



**Power Supply For Use In FMT-400  
Inbuilt LCD Display  
4 Inbuilt Function Keys  
Wide Supply Range**

**Introduction**

The PSU-400 module is the Power supply module for the RACK-400H and the RACK-400F. It supplies all the power needs for the various modules used within the FMT-400 system (except were an external power supply is needed). The PSU-400 includes an integral 4 line by 20 character LCD display - for user text output from the CPU modules, and also for use with built in system menu display. There are also four user configurable function buttons.

**General Specifications**

|                                |  |
|--------------------------------|--|
| Storage temperature            | -20 to +70 °C  |
| Operating temperature          | 0 to 55 °C   |
| Humidity                       | 20-90% non condensing  |
| Weight                         | 975g   |
| Dimensions                     | Standard FMT-400 PSU width module  |
| Mains Supply Voltage           | 90 - 264Vac, 120 - 370Vdc  |
| Mains Supply Frequency         | 47 - 440Hz   |
| Current Consumption From Mains | Max 0.9A at 230Vac, 1.5A at 110Vac   |
| Mains Input Connection         | Male IEC connector on front panel  |
| Mains Input Fuse               | (T) 3.15A  |
| LCD Display                    | 4 lines by 20 characters, Yellow/Green backlight, automatic contrast compensation for ambient temperature. |
| Keys                           | 4 membrane keys, functions user configurable.  |



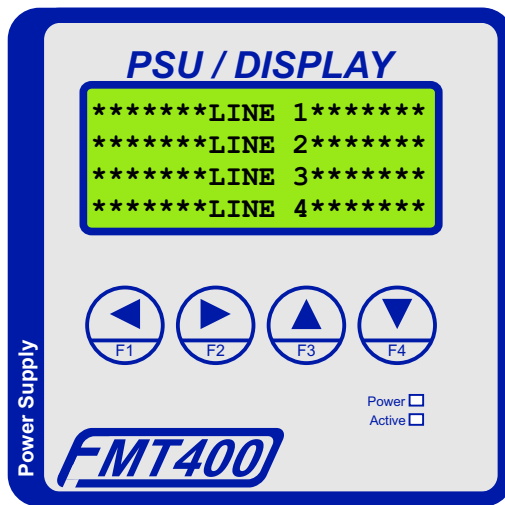
## Connection Details

The mains connection to the PSU-400 is made via an IEC plug on the front panel of the PSU which can be connected to using a IEC socketed lead.



**SAFETY WARNING!** *If removing the PSU-400 from the Rack that it is inserted in the rack you must remove the mains lead first, because there are exposed terminals within the PSU-400 when it is removed from the rack.*

## Integral Display & Function Keys



### Using the LCD Display

The PSU-400/DISPLAY incorporates a 4 line by 20 character LCD display. The display is treated by the FMT-400 and by Flex32 as serial port 8.

Text can be printed on the display by the use of the 'Text' function, specifying the text string number (as you would for a normal serial port) and the port number as 8.

Printing text on the display can use all of the existing control codes to incorporate date and time, register contents etc. There are also special control codes exclusively for use with the display. These can be placed in the text string by clicking on the 'Display' button in the Text String Editor and choosing from the list presented. The codes are:

- %#0C - Clear display and position the cursor at the start of the first line.
- %#0D (or %r) - Position the cursor at the start of the first line.
- %#0A (or %l) - Position the cursor at the start of the next line.



## Integral Display & Function Keys (continued)

### Using the Function Keys

The PSU-400/DISPLAY incorporates 4 user configurable function keys for use within your application program if so desired.

To enable your application program to use these keys there are four internal flags and one internal register that relate to the keys. They have been assigned as shown in the table below:

| <u>Facility</u> | <u>Short Symbol Name</u> | <u>Long Symbol Name</u> | <u>Function</u>                                  |
|-----------------|--------------------------|-------------------------|--|
| IR78            | KeyCod                   | Key_Codes               | Function Keys as bit pattern. Bit 0=F1, Bit 3=F3 |
| IF40            | Key-F1                   | Key-F1                  | Function Key F1, ON when key is pressed          |
| IF41            | Key-F2                   | Key-F2                  | Function Key F2, ON when key is pressed          |
| IF42            | Key-F3                   | Key-F3                  | Function Key F3, ON when key is pressed          |
| IF43            | Key-F4                   | Key-F4                  | Function Key F4, ON when key is pressed          |

