

# Mechanical Relay Board: 8 and 4 gang

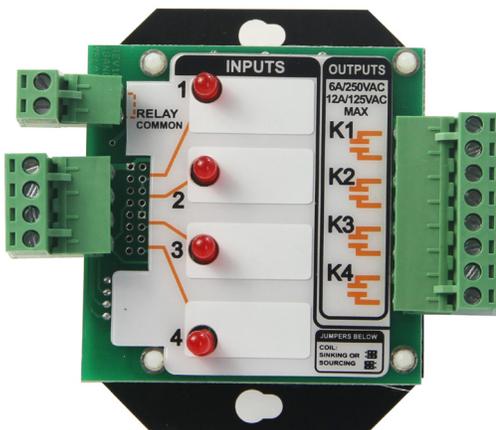
## Description

The MRB Mechanical Relay Board comes in two models, the 4 gang and the 8 gang versions. The board features status LEDs and a label with writeable surface where you can mark the name of each output. The coils are low power, requiring 20ma at 24VAC (30ma at 12VDC). The SPST relay is rated at 12A/125VAC, 6A/250VAC. The relay board has two versions with either 24VAC or 12VDC coils. There are jumpers on the rear of the relay board which allow you to switch from 12VDC to 24VAC or vice versa in the field. The coils are normally configured as sourcing with a common ground but they can also be factory configured to sinking operation, please write us if you would like the sinking version. The terminals are pluggable with full floating cage type wire clamp which grip the wire firmly, not the lower cost spring terminal style.

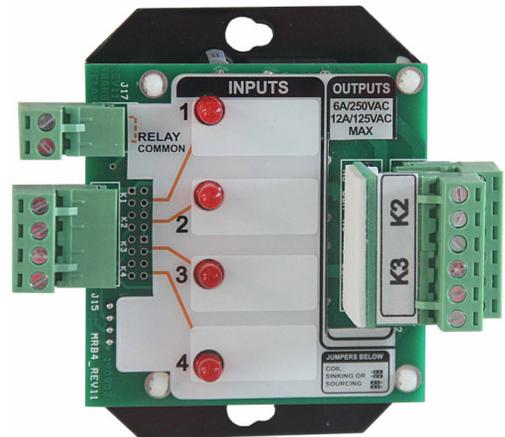
## Features

- Works with positive and negative ground systems.
- Jumpers can set each relay to two different operating Modes: common switched 24VAC or dry contact.
- UR approved
- Panel mount base, removable face plate
- LED for each low voltage relay

