



Moving Iron Meters

Moving Iron Meters

Models Available

- FE48MIA DIN 48 Moving Iron Ammeter
- FE72MIA DIN7 2 Moving Iron Ammeter
- FE96MIA DIN 96 Moving Iron Ammeter

- FE48MIV DIN 48 Moving Iron Voltmeter
- FE72MIV DIN7 2 Moving Iron Voltmeter
- FE96MIV DIN96 Moving Iron Voltmeter

Product Features

- AC current or AC voltage
- Standard DIN square sizes
- Interchangeable scaleplates
- Many options available (see page 22)

For dimensions see pages 23-24

Moving iron meters are suitable for the measurement of true rms AC current or voltage. All moving iron meters have interchangeable scaleplates. Scales are non-linear and are calibrated down to 20% of full scale. Ammeters are available with a 2x overload as standard or a 6x overload for monitoring motor start up currents.

Voltmeters are also available with scales for high voltage measurement via voltage transformers. All moving iron meters are calibrated for operation at 50/60Hz but calibration at 400Hz is available upon request. Moving iron meters may be used to measure DC at reduced accuracy.



Moving Iron – for measurement of true rms AC current or voltage

Specification

Accuracy:

- Class 1.5 ($\pm 1.5\%$ max. error)

Input Current, I_n :

- 0-0.5A to 0-100A direct connected
- FE48 40A maximum direct
- 0-1A or 0-5A CT operated

Input Voltage, U_n :

- 0-100V to 0-800V direct connected
- FE48 500V maximum

Scales:

- 0-0.5, 1, 1.5, 2, 2.5, 3, 4, 5, 6, 8, 10, 15, 20, 25, 30, 40, 50, 60, 75, 80, 100, 120, 150, 200, 250, 300, 400, 500, 600, 800, 1000, 1200, 1500, 1600, 2000, 2500, 3000A
- 100, 150, 250, 300, 400, 500, 600, 800V

Overload:

- 1.2 x I_n or U_n for 2 hours
- 10 x I_n or U_n for 5 seconds

Frequency:

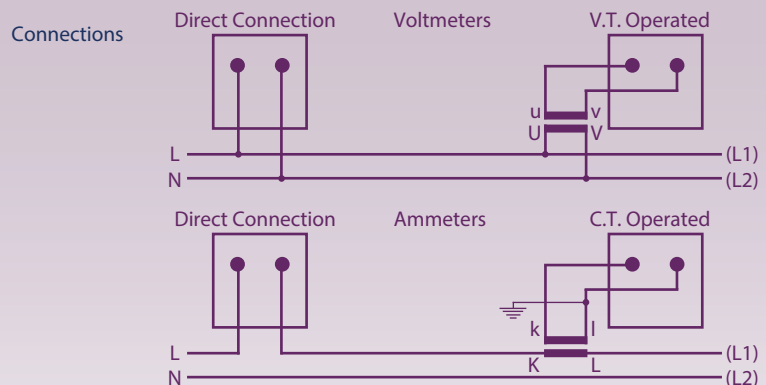
- 50/60Hz (400Hz upon request)

Burden:

- Ammeter < 1VA, Voltmeter < 3VA

Weight:

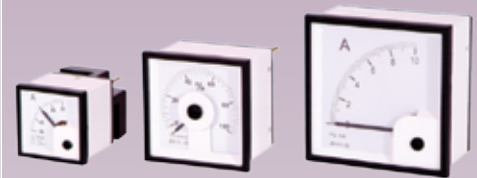
- FE48 140g, FE72 190g, FE96 290g



Ordering information

Code	DIN Square Size & Movement Type	Meter Type	Input & Scaling
FE48MI	48 x 48mm Shortscale (90°)	-	-
FE72MI	72 x 72mm Shortscale (90°)	-	-
FE96MI	96 x 96mm Shortscale (90°)	-	-
A	-	Moving Iron Ammeter	-
V	-	Moving Iron Voltmeter	-
Specify	-	-	0.5 to 100A direct (FE48 – 40A max.)
Specify	-	-	1A or 5A from a CT scaled 5A to 3000A
Specify	-	-	100, 150, 250, 300, 400, 500, 600, 800V (FE48 – 500V max.)
Example	FE48MI	A	100/5A

Moving Coil Meters



Moving coil meters are suitable for measurement of DC current or voltage. All meters have a jewel and pivot movement which ensures reliability and accuracy. The moving coil meters are available in shortscale (90°) versions or longscale (240°) versions.

