

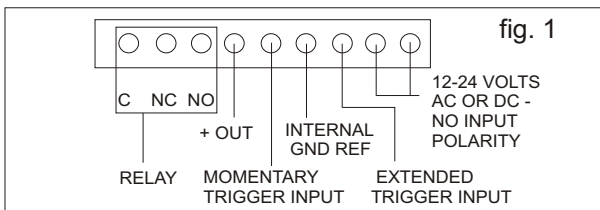
SA-1/2 FEATURES:

- ✓ CAN BE POWERED FROM ANY AVAILABLE 12 TO 24 VOLTS AC OR DC POWER SUPPLY
- ✓ SEPARATE MOMENTARY AND EXTENDED TRIGGER INPUTS
- ✓ DRY CONTACT AND HOT TRIGGER INPUTS
- ✓ HOT TRIGGER INPUTS CAN BE AC OR DC
- ✓ OPTIONAL 1/2 SECOND DELAY TIME BEFORE RELAY ENGAGES
- ✓ RELAY TIMER CAN BE ADJUSTED FROM 1/2 TO 30 SECONDS.
- ✓ TIMER USES TIME RANGE TRIM POT AND TIME BLOCK ADDITION SWITCHES TO KEEP TIME SETTING EASY
- ✓ LED PROVIDES VISIBLE INDICATION OF RELAY STATUS
- ✓ MULTIPLE OPERATING MODES - MOMENTARY, EXTENDED AND LATCHING
- ✓ WARRANTY GOOD FOR 16 MONTHS FROM DATE STAMPED ON THE BACK

Specifications

OPERATING VOLTAGE.....	12 through 24 Volts, AC or DC
STAND BY CURRENT.....	12 VOLTS - 5 mA 24 VOLTS - 14mA
OPERATING CURRENT.....	12 VOLTS - 34 mA 24 VOLTS - 46 mA
TRIGGER INPUT	1 mA at 12V, 4mA at 48V 5 - 48 VDC, 12 - 48 VAC
RELAY CONTACTS.....	2 A @ 24V, FORM 'C'
SIZE	64mm (2.5") WIDE, 85 mm (3.4") HIGH 15 mm (0.7") DEEP

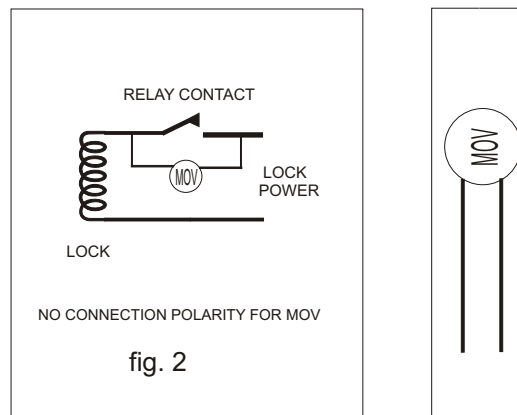
The terminal strip provides access to the relay contacts, trigger inputs, and power connections.



A SMALL TIP TO HELP PROTECT YOUR SA-1/2 RELAY MODULE

Locks such as maglocks and door strikes are essentially large electro-magnets. When power is removed from such locks, a high voltage is generated by the collapsing magnetic field. This voltage (called Back EMF or Kickback) will eventually damage the relay contacts.

Fortunately, it is possible to virtually eliminate these effects by simply connecting the proper suppression device across the relay contacts. This device is called a MOV (Metal Oxide Varistor). Use the supplied 35 volt MOV with either AC or DC power to the electric lock.



USE THIS COMPLIMENTARY MOV TO EXTEND THE LIFE OF YOUR SA-1/2

SA 1/2

Latching or Timed Relay Module

The SA-1/2 Relay Module is a highly versatile device designed to allow easy interface solutions for a wide variety of applications. The SA-1/2 has one timed Form C relay, 2 triggering inputs as well as a number of operating options. An optional 1/2 second delay before the timer starts provides added flexibility.

The momentary trigger is designed for those applications that always require a timed response on the relay. The initial application of a voltage on the trigger will start the timer. At the end of the time, the relay will always turn off unless the latching option has been selected.

Voltage on the extended trigger will also start the timer. However, the relay will only turn off at the end of the time if the voltage has been removed. The SA-1/2 will keep the relay active as long as the voltage is in place.

With the latching mode enabled, the momentary trigger becomes the latching input. The 1st push of the button activates the relay. The next push will turn it off again. A voltage on the extended trigger will override the latched condition and disable the momentary input.

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
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Momentary mode triggering

The momentary mode is designed to accept either dry contact (N.O.) or hot (applied voltage) triggers of arbitrary length. Once the preset period for the timer has expired, the relay will release regardless of whether or not the trigger input has been removed. The momentary (MOM TRIG) is selected by taking the +OUT output to the MOM TRIG input via dry contacts, or placing 12-24 VDC between the MOM TRIG input and ground (GND REF) terminals.

Latched mode triggering




This switch in the down position changes the momentary trigger into the latching mode trigger. In this mode, the first trigger will cause the relay will stay on indefinitely. The next trigger will release the relay immediately even if the timer hasn't expired. Activation of the extended trigger will override the latching mode. This prevents the relay from remaining latched on after the extended trigger ends.

fig. 3

Extended mode triggering

The extended mode is designed to accept either dry contact (N.O.) or hot (applied voltage) triggers of arbitrary length. The relay will be maintained for the duration of trigger input. If the trigger is removed prior to the timer expiring, the SA-1/2 will default to momentary mode.

