

# Century Style Analog Panel Meters



- **UL Recognized – File # E91015**  
 Except for the Wattmeters and Frequency Meters
- **Glass window for optimum viewing**
- **Rugged black plastic case**
- **Black knife-edge pointer for precision reading**

The Specifications & Dimensions are on the last pages

## Ordering Information

| AC Milliammeters, Iron-Vane Movement |                                  |                                 |                   |                   |
|--------------------------------------|----------------------------------|---------------------------------|-------------------|-------------------|
| Range                                | Approx. Impedance (Ohms) @ 60 Hz | Model / Size and Catalog Number |                   |                   |
|                                      |                                  | 2-1/2" Model 2152               | 3-1/2" Model 2153 | 4-1/2" Model 2154 |
| 0-10                                 | 1,650                            | 17680                           | <>                | 17760             |
| 0-50                                 | 80                               | 17681                           | 17716             | 17761             |
| 0-100                                | 17.2                             | 17682                           | 17717             | 17762             |
| 0-250                                | 3.15                             | 17683                           | 17718             | 17763             |
| 0-500                                | 0.9                              | 17684                           | 17719             | 17764             |

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## Ordering Information

| AC Ammeters, Iron-Vane Movement |                                  |                                 |                   |                   |
|---------------------------------|----------------------------------|---------------------------------|-------------------|-------------------|
| Range                           | Approx. Impedance (Ohms) @ 60 Hz | Model / Size and Catalog Number |                   |                   |
|                                 |                                  | 2-1/2" Model 2152               | 3-1/2" Model 2153 | 4-1/2" Model 2154 |
| 0-1                             | .213                             | 17665                           | 17695             | 17740             |
| 0-1.5                           | .105                             | 17666                           | <>                | <>                |
| 0-2                             | .065                             | <>                              | 17697             | 17742             |
| 0-3                             | .028                             | 17667                           | 17698             | 17743             |
| 0-5                             | .008                             | 17668                           | 17699             | 17744             |
| 0-10                            | .004                             | 17669                           | 17700             | 17745             |
| 0-10                            | .008                             | <>                              | 35081 †           | 35085 †           |
| 0-15                            | .0025                            | 17670                           | 17701             | 17746             |
| 0-25                            | .002                             | 17671                           | 17702             | 17747             |
| 0-25                            | .008                             | <>                              | 35082 †           | 35086 †           |
| 0-30                            | .0015                            | 17672                           | 17703             | 17748             |
| 0-50                            | .001                             | 17673                           | 17704             | 17749             |
| 0-50                            | .008                             | <>                              | 35083 †           | 35087 †           |
| 0-75                            | .0002                            | <>                              | 17710             | 17755             |
| 0-75                            | .008                             | <>                              | 35084 †           | 35088 †           |
| 0-80                            | .008                             | <>                              | 35036 †           | <>                |
| 0-100                           | .008                             | 17674 †                         | 17706 †           | 17751 †           |
| 0-150                           | .008                             | <>                              | 17707 †           | 17752 †           |
| 0-200                           | .008                             | <>                              | 17708 †           | 17753 †           |
| 0-300                           | .008                             | <>                              | 17709 †           | 17754 †           |

† These meters are 5-amp meters to be used with an external current transformer

<> Available on special order

| AC Dual Range Ammeter / Voltmeter, Iron-Vane Movement |                                  |                                 |                   |                   |
|---|----------------------------------|---------------------------------|-------------------|-------------------|
| Range   | Approx. Impedance (Ohms) @ 60 Hz | Model / Size and Catalog Number |                   |                   |
|   |                                  | 2-1/2" Model 2152               | 3-1/2" Model 2153 | 4-1/2" Model 2154 |
| 0-150V<br>0-5A  | 15,030<br>0.021                  | -                               | 17694             | 17739             |