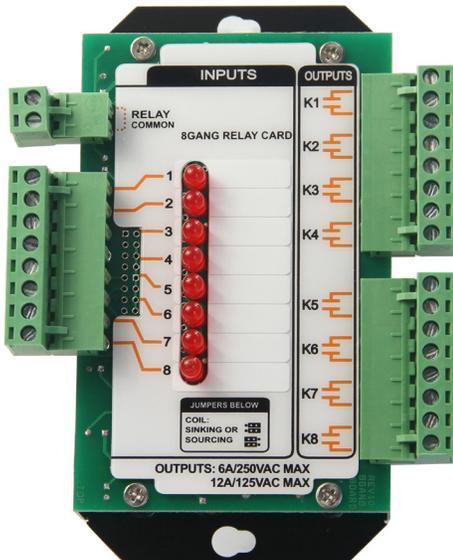
MRB-4



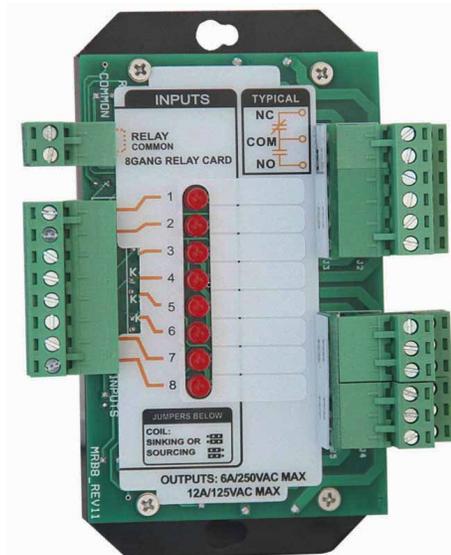
MRB-4NC



MRB-8



MRB-8NC



# Specifications

## CONTACT

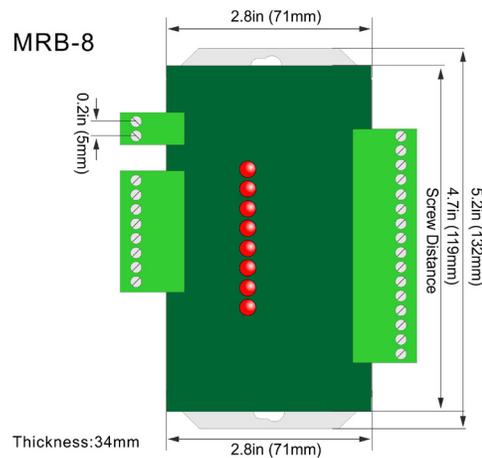
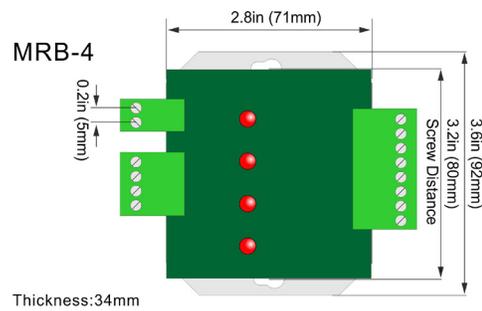
Initial Contact Resistance, (By Voltage Drop 60VDC 1A)	<100mOhm
Contact Material	Silver Cadmium Oxide
Switching Capacity	12A/125VAC, 6A/250VAC, 6A/28VDC
Relay	UL E169380
Operating Time(at nominal voltage)	< 10 ms
Release Time(at nominal voltage)	< 5 ms
Max Switching Power	1500VA/168W
Max Switching Voltage	250VAC/28VDC

## COIL DATA

Coil Voltage	24VAC
Coil Resistance	400ohm(+/-10%)
Nominal Operating Power	0.36W

## CHARACTERISTICS

Operating Temp. Range	-55 to 85°C
Operating Relative Humidity	0 to 93%
4 gang dimensions	92 x 100 x 34mm
8 gang dimensions	132 x 100 x 34mm



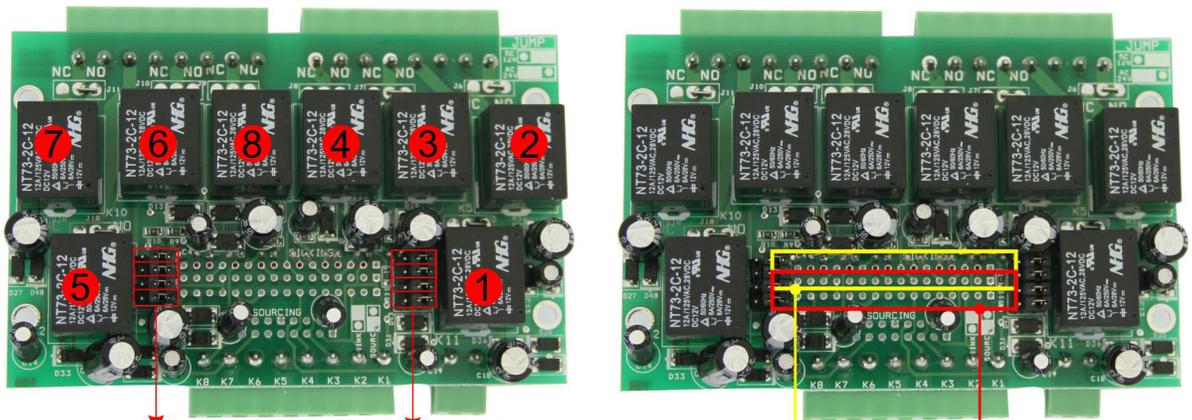
# Jumper Settings

The MRB-8 has 8 relays and 8 jumpers. Each relay has its own jumper that can be configured as shown by the picture below. The default setting is 24VAC for the relay coils. By moving a jumper, the user can select 12VDC coils. When using 12VDC mode, the board can be operated in sourcing or sinking modes, sourcing mode is the default. If you would like to adjust the board to operate in sinking mode this can be done by soldering a jumper and cutting a trace, please review the schematic or contact us for assistance.

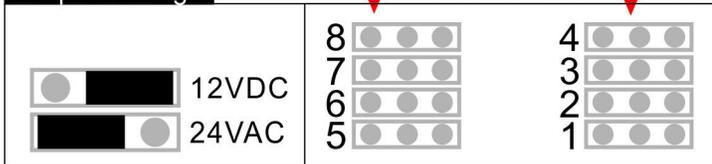
Notes about the sinking and sourcing jumpers:

1. The relays can be used with either sourcing or sinking DC sources for the coils, the default setting is sourcing.
2. When using the relays with 24vac coils, the jumpers must be left in their default sourcing setting.
3. The sourcing/sinking jumpers are not actually populated with jumpers since this 'sinking' feature will not be used by the vast majority of users. To use the sinking mode feature you will need to solder some jumper wires to the PCB, the feature is there for those that know how to read the schematic and do this on their own. If you know you need the sinking mode setup you can mention this during ordering and we will pre-configure for you.

