



Multi Function Relay

Accessories – Ancillary

Part No. 500-0002W/R

www.illuminoignis.co.uk

Product Details

This product is specifically designed to meet the needs of the fire/intruder alarm industries. The PCB is mounted in a single gang front plate as illustrated.

The main applications are;

Fire Alarm Panel interlinks, remote signaling (dialer's), Door release control, outdoor lighting control (Fused/Live & Neutral switching), monitored circuit interfacing (bell circuits), general interfacing (Plant shut down ETC) and the single pulse output option is also useful for triggering surveillance systems or start-up computer based systems.

The unit has a wide ranging trigger **INPUT** voltage (9.5V to 42VDC and 7.5V to 30VAC RMS) and also incorporates a timer (this counteracts fire control panel interlink latches – enabled by removing the LINK). A series diode is also "built-in" which allows easy connection to fire alarm monitored bell type circuits.

The unit has at its heart a relay which is capable of switching **8A @ 250VAC (2000VA)** for 100,000 operations, however it has been fused at 6A to give extreme durability.

An LED (RED) is provided to 'visually indicate' that the contacts are in the active position (note: not the presence of the I/P trigger voltage but the contacts in the active state IE will show if timer has elapsed).



Timer

The unit has a 2second timer which is enabled by removing the LINK (marked as Pulsed mode on the PCB). When removed the relay will activate as normal to the trigger voltage but after 2S will drop back out (the LED will also extinguish). This feature allows fire control panels to be inter-linked without the problems of reset latch-up (panel retriggering after a reset). See the application diagrams below for connection details (this feature may also be suitable for certain dialers and plant shut-down).

General Installation

The Multi Function Relay PCB is supplied with a self-adhesive fixing pad and must be mounted securely within a suitable enclosure, ensuring that there is adequate access. The unit is also available mounted on a single gang plate. If mains voltages are being switched ensure the latest IEEE electrical wiring practices are adhered to.

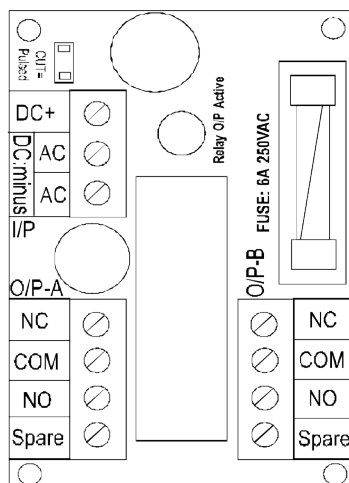
PCB Connections

Connect the relay using the application schematics, according to your particular requirements

Remove link for timer operation

Input trigger ('coil' connections)

Output – A
Volt Free Change Over Contacts



Fuse – in line with common terminal of output - B

Output – B (fused at 6A)
Volt Free Change Over Contacts



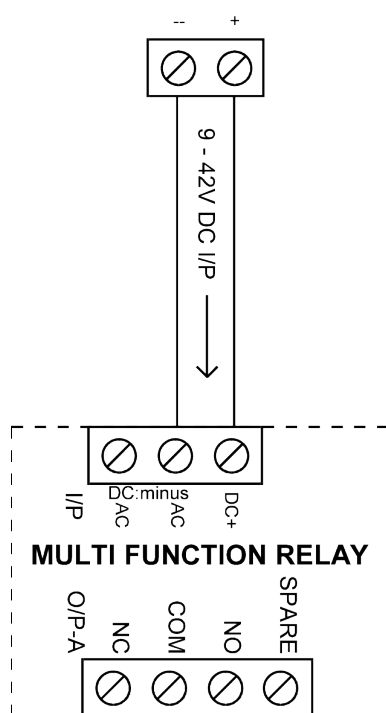
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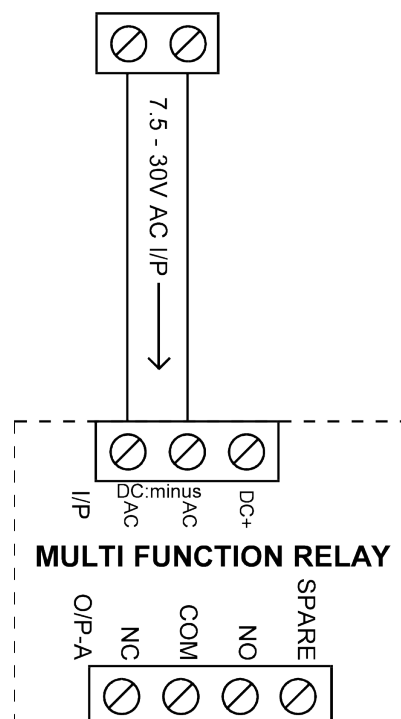
APPLICATION DIAGRAMS



9.5-42V DC Inputs

Any DC voltage from 9.5 to 42V may be used to trigger the Multi Function Relay, as shown to the left.

This will be suitable for most fire and intruder alarm control panels operating with 12 or 24v DC.



7.5-30V AC Inputs

Any AC voltage from 7.5-30V may be used to trigger the Multi Function Relay, as shown to the right. This will be suitable with transformer outputs from 7.5 to 30v AC (RMS – which is what most multi-meters display).