# Century Style Analog Panel Meters

## Ordering Information

| AC Voltmeters, Iron-Vane Movement |                                  |                                 |                   |                   |
|-----------------------------------|----------------------------------|---------------------------------|-------------------|-------------------|
| Range                             | Approx. Impedance (Ohms) @ 60 Hz | Model / Size and Catalog Number |                   |                   |
|                                   |                                  | 2-1/2" Model 2152               | 3-1/2" Model 2153 | 4-1/2" Model 2154 |
| 0-5                               | 33                               | <>                              | 17725             | <>                |
| 0-10                              | 133                              | 17685                           | 17726             | 17771             |
| 0-15                              | 300                              | 17686                           | 17727             | 17772             |
| 0-25                              | 833                              | 17687                           | 17728             | 17773             |
| 0-50                              | 3,333                            | 17688                           | 17729             | 17774             |
| 0-100                             | 16,666                           | <>                              | 17730             | 17775             |
| 0-150                             | 25,000                           | 17690                           | 17731             | 17776             |
| 0-250                             | 41,166                           | 17691                           | 17732             | 17777             |
| 0-300                             | 50,000                           | 17692                           | 17733             | 17778             |
| 0-500 †                           | 83,333                           | <>                              | 17734 †           | 17779 †           |

† External multipliers, Model 183 are furnished on AC meters having a range of 500 volts or higher. All others have self-contained multipliers

<> Available on special order

| AC Voltage Meters Rectifier Type, Self-shielding Movement |                                 |                                 |                   |                   |
|---|---------------------------------|---------------------------------|-------------------|-------------------|
| Range   | Approx. Impedance (Ohms)@ 60 Hz | Model / Size and Catalog Number |                   |                   |
|   |                                 | 2-1/2" Model 2142               | 3-1/2" Model 2143 | 4-1/2" Model 2144 |
| 0-5   | 2000 Ohms Per Volt              | 17460                           | 17542             | 17640             |
| 0-10  |                                 | <>                              | 17543             | 17641             |
| 0-15  |                                 | <>                              | 17544             | 17642             |
| 0-50  |                                 | <>                              | 17545             | 17643             |
| 0-150   |                                 | 17462                           | 17546             | 17644             |
| 0-300   |                                 | <>                              | <>                | 17645             |

<> Available on special order

# Century Style Analog Panel Meters

## Ordering Information

| DC Milliammeters, Self-shielding Movement |                                  |                                 |                   |                   |                   |
|---|----------------------------------|---------------------------------|-------------------|-------------------|-------------------|
| Range                                     | Approx. Impedance (Ohms) @ 60 Hz | Model / Size and Catalog Number |                   |                   |                   |
|   |                                  | 1-1/2" Model 2121               | 2-1/2" Model 2122 | 3-1/2" Model 2123 | 4-1/2" Model 2124 |
| 0-1                                       | 43.0                             | 17825                           | 17430             | 17510             | 17600             |
| 0-3                                       | 2.0                              | <>                              | 17431             | 17511             | 17601             |
| 0-5                                       | 2.0 (20) †                       | 17826                           | 17432             | 17512             | 17602             |
| 0-10                                      | 10.0 (2.2) †                     | 17827                           | 17433             | 17513             | 17603             |
| 0-15                                      | 6.6 (2.2) †                      | 17828                           | 17434             | <>                | <>                |
| 0-20                                      | 5.0                              | <>                              | <>                | 17515             | <>                |
| 0-25                                      | 4.0 (6.0) †                      | 17829                           | 17436             | 17516             | 17606             |
| 0-50                                      | 2.0 (3.0) †                      | 17830                           | 17437             | 17517             | 17607             |
| 0-100                                     | 1.0 (1.5) †                      | 17832                           | 17438             | 17518             | 17608             |
| 0-150                                     | .66 (1.0) †                      | 17833                           | 17439             | 17519             | 17609             |
| 0-200                                     | .50 (.75) †                      | 17834                           | 17440             | 17520             | 17610             |
| 0-250                                     | .40 (.60) †                      | 17835                           | 17441             | 17521             | 17611             |
| 0-300                                     | .33 (.50) †                      | 17836                           | 17442             | 17522             | 17612             |
| 0-500                                     | .20 (.30) †                      | 17837                           | 17443             | 17523             | 17613             |
| 0-750                                     | .13                              | <>                              | <>                | 17524             | 17614             |
| 0-1000                                    | .05                              | <>                              | 17444             | <>                | 17615             |

