

DATASHEET

Specifications rev.1, 020710

P/N 400-025 Alarm Multiplexer



Description:

The Alarm Multiplexer is able to monitor and combine a number of individual alarm signals in order to generate one common, mutable alarm signal. (i.e. buzzer in nav-light control panel).

This function is typically used when a central acoustic alarm must be activated in the event of one (of several) failing navigation lights.

Trigger function:

The Alarm Multiplexer has 6 individual input connections and any signal on any one of these will trigger the output relay and the internal buzzer. The output is "positive edge triggered". (i.e. it will trigger regardless of the duration of the input signal).

Reset function:

The output relay and the internal buzzer can be reset regardless of the state of any of the input pins. (i.e. the unit can still be reset even if an input pin is high). Any new signal on an input pin will result in a new relay/buzzer triggering.

Physical dimensions:

Form: M36 DIN-rail enclosure
 Size: 110 x 32 x 58 mm (L x W x H)
 Weight: 64 gram

Output:

Relay contacts: (NO-C-NC) maximum contact ratings: 1A, 50VDC / 0,5A 125VAC
 Internal buzzer: parallel to relay contacts

Inputs:

Power: 10-32 VDC, max 50 mA. Protected from reversed polarity.
 Six positive edge Triggered inputs. Max: 5-32 VDC
 Reset pin: (positive edge Triggered) 5-32 VDC

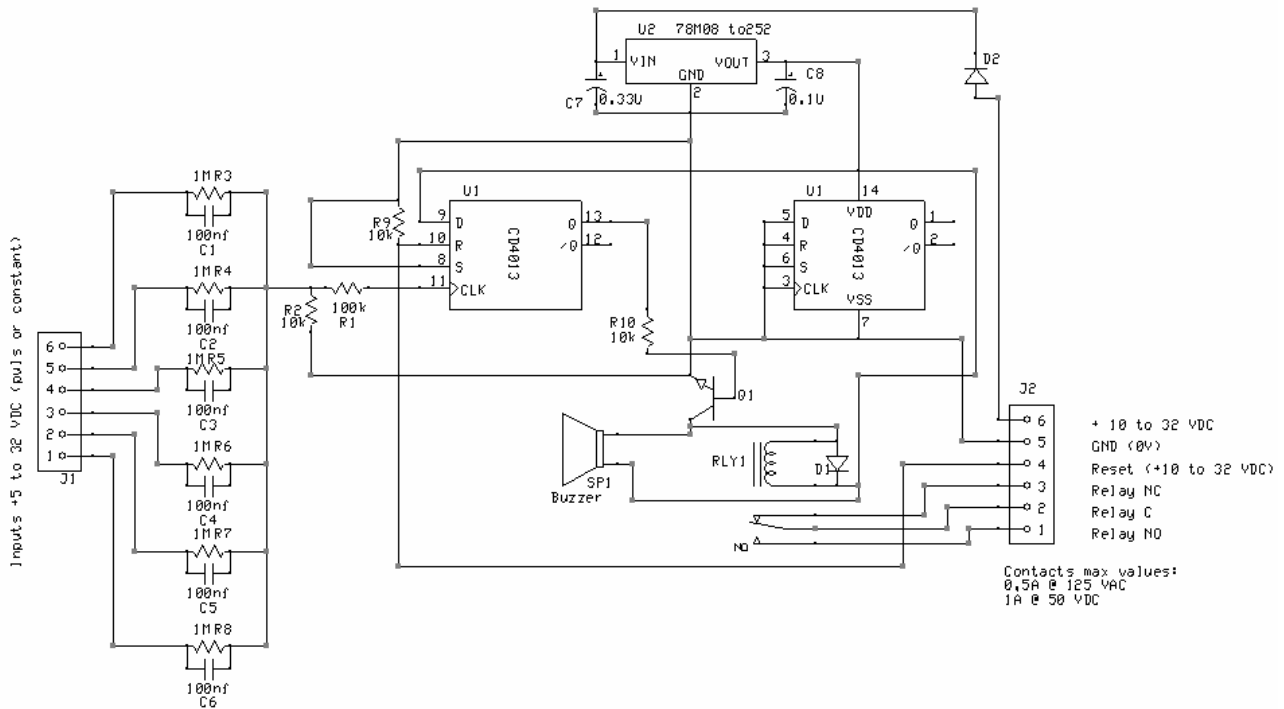
Connections:

J1 & J2 plugs with screw terminals

Additional inputs:

Any number of Alarm Multiplexers can be connected to the same common alarm if more than 6 inputs are needed. The output relay contacts and reset pins can simply be connected in parallel to achieve this.