MRB-8/8NC

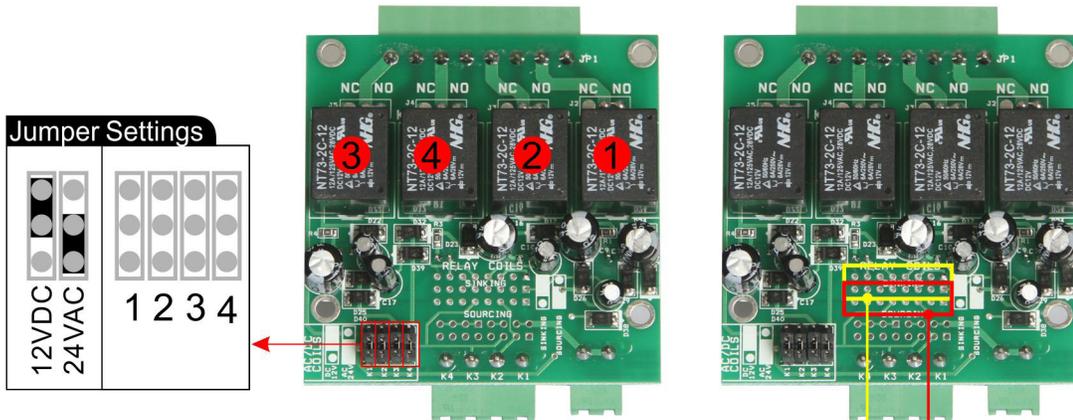


Jumper Settings

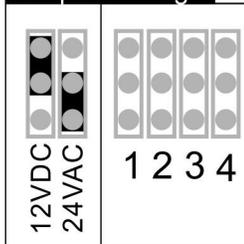


Sinking      Default Sourcing  
By soldering to choose sinking.