† Resistances of Model 2121 shown in ( )

<> Available on special order

| DC Microammeters, Self-shielding Movement |                                  |                                 |                   |                   |                   |
|---|----------------------------------|---------------------------------|-------------------|-------------------|-------------------|
| Range                                     | Approx. Impedance (Ohms) @ 60 Hz | Model / Size and Catalog Number |                   |                   |                   |
|   |                                  | 1-1/2" Model 2121               | 2-1/2" Model 2122 | 3-1/2" Model 2123 | 4-1/2" Model 2124 |
| 0-50                                      | 1800 (5500) †                    | 17815                           | 17418             | 17499             | 17589             |
| 0-100                                     | 1800                             | 17816                           | 17420             | 17501             | 17591             |
| 0-200                                     | 1100                             | 17818                           | 17422             | 17503             | 17593             |
| 0-500                                     | 90 (190) †                       | 17819                           | 17424             | 17505             | 17595             |
| 25-0-25                                   | 1800 (5500) †                    | 17820                           | <>                | 17506             | 17596             |
| 50-0-50                                   | 1800                             | 17821                           | 17425             | 17507             | 17597             |
| 100-0-100                                 | 1100                             | 17822                           | 17426             | 17508             | 17598             |
| 500-0-500                                 | 43                               | 17823                           | 35063             | 17509             | 17599             |

† Resistances of Model 2121 shown in ( )

<> Available on special order

# Century Style Analog Panel Meters

## Ordering Information

| Taut Band DC Microammeters, Self-shielding Movement |                                  |                                 |                    |                    |
|---|----------------------------------|---------------------------------|--------------------|--------------------|
| Range   | Approx. Impedance (Ohms) @ 60 Hz | Model / Size and Catalog Number |                    |                    |
|   |                                  | 2-1/2" Model 2122T              | 3-1/2" Model 2123T | 4-1/2" Model 2124T |
| 0-10  | 4900                             | 17415                           | 17496              | 17586              |
| 0-15  | 1960                             | 17416                           | 17497              | 17587              |
| 0-25  | 1960                             | 17417                           | 17498              | 17588              |
| 0-50  | 960                              | 17419                           | 17500              | 17590              |
| 0-100   | 500                              | 17421                           | 17502              | 17592              |
| 0-200   | 234                              | 17423                           | <>                 | 17594              |

<> Available on special order


| DC Ammeters, Self-shielding Movement |                                  |                                 |                   |                   |                   |
|--------------------------------------|----------------------------------|---------------------------------|-------------------|-------------------|-------------------|
| Range                                | Approx. Impedance (Ohms) @ 60 Hz | Model / Size and Catalog Number |                   |                   |                   |
|                                      |                                  | 1-1/2" Model 2121               | 2-1/2" Model 2122 | 3-1/2" Model 2123 | 4-1/2" Model 2124 |
| 0-1                                  | .050                             | 17800                           | 17400             | 17475             | 17565             |
| 0-1.5                                | .003                             | <>                              | 17401             | 17476             | <>                |
| 0-2                                  | .025                             | 17801                           | 17402             | 17477             | 17567             |
| 0-3                                  | .0166                            | 17802                           | 17403             | 17478             | 17568             |
| 0-5                                  | .010                             | 17803                           | 17404             | 17479             | 17569             |
| 0-10                                 | .005                             | 17805                           | 17405             | 17480             | 17570             |
| 0-15                                 | .0033                            | 17806 †                         | 17406             | 17481             | 17571             |
| 0-25                                 | .0020                            | 17807 †                         | 17407             | 17482             | 17572             |
| 0-30                                 | .0017                            | <>                              | 17408             | 17483             | 17573             |
| 0-50                                 | .001                             | 17808 †                         | 17409             | 17484             | 17574             |
| 0-100                                | 10.0                             | <>                              | 17410 †           | 17485 †           | 17575 †           |
| 0-150                                | 10.0                             | <>                              | <>                | 17486 †           | 17576 †           |
| 0-200                                | 10.0                             | <>                              | 17412 †           | 17487 †           | 17577 †           |
| 0-300                                | 10.0                             | <>                              | -                 | 17488 †           | 17578 †           |
| 0-500                                | 10.0                             | <>                              | -                 | 17489 †           | 17579 †           |
| 2-0-2                                | .025                             | <>                              | -                 | 35064             | -                 |
| 5-0-5                                | .010                             | <>                              | -                 | 35072             | -                 |
| 15-0-15                              | .0033                            | <>                              | -                 | 17490             | -                 |
| 30-0-30                              | .0017                            | <>                              | -                 | 17491             | -                 |