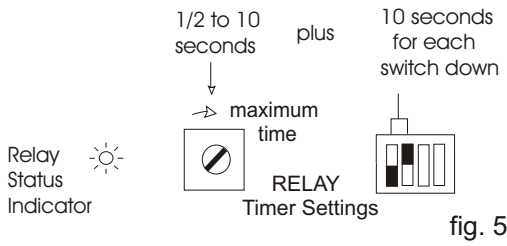
Optional Delay Before Relay Activates



This switch in the down position will add a 1/2 second delay before the relay timer starts and the relay activates. This is to allow for situations that need some

fig. 4

Adjusting relay timer



1/2 to 10 seconds plus 10 seconds for each switch down

Relay Status Indicator

RELAY Timer Settings

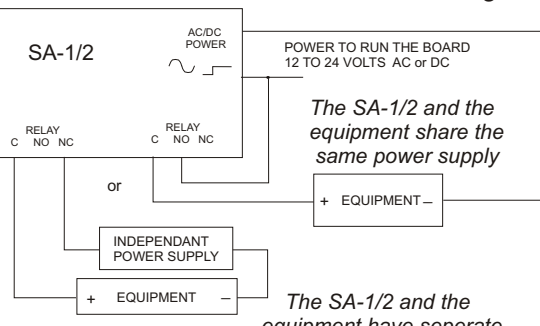
fig. 5

Example: To set a time of 15 seconds, set trimpot to 5 seconds and move 1 switch down. For 25 seconds, slide 2 switches down.

Mixed mode triggering

The SA-1/2 has been designed to give you the greatest flexibility in your installations. There are only a few things to remember in selecting your trigger inputs. The extended trigger ON blocks both the momentary and latching modes. Therefore this is the trigger to use for door hold open applications. However, the momentary trigger left active will not prevent the operation of the extended trigger. This makes it the ideal input for those situations where the button is prone to sticking.

OUTPUT OPTIONS



SA-1/2

AC/DC POWER

POWER TO RUN THE BOARD 12 TO 24 VOLTS AC or DC

RELAY C NO NC

RELAY C NO NC

INDEPENDANT POWER SUPPLY

+ EQUIPMENT -

+ EQUIPMENT -

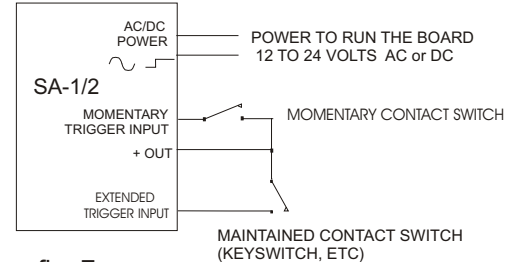
The SA-1/2 and the equipment share the same power supply

The SA-1/2 and the equipment have separate power supplies.

fig. 6

Triggering examples

Triggering from a dry contact



SA-1/2

AC/DC POWER

POWER TO RUN THE BOARD 12 TO 24 VOLTS AC or DC

MOMENTARY TRIGGER INPUT

+ OUT

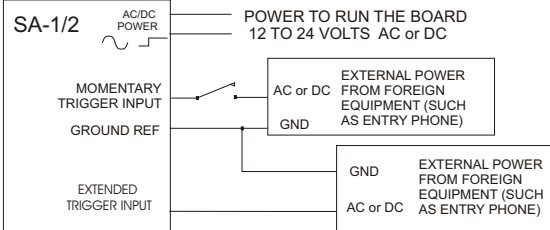
EXTENDED TRIGGER INPUT

MOMENTARY CONTACT SWITCH

MAINTAINED CONTACT SWITCH (KEYSWITCH, ETC)

fig. 7

Triggering from a hot output



SA-1/2

AC/DC POWER

POWER TO RUN THE BOARD 12 TO 24 VOLTS AC or DC

MOMENTARY TRIGGER INPUT

GROUND REF

EXTENDED TRIGGER INPUT

AC or DC

EXTERNAL POWER FROM FOREIGN EQUIPMENT (SUCH AS ENTRY PHONE)

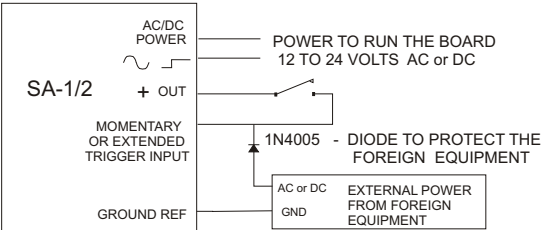
GND

EXTERNAL POWER FROM FOREIGN EQUIPMENT (SUCH AS ENTRY PHONE)

AC or DC

fig. 8

Triggering from hot output and dry contacts in combination



SA-1/2

AC/DC POWER

POWER TO RUN THE BOARD 12 TO 24 VOLTS AC or DC

+ OUT

MOMENTARY OR EXTENDED TRIGGER INPUT

GROUND REF

1N4005 - DIODE TO PROTECT THE FOREIGN EQUIPMENT

AC or DC

EXTERNAL POWER FROM FOREIGN EQUIPMENT

fig. 9