



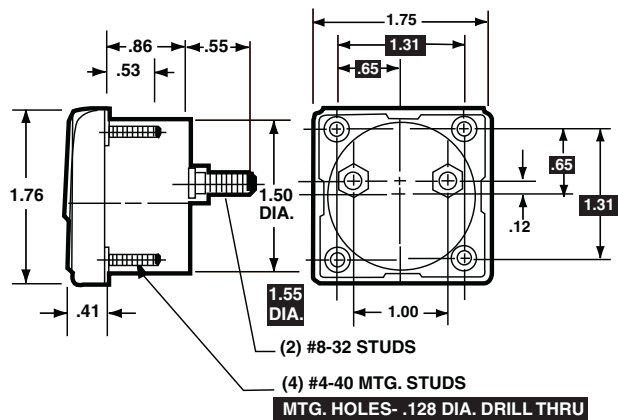
- Clear acrylic window for wide angle visibility
- Rugged black plastic case
- Black spade pointer for easy distant reading
- Optional behind-panel mounting bezel kit

## Specifications

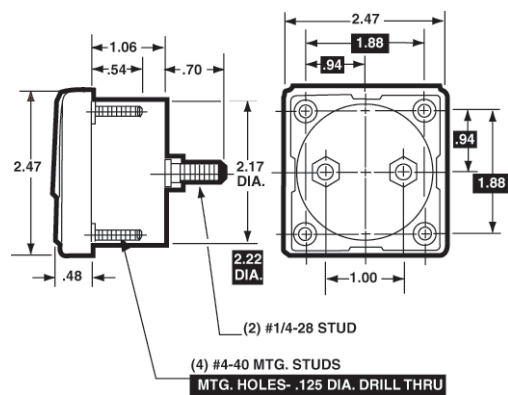
|                               |                                                                                                                                                                                                                                                         |
|-------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Accuracy:</b>              | ±2% F.S. (Iron-Vane), ±3 F.S. (Rectified)                                                                                                                                                                                                               |
| <b>Movement:</b>              | Models 1212, 1212T: Small core magnet<br>Models 1247, 1347, 1349: Annular, rectifier<br>Models 1257, 1357, 1359: Iron-vane, magnetically damped                                                                                                         |
| <b>Tracking:</b>              | ±3%                                                                                                                                                                                                                                                     |
| <b>Shielding:</b>             | Calibration is unaffected by magnetic panel mounting.                                                                                                                                                                                                   |
| <b>Response Time:</b>         | 1.5 seconds maximum                                                                                                                                                                                                                                     |
| <b>Overload (1 sec.):</b>     | 10 times F.S.                                                                                                                                                                                                                                           |
| <b>Overload (Continuous):</b> | 1.5 times F.S.                                                                                                                                                                                                                                          |
| <b>Repeatability:</b>         | 2%: AC Current, DC Process<br>3%: AC Voltage, DC Voltage, Wattmeters<br>0.5%: DC Current                                                                                                                                                                |
| <b>Dial:</b>                  | Sharp clear scale. Each dial arc is calibrated to track the specific type of movement used.                                                                                                                                                             |
| <b>Resistance:</b>            | ±15% of meter impedance                                                                                                                                                                                                                                 |
| <b>Operating Temperature:</b> | -4°F to +149°F (-20°C to +65°C)                                                                                                                                                                                                                         |
| <b>Case:</b>                  | High density black plastic                                                                                                                                                                                                                              |
| <b>Pointer:</b>               | Model 1212: Black lance;<br>All other models: Spade with black matte finish                                                                                                                                                                             |
| <b>Scale Length:</b>          | Model 1212, 1212T: 1.50" (38.1mm);<br>Model 1227, 1227T, 1247, 1257: 2.3" (58.4mm)<br>Model 1327, 1327T, 1347, 1357, 1377: 3.14" (79.9mm);<br>Model 1329, 1329T, 1349, 1359, 1379: 3.93" (100mm)                                                        |
| <b>Net Weight:</b>            | Model 1212, 1212T: 2oz (0.06kg);<br>Model 1257: 4 oz. (0.11kg)<br>Model 1359: 5 oz. (0.14kg)<br>Model 1227, 1227T: 6oz (0.17kg)<br>Model 1327, 1327T, 1347: 8oz (0.23kg);<br>Model 1329, 1329T, 1349, 1377: 9oz (0.26kg)<br>Model 1379: 10 oz. (0.28kg) |