† 1-1/2" DC current meters are self-contained through 10 amps; higher ranges are supplied as 50mV meters and require an external shunt;  
 † 2-1/2", 3-1/2" and 4-1/2" meters are self-contained through 50 amps; higher ranges are 50mV and require use of an external shunt

<> Available on special order

# Century Style Analog Panel Meters

## Ordering Information

| Wattmeters / Dynamometer Type, Not  |         |       |                                 |                   |
|--|---------|-------|---------------------------------|-------------------|
| Range  | Maximum |       | Model / Size and Catalog Number |                   |
|  | Volts   | Amps  | 3-1/2" Model 2173               | 4-1/2" Model 2174 |
| 0-10   | 150     | .175  | 17875 *                         | 17890 *           |
| 0-20   | 150     | .400  | 17876                           | 17891 *           |
| 0-30   | 150     | 0.650 | 17877 *                         | 17892 *           |
| 0-30   | 300     | 0.300 | 18879 *                         | 17894 *           |
| 0-50   | 300     | 0.500 | 17880 *                         | 17895 *           |
| 0-75   | 150     | 1.0   | 17881                           | 17896             |
| 0-150  | 150     | 2.0   | 17882                           | 17897             |
| 0-300  | 150     | 4.0   | 17883                           | 17898             |
| 0-600  | 300     | 4.0   | 17884                           | 17899             |
| 0-750  | 150     | 10.0  | 17885                           | 17900             |
| 0-1500   | 300     | 10.0  | 17886                           | 17901             |
| 0-3000   | 300     | 20.0  | 17887                           | 17902             |

\* Compensated wattmeters: calibrated for either magnetic or non-magnetic panels and for a frequency of 25-125Hz


| Percent Motor Load Meters, Self-shielding Movement |         |                  |                                 |                  |             |
|--|---------|------------------|---------------------------------|------------------|-------------|
| Type   | Maximum |                  | Model / Size and Catalog Number |                  |             |
|  | Rating  | 3-1/2" Model No. | Catalog No.                     | 4-1/2" Model No. | Catalog No. |
| DC (Note 1)  | 30 mV   | 2123             | 17564                           | 2124             | 17637       |
| AC (Note 2)  | 5 amps  | 2153             | 17711                           | 2154             | 17756       |

1. These DC meters require an external shunt and an 8 to 10Ω 2W wire-wound potentiometer (customer supplied)

2. These AC meters require use of a current transformer

# Century Style Analog Panel Meters

## Ordering Information

| Frequency Meters, Self-shielding Movement, Not  |                                  |                                 |                   |                   |
|--|----------------------------------|---------------------------------|-------------------|-------------------|
| Range  | Approx. Impedance (Ohms) @ 60 Hz | Model / Size and Catalog Number |                   |                   |
|  |                                  | 2-1/2" Model 2182               | 3-1/2" Model 2183 | 4-1/2" Model 2184 |
| 45-55 Hz   | 120V                             | 35118                           | 35124             | 35130             |
| 55-65 Hz   | 120V                             | 35120                           | 35126             | 35132             |
| 380-420 Hz   | 120V                             | 35122                           | 35128             | 35134             |
| 45-55 Hz   | 240V                             | 35119                           | 35125             | 35131             |
| 55-65 Hz   | 240V                             | 35121                           | 35127             | 35133             |
| 380-420 Hz   | 240V                             | 35123                           | 35129             | 35135             |

