

Power Supply For Use In FMT-400
Enable FMT-400 system to be
powered by 24Vdc
Inbuilt LCD Display
4 Inbuilt Function Keys

Introduction

The PSU-400-24 module is a 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). It enable the FMT-400 system to be powered by a nominal 24Vdc power supply. The PSU-400-24 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	815g
Dimensions	Standard FMT-400 PSU width module
24Vdc PSU required	Must be capable at supplying 2.5A at 24Vdc*
Supply Voltage	18Vdc to 30Vdc, 24Vdc nominal
Max Current Consumption	Max 1.5A @ 24Vdc
Power Input Connection	Phoenix two part connector on front panel
Fuse	3A Self Resettable
LCD Display	4 lines by 20 characters, Yellow/Green backlight, automatic contrast compensation for ambient temperature.
Keys	4 membrane keys, functions user configurable.
Main On / Off switch	On front panel of PSU-400-24

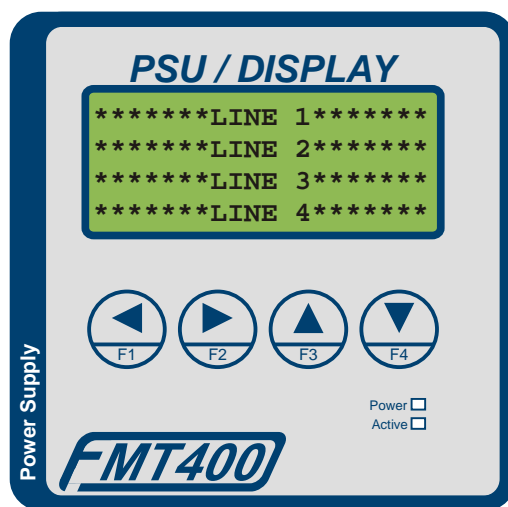
*A suitable Power Supply is the Colter PS 24/2.5



Connection Details

+V terminal: Connect to supply +24Vdc
 0V terminal: Connect to supply 0V
 Earth terminal: Connect to a good earth eg. The gear plate that the FMT-400 system is mounted on.

Integral Display & Function Keys



Using the LCD Display

The PSU-400-24/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-400-24/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

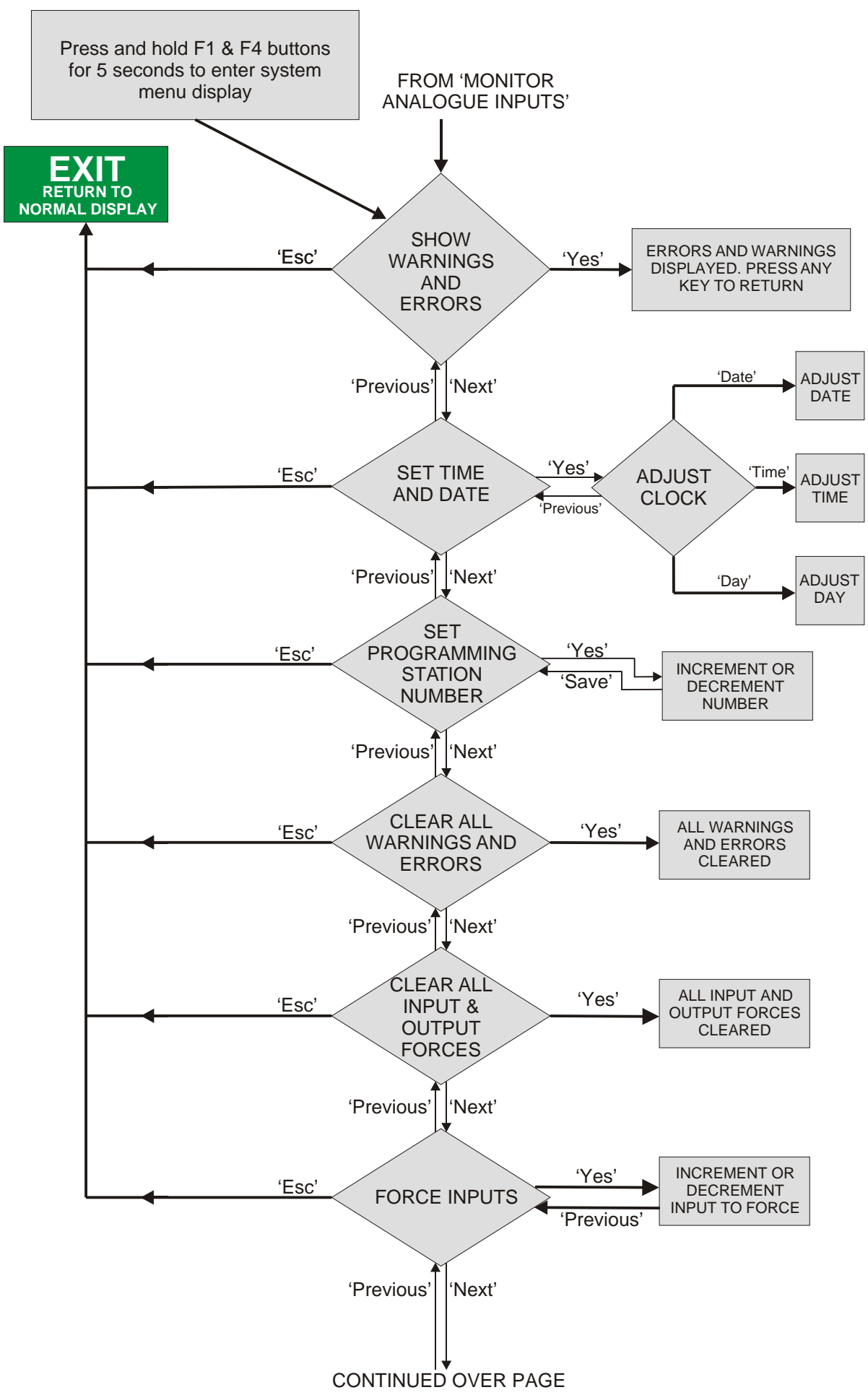
The keypad and the LCD display on the PSU-400-24 allow access to the 'System Menu Display'. This feature allows monitoring and configuring of the FMT-400 system without the need to use Flex32.