## LED Descriptions

| <u>Label</u> | <u>Colour</u> | <u>Description</u>   |
|--------------|---------------|--|
| Power        | Green         | Indicates presence of +5Vdc on backplane (indicates power supply is working correctly)                     |
| Active       | Yellow        | Flickers or illuminates when the LCD display is being written to by the CPU module present in the FMT-400. |

## System Menu Display

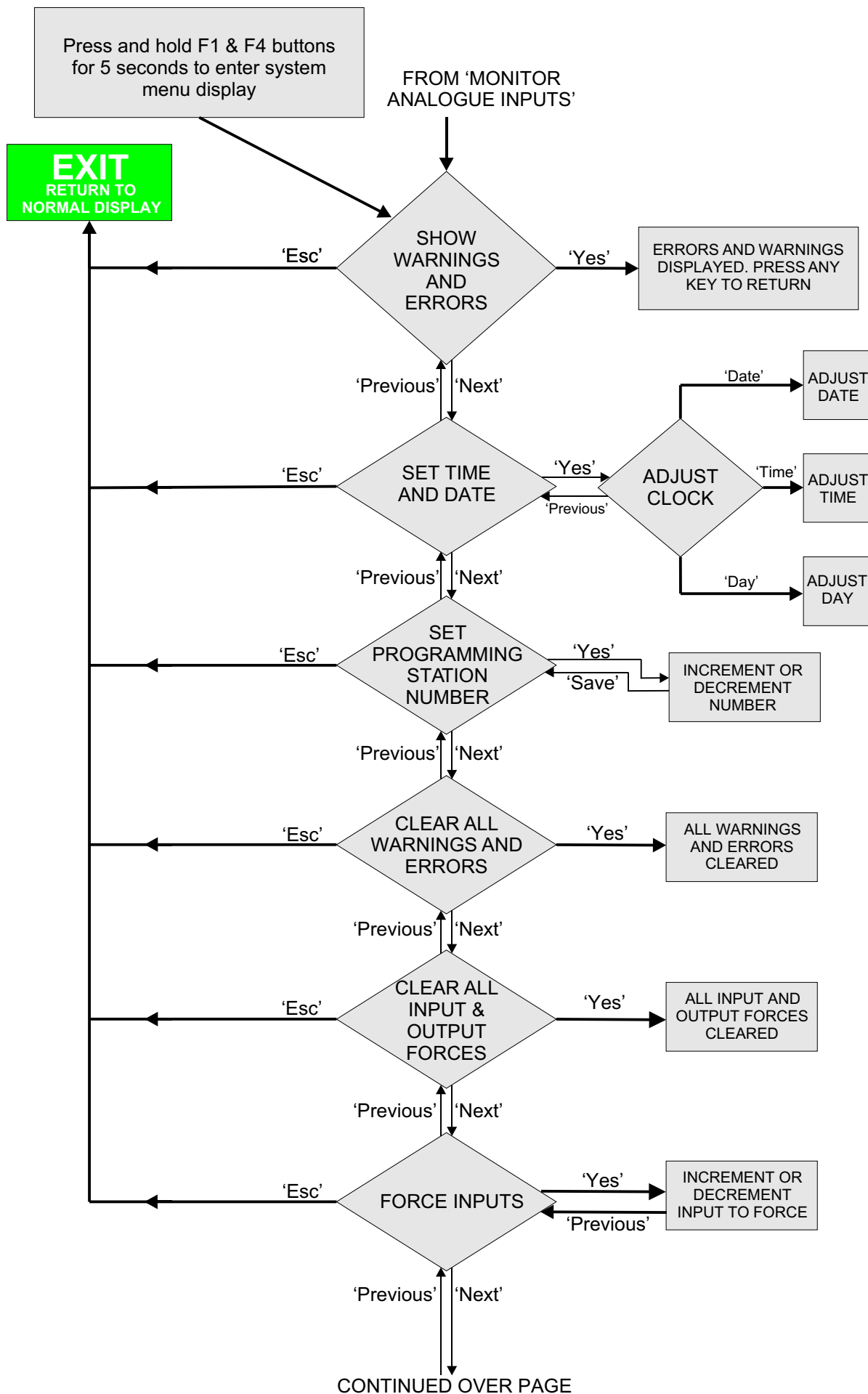
The keypad and the LCD display on the PSU-400 allow access to the 'System Menu Display'. This feature allows monitoring and configuring of the FMT-400 system without the need to use Flex32.