MRB-4/4NC



Jumper Settings

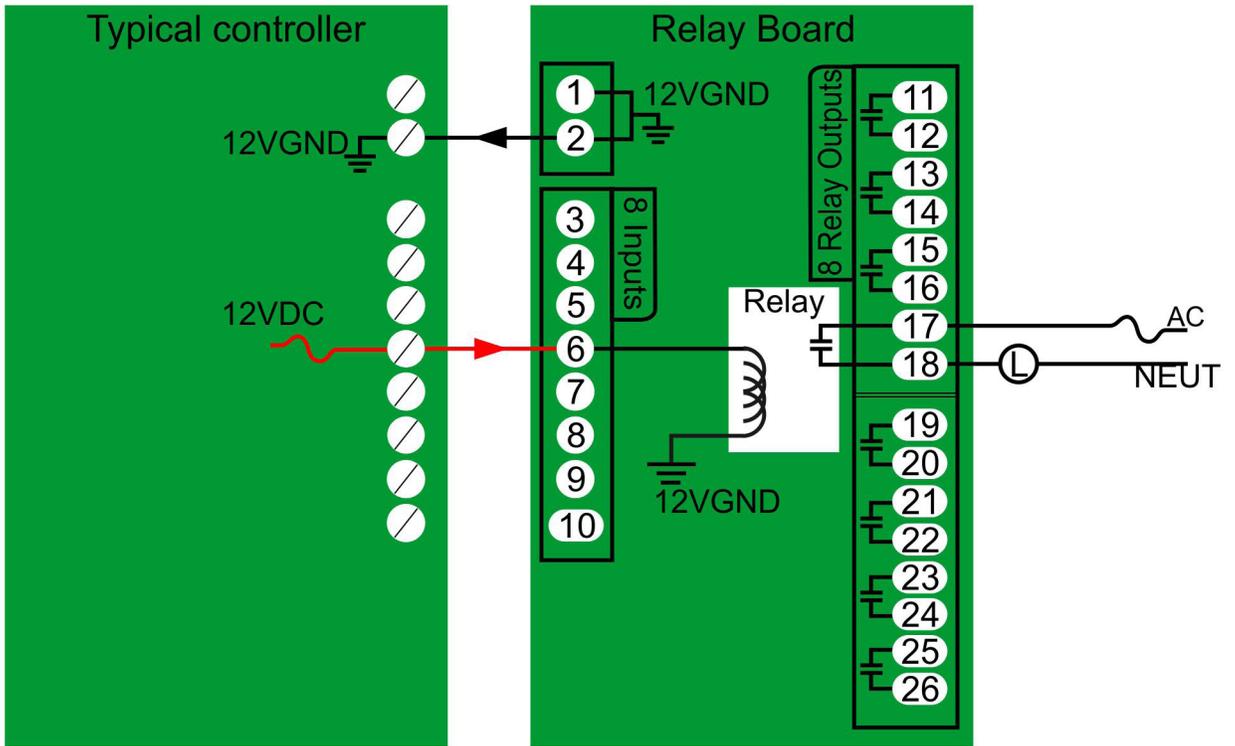


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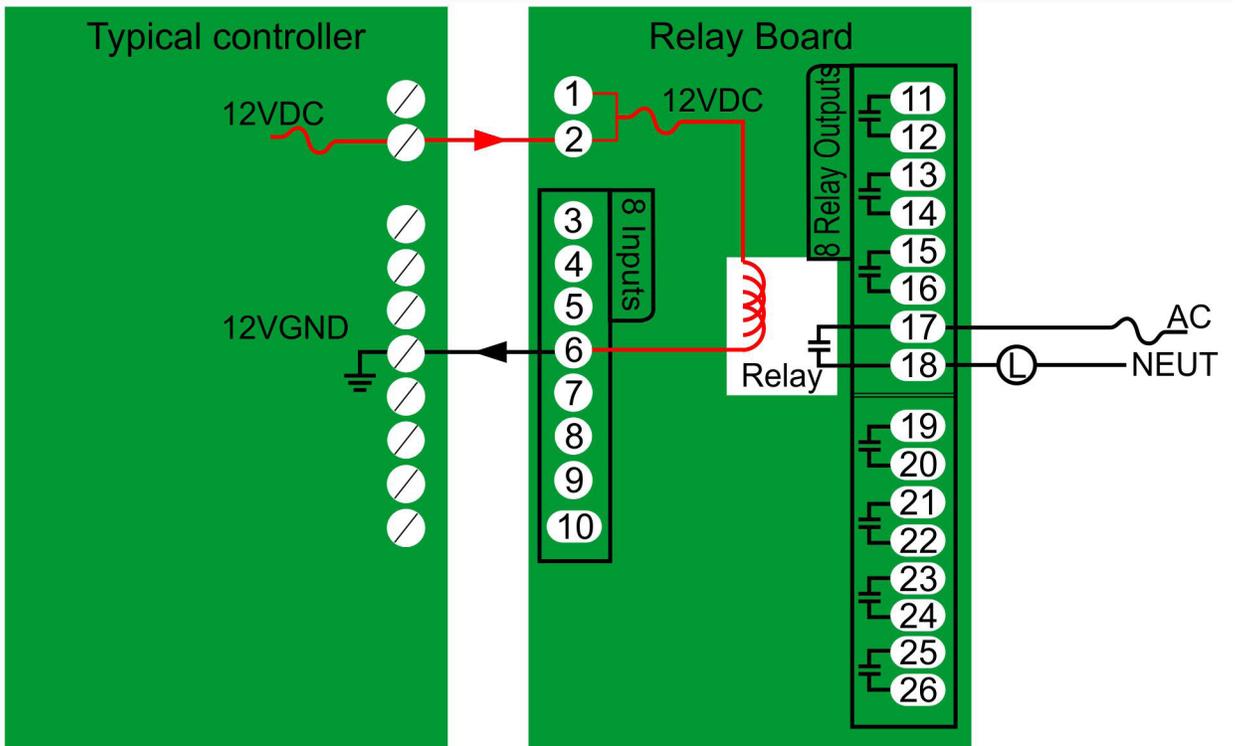
# Sourcing and Sinking