## Dimensions

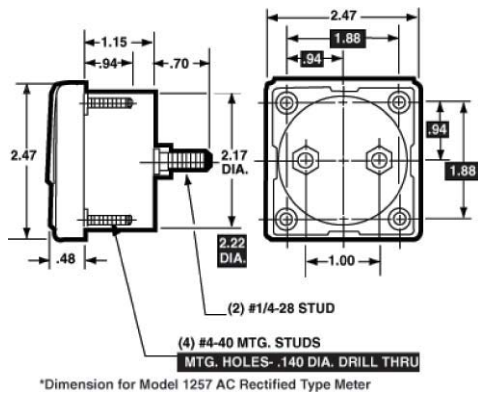
1-1/2"-Model 1212, 1212T



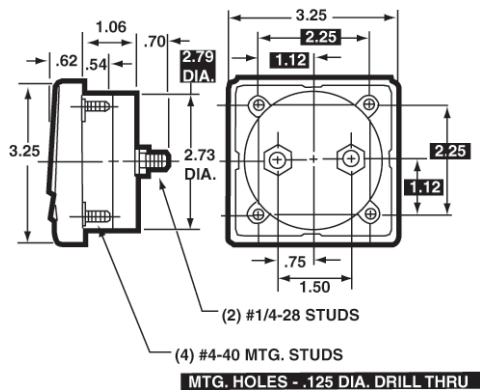
2-1/2" - Model 1287



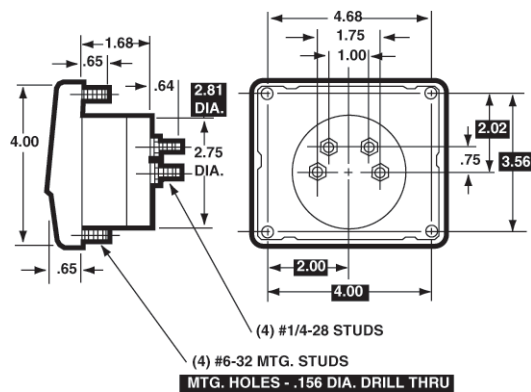
2-1/2"-Model 1227, 1227T, 1247, 1257



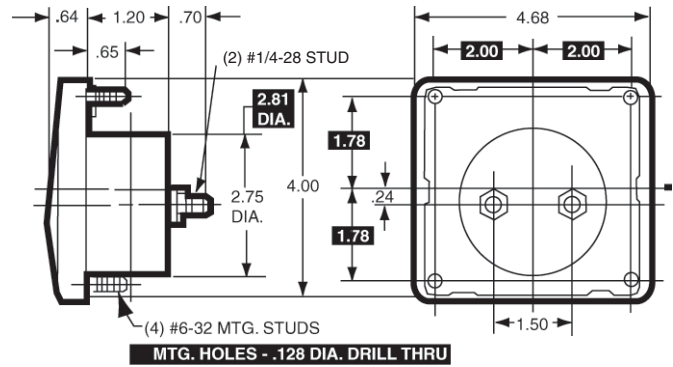
3-1/2"-Model 1387



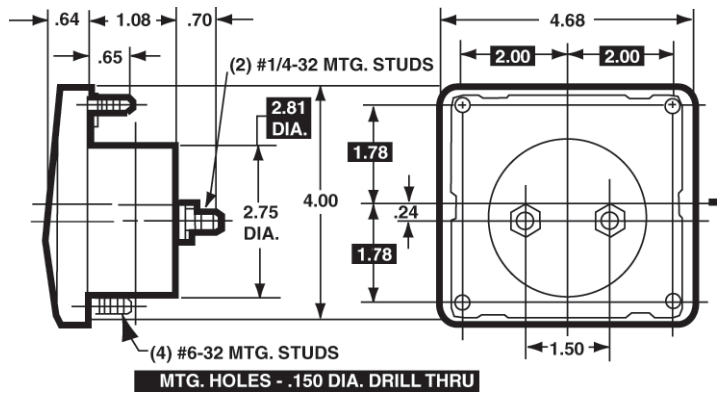
4-1/2" Model 1379



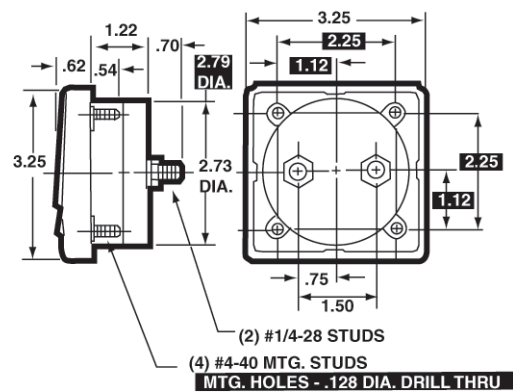
4-1/2"-Model 1329, 1329T, 1349, 1359



4-1/2"-Model 1389



3-1/2"-Model 1327, 1327T, 1347, 1357





# Wide-Vue Style Analog Panel Meters

## Ordering Information

B  
4

### AC Milliammeters, Iron Vane Movement,

| Range  | Approx. Impedance (Ohms) @ 60 Hz | Model/Size and Catalog Number |                   |                   |
|--------|----------------------------------|-------------------------------|-------------------|-------------------|
|        |                                  | 2-1/2" Model 1257             | 3-1/2" Model 1357 | 4-1/2" Model 1359 |
| 0-10   | 1,650                            | 06294                         | 06625             | 06665             |
| 0-50   | 80                               | 06295                         | 06630             | 06670             |
| 0-100  | 17.2                             | 06296                         | 06640             | 06680             |
| 0-250  | 3.15                             | 06297                         | 06650             | 06690             |
| 0-500  | 0.9                              | 06300                         | 06660             | 06699             |
| 0-1000 | .213                             | <>                            | 35065             | <>                |

<> Available on special order

### AC Ammeters, Iron Vane Movement

| Range | Approx. Impedance (Ohms) @ 60 Hz | Model/Size and Catalog Number |                   |                   |
|-------|----------------------------------|-------------------------------|-------------------|-------------------|
|       |                                  | 2-1/2" Model 1257             | 3-1/2" Model 1357 | 4-1/2" Model 1359 |
| 0-1   | .213                             | 02560                         | 03130             | 03260             |
| 0-1.5 | .105                             | 02570                         | 03140             | 03270             |
| 0-2   | .065                             | <>                            | 03150             | 03280             |
| 0-3   | .025                             | 02575                         | 03160             | 03290             |
| 0-5   | .008                             | 02580                         | 03170             | 03300             |
| 0-10  | .004                             | 02590                         | 03180             | 03310             |
| 0-10  | .008                             | <>                            | 35073*            | 35077*            |
| 0-15  | .0025                            | 02599                         | 03190             | 03320             |
