

LCD status display

Product details

Functionality.

This system stores up to 48 pre-programmed messages of 32 characters long.

A menu is available to view all pre-programmed alarm messages.

When one of the 48 inputs becomes active, the message corresponding to that input line is displayed on the LCD.

If any alarms are active, the display automatically goes to the alarm message display where you can scroll through the alarm messages.

Alarm start and stop times are logged and can be down loaded to a PC. Reports can be generated from this information and give for example plant down time reports.

Up to 32 LCD System Display units can be placed on a single RS485 bus network. This will allow several plants to be monitored in a factory.

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Features.

This display has 48 opto isolated inputs (2 x DB25 connectors with 24 signal inputs and one ground on each).

1. A RS232 interface is provided for communications to a PC (Laptop).
 - Firmware upgrade.
 - System status check, memory display and test.
 - Upload preset alarm messages into display memory.
 - Download alarm log for report generation.
2. A RS485 interface is provided to enable a bus network to connect more than one display to a PC to enable monitoring multiple alarms from a central point.
 - Allow for same functions as in "1" above
3. Menu to view alarm messages stored in memory.
4. Menu to step through displayed alarm messages.
5. Menu selection for RS232 or RS485
6. Any of the inputs can be configured active HIGH or active LOW.
7. Tricolor LED :
 - Green - no alarms.
 - Yellow - one alarm.
 - Red - more than one alarm.
8. Four membrane keys: Up, Down, Enter and Escape.

Power supply specification.

24 Volt DC 150 mA

Input signal specification.

Input HIGH = 24V DC

Input LOW = 0V DC

Active HIGH configuration:

24 Volt to trigger alarm display message.

0 Volt for no alarm message trigger.

Alarm active trigger will be between 18 and 24 Volt, giving a buffer zone between 0 and 16 Volt to protect against noise signals triggering the alarm.

Active LOW configuration:

0 Volt to trigger alarm display message.

24 Volt for no alarm message trigger.

Alarm active trigger will be between 0 and 16 Volt, giving a buffer zone between 18 and 24 Volt to protect against noise signals triggering the alarm.

Programming the display.

In order to program this unit the PPtest V3.01 test-bench is required.

Use the "File" tab to connect to a comms port and read the LCD version under the "LCD" tab.

Select the "LCD" tab to upgrade the "Firmware" and "Send messages" to the display.

In the PPtestV301 folder, look at the LcdMessages folder for this file PPmsgSTD.txt, this contain a standard message file layout.

Message layout.

The message must start with a "M", "H" or "L" and two numbers (01 to 48), a space is used to separate the message number from the message text.

- L = LOW active alarm level.
- H = HIGH active alarm level.
- M = HIGH active alarm level.

The messages must be numbered sequentially and there must be a new line ("Enter") after the last message.

The message number is followed by the message text and can be 32 characters long.

The sample file has numbers up to "M48", if you use this file as a template, please remember to delete the message numbers after your last message.

Paths

In the settings file "PPTest.ini" you can set up the paths for the folders containing the firmware and messages, this will make it easier to navigate to the correct folder.

Alarm display.

If you get an alarm on one of the 48 inputs, the alarm will be displayed on the LCD and logged in memory with a date and time stamp.

The display will automatically go to the Alarm Message display where you will have the alarm number first, starting with 01 up to 48, this is simply a number to indicate the number of alarms you had. Next you will have the message number (01 to 48), this will correspond to the input number (01 to 48) that was triggered.

The LED will be orange for one alarm and red for more than one alarms.

You can scroll through the displayed alarms with the up / down keys.

If you accept an alarm by pressing the "Enter" key, the alarm will be cleared from the display if it is no longer active on the input. If the alarm is still active, the "Enter" or "ESC" key will take you back to the normal Menu and you can go back to the Alarm Menu to view the active alarms again.

If you get the same alarm input more than once, it will only be displayed once until it is cleared from the display. It will however be logged in memory when active and when cleared.

Log message layout.

Date – time – unit address – input – status (A or C) – flag – message (description of alarm)

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