Internal schematic:



Connections:

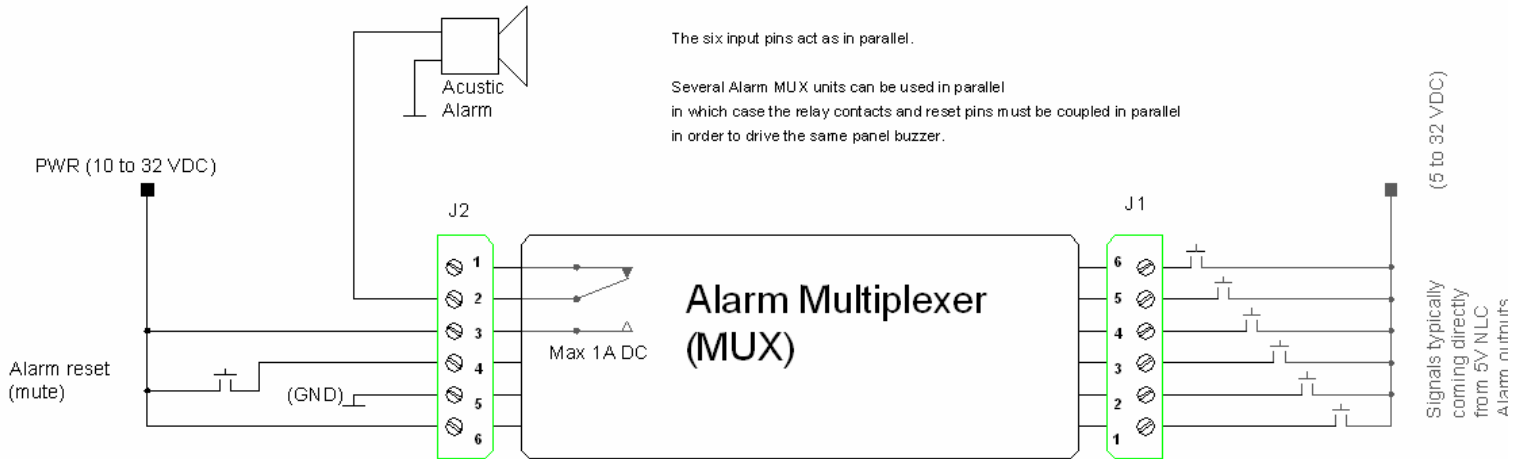
Basic Function:

Any positive signal on any of the six input pins will trigger the relay output and the internal buzzer. The input signal can be either a pulse or constant.

Activating the reset pin will reset the relay and internal buzzer regardless of input pin state. Any new input pulse will trigger the relay and internal buzzer again.

The six input pins act as in parallel.

Several Alarm MUX units can be used in parallel in which case the relay contacts and reset pins must be coupled in parallel in order to drive the same panel buzzer.