All meters have interchangeable scaleplates. Scales are linear and are calibrated from zero to full scale. Scaleplates are available in any process unit including A, V, °C, bar, rpm, kW and %, so meters can be driven from a transducer output.

Models Available

FE48MCA DIN 8 Moving Coil Ammeter
 FE72MCA DIN72 Moving Coil Ammeter
 FE96MCA DIN96 Moving Coil Ammeter
 FE72LSA DIN72 240° Mov. Coil Ammeter
 FE96LSA DIN96 240° Mov. Coil Ammeter

FE48MCV DIN48 Moving Coil Voltmeter
 FE72MCV DIN72 Moving Coil Voltmeter
 FE96MCV DIN96 Moving Coil Voltmeter
 FE72LSV DIN72 240° Mov. Coil Voltmeter
 FE96LSV DIN96 240° Mov. Coil Voltmeter

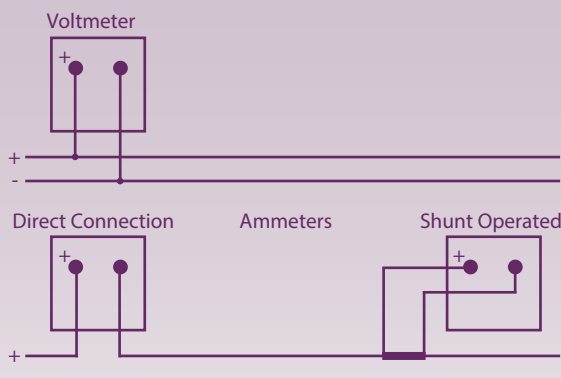
Product Features

- DC current or DC voltage
- Standard DIN square sizes
- Interchangeable scaleplates

For dimensions see pages 23-24

Moving Coil – for measurement of DC current or voltage

Connections



Ordering information

Code	DIN Square Size & Movement Type	Meter Type	Input & Scaling
FE48MC	48 x 48mm Shortscale (90°)	-	-
FE72MC	72 x 72mm Shortscale (90°)	-	-
FE96MC	96 x 96mm Shortscale (90°)	-	-
FE72LS	72 x 72mm Longscale (240°)	-	-
FE96LS	96 x 96mm Longscale (240°)	-	-
A	-	Moving Coil Ammeter	-
V	-	Moving Coil Voltmeter	-
Specify	-	50 mA to 40A direct (FE48 - 25A max.)	-
Specify	-	> 40A use shunt & 50, 60, 75mV Voltmeter (c/w scale)	-
Specify	-	4-20mA (c/w scale)	-
Specify	-	50mV to 800V (FE48 - 500V max.)	-
Example	FE72MC	V	100Vdc

Specification

Accuracy:

- Class 1.5 ($\pm 1.5\%$ max. error)

Input Current, I_n :

- 0-50 mA to 0-40A direct connected
- FE48 25A maximum direct
- > 0-40A use shunt and mV voltmeter
- 4-20mA

Input Voltage, U_n :

- 0-50mV to 0-800V direct connected
- FE48 500V maximum

Scales:

- 0-1, 1.5, 2, 2.5, 3, 4, 5, 6, 8, 10, 15, 20, 25, 30, 40, 50, 60, 75, 80, 100, 120, 150, 200, 250, 300, 400, 500, 600, 800, 1000, 1200, 1500, 1600, 2000, 2500, 3000 mA, mA, A, mV, V

Overload:

- 1.2 x I_n or U_n for 2 hours
- 10 x I_n or U_n for 5 seconds

Voltage Drop:

- Ammeter < 100mV

Current Consumption:

- Voltmeter < 200V 1mA, > 200V 200 mA

Weight:

- FE48 140g, FE72 190g, FE96 280g
- FE72LS 310g, FE96LS 360g