



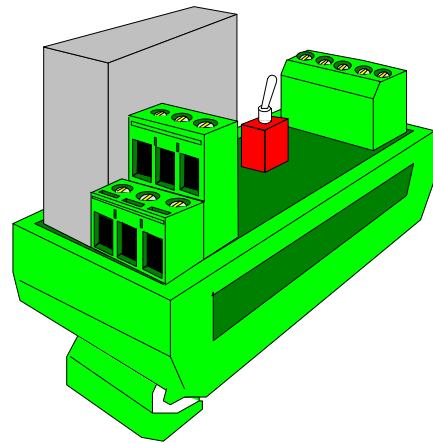
General Purpose

## DPDT RELAY Module

With HOA Switch  
and 1 K $\Omega$  feedback

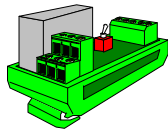
**RM-5** is a Din rail mounted **DPDT**, Form - **C** contacts general purpose control relay. It is designed to control any low or high voltage, medium current loads. It has a built in manual HOA switch ( HANDS - OFF - AUTO SWITCH) for convenience of switching Loads ON or OFF for override manually.

- Double Pole Double Throw form " C " contacts
- Can switch 5 Amps up to 250 VAC
- Din Rail mounted
- Modules plug in to each other, no need to wire each unit and reduces the wire termination time significantly
- Built in 3 position manual " HOA " toggle switch
- Has a feed back resistor ( 1 KOHMS ) to detect if the Relay is overridden
- "On " and " Overridden " status LEDs
- Large opening terminal blocks
- Works from any 24 VAC source to control the output relay
- Very high quality relay, surge voltage between the contacts are 10,000 VAC
- Relay is UL, CSA, VDE and SEMKO approved
- Over 5,000,000 cycle minimum expected mechanical life
- Over 100,000 cycle minimum expected life under full load (resistive)
- Economical



**Model :**  
**RM - 5**

**DPDT Form - C**  
**5 Amps @ 250 VAC**



**OPERATION :**

**RM - 5** is designed to operate from a 24 VAC control voltage signal. It is primarily designed for control panels where there are number of such relays are installed. The module has many features built in that are useful, convenient and reduce cost of wiring very significantly.

These features are as follows :

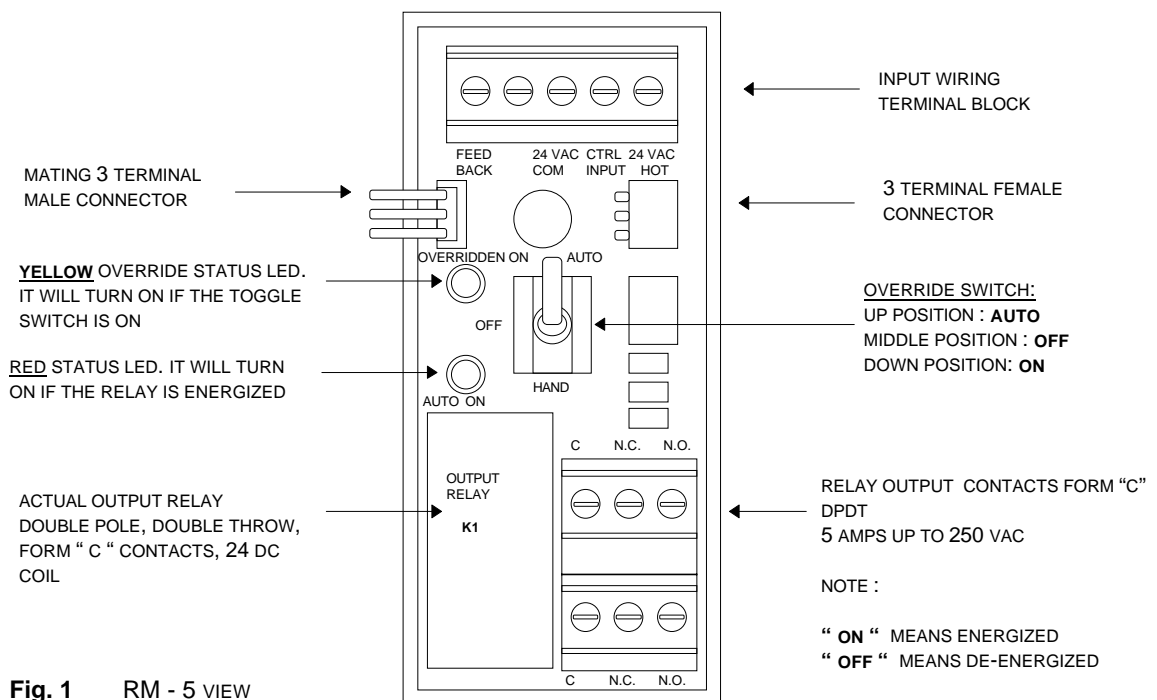
1. RM - 5 has built in 3 position HOA override switch. The relay output can be overridden to be OFF ( de-energized), ON (energized) or operate Automatically by the controlling signal.
2. It has a 2 wire Feedback signal This signal is a resistor which has a value of " 0 " Ohm (short) in Auto mode and becomes 1.00 Kilo Ohms if it is overridden to be ON or OFF. This feature can be used with any Controller as a feedback signal where if the resistance is any value other than 0 ohms, it is overridden.
3. The modules have a unique design where one module plugs into a module next to it. Each module has a two (3 pins) connectors on the side. One set is male and the other one is female and they mate. If one module is wired for 24 VAC HOT and Return, then all the other modules will be powered for 24 VAC via these 3 pin connectors, if they are plugged into each other.

