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Modifying a GP12 for Emergency Operation

In some applications it may be necessary to drive the outputs of a GP Dimmer to full, regardless of the setting of the DMX control signal. Emergency evacuation systems are an example of such systems. This technote describes how to modify a GP dimmer such that all outputs will be driven to full when an emergency switch is closed.

Parts Required

- Relay or contactor with normally open contacts rated at 12V 0.5A or greater. High current contactors are not recommended. One set of contacts is required for each GP12.
- Power supply for the relay/contactor coil.
- Emergency switches.
- Connecting wire

Circuit

The relay/contactor is used to isolate the external switch circuitry from the internal electronics, and should be mounted as close to the dimmers as possible, preferably inside the dimmer chassis. If more than one GP12 is to be modified then a separate relay is required for each. A power supply is required to run the relay/s and this ideally should be run from an emergency supply.

The relay contacts are connected between the DAC and +5V test points on the main circuit board of each GP12. The wire should be rated at 240VAC/105°C and cable tied clear of other wires and circuit boards. All exposed solder joints must be covered with heatshrink tubing or electrical tape.

Refer to the circuit diagram below.