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Fire Alarm Panel Link

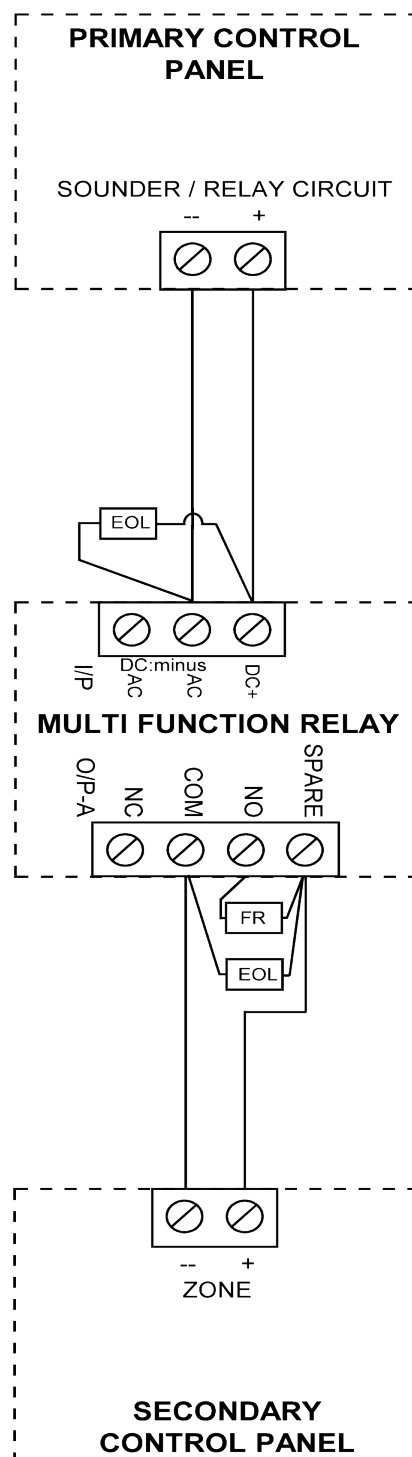
Where the operation of a fire alarm system must trigger another the Multi Function Relay may simply be used to trigger the 'Class-Change' contacts of the secondary panel.

However the class change is not normally monitored and thus zone triggering is preferred, shown on the right is a connections for zone triggering.

Removing the **LINK** to activate the **TIME** mode will ensure that the control panels do not 'lock-up', allowing them to be reset in any order.

NOTE.

Only one relay is shown – but two will be required – for the secondary to trigger the primary panel.



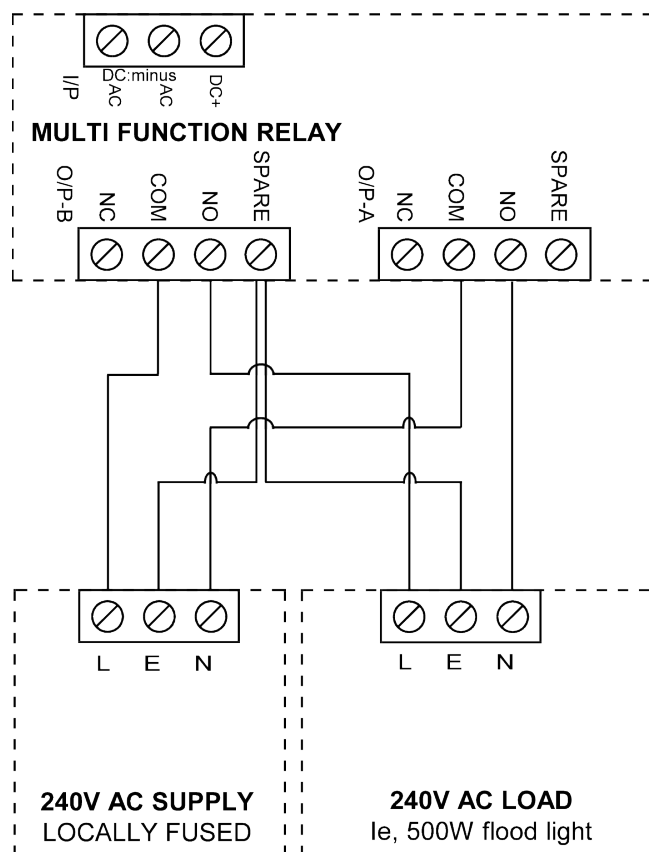


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Switching 240V AC

The Multi Function Relay may be used to switch 240V AC loads such as flood lights from your intruder alarm control panel as shown on the left.

It is suggested that both of the relay contacts (O/P – A and O/P – B) are used for double pole switching in order to ensure that both the live and neutral connections are isolated when the relay is inactive.

It is suggested that the 240V AC supply has a local means of isolation. Ensure that all regulations regarding 240V AC installations are adhered to, and that all system components are thus labeled clearly.

Technical Specifications

Input Voltage Range	9.5 – 42V DC 7.5 – 30V AC
Operational Current (for DC voltages)	35mA @ 12V 35mA @ 24V 35.7mA @ 30V 38mA @ 40V
Timer mode (DC only)	1.8 second min. 'On time' (link removed)
Drop Out Voltage	6V DC
Output Contact Rating	Double Pole – Change Over Contacts 230V AC 6A max
Output Fuse	F6A Common connection of O/P – B
PCB Size	W.47 x L.60 x H.25mm
Housing Size	Single gang – W.86 x L.86 x H.30 mm