| DC Millivoltmeters, Self-shielding Movement |                                  |                                 |                   |                   |
|---|----------------------------------|---------------------------------|-------------------|-------------------|
| Range                                       | Approx. Impedance (Ohms) @ 60 Hz | Model / Size and Catalog Number |                   |                   |
|   |                                  | 2-1/2" Model 2122               | 3-1/2" Model 2123 | 4-1/2" Model 2124 |
| 0-50  | 10.0                             | 17472                           | 17540             | 17636             |
| 50-0-50                                     | 20.0                             | <>                              | 17541             | 17635             |
| <> Available on special order               |                                  |                                 |                   |                   |

# Century Style Analog Panel Meters

## Ordering Information

| DC Voltage Meters, Self-shielding Movement |                                 |                                 |                   |                   |                   |
|--|---------------------------------|---------------------------------|-------------------|-------------------|-------------------|
| Range                                      | Approx. Impedance (Ohms) @60 Hz | Model / Size and Catalog Number |                   |                   |                   |
|  |                                 | 1-1/2" Model 2121               | 2-1/2" Model 2122 | 3-1/2" Model 2123 | 4-1/2" Model 2124 |
| 0-5  |                                 | 17840                           | 17445             | 17525             | 17618             |
| 0-8  |                                 | <>                              | <>                | <>                | 17619             |
| 0-10                                       |                                 | 17842                           | 17446             | 17527             | 17620             |
| 0-15                                       |                                 | 17843                           | 17447             | 17528             | 17621             |
| 0-25                                       |                                 | 17844                           | 17448             | 17529             | 17622             |
| 0-30                                       |                                 | 17845                           | 17449             | 17530             | 17623             |
| 0-50                                       |                                 | 1000 Ohms Per Volt              | 17846             | 17450             | 17531             |
| 0-100                                      | 17848                           |                                 | 17451             | 17532             | 17625             |
| 0-150                                      | 17849                           |                                 | 17452             | 17533             | 17626             |
| 0-200                                      |                                 | <>                              | <>                | 17534             | 17627             |
| 0-250                                      |                                 | <>                              | <>                | 17535             | <>                |
| 0-300                                      |                                 | -                               | 17455             | 17536             | 17629             |
| 0-300                                      | 2000 Ohms Per Volt              | 17850                           | <>                | <>                | <>                |
| 0-500                                      |                                 | 17851 †                         | 17456             | 17537             | 17630             |
| 0-750                                      |                                 | <>                              | <>                | 17538             | 17631             |
| 0-1000                                     |                                 | <>                              | 17458 †           | 17539 †           | 17632 †           |

† External multipliers (Model 183) are furnished on 1-1/2" DC meters 500 volts or higher; on 2-1/2" DC meters 750 volts or higher; and on 3-1/2" and 4-1/2" DC meters 1,000 volts or higher. All others have self-contained multipliers

<> Available on special order

| 4-20 DCmA Process Meters |        |       |                |
|--------------------------|--------|-------|----------------|
| Size                     | Scale  | Model | Catalog Number |
| 3-1/2"                   | 0-100% | 2123  | 35027          |
| 4-1/2"                   | 0-100% | 2124  | 35028          |



