

Power Factor (cosØ) Meters

Digital power factor meters are available in the DIN 96x48mm size, for the measurement of power factor (cosØ). These self contained meters are panel mounting and are calibrated bi-directionally from 0.30 lag to 0.30 lead.

All digital power factor meters can be powered by a large selection of self contained AC or DC auxiliary power supplies, which all offer isolation between the measured input signal and auxiliary supply voltage. Optional terminal protection covers are also available.

Notes:

1. Ensure that current transformers are mounted such that K faces the supply and L faces the load.
2. Secondary windings of the current transformers should be earthed.



Models Available

- FPM964PF1** DIN96x48 1ph/3ph4w cosØ
- FPM964PF3** DIN96x48 3ph3w cosØ

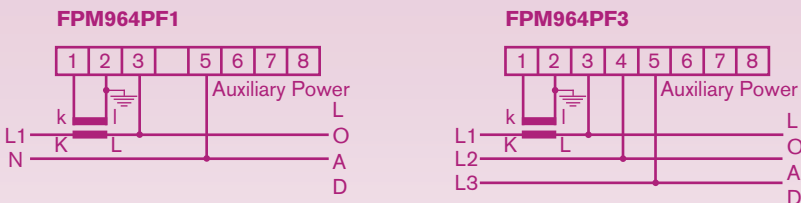
Product Features

- Power Factor (cosØ) measurement
- 3 digit red LED display
- DIN 96x48mm size
- Easy to wire screw type terminals

For dimensions see page 7

Digital Power Factor Meters - for measurement of power factor (cosØ)

Connections



For auxiliary power connections see page 7

Ordering information

Code	DIN Size & Meter Type	Input	Auxiliary
FPM964PF	96 x 48mm Digital CosØ meter	-	-
1	Single Phase / 3 Phase 4 Wire Balanced	-	-
3	3 Phase 3 Wire Balanced	-	-
Specify	-	Voltage (L-N or L-L) and Current -	-
110/230Vac	-	-	110/230Vac Dual Auxiliary
Specify	-	-	12, 24, 48, 415Vac
10-60Vdc	-	-	10-60Vdc
Example	FPM964PF1	230VL-N, 5A	110/230Vac

Specification

- Accuracy:**
 - Class 1.0 ($\pm 1.0\%$ max. error)
- Input Current, I_n :**
 - 0-0.2A to 0-10A direct connected
 - 1A or 5A CT operated
- Input Voltage, U_n :**
 - 110, 230 or 415V (-30% to +10%)
 - (50 to 600V upon request)
- Frequency:**
 - 50/60Hz
- Scale:**
 - 0.3 lag to 0.3 lead
 - Lag denoted by minus sign (-)
- Overload:**
 - 1.2 x I_n or U_n for 2 hours
 - 6 x I_n for 5 seconds
- Burden:**
 - Voltage circuit < 2VA per phase
 - Current circuit < 1VA per phase
- Response Time:**
 - < 1 second
- Weight:**
 - 420g

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

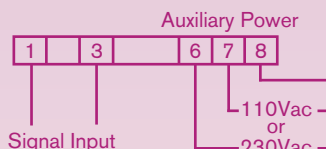
Enclosure

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

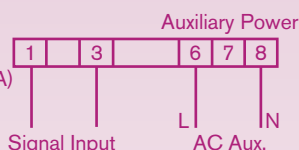
Specification subject to change without notice.

Auxiliary Power Connections

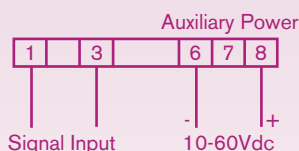
FPM964 Standard Dual AC Auxiliary Supply
 110/230Vac ±20% (Burden < 3VA)



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

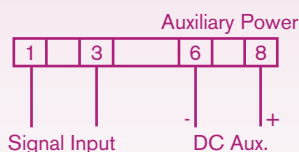


FPM482 Standard AC Auxiliary Supply
 12Vac (±10%)
 24Vac, 48Vac, 110Vac, 230Vac ±20%
 (Burden < 3VA)



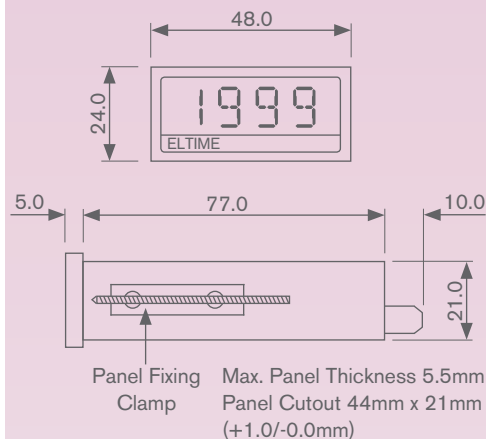
FPM964 DC Auxiliary Supply
 10-60Vdc (Burden < 2W)

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

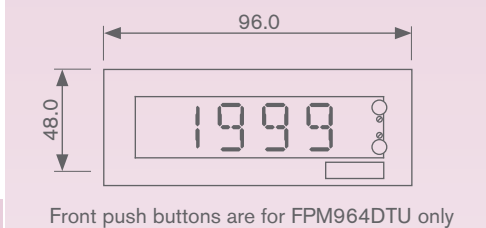


Dimensions

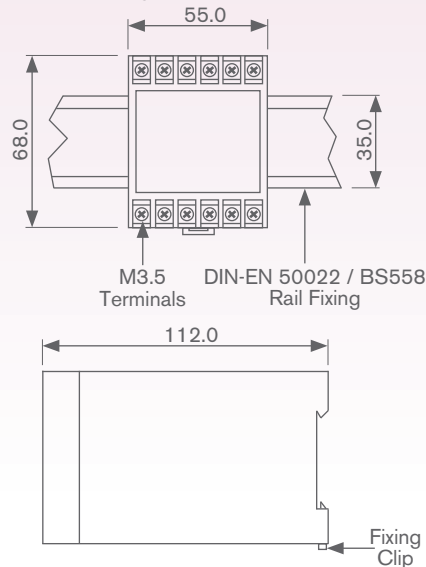
FPM482 Enclosure



FPM964 Enclosure



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



All dimensions in mm