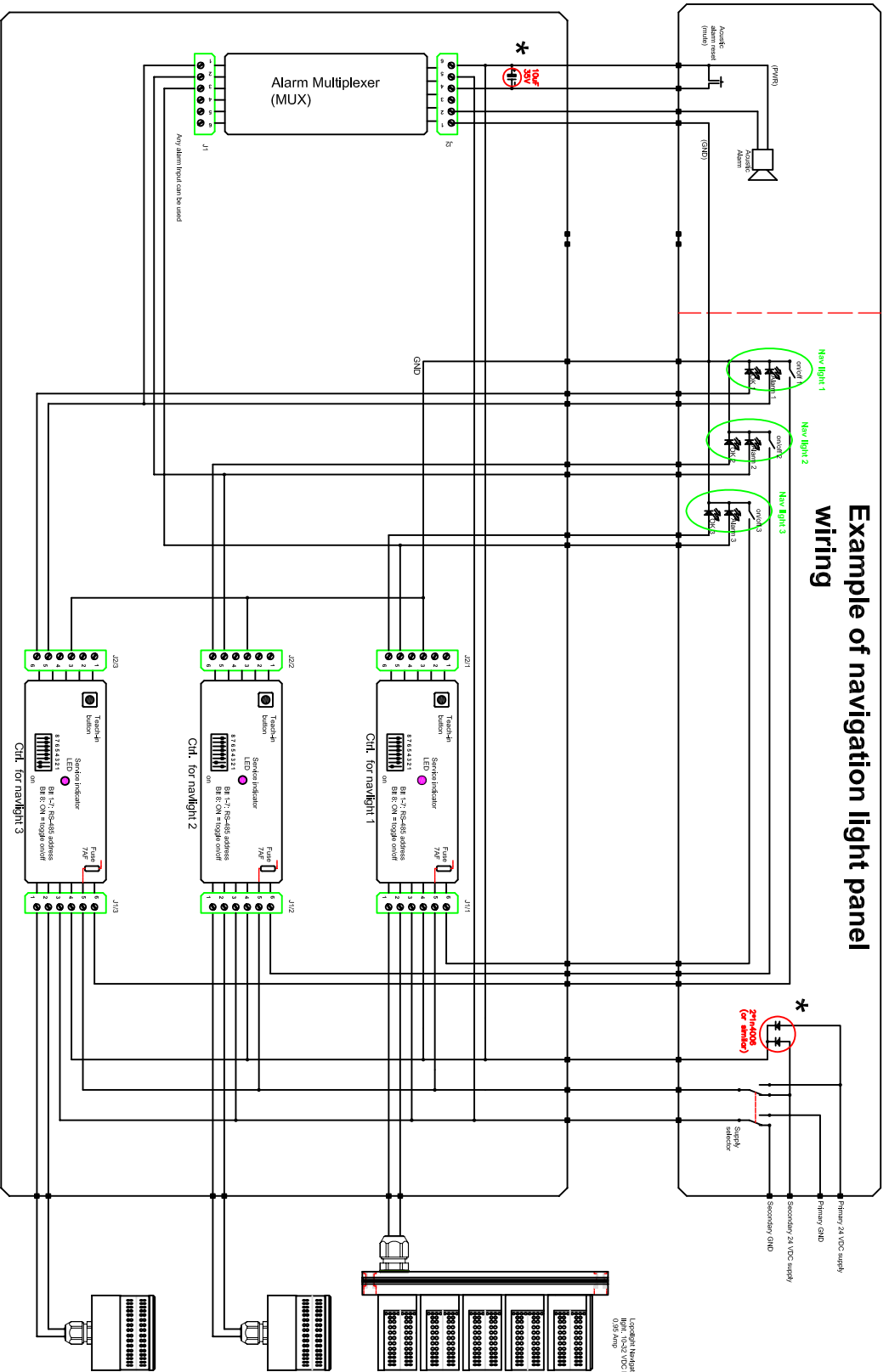
J2 connections:

- 1: Relay NO
- 2: Relay C
- 3: Relay NC
- 4: Reset (5 to 32 VDC signal)
- 5: GND (0V)
- 6: PWR (10 to 32 VDC)

J1 connections:

- 1: Input 1
- 2: Input 2
- 3: Input 3
- 4: Input 4
- 5: Input 5
- 6: Input 6

Example of navigation light panel wiring



NLC connections

- J1 connections:**
 1: Nav Right power out, positive 10-32 VDC
 2: Nav Right power out, negative
 3: Ground
 4: Controller power supply 10-32 VDC
 5: Nav Light power supply minimum 10.5 VDC, maximum 32 VDC
 6: On/off. Connect to GND to turn on. (Alternatively toggle function available if bit 8 on dip-set to on).
- J2 connections:** DO NOT USE (special purposes only).
 1: RS-232 output. DO NOT USE (special purposes only).
 2: RS-485 +
 3: Ground
 4: RS-485 -
 5: Alarm output. 5VDC, 20 mA current limiter
 6: OK output. 5VDC, 20 mA current limiter

MUX connections

- J1 connections:**
 1: Input (5 to 32 VDC)
 2: Input (5 to 32 VDC)
 3: Input (5 to 32 VDC)
 4: Input (5 to 32 VDC)
 5: Input (5 to 32 VDC)
 6: Input (5 to 32 VDC)
- J2 connections:**
 1: Relay NO
 2: Relay C
 3: Relay NC
 4: Reset (5 to 32 VDC signal)
 5: GND (0V)
 6: PWR (10 to 32 VDC)

Example of navigation light controllers connected to alarm multiplexer

* Note per 1/2-2012: In case the complete system is turned OFF on daily basis, then a 10uF capacitor may be connected between supply (+ 24VDC) and the reset input on the multiplexer. This will create a short automatic alarm reset after start-up, thus avoiding unwanted alarm at start-up time. Alternatively the various NLC's and multiplexer(s) may be supplied constantly via diodes from both power-supplies.

Multiple LPL navlight controllers connected to Alarm Multiplexer (common, mutible alarm controller)

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