MRB-8

Default Sourcing

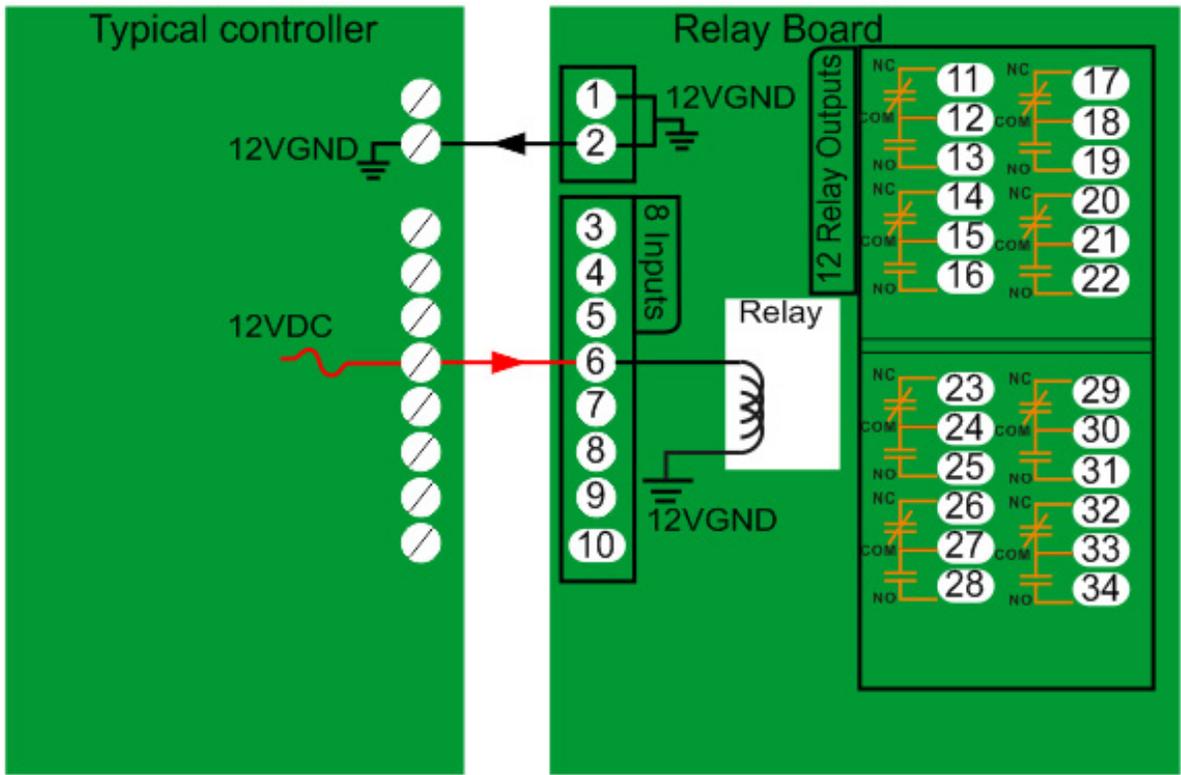


Sinking

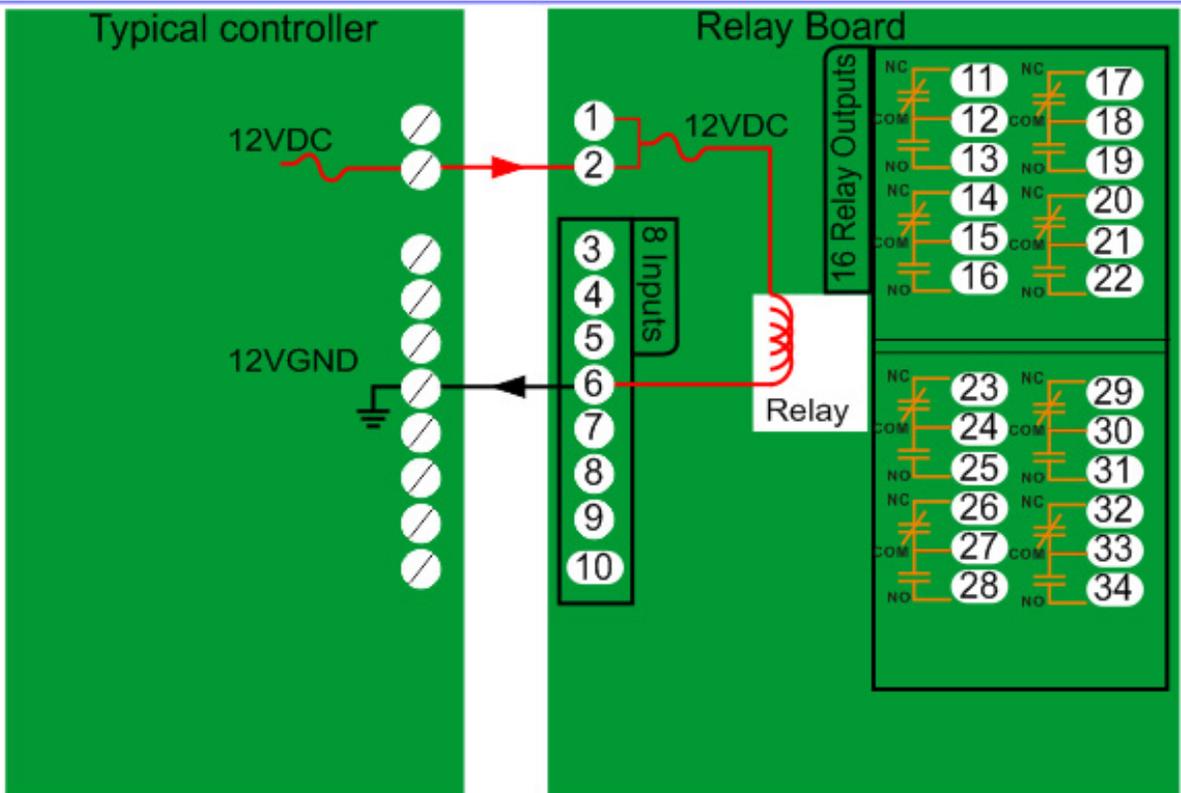


MRB-8NC

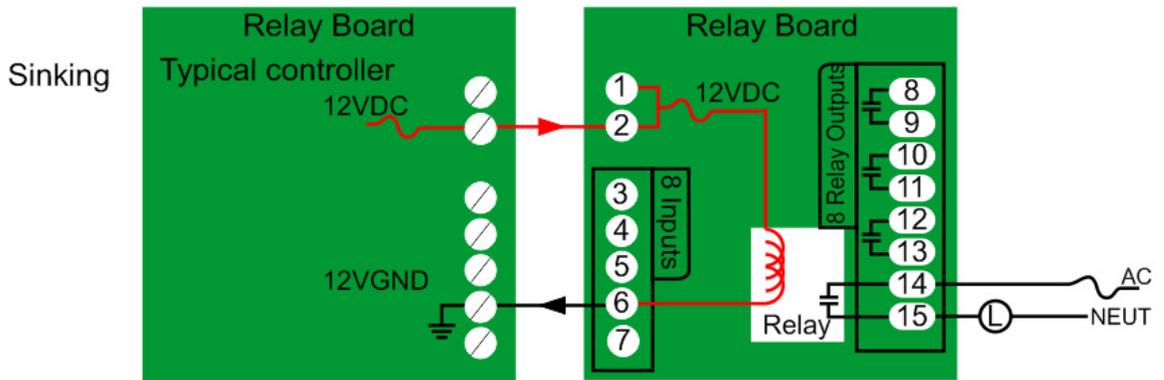
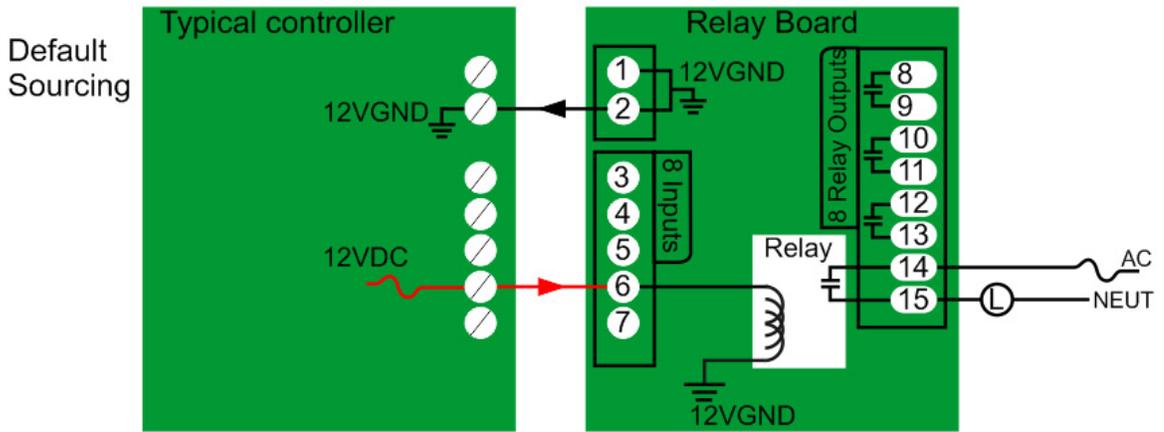
Default Sourcing