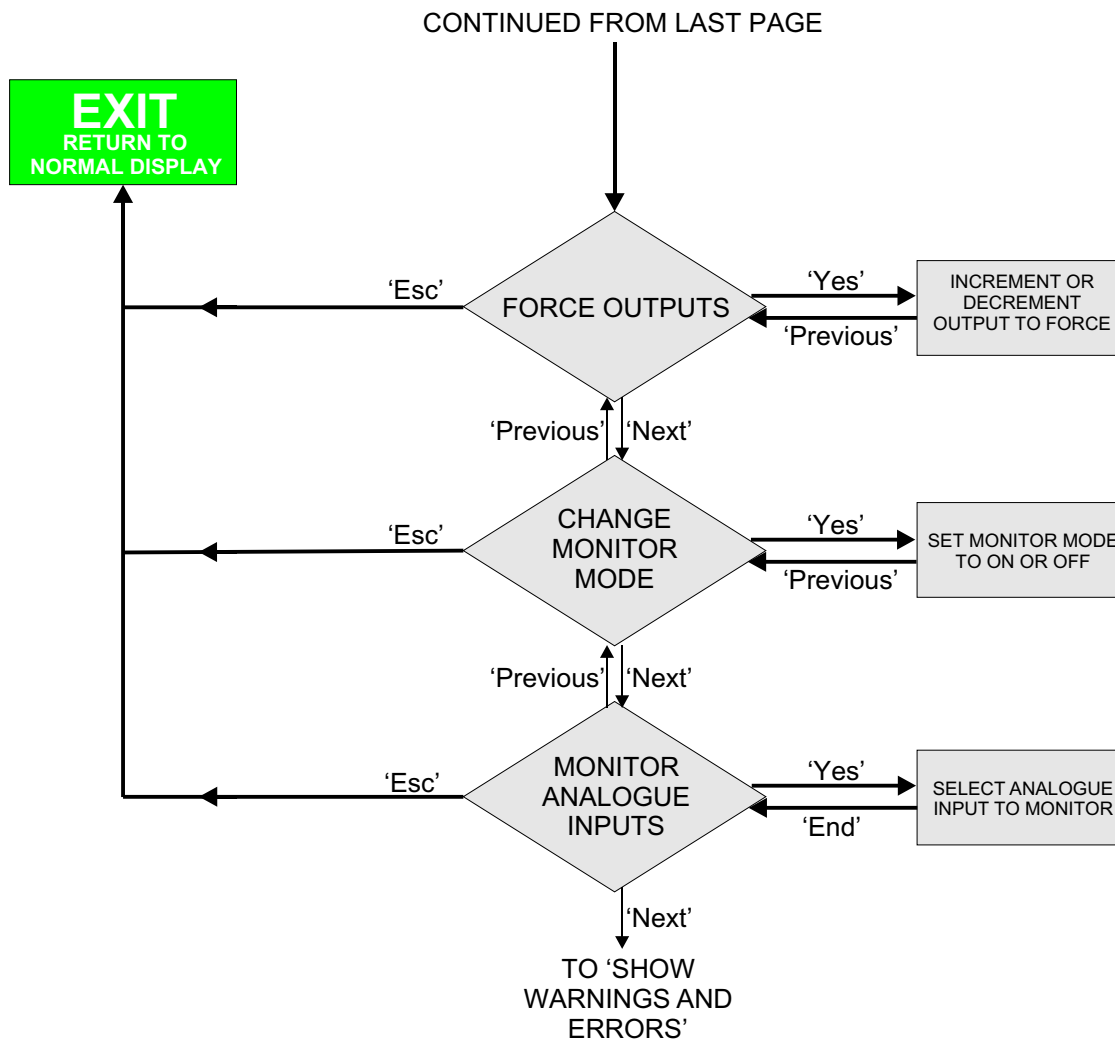
Please see the next page for a flowchart outlining the key features of the 'System Menu Display'

### **Monitor Mode:**

The 'System Menu Display' also allows 'Monitor Mode' to be set to 'on' or 'off'. If monitor mode is set 'on' then it is only possible to monitor the operation of the FMT-400 using Flex32, however it is not possible to make any changes to the program or modify any facilities using Flex32.







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## **Order Codes**

Part Number  
PSU-400

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