

ADDA APM4

4 WAY MODULAR PANEL MOUNT ALARM ANNUNCIATOR SYSTEM

General Description:

The Adda APM4 micro controller based alarm annunciator system was designed for use as an industrial panel mount alarm system. This modular system comprises of 4 way panel mount alarm modules which wire directly to the field. The system comprises of a control unit which houses the pushbuttons, inputs and power supply inputs as well as potential free contacts for the horn and trip functions. The alarm units consist of 4way alarm modules with field inputs and integrated displays.

One control unit can drive up to 16 slave units , thus expanding the alarm unit to a 64 way alarm. With custom ribbon cables this limit can be extended to above 150 alarms.

Function Description:

Dip-switch functions

Normally Open/normally closed:

Normally open alarm is activated when a positive input is present.

Normally closed: alarm is activated when the positive input is not present.

First on fast flash: The first alarm received flashes faster than the alarms that follow.

This function works in groups of four for each alarm slave unit.

Auto/manual:

Auto: Momentary (fleeting) alarms, Leds flash. Horn is silenced with Accept pushbuttons, lamps go to steady. The alarm auto resets when inputs return to normal state.

Manual: Momentary (fleeting) alarms, Leds flash. Horn is silenced with Accept pushbutton, lamps go to steady. The alarms will only reset when the reset pushbutton is pressed and the inputs have returned to the normal state.

Ringback: The ringback option will sound the horn for one second each time an alarm returns to the normal state. Ie. After accepting alarms in auto reset state or manually resetting alarms.

Input response time: This setting allows for each slave units input response time to be set.

This allows for fast response on required inputs or 1/2 second debounce on noisy input lines.



ALARM UNIT
(Bezel 48x144mm)
(Cutout 44x138mm)

CONTROL UNIT
(Bezel 48x144mm)
(Cutout 44x138mm)

Internal functions: (alarm units)

Led invert function: This function allows for the inversion of the lamp output for normally on situations. This allows for alarm inputs where the alarm must be activated when the led goes to the off state. E.g. Mains on lamps etc. The lamp will normally be on and when the input is activated the lamp will start flashing, upon acceptance of the alarm the lamp will be cleared. Once the alarm is returned to the normal state and the alarm unit reset the lamp will return to the normally on state. This function can be selected by removing the internal jumpers.

Control unit functions:

Horn: The horn output is activated when flashing alarm is active. This is silenced when the alarm is accepted. It is also active in the ringback option as described before.

Trip: The trip relay is active whenever an alarm is active. This output is only cleared when all alarms are in the normal state.

Main functions:

Each input provides for normally open or normally closed alarms via Dip-switch.

Each unit provides for normally on (inverse) led drive e.g. For use as Mains On alarms etc. (Jumper setting on rear of unit)

All slave modules have dip-switch settings for the following control options: First on fast flash / Manual or Auto reset / ringback / and input fast or slow response time.

The system is modular expandable - up to 64 slave units.

The units are interconnected via a standard 10-way ribbon system.

The master unit has pushbutton facilities for Lamp Test / Accept / Reset inputs as well as potential free relay contacts for Horn and Trip outputs.

Optional opto-coupled inputs with additional external PSU.

Led Backlight colours

The colour of the back lit display can be altered by replacing the individual Led Backlight PCB's behind the front panel diffuser.

The Led Backlight PCB's are available in two types,

1/ Single Colour - Red, Green, Yellow, Blue or White

2/ Three Colour Switchable - This unit can be switched between the colours Red, Green or Yellow.

Specifications:

Power supply:

Supply voltage	24Vdc \pm 10% or 80V - 260V ac
Slave current consumption	100mA (max) / module @ 24V dc
Master unit current consumption	90mA (max) @ 24V dc

Alarm inputs:

Input voltage	Using the internal 24Vdc from the 24Vdc or 80-260Vac master for the field alarms. All inputs are 24V only. If an external power supply is used to supply 24V dc for the master, Fault inputs can be 24V, 32V, 48V, 72V and 110Vdc (special input cards) If requested, opto isolated inputs are also available for the same input voltages but an additional (2nd) isolated DC to DC converter will be necessary if galvanically isolated inputs are required
Input current	7mA @ 24V (max) Opto coupled input option is available for use with two external power supplies. Optional input "follow me" relays (5A) at input voltage are available
Fault relays	

Relay outputs:

Horn relay	SPST
Trip output	SPDT
Contact rating	2A @ 250Vac