

# Round Style Analog Panel Meters



- **UL Recognized - File # E91015**  
**Except for the Wattmeters & Frequency 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)<br>55-65Hz ±0.3Hz (120V-240V)<br>380-420Hz ±1.2Hz (120V-240V)                                                                                                           |
| Wattmeters:            | ±2% F.S.; Compensated Meters: ±3% F.S.                                                                                                                                                             |
| Movement:              | Models 55, 155: Iron-vane, magnetically damped<br>Models 45, 145: Annular, rectifier type<br>Models 85 & 185: small core magnet, self-shielding<br>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<br>All others: spade pointer with black matte finish                                                                                                     |
| Scale Length:          | Model 155 & 185: 1.6" (40.6mm)<br>Models 125 & 145: 1.8" (45.7mm)<br>Model 55: 2.3" (58.4mm)<br>Models 25, 27, 45 & 85: 2.5" (63.5mm)<br>Model 29: 3.80" (96.5mm)                                  |
| Net Weight:            | Models 55, 155 & 185: 5oz (0.14kg)<br>Models 85, 125, 145 & 45: 7oz (0.20kg)<br>Models 25 & 27: 8oz (.23kg)<br>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 | 3-1/2" 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



# Round Style Analog Panel Meters

## Ordering Information

### AC Voltmeters, Iron Vane Movement

| Range | Approx.<br>Impedance<br>(Ohms) @ 60 H | Model/Size and Catalog Number |                    |
|-------|---------------------------------------|-------------------------------|--------------------|
|       |                                       | 2-1/2"<br>Model 155           | 3-1/2"<br>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.<br>Impedance<br>(ohms) @ 60 Hz | Model/Size and Catalog Number |
|-------|----------------------------------------|-------------------------------|
|       |                                        | 3-1/2"<br>Model 45            |
| 0-150 | 300K                                   | 08010                         |

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

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

### Wattmeters - Dynamometer Type

Not 

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

### Frequency Meters, Self-Shielding Movement

Not 

| Range      | Voltage | Model/Size and Catalog Number |                    |
|------------|---------|-------------------------------|--------------------|
|            |         | 2-1/2"<br>Model 185           | 3-1/2"<br>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              |

**DC Microammeters, Self Shielding Movement**

| Range     | Approx.<br>Impedance<br>(ohms) @ 60 Hz | Model/Size and Catalog Number |                    |
|-----------|----------------------------------------|-------------------------------|--------------------|
|           |                                        | 2-1/2"<br>Model 125           | 3-1/2"<br>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              |

&lt;&gt; Available on special order

**DC Taut-Band Microammeters, Self-Shielding Movement**

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

&lt;&gt; Available on special order

**DC Milliammeters, Self Shielding Movement**

| Range  | Approx.<br>Impedance<br>(ohms) @ 60 Hz | Model/Size and Catalog Number |                    |
|--------|----------------------------------------|-------------------------------|--------------------|
|        |                                        | 2-1/2"<br>Model 125           | 3-1/2"<br>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              |

&lt;&gt; Available on special order.

**DC Ammeters, Self Shielding Movement**

| Range   | Approx.<br>Impedance<br>(Ohms) @ 60 Hz | Model/Size and Catalog Number |                    |
|---------|----------------------------------------|-------------------------------|--------------------|
|         |                                        | 2-1/2"<br>Model 125           | 3-1/2"<br>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                                   | 01670                         | 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.

&lt;&gt; Available on special order.

**DC Millivoltmeters, Self Shielding Movement**

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

&lt;&gt; Available on special order.

**DC Voltmeters, Self Shielding Movement**

| Range  | Approx.<br>Impedance<br>(Ohms) @ 60 Hz | Model/Size and Catalog Number |                    |
|--------|----------------------------------------|-------------------------------|--------------------|
|        |                                        | 2-1/2"<br>Model 125           | 3-1/2"<br>Model 25 |
| 0-1.5  | 1000<br>Ohms<br>Per<br>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<br>Ohms<br>Per<br>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*             |

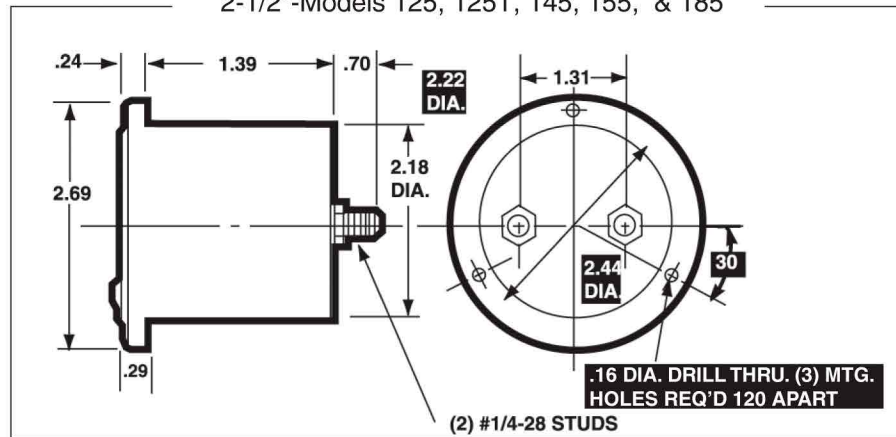
\*External multipliers, Model 183, are furnished on 2-1/2" DC meters 750 volts or higher.

&lt;&gt; Available on special order.

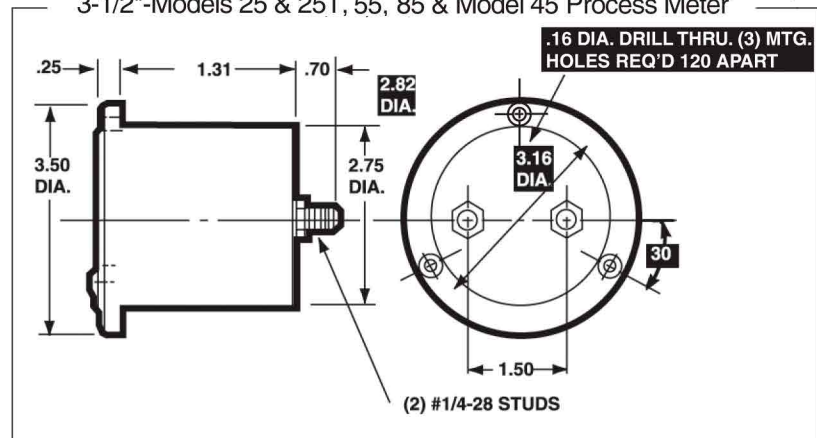
# Round Style Analog Panel Meters



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



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



1 = Panel Meter Cut-out Dimensions

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

3-1/2"-Model 75 Wattmeter