| 0-25  | .002                             | 02609                         | 03200             | 03330             |
| 0-25  | .008                             | <>                            | 35074*            | 35078*            |
| 0-30  | .0015                            | 02615                         | 03205             | 03335             |
| 0-50  | .001                             | 02619                         | 03210             | 03340             |
| 0-50  | .008                             | <>                            | 35075*            | 35079*            |
| 0-75  | .0002                            | <>                            | 03215             | 03345             |
| 0-75  | .008                             | <>                            | 35076*            | 35080*            |
| 0-100 | .008                             | 02622*                        | 03220*            | 03350*            |
| 0-150 | .008                             | 02624*                        | 03230*            | 03360*            |
| 0-200 | .008                             | 02626*                        | 03240*            | 03370*            |
| 0-300 | .008                             | 02627*                        | 03250*            | 03380*            |

<> Available on special order

\* These meters require use of an external current transformer from page C5.

### AC Voltmeters, Iron Vane Movement

| Range | Approx. Impedance (Ohms) @ 60 Hz | Model/Size and Catalog Number |                   |                   |
|-------|----------------------------------|-------------------------------|-------------------|-------------------|
|       |                                  | 2-1/2" Model 1257             | 3-1/2" Model 1357 | 4-1/2" Model 1359 |
| 0-5   | 33                               | <>                            | 10160             | 10260             |
| 0-10  | 133                              | 09670                         | 10170             | 10270             |
| 0-15  | 300                              | 09675                         | 10180             | 10280             |
| 0-25  | 833                              | 09680                         | 10190             | 10290             |
| 0-50  | 3,333                            | 09690                         | 10200             | 10300             |
| 0-100 | 16,333                           | 09695                         | 10210             | 10310             |
| 0-150 | 25,000                           | 09700                         | 10220             | 10320             |
| 0-250 | 41,166                           | 09705                         | 10230             | 10330             |
| 0-300 | 50,000                           | 09710                         | 10240             | 10340             |
| 0-500 | 83,333                           | 09715*                        | 10250             | 10350*            |

