VECTOR

Repeater Panels

**Analogue Addressable
Repeater Panel**

for

Apollo XP95 & Discovery Protocol

V4.1 and above

**Installation & Commissioning
Manual**

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INTRODUCTION

The Vector repeater is available in 5 variants.

- FCRPV-16ZE   16 zone in small enclosure no PSU
- FCRPV-16Z-3A   16 zone in standard panel size cw 3A PSU
- FCRPV- 64Z-3A   64 zone in standard panel size c\w 3A PSU
- FCRPV-16Z-3A-P   16 zone in standard panel size cw 3A PSU and printer
- FCRPV- 64Z-3A-P   64 zone in standard panel size c\w 3A PSU and printer

The repeaters are intended purely for indication and control purposes. They have no hardware inputs or outputs (bell circuits etc). No PC download is available for the repeater. Programming only via local repeater controls

Hardware details

The repeaters use a modified version of the main single loop display pcb known as PCSLA7-R. This is a depopulated version of the PCSLA7 PCB. Special repeater software is loaded to this board.

Input Terminals

CAN NET A B can bus terminals
Comms link network to main panels, requires screened cable. Refer to networking section of main panel installation manual.

28v + 28v - (x 2) power supply DC input terminals
24 volts DC nominal. Can be derived from main panel or from power supply unit

PSD, Power supply data input (psu monitoring) from XLK/VECTOR power supply
Converts to switched -ve charger fault input when no vector supply is programmed

PSC, Power supply clock input (psu monitoring) from XLK/VECTOR power supply
Converts to switched -ve battery fault input when no vector supply is programmed

10 way download header. for connection of expansion LEDS.
Also used to 'Flash' firmware upgrades.

Circuits fitted to PCSLA7-R

- 5V vcc supply switching regulator for CPU and LCD
- Microcontroller , crystal and watchdog circuits
- Real time clock and watch crystal, cw backup gold cap
- Piezo buzzer circuit and volume control
- 2 x 40 LCD backlit display and contrast control
- Novram memory for configuration storage
- Adddressing dil switch
- 16 x zonal fire leds, common fire led
- Common fault, pre alarm, test mode and disabled LEDs
- CPU fault, sounder fault, remote active, remote isolated LEDs
- ARW, more, psu fault and supply on LEDs
- 12 way elastomeric keypad

REPEATER PANEL TYPES

The repeater panels have two distinct modes of operation, 'Assigned' (by address switches) and 'Network Wide'.

ASSIGNED - default setting.
The repeater acts for a particular main panel. This main panel is selected by setting the address switches of the repeater to the same address as the panel. Up to eight repeaters can share the same address as the panel.

An 'assigned' repeater will report all fires from the panel and the network and all faults from the assigned panel. Faults from other panels are common and reported as 'fault on panel xx' and no further detail is given.

The controls mimic the controls of the assigned panel and thus will follow the programing set for that panels' controls e.g.' Evacuate' will cause an evacuate message to be sent out from the assigned panel.
The zone LEDs on an 'assigned', repeater panel mimic the 64 zone LEDs of the associated panel.

NETWORK WIDE repeater mode
The repeater in this mode is not associated with any particular panel. The address switch settings are not used. The repeater address switch is used to number the network repeater for controls purposes A network repeater will report all fires and faults from the network purely as common i.e. 'fault on panel xx'

The controls behave as common system controls, e.g. Evacuate is from repeater xx. The repeater LEDS will default to displaying as 'all for each panel on the network' i.e. zone 1 = all zones on panel address 00, zone 2 = all zones from panel address 01, zone 16 = all zones from panel 15 etc etc. LEDs from zone 1 to zone 64 in this circumstance will be set to 'off'.

SETUP AND PROGRAMING

Setup of the repeaters is straightforward.

Set required address, depending on associated panel or network address.

Initialisation of novram parameters. This is achieved by pressing button 2 at power up. The repeater defaults to 'assigned'. Can be set to 'network wide' if required. Defaulting of zone LEDs will be offered on menu if operating mode is changed.

The main panels do not monitor repeaters. A repeater panel will provide a fault if it's associated panel is missing. 'Network Wide' repeaters have no associated panel so will not provide this fault indication. Repeaters will annunciate a fault if no ' comms ' is being received.

Faults on repeaters themselves are not transmitted to the system but remain purely local to the repeater.

Power supply faults from the associated panel are announced as 'panel xx charger fault ' etc.
Power supply faults on the repeater are announced as 'local battery fault' etc.

