



OPERATING INSTRUCTIONS - 12 Volt AC/DC Relay Module



HOLATRON SYSTEMS, LLC

2800 Woodlawn Dr., Ste 138

Honolulu, HI 96822

(808) 732-5419

www.holatron.com

WARNING

Holatron Systems specializes in the design and manufacture of standard and custom electronic control systems used for the actuation of hazardous devices. As a condition of purchase, the user must acknowledge awareness and agreement that utilization of this product and participation in activities utilizing fireworks, rockets, and explosives is an ultra-hazardous activity carrying implied and explicit risks of injuries and damages to the user and to other participants. The user assumes the risk connected with the utilization of this product and all risks of participation in the activities for which this product is sold. User acknowledges that he/she/it has the necessary and required skill, expertise, training and licensing, as may be applicable or necessary by custom, usage, trade or law, to engage and participate in the ultra-hazardous activities connected with the use, purchase, transportation, or employment of the products sold under this agreement. User acknowledges that Holatron Systems, LLC, has not and will not conduct any investigation into the skill, expertise, training and licensing, as may be applicable or necessary by custom, usage, trade or law, of the user or of user's agents, employees and assigns, to engage and participate in the ultra-hazardous activities connected with the use, purchase, transportation, or employment of this product. User specifically agrees that Holatron Systems, LLC, its officers, employees, and agents shall not be liable for any claim, demand, cause of action of any kind whatsoever for, or on account of death, personal injury, property damage or loss of any kind resulting from or related to user's or user's employees', agents' or assigns' use of this product, and user agrees to indemnify, defend in any action at law, and hold harmless Holatron Systems, LLC, from same, whether brought by the user, user's agent, or assigns, or any third party.

1.0 HARDWARE DESCRIPTION.

The module contains 6 spring terminals and an indicator. The components associated with the latching function, shown in the photograph, are not included in the RELAY12 version. The two terminals marked "12 VDC Power In" connect to your 12 volt supply. Power polarity is not critical (even AC power may be used), but output polarity will match power polarity, as defined by the red and black terminals. That is, when turned on, power red is connected to output red. Power black is always connected to output black, whether on or off. **DO NOT EXCEED 12 VOLTS**, as that will damage the indicators. The two terminals marked "Output" connect to the 12 volt device you wish to actuate. The output indicator lights when 12 volts is present at the output terminals. The input indicator lights similarly for the input terminals. Any voltage up to a maximum of 12 volts, either AC or DC, may be switched. Note that the indicators will dim as the input voltage is reduced. Maximum current capacity of the relay is 5 amps. Operation with devices consuming more than 5 amps, or with shorted output terminals, will damage the relay and void the warranty. Please note that the output is not fused. So be very careful not to connect to a short circuit. Modules with internal automatic resetting fuses are available at a higher price.

2.0 OPERATION.

The two terminals marked "9 VDC CONTROL" connect to outputs on our AirFire-1 mini-receivers, two-shot receivers, or six-shot receivers. "COM+" connects to the red wire on the mini-receiver or one of the "COM+" terminals on the two-shot or six-shot receiver. "ON" connects to the black wire on the mini-receiver, or to one of the output firing terminals on the two-shot or six-shot receiver. These inputs may be swapped since they are not polarity-sensitive. **This module cannot be triggered by our micro-receiver.**

An **input modification is required to enable it to be used with our SafeFire-12 receiver** 18V outputs if those outputs will be on for durations longer than one second. It may be used without modification if the SafeFire-12 firing output will always be shorter than one second. Note that an 18V control input longer than one second may damage an unmodified relay module and void its warranty.

Pressing the transmitter button to fire the "ON" cue turns on the device connected to the relay module output. The device will remain on as long as the receiver output continues.

3.0 SPECIFICATIONS.

Parameter	Minimum	Typical	Maximum
Output Current			5 Amps
Supply Voltage		12 VDC or 12 VAC rms	14 VDC or 14 VAC rms
Control Voltage	8.5 VDC	9 VDC	12 VDC
Control Current		18 milliamp	
Control Input Impedance		500 ohm	
Leakage current from power input to control inputs			0 milliamps

If further information or service is required, contact:

Holatron Systems, LLC.
2800 Woodlawn Dr., Ste 138
Honolulu, HI 96822
(808) 732-5419
www.holatron.com