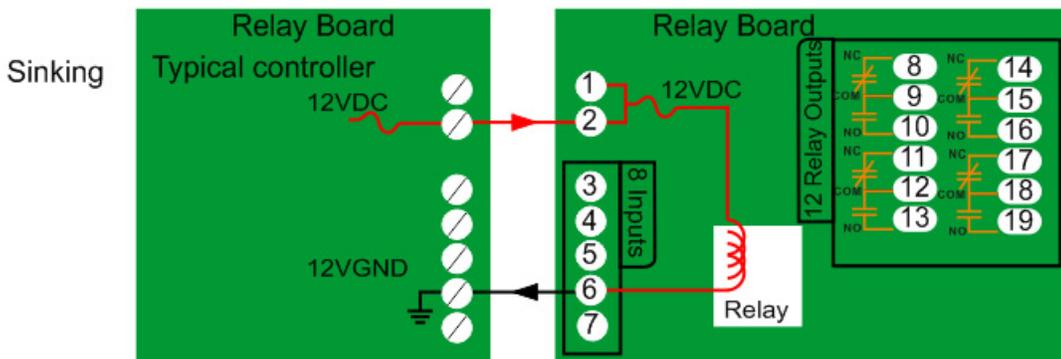
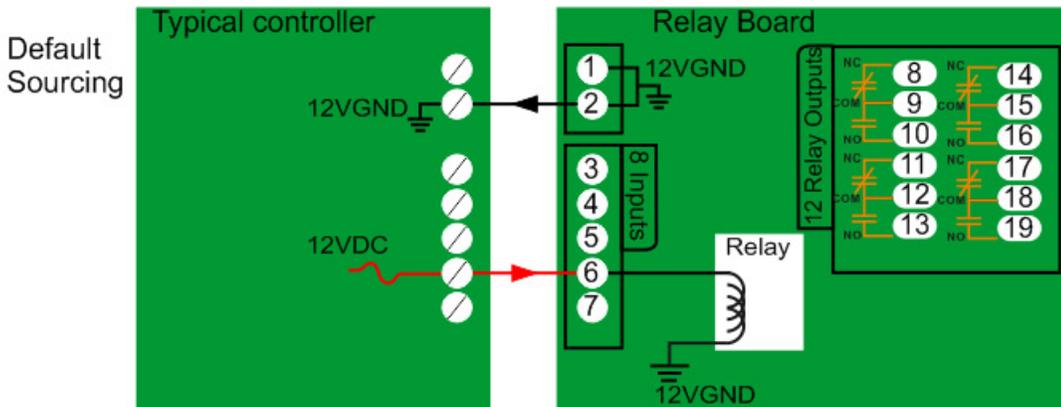
Sinking