CONTROLS AND INDICATIONS

TEST LAMPS BUTTON
Activates all panel leds (except system fault)
Performs a test pattern on the lcd display
Pulses the panel buzzer

EVACUATE BUTTON
Puts the associated panel into evacuate alarm condition
Activates the panel sounder alarm tone
Displays evacuate etc on the LCD display
If repeater panel is set to 'network wide' evacuate will evac all panels in the network
Button can be disabled in engineers options

SILENCE / RESOUND ALARMS
Only active if an alarm or evacuate is present on the system
Press once to stop all alarm sounders, also stops panel buzzer
Press again to re instate alarms to previous condition, previous condition is as configured by cause and effects
Button can be disabled in the engineers options

RESET SYSTEM
Press to carry out reset of system
Fire condition can only be reset is silenced first
Reset performs simple lamp test to show it is occurring
Button can be disabled in the engineers options

MUTE BUZZER
Mutes the fire buzzer
Mutes the fault buzzer
New fires or faults will reactivate the buzzer

DISPLAY SCROLLING KEYS
When 'more' indicator is present messages can be scrolled
Enables navigation of menus
Button 5 is enter
Up, down, and move cursor left and right

NOTE:- It is possible to scroll events without activation of the key-switch

ACTIVATE CONTROLS KEYSWITCH
Enables use of the keypad when input is shorted by keyswitch
Mute buzzer should still function when switch is 'off'

FIRE ALARM DISPLAY
Display as per fires on any panel display i.e. panel and zone of fire is indicated etc

ZONE FIRE LED INDICATORS
Indicates the zone fires of the associated panel
May be re-designated as one LED for an entire panel or as LED for an individual zone of any panel on the network.
Up to 64 zones when expansion PCB is added

PRE ALARM DISPLAY
Displays as a fault similar to the associated panel unless it is a pre alarm from another panel in which case it will say 'fault on panel xx'

FAULT DISPLAY
Displays detailed faults of the associated panel or 'fault on panel xx message' if fault is from another panel

CONTROLS AND INDICATIONS CONT'D

DISABLEMENTS ACTIVE INDICATOR
Indicates if any disablements are present on the associated panel

TEST MODE INDICATOR
Indicates if the associated panel is in test mode

REMOTE ACTIVE INDICATOR
Indicates when the remote active indicator is active on the associated panel

REMOTE DISABLED INDICATOR
Indicates when the remote is disabled on the associated panel

ALARM FAULT INDICATOR
Indicates when the alarm fault indication is active on the associated panel

SYSTEM FAULT INDICATOR
Local only. Indicates a processor crash.

ARW INDICATOR
Local only. Indicates that the panel has restarted following a system fault.

MORE INDICATOR
Indicates that more events are scrollable on the display

PSU FAULT INDICATOR
Local only. Indicates that the repeater PSU has a fault

SUPPLY HEALTHY INDICATOR
Green, healthy, LED. Remains on when a supply is available to the repeater. (mains or battery)

MENU BUTTON
Pressing invokes the menu, as follows:

1.VIEW ACTIVE FAULTS
If a fire is present the active faults log can be reviewed in this menu

2.SET CLOCK
Set real time clock. Updating will set all clocks on network.

3.PRINT OPTIONS
Select to command print outs from panels

 3.1 Print alarm log
 Select panel to print the log from. Print alarm log panel xx

 3.2 Print fault log
 Select panel to print the log from. Print fault log panel xx

 3.3 Print user log
 Select panel to print the log from. Print user log panel xxx

 3.4 Print device parameters
 Select panel number and loop number to print the parameters from. Print parameters panel xxx loop x

CONTROLS AND INDICATIONS CONT'D

4.ENGINEER OPTIONS
Enter code 195 to edit engineer options

Software version is displayed in window when this option is selected.

NOTE:- write protect switch must be enabled to use menu

4.1 Edit company name
Edit the company name text.

4.2 Set PSU type
Select vector psu or not (affects PSU monitoring)
If no Vector supply is used must be set to 'no' to stop PSU fault indication

4.3 Set zonal LED assignments
Re-assign zone fire LED indications. Repeater LEDs may be re-assigned, main panel LEDs cannot!