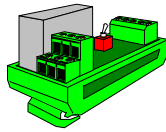
Additionally, the feedback resistors are connected in series via these connectors. Hence, only the first and last module needs to be wired (2 terminations) to the Sensor Common and Sensor Input of the Controller.

4. It has 2 status LEDs. RED LED indicates if the relay is energized. The second YELLOW LED is for Override indicator, which turns along with the RED LED if it is overridden ON.

RM - 5 is designed to be mounted on a DIN rail. This allows multiple modules to be snapped on to the DIN rail without any additional labor. This saves time and allows future flexibility.

RM - 5 has a very reliable in relay. It is specifically design for control applications where the voltage break down between the contacts and contacts to the relay coil is exceptionally high. It is in excess of 10,000 volts. If the relay contacts are switching electrically noisy and very inductive loads they will generate a lot of voltage transients and spikes they are turned on and off. Due to very high voltage isolation between the contacts and the relay coil, the Controller will further be protected from these high voltage transients. The module has very long mechanical and electrical life for control applications.





## SPECIFICATIONS :

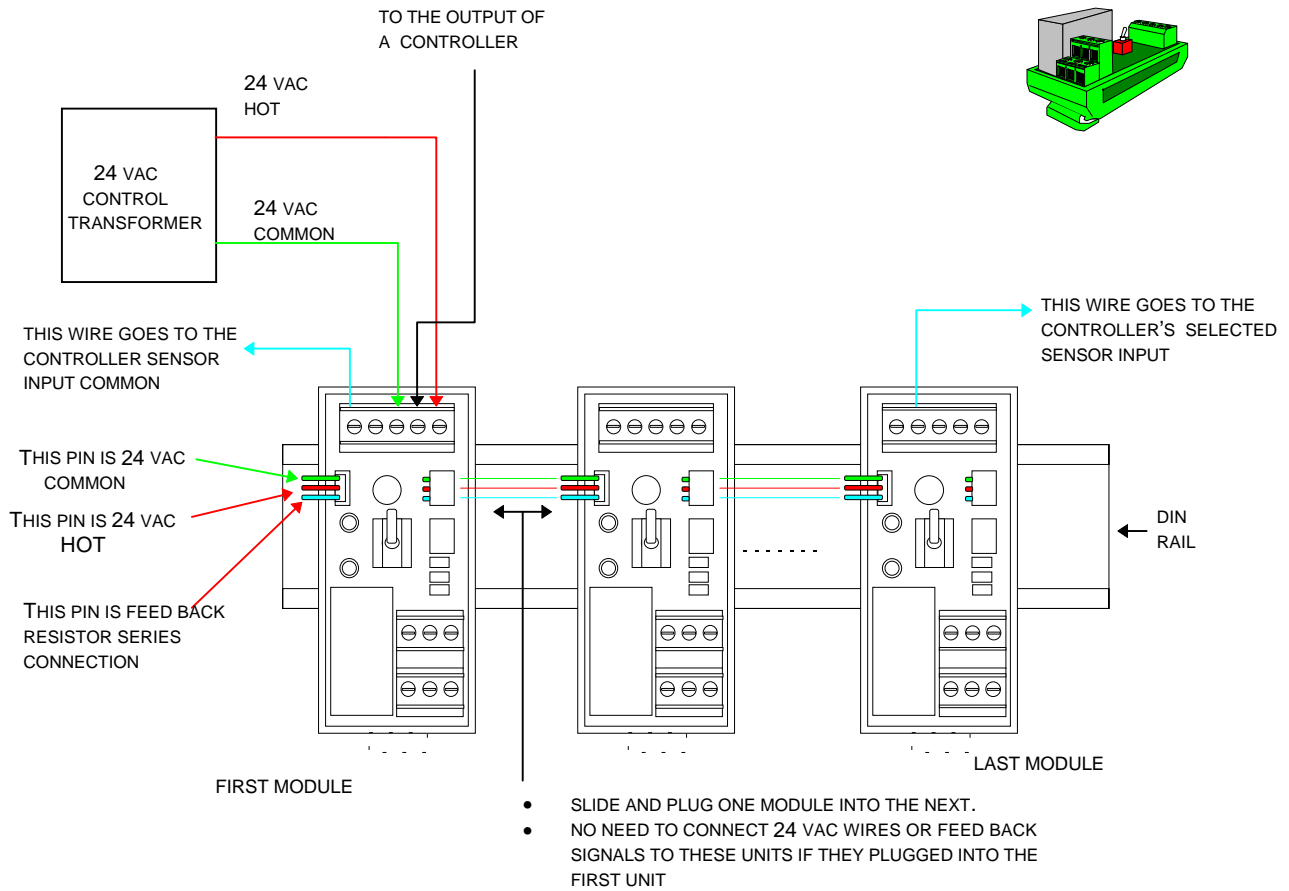
<b>Input Voltage</b>	:	16.5 to 27.00 VAC
<b>Contact ratings</b>	:	DPDT Form C contacts