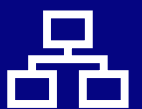
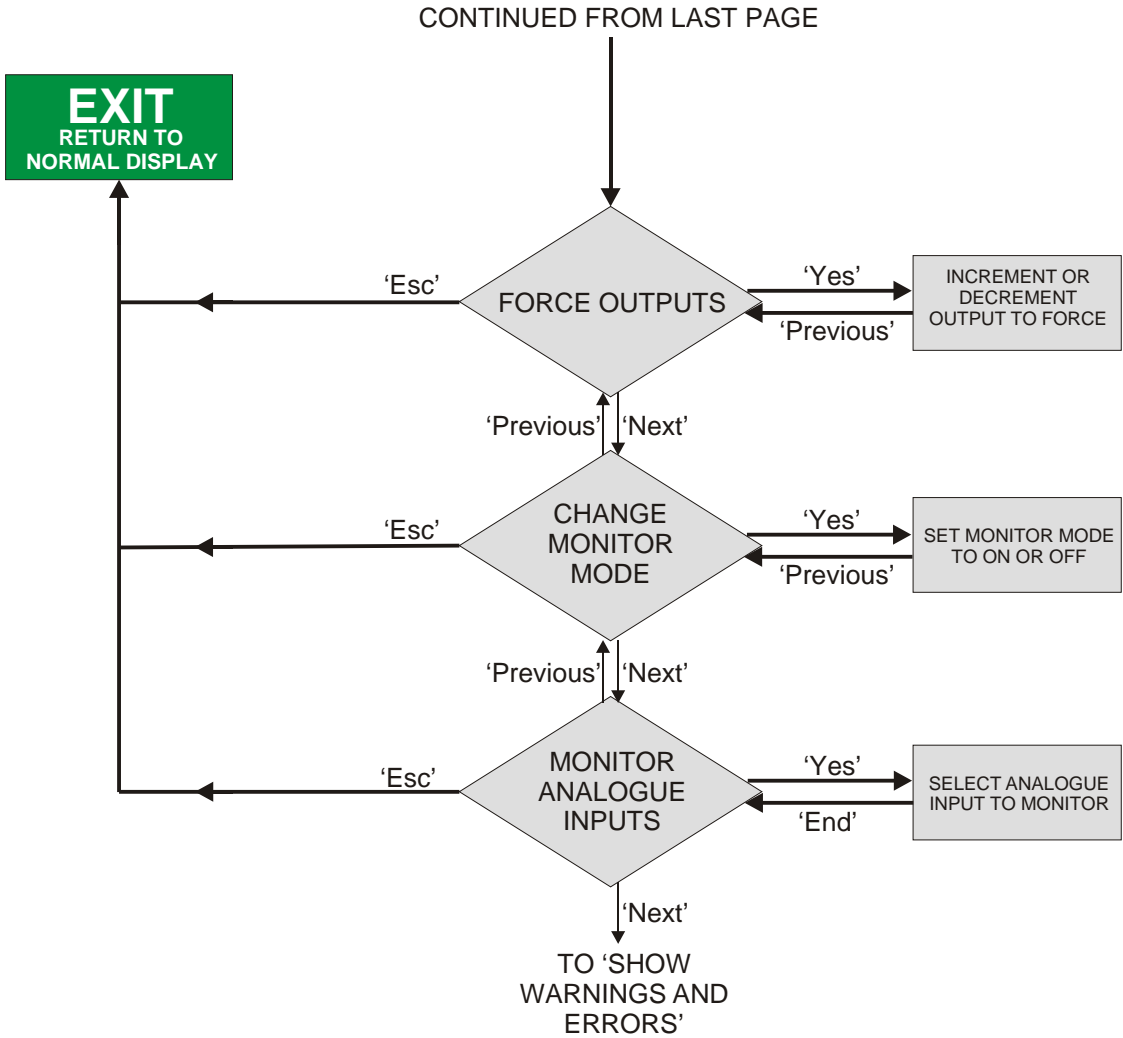
Please see the next page for a flowchart outlining the key features of the 'System Menu Display'

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

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PSU-400-24

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