MRB-4



MRB-4NC

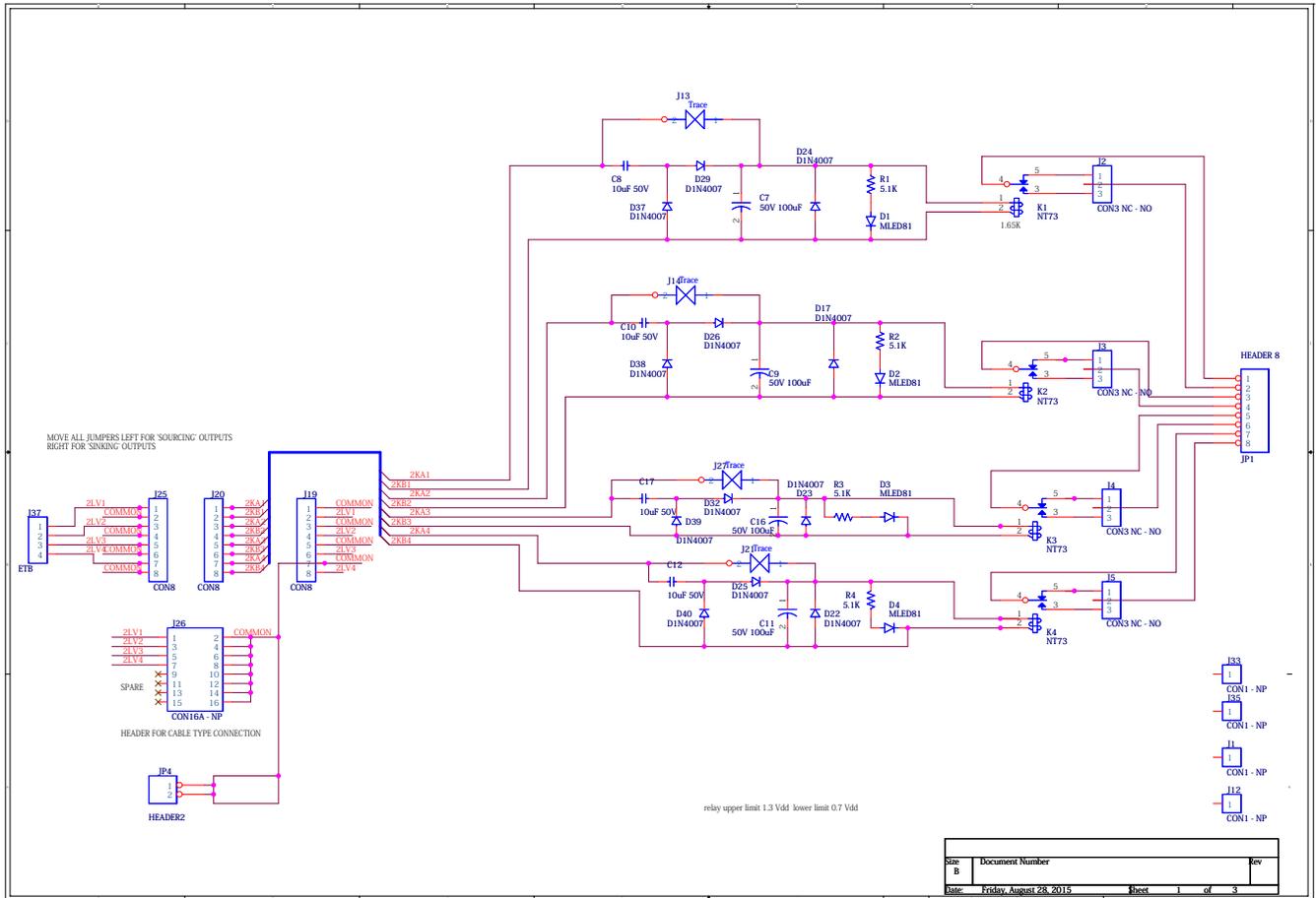


Sourcing/Sinking Coil Option

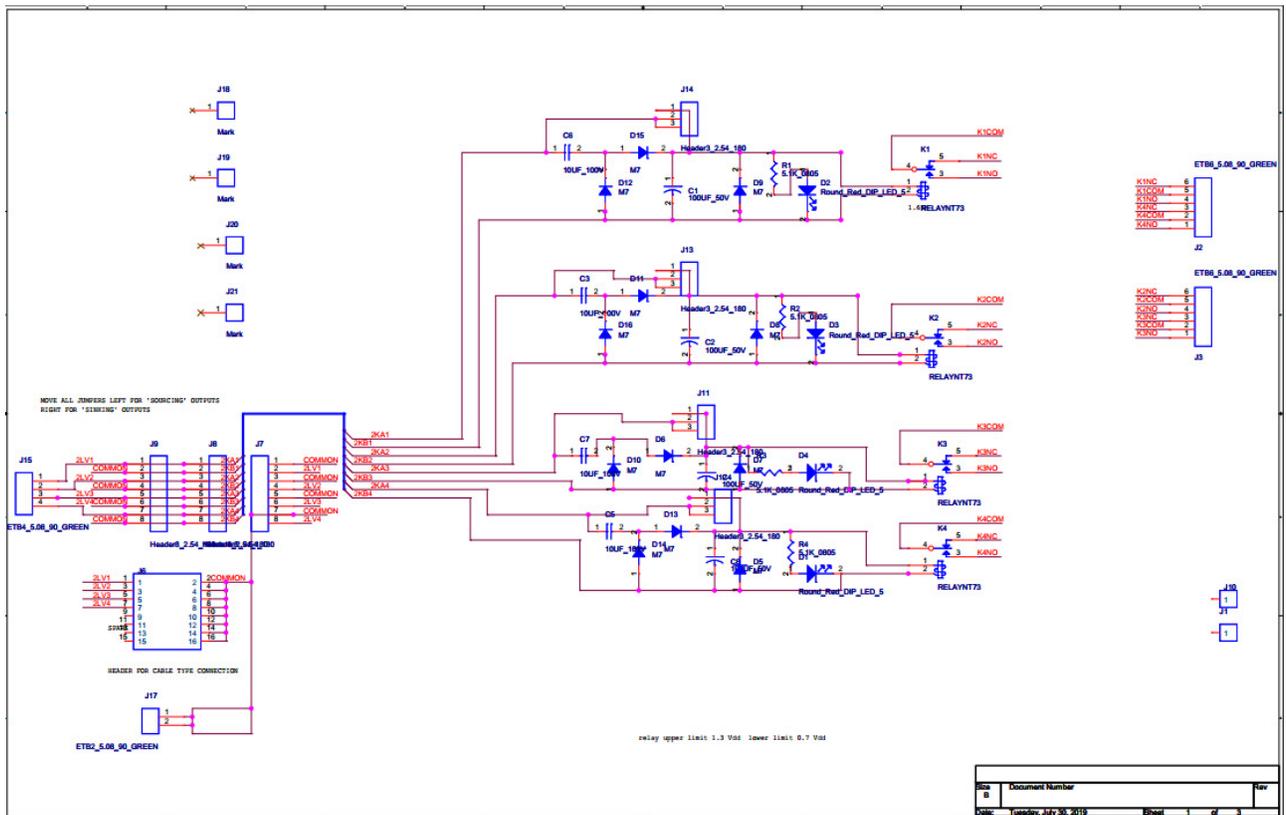
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# MRB-4



