

Round Style Analog Panel Meters



- **Glass window for optimum viewing**
- **Rugged black plastic case**
- **Black spade-type pointer for easy distant reading**

Specifications

Accuracy:	±2% F.S. (Iron-Vane), ±3% F.S. (Rectifier)
Frequency models:	45-55Hz ±0.3Hz (120V-240V) 55-65Hz ±0.3Hz (120V-240V) 380-420Hz ±1.2Hz (120V-240V)
Wattmeters:	±2% F.S.; Compensated Meters: ±3% F.S.
Movement:	Models 55, 155: Iron-vane, magnetically damped Models 45, 145: Annular, rectifier type Models 85 & 185: small core magnet, self-shielding Models 25, 27, 29, 125: Annular, self-shielding
Tracking:	±3%
Shielding:	Calibration is unaffected by magnetic panel mounting.
Response Time:	1.5 seconds maximum
Overload (1 sec.):	10 times F. S.
Overload (Continuous):	1.5 times F. S.
Repeatability:	2%
Dial:	Sharp clear scale. Each dial arc is calibrated to track the specific type of movement used.
Case:	High density black plastic
Resistance:	±15%
Operating Temp:	-4°F to +149°F (-20°C to +65°C)
Pointer:	Models 85 & 185: knife edge, black finish All others: spade pointer with black matte finish
Scale Length:	Model 155 & 185: 1.6" (40.6mm) Models 125 & 145: 1.8" (45.7mm) Model 55: 2.3" (58.4mm) Models 25, 27, 45 & 85: 2.5" (63.5mm) Model 29: 3.80" (96.5mm)
Net Weight:	Models 55, 155 & 185: 5oz (0.14kg) Models 85, 125, 145 & 45: 7oz (0.20kg) Models 25 & 27: 8oz (.23kg) Model 29: 11oz (.31kg)

Ordering Information

AC Microammeters Rectifier Type, Self Shielding Movement

Range	Approx. Impedance (ohms)	Model/Size and Catalog Number
		3-1/2" Model 45
0-100	3400	04080

AC Milliammeters, Iron Vane & Rectified Movement

Range	Approx. Impedance (ohms) @ 60 Hz	Model/Size and Catalog Number		
		2-1/2" Model 155	3-1/2" Model 55	4-1/2" Model 45
0-1	600	<>	<>	06820*
0-5	200	<>	<>	06840*
0-15	887.0	<>	05380	<>
0-50	80.0	<>	05400	<>
0-100	717.2	<>	05410	<>
0-150	8.76	<>	35069	<>
0-250	3.1	06080	05420	<>
0-500	.9	<>	05430	<>

* Rectified Models

AC Ammeters, Iron Vane Movement

Range	Approx. Impedance (ohms) @ 60 Hz	Model/Size and Catalog Number	
		2-1/2" Model 155	3-1/2" Model 55
0-1	.213	02100	00950
0-1.5	.105	<>	00960
0-2	.065	02120	00970
0-3	.028	02130	00980
0-5	.008	02140	00990
0-10	.004	02150	01001
0-15	.0025	02160	01010
0-25	.002	02170	01020
0-30	.0015	02180	01030
0-50	.001	02190	01040
0-75	.0002	<>	03432
0-75	.008	02200*	<>
0-100	.008	02210*	01060*
0-150	.008	02220*	01070*
0-200	.008	<>	01080*
0-250	.008	02240*	01090*
0-300	.008	<>	01100*
0-500	.008	02260*	01110*

<> Available on special order.

* These meters require use of an external current transformer from page C4-C6

4-20mA Process Meters, Dial indicates 0-100 Percent

Range	Approx. Impedance (Ohms)	Model/Size and Catalog number 3-1/2" Model 25
4-20	5.0	35022

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Ordering Information

AC Voltmeters, Iron Vane Movement

Range	Approx. Impedance (Ohms) @ 60 Hz	Model/Size and Catalog Number	
		2-1/2" Model 155	3-1/2" Model 55
0-5	33	<>	08410
0-10	133	<>	08420
0-15	300	<>	08430
0-25	833	<>	08440
0-50	3,333	09290	08450
0-100	16,166	<>	08460
0-150	25,000	09310	08470
0-250	41,166	09320	08480
0-300	50,000	09330	08490
0-500	83,333	09340*	08500*
0-750	125,000	<>	08510*

* External multipliers (model 183) are furnished on AC meters having a range of 500 volts or higher.

