

# ***SUPERELAY II***

## **UTILITY CONTROL INTERFACE**

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### **DESCRIPTION**

SUPERELAY II is a utility control interface that provides switching and control functions in a broadcast studio, control room, A/V system, or any installation requiring multiple circuit control. Superelay II provides three types of outputs: isolated relay contacts, switched AC, and switched DC. Six SPDT relay contacts can be used for audio, low voltage, or "dry circuit" switching. The switched AC output can control up to 200 watts of AC load. The switched DC output can supply 12 vdc at up to 300 ma; it can also "sink" up to 1 amp if used with an external power source. Both switched AC and DC outputs can be set to "flash" when ON for use with *ON THE AIR* warning lights. All control, relay output, and DC output connections are via plug-in euroblock connectors. The AC output is via a standard three-prong grounded outlet.

### **WARNING! For 230V operation, change mains voltage jumpers before connecting to AC power!**

Remove jumpers between E6 & E7, and between E5 & E8. Install a jumper between E5 & E6 for 230V; replace fuse F1 with .125a fuse. See schematic on reverse side. Jumpers should be changed by a qualified technician only.

### **INSTALLATION**

Connection to Control inputs and low voltage relays is via plug-in connectors. Remove about 1/8" of the insulation, insert wires into the connector, and tighten the screws. Be sure that no bare wires are exposed.

**CONTROL INPUTS:** Superelay can be switched ON and OFF by either a momentary or maintained ground closure, or by application of an external DC voltage.

**For control with a ground closure:** A *momentary* closure between the **ON** and **G** terminals will turn the unit ON. A *momentary* closure between **OFF** and **G** will reset it OFF.

For control with a maintained closure install a jumper between the **OFF** and **G** terminals.

A *maintained* closure between **ON** and **G** will turn the unit ON; removing the closure will reset it OFF.

The ground closure can be a relay or switch contact, open collector, CMOS or TTL gate, opto-isolator, or any other circuit that switches to ground. The red TALLY-ON LED will light to indicate the ON state.

**For control with a DC voltage:** Superelay can be controlled by applying an external DC voltage to the **IN+** and **G** terminals. Any DC voltage between 5 and 24 volts will switch the unit ON. This input is opto-isolated. Observe polarity.

**RELAY OUTPUTS:** Superelay provides six SPDT relay contacts for utility use. All six relays operate simultaneously. The C and NO terminals are active when the unit is ON; the C and NC terminals are active when the unit is OFF. These relays can switch up to 1 amp at 24 volts DC. (Do NOT use these relay outputs to switch AC line voltage!)

**AC TALLY LIGHT OUTPUT:** Superelay also provides a TALLY output that supplies AC line voltage for incandescent warning lights when the unit is ON. (Do not use florescent lights.) The TALLY output will flash if the front panel FLASH switch is set to ON. The Tally output load should not exceed 200 watts. The TALLY LIGHTS FUSE, accessible from the rear panel, will blow if this limit is exceeded. (Replace with a 2A AGC fuse.) Note: The low voltage relays will continue to operate even if the Tally Lights fuse blows.

**NOTE:** It is normal for there to be a slight amount of leakage current through the AC output if no output load is plugged into the AC socket. If the AC output is measured with an AC voltmeter, it will show line voltage present even if the unit is OFF. This is normal; plugging a light bulb or other load into the AC socket will eliminate this false reading.

**LED TALLY LIGHT OUTPUT:** Superelay can control low-voltage LED Tally lights. The unit can directly power LED Tally lights that require 12 vdc, 300 ma or less. Connect the Superelay **12V** terminal to the + wire of the light; connect the – wire of the light to the **LED** terminal on the Superelay.

For LED Tally lights that require more than 12 vdc or 300 ma, use an external power source connected as follows: Connect the + voltage source directly to the + wire of the light. Connect the ground of the power source to the **G** terminal of the Superelay, and connect the – wire of the light to the **LED** terminal on the Superelay.

The 12V terminal provides 12 volts DC for utility use, 300 ma maximum.

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