# MRB-4NC



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## Getting Started

### CONTACT

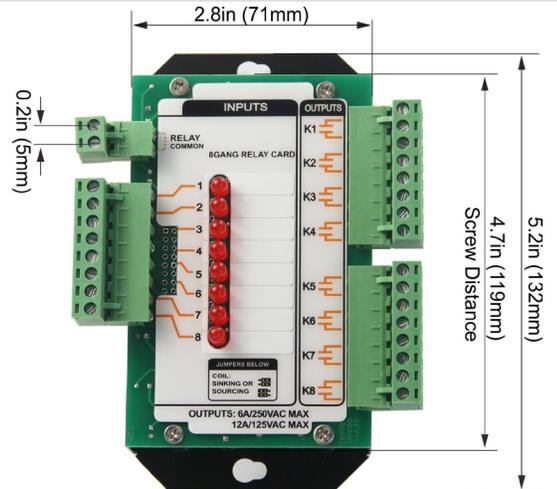
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Relay	UL E169380
Operating Time(at nominal voltage)	< 10 ms
Release Time(at nominal voltage)	< 5 ms
Max Switching Power	168W/1500VA
Max Switching Voltage	250VAC /28VDC

### COIL DATA

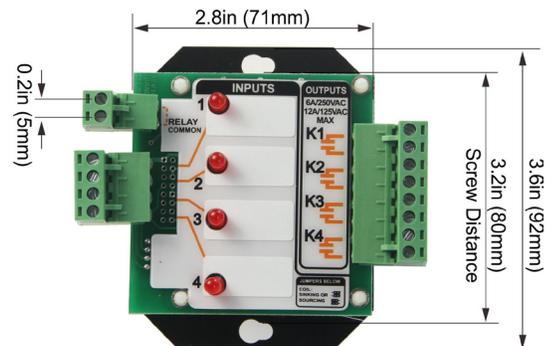
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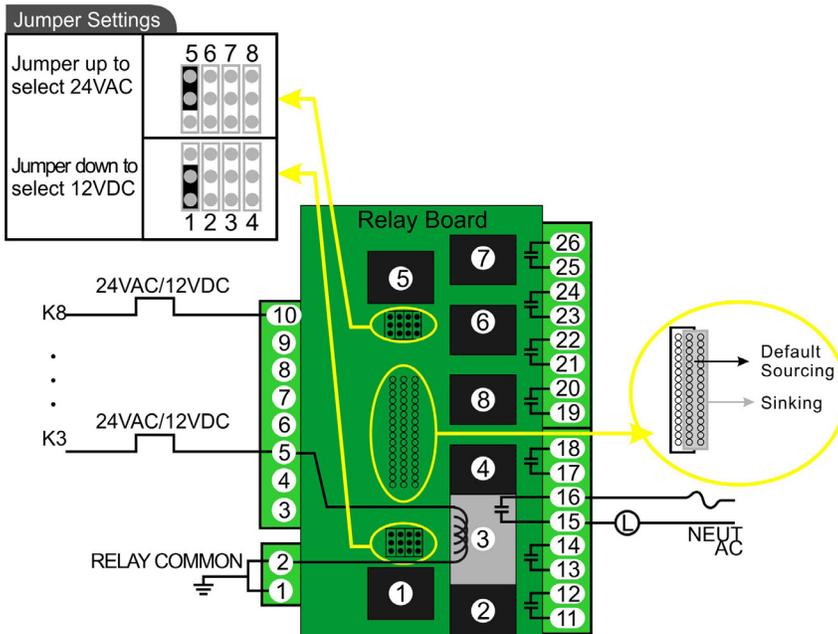
MRB-8



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