<> Available on special order

AC Volt Meters Rectifier Type, Self Shielding Movement

Range	Approx. Impedance (ohms) @ 60 Hz	Model/Size and Catalog Number	
		2-1/2" Model 45	3-1/2" Model 45
0-150	300K	08010	

DC Microammeters, Self Shielding Movement

Range	Approx. Impedance (ohms) @ 60 Hz	Model/Size and Catalog Number	
		2-1/2" Model 125	3-1/2" Model 25
0-50	1800	04210	03760
0-100	1800	04220	03770
0-200	1100	04230	03780
0-500	90	04240	03790
50-0-50	1800	04194	03810
100-0-100	1100	04196	03820
500-0-500	43	<>	03830

<> Available on special order

DC Taut-Band Microammeters, Self-Shielding Movement

Range	Approx. Impedance(ohms) @ 60 Hz	Model/Size and Catalog Number	
		2-1/2" Model 125T	3-1/2" Model 25T
0-10	4900	04197	<>
0-15	1960	<>	03741
0-25	1960	04201	03751
0-50	960	<>	03761
0-100	500	<>	03771

<> Available on special order

DC Milliammeters, Self Shielding Movement

Range	Approx. Impedance (ohms) @ 60 Hz	Model/Size and Catalog Number	
		2-1/2" Model 125	3-1/2" Model 25
0-1	43.0	05580	04610
0-1.5	43.0	<>	04620
0-5	2.0	05610	04640
0-10	10.0	05620	04650
0-15	6.6	05630	04660
0-25	4.0	05650	04680
0-50	2.0	<>	04690
0-75	1.3	05670	<>
0-100	1.0	05680	04710
0-150	.66	05690	04720
0-200	.5	05700	04730
0-250	.5	05710	<>
0-300	.33	<>	04750
0-500	.2	05730	04760
0-1000	.05	<>	04780

<> Available on special order.

Wattmeters - Dynamometer Type

Range	Maximum		Model/Size and Catalog Number
	Volts	Amps	
0-300	150	4.0	3-1/2" Model 75 10600

DC Ammeters, Self Shielding Movement

Range	Approx. Impedance (Ohms) @ 60 Hz	Model/Size and Catalog Number	
		2-1/2" Model 125	3-1/2" Model 25
0-1	.050	01460	00005
0-2	.025	<>	00030
0-3	.0166	01490	00040
0-5	.010	01500	00050
0-10	.005	01510	00060
0-15	.0033	01520	00070
0-25	.002	01530	00080
0-30	.0017	01540	00090
0-50	.001	01550	00099
0-75	10.0	01560*	00110*
0-100	10.0	01570*	00120*
0-150	10.0	01580*	00130*
0-200	10.0	01590*	00140*
0-250	10.0	<>	00151*
0-300	10.0	01610*	00160*
0-500	10.0	01620	00170*
0-750	10.0	<>	00177*
0-1000	10.0	<>	00188*
15-0-15	.0033	<>	00200
30-0-30	.0017	01660	00210
50-0-50	.001	016670	00220
75-0-75	20.0	35066	35037*

* DC current meters are self-contained for ranges up to and including 50 amperes. Higher range DC current meters (50 mV) listed above are calibrated for 5' leads and require external shunts.

<> Available on special order.

DC Millivoltmeters, Self Shielding Movement

Range	Approx. Impedance (ohms) @ 60 Hz	Model/Size and Catalog Number	
		2-1/2" Model 125	3-1/2" Model 25
0-50	10.0	06970	06910
0-100	20.0	<>	35093

<> Available on special order.

