b>	<b>ON</b>	<b>ON</b>	<b>ON</b>

BINARY MODE JP1 = B JP2 = B

INPUT	0.6	1.2	1.8	2.4	3.0	3.6	4.2	4.8	5.4	6.0	6.6	7.2	7.8	8.4	9.4	9.6
RLY 1	OFF	<b>ON</b>	OFF	<b>ON</b>	OFF	<b>ON</b>	OFF	<b>ON</b>	OFF	<b>ON</b>	OFF	<b>ON</b>	OFF	<b>ON</b>	OFF	<b>ON</b>
RLY 2	OFF	OFF	<b>ON</b>	<b>ON</b>	OFF	OFF	<b>ON</b>	<b>ON</b>	OFF	OFF	<b>ON</b>	<b>ON</b>	OFF	OFF	<b>ON</b>	<b>ON</b>
RLY 3	OFF	OFF	OFF	OFF	<b>ON</b>	<b>ON</b>	<b>ON</b>	<b>ON</b>	OFF	OFF	OFF	OFF	<b>ON</b>	<b>ON</b>	<b>ON</b>	<b>ON</b>
RLY 4	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	<b>ON</b>	<b>ON</b>	<b>ON</b>	<b>ON</b>	<b>ON</b>	<b>ON</b>	<b>ON</b>	<b>ON</b>

All values are maximum switching points. Exact switching points may be slightly lower than those stated.  
Terminals 0.5-2.5mm<sup>2</sup> rising clamps Min sensor / control signal cable size 7/0.2mm Max length 100m  
Screened cable is recommended The screen should be earthed at controller end only  
Keep sensor/control signal wires away from power cables/units which may cause interference.