



Digital Trip Unit

The digital trip unit is an electronic monitoring and protection unit consisting of a digital meter and a remote DIN rail mounting relay unit. It offers increased reliability and accuracy over the traditional analogue meter relay and is available to measure all the same electrical parameters as the standard digital meters - AC Voltage, AC Current, DC Voltage, DC Current, Frequency and Power (Watts or Vars).

The digital trip unit has 'HI' and 'LO' trip points which can easily be set by the user with the aid of a small screwdriver and can be verified by pressing one of two push-buttons on the front of the meter. The FPM964 digital meter constantly displays the measured parameter so if a system is approaching its trip point it can be observed and action taken. Optional terminal protection covers are also available.

Models Available

FPM964DTU DIN96x48 Digital Trip Unit

Product Features

- User Adjustable HI and LO setpoints
- 3½ digit red LED display
- DIN 96x48mm size
- User adjustable scale and decimal point
- Wide range of AC and DC inputs
- Easy to wire screw type terminals

For dimensions see page 7

For digital measurement with user adjustable high and low setpoints

Specification

For Digital Meter Specification see relevant page (pages 2 to 4)

Differential:

- < 10 digits

Repeatability:

- < 3 digits

Relay Unit

Enclosure:

- 55mm wide grey ABS
- Case IP40, terminals IP20
- Fixes to 35mm DIN rail (DIN-EN 50022)

Auxiliary Power Supply:

- 110 or 230V 50/60Hz (standard)
- 12, 24, 48V 50/60Hz or 10-60Vdc

Auxiliary Power Supply Variation:

- ±15%

Auxiliary Burden:

- < 3VA

Output Contacts:

- 2 single pole changeover contacts
- 8A at 250Vac/30Vdc

Operating Temperature:

- 0°C to 60°C

Contact Life:

- 1,000,000 operations at 5A
- 10,000,000 operations at 1A

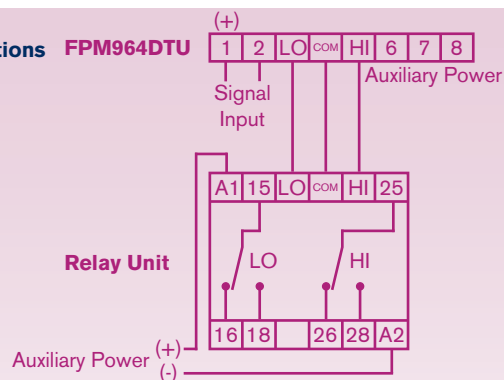
Reset Time:

- 100msec

Weight:

- 290g

Connections FPM964DTU



For auxiliary power connections see page 7

Ordering information

Code	Meter Type	Input & Scaling	Auxiliary
FPM964DTUDCA	DC Ammeter Trip Unit	-	-
FPM964DTUDCV	DC Voltmeter Trip Unit	-	-
FPM964DTUACA	AC Ammeter Trip Unit	-	-
FPM964DTUACV	AC Voltmeter Trip Unit	-	-
FPM964DTUF	Frequency Meter Trip Unit	-	-
FPM964DTUW*	Wattmeter Trip Unit	-	-
FPM964DTUV*	Varmeter Trip Unit	-	-
Specify	-	See Individual Specifications	
Specify	-	12, 24, 48, 110, 230, 415Vac	
10-60Vdc	-		10-60Vdc
Example	FPM964DTUDCV	0-10Vdc / 0-100.0%	230Vac

* Wiring system information required e.g. 3 phase 4 wire unbalanced

General Specification

Environmental

Operating Temperature: 0°C to 60°C (Calibration temperature 23°C)
 Storage Temperature: -10°C to 70°C
 Temperature Coefficient: < 100ppm/ °C
 Relative Humidity: 0 - 85% non-condensing
 Warm Up Time: 1 minute

Display

Digit & Display: 3½ digit (1999) red LED (cosØ meter 3 digit)
 Digit Height: 10.2mm high (FPM482), 14.2mm high (FPM964)
 Decimal Point: Internally selectable
 Sampling Time: Approx 0.4 sec (FPM482), 1 sec (FPM964)
 Over Input Indication: '1'
 Polarity: Automatic with (-) indicating negative inputs
 Measuring Mode: Dual slope
 Input Mode: Floating
 Noise Elimination Ratio: CMRR over 86dB 50/60Hz