DC Voltmeters, Self Shielding Movement

Range	Approx. Impedance (Ohms) @ 60 Hz	Model/Size and Catalog Number	
		2-1/2" Model 125	3-1/2" Model 25
0-1.5	1000 Ohms Per Volt	08850	<>
0-3		<>	07070
0-5		08870	07080
0-10		08890	07100
0-15		08900	07110
0-25		08910	07120
0-30		08920	07130
0-50		08930	07140
0-100		08940	07150
0-150		08950	07160
0-200	2000 Ohms Per Volt	08960	07170
0-250		08970	07180
0-300		<>	07190
0-500		<>	07200
0-750		<>	07210
0-1000		<>	07220*
0-2000		<>	07240*
0-3000		<>	07260*
0-5000		<>	07280*

*External multipliers, Model 183, are furnished on 2-1/2" DC meters 750 volts or higher.

<> Available on special order.

Frequency Meters, Self-Shielding Movement

Range	Voltage	Model/Size and Catalog Number	
		2-1/2" Model 185	3-1/2" Model 85
45-55 Hz	120V	35154	35160
55-65 Hz	120V	35156	35162
380-420 HZ	120V	35158	35164
45-55 Hz	240V	35155	35161
55-65 Hz	240V	35157	35163
380-420 Hz	240V	35159	35165

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2-1/2" Models 125, 151, 145, 155, & 185

Technical drawing showing the side and end views of a flange component. The side view (left) shows a flange with a total width of 2.69 inches, a central hole diameter of 2.22 inches, and a flange thickness of 0.29 inches. The end view (right) shows a circular flange with an outer diameter of 2.44 inches and a central hole diameter of 2.22 inches. The flange has a thickness of 0.30 inches. The end view also shows three mounting holes, each with a diameter of 0.16 inches, spaced 120 degrees apart. The mounting holes are required to be 120 degrees apart.

Dimensions and Callouts:

- Side View Dimensions:
 - Overall Width: 2.69
 - Central Hole Diameter: 2.22 DIA.
 - Flange Thickness: 0.29
 - Mounting Hole Diameter: 0.16 DIA.
- End View Dimensions:
 - Outer Diameter: 2.44 DIA.
 - Central Hole Diameter: 2.22 DIA.
 - Flange Thickness: 0.30
 - Mounting Hole Diameter: 0.16 DIA.
 - Mounting Hole Spacing: 120°

Callouts:

- (2) #1/4-28 STUDS
- .16 DIA. DRILL THRU. (3) MTG. HOLES REQ'D 120° APART

3-1/2"-Models 25 & 251, 45, 55, 75, 85 & Model 25 Process Meter

Technical drawing showing the side and end views of the Model 25 Process Meter with dimensions:

- Side View Dimensions:
 - Overall Width: 2.5
 - Internal Width: 1.31
 - Internal Width: .70
 - Overall Height: 3.50 DIA.
 - Internal Height: 2.82 DIA.
 - Internal Height: 2.75 DIA.
- End View Dimensions:
 - Overall Diameter: 3.16 DIA.
 - Internal Diameter: 1.50
 - Internal Diameter: .30
 - Internal Diameter: .16 DIA. DRILL THRU. (3) MTG. HOLES REQ'D 120 APART
 - Internal Diameter: (2) #1/4-28 STUDS

NOTE: "T" model suffix used for Taut-Band movement

Technical drawing of a 3-1/2 inch Model 75 component, showing side and end views with dimensions.

Side View Dimensions:

- Overall length: 2.06
- Overall width: 3.50 DIA.
- Top flange thickness: .25
- Bottom flange thickness: .25
- Internal hole diameter: .64
- Internal hole depth: 2.81 DIA.
- Internal hole offset from center: .75
- Internal hole diameter: 2.75 DIA.
- Internal hole depth: .25

End View Dimensions:

- Overall diameter: 3.16 DIA.
- Overall width: 1.75
- Internal hole diameter: 1.00
- Internal hole depth: .30

Notes:

- (4) #1/4-28 STUDS
- .16 DIA. DRILL THRU. (3) MTG. HOLES REQ'D 120° APART

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