<b>Max</b>	:	5 Amps @ 250 VAC or 1250 VA 5 Amps @ 30 VDC or 150 Watts 1/8 HP at 120 or 250 VAC
<b>Power Consumption</b>	:	0.750 VA
<b>Surge Voltage between the contacts</b>	:	10,000 V
<b>the contacts and the coil</b>	:	10,000 V
<b>Electrical Life</b>	:	100,000 operations under full load ( resistive)
<b>Mechanical Life</b>	:	5,000,000 operations
<b>Feedback Signal</b>	:	0 $\Omega$ (short) when in Auto position, 1 K $\Omega$ when it is in On or Off
<b>Max. No. of Modules Interconnected</b>	:	16
<b>Mechanical</b>	:	3.000 "L x 1.350 " W x 2.500 "H
<b>Mounting</b>	:	Standard DIN rail snap on
<b>Operating temperature</b>	:	- 40 ° F to 150 ° F
<b>Storage Temperature</b>	:	- 40 ° F to 165 ° F
<b>Operating Humidity</b>	:	5 to 85 % non condensing

## WIRING :

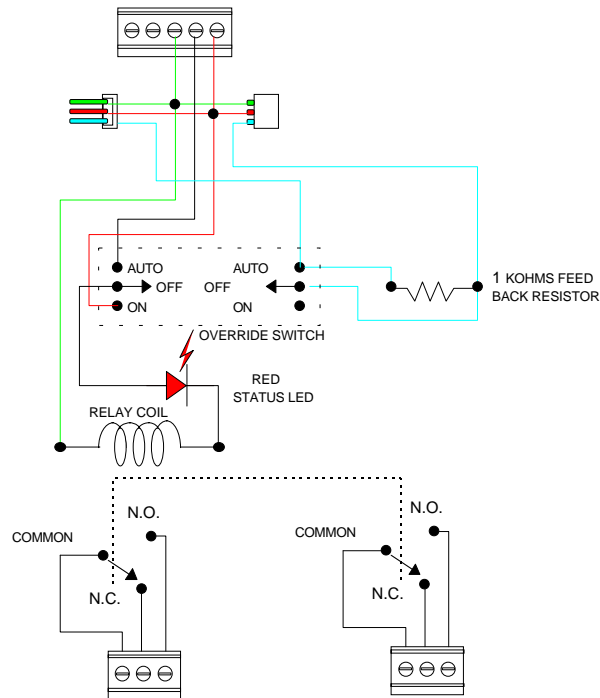
The wiring is shown in Fig. 2

### Caution :

1. Excessive wear and tear will occur if the relay contacts are wired to control excessive load currents. Do not use this relay module if the load switching is above 250 VAC and current rating is more than 5.00 Amps and resistive load. Maximum power specified to control is 1250 VA AC load.
2. Do not use this relay module if it is controlling a motor, which is more than 1/8 HP.
3. Do not exceed 30 VDC and 150 Watts DC load.
4. Do not exceed 3.00 Amps AC if the power factor  $\cos\phi \leq 0.4$



**Fig. 2** RM - 5 Wiring



**Fig. 3** RM - 5 Internal wiring diagram