4.4 Set repeater operating mode
Select assigned (by address switches)
Select network wide

NOTE:- when exiting this mode the choice of initialising fire LED assignments is given
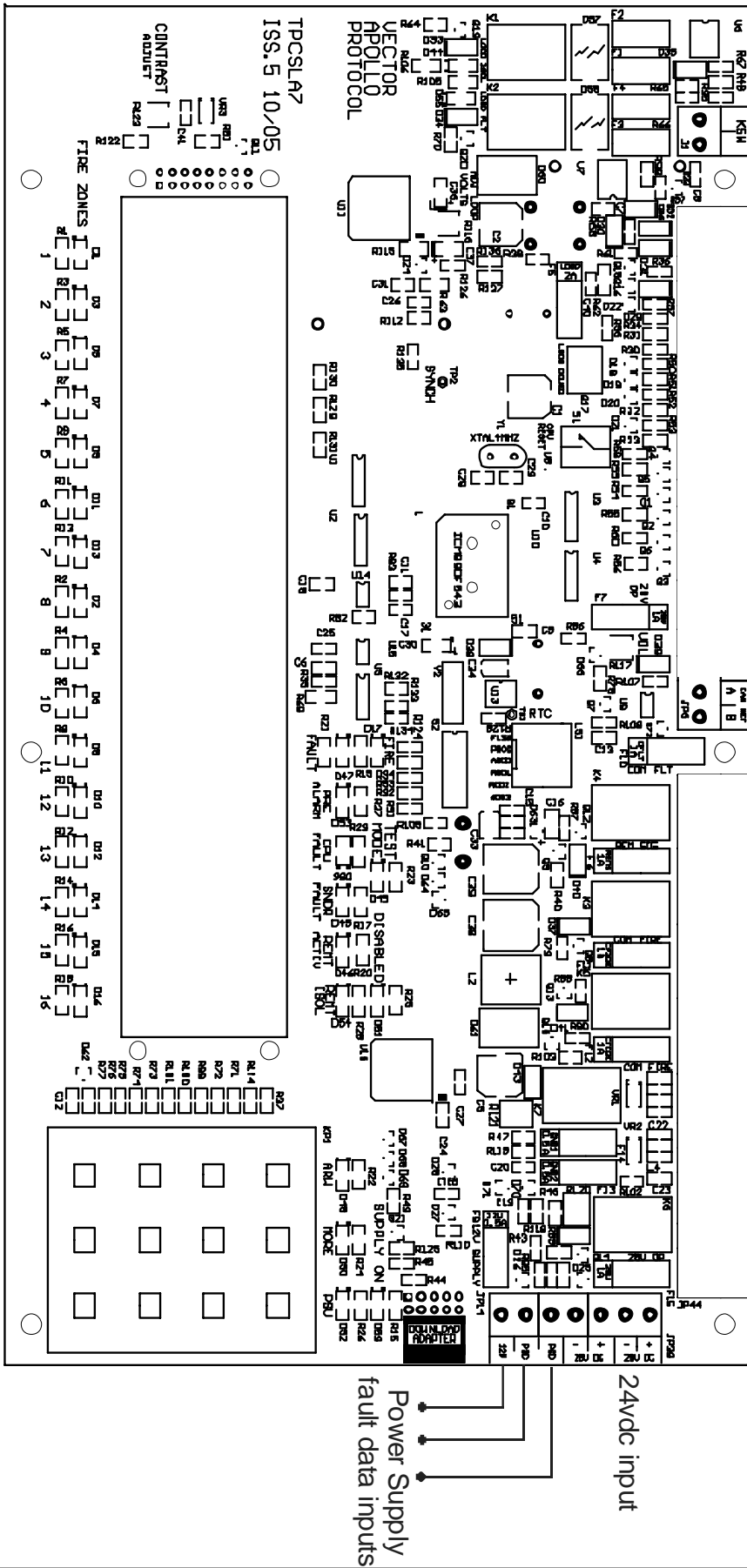
Select assigned 'yes' will default LEDs to indicate zones of associated panel address
Select network wide 'yes' will default LEDs 1 -16 to repeat 'all' for panel addresses 00 to 15
LEDs 17 - 64 if fitted will default to 'off' in this circumstance.

4.5 SET KEYPAD OPTIONS
- Disable / enable evacuate button
- Disable / enable silence button
- Disable / enable reset button
- Local evacuate no / yes, should be set in unison with the main panel settings
- Local silence no / yes, be aware that operation may be affected.
- Local reset no / yes

PCSLA7-R

CAN Network (Belden cable). Up to 8 repeaters per panel

A

B

Power Supply
fault data inputs

24vdc input