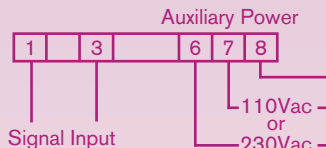
Enclosure

Enclosure: Flame retardant black ABS plastic case
 Enclosure Code: Case IP54 (IP65 with gasket optional) to IEC529
 Insulation Test: 2kV rms 50Hz 1min input/auxiliary (to IEC 414)
 2kV rms 50Hz 1min terminals/case (FPM482)
 4kV rms 50Hz 1min terminals/case (FPM964)
 Markings: CE marked

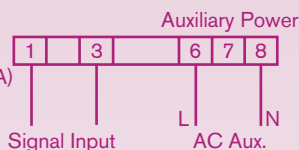
Specification subject to change without notice.

Auxiliary Power Connections

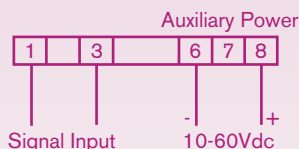
FPM964 Standard Dual AC Auxiliary Supply
 110/230Vac ±20% (Burden < 3VA)



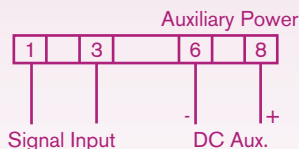
FPM964 Non Standard AC Auxiliary Supply
 12Vac, 24Vac, 48Vac, 110Vac, 230Vac ±20% (Burden < 3VA)



FPM482 Standard AC Auxiliary Supply
 12Vac (±10%)
 24Vac, 48Vac, 110Vac, 230Vac ±20% (Burden < 3VA)



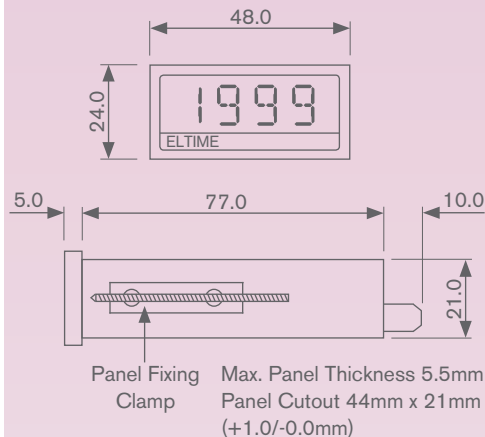
FPM964 DC Auxiliary Supply
 10-60Vdc (Burden < 2W)



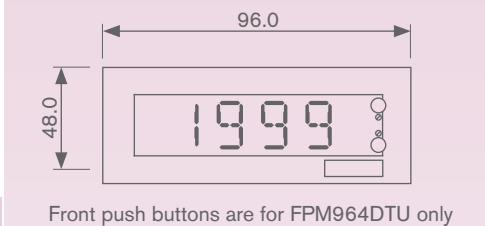
FPM482 DC Auxiliary Supply
 12Vdc (±10%), 24Vdc, 48Vdc ±20% (Burden < 2W)

Dimensions

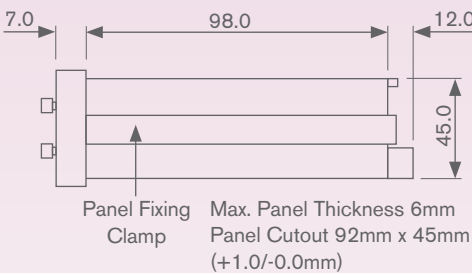
FPM482 Enclosure



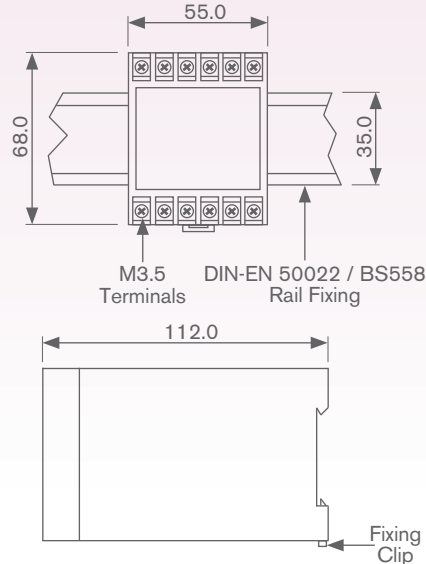
FPM964 Enclosure



Front push buttons are for FPM964DTU only



Watt/Var/CosØ Converter Unit and DTU Relay Unit Enclosure



All dimensions in mm