# Century Style Analog Panel Meters

| Frequency Meter Specifications |   |
|--------------------------------|---|
| Accuracy                       | 45-55Hz ± 0.3Hz (120V-240V)   |
|                                | 55-65Hz ± 0.3Hz (120V-240V)   |
|                                | 380-420Hz ± 1.2Hz (120V-240V)   |
| Movement                       | Small core magnet, self-shielding                                       |
| Suspension                     | Pivot and jewel   |
| Tracking                       | ±3%   |
| Shielding                      | Calibration is unaffected by magnetic panel mounting                    |
| Center Scale Value             | 50/60/400Hz   |
| Power Consumption              | 1.6VA   |
| Max. Input Voltage (10 sec)    | 150, 120V normal; 280, 240V normal                                      |
| Dial                           | Each dial arc is calibrated to track the specific type of movement used |
| Operating Temperature          | -4°F to +149°F (-20°C to +65°C)   |
| Case                           | High density black plastic  |
| Pointer                        | Knife-edge, with black matte finish                                     |
| Scale Length                   | Model 2182: 1.88" (47.2mm)  |
|                                | Model 2183: 2.48" (63.0mm)  |
|                                | Model 2184: 3.68" (93.5mm)  |
| Net Weight                     | Model 2182: 5oz (0.14kg)  |
|                                | Model 2183: 6oz (0.17kg)  |
|                                | Model 2184: 9oz (0.26kg)  |
| Warm-up Time                   | 5 minutes   |

| Watt Meter Specifications |   |
|---------------------------|---|
| Accuracy                  | ±2% F.S.; Compensated Meters: ±3% F.S.                                  |
| Movement                  | Dynamometer   |
| Suspension                | Pivot and jewel   |
| 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                      | Each dial arc is calibrated to track the specific type of movement used |
| Resistance                | ±15% of meter impedance   |
| Operating Temperature     | -4°F to +149°F (-20°C to +65°C)   |
| Case                      | High density black plastic  |
| Pointer                   | Knife-edge, with black matte finish                                     |
| Scale Length              | Model 2173: 2.48" (63.0mm)  |
|                           | Model 2174: 3.68" (93.5mm)  |
| Net Weight                | Model 2173: 9oz (0.26kg)  |
|                           | Model 2174: 13oz (0.37kg)   |

# Century Style Analog Panel Meters

| <b>Specifications for Other Meters</b> |   |
|--|---|
| Accuracy                               | ±2% F.S. Iron Vane, ±3% F.S. Rectified  |
| Movement                               | Models 2152, 2153, 2154: Iron-vane, magnetically damped.<br>2121 and 2121T: small core magnet, all others Annular, self-shielding |
| Suspension                             | Pivot and jewel except for "T" models which have taut band movement   |
| 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% pivot and jewel, 0.5% taut band  |
| Dial                                   | Each dial arc is calibrated to track the specific type of movement used   |
| Resistance                             | ±15% of meter impedance   |
| Operating Temperature                  | -4°F to +149°F (-20°C to +65°C)   |
| Case                                   | High density black plastic  |
| Pointer                                | Knife-edge, with black matte finish   |
| Scale Length                           | Model 2121 & 2121T: 1.25" (31.7mm)  |
|  | Model 2152: 1.86" (47.2mm)  |
|  | Model 2122, 2122T, 2142: 2.07" (52.7mm)   |
|  | Model 2153: 2.48" (63.0mm)  |
|  | Model 2123, 2123T, 2143: 2.75" (69.8mm)   |
|  | Model 2154: 3.68" (93.5mm)  |
|  | Model 2124, 2124T, 2144: 4.09" (103.9mm)  |
| Net Weight                             | Model 2121 & 2121T: 2oz (0.06kg)  |
|  | Model 2152: 5oz (0.14kg)  |
|  | Model 2153: 6oz (0.17kg)  |
|  | Model 2122, 2122T, 2142: 7oz (0.20kg)   |
|  | Model 2123, 2123T, 2143: 8oz (0.23kg)   |
|  | Model 2154: 9oz (0.26kg)  |
|  | Model 2124, 2124T, 2144: 11oz (0.31kg)  |

# Century Style Analog Panel Meters

## Dimensions