<> Available on special order

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

### AC Voltmeters Rectified, Self-Shielding Movement

| Range | Approx. Impedance (Ohms) @ 60 Hz | Model/Size and Catalog Number |                   |                   |
|-------|----------------------------------|-------------------------------|-------------------|-------------------|
|       |                                  | 2-1/2" Model 1247             | 3-1/2" Model 1347 | 4-1/2" Model 1349 |
| 0-5   | 2000 Ohms Per Volt               | 10015                         | 10020             | 10090             |
| 0-10  |                                  | 10016                         | 10030             | 10100             |
| 0-15  |                                  | <>                            | 10040             | 10110             |
| 0-50  |                                  | <>                            | 10050             | 10120             |
| 0-150 |                                  | 10017                         | 10060             | 10130             |
| 0-300 |                                  | 10018                         | 10070             | 10140             |

<> Available on special order

### DC Microammeters, Self-Shielding Movement

| Range     | Approx. Impedance (Ohms) @ 60 z | Model/Size and Catalog Number |                   |                   |                   |
|-----------|---------------------------------|-------------------------------|-------------------|-------------------|-------------------|
|           |                                 | 1-1/2" Model 1212             | 2-1/2" Model 1227 | 3-1/2" Model 1327 | 4-1/2" Model 1329 |
| 0-50      | 1800(5500)*                     | 04294                         | 04310             | 04380             | 04480             |
| 0-100     | 1800                            | 04295                         | 04320             | 04390             | 04490             |
| 0-200     | 1100                            | 04296                         | 04330             | 04400             | 04500             |
| 0-500     | 90(190)*                        | 04297                         | 04340             | 04410             | 04510             |
| 25-0-25   | 1800                            | 04298                         | <>                | 04420             | 04520             |
| 50-0-50   | 1800(5500)*                     | 04302                         | 04350             | 04430             | 04530             |
| 100-0-100 | 1100                            | 04300                         | 04351             | 04440             | 04540             |
| 500-0-500 | 43                              | 04301                         | 04352             | 04450             | 04550             |

<> Available on special order

\* Impedance of Model 1212 shown in ( ).

### DC Taut Band Microammeters, Iron Vane Movement

| Range | Approx. Impedance (Ohms) @ 60 Hz | Model/Size and Catalog Number |                    |                    |                    |
|-------|----------------------------------|-------------------------------|--------------------|--------------------|--------------------|
|       |                                  | 1-1/2" Model 1212T            | 2-1/2" Model 1227T | 3-1/2" Model 1327T | 4-1/2" Model 1329T |
| 0-5   | 5750                             | <>                            | <>                 | 04358              | 04458              |
| 0-10  | 4900                             | <>                            | 04303              | 04359              | 04459              |
| 0-15  | 1960(5500)*                      | 04601                         | 04304              | 04361              | 04461              |
| 0-25  | 1960                             | 04602                         | 04306              | 04371              | 04471              |
| 0-50  | 960                              | 04603                         | 04311              | 04381              | 04481              |
| 0-100 | 500                              | 04604                         | 04321              | 04391              | 04491              |
| 0-200 | 234                              | 04605                         | 04331              | 04401              | 04501              |

<> Available on special order



# Wide-Vue 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 1212             | 2-1/2" Model 1227 | 3-1/2" Model 1327 | 4-1/2" Model 1329 |
| 0-1    | 43.0                             | 06163                         | 06175             | 06310             | 06470             |
| 0-3    | 2.0                              | <>                            | 06180             | 06320             | 06480             |
| 0-5    | 2.0 (20)†                        | 06164                         | 06190             | 06330             | 06490             |
| 0-10   | 10.0 (2.2)†                      | 06165                         | 06200             | 06340             | 06495             |
| 0-15   | 6.6 (2.2)†                       | 06166                         | 06210             | 06350             | 06502             |
| 0-20   | 5.0                              | <>                            | 06215             | 06360             | 06524             |
| 0-25   | 4.0 (6.0)†                       | 06167                         | 06220             | 06370             | 06530             |
| 0-50   | 2.0 (3.0)†                       | 06168                         | 06230             | 06380             | 06540             |
| 0-100  | 1.0 (1.5)†                       | 06169                         | 06240             | 06390             | 06550             |
| 0-150  | .66 (1.0)†                       | 06170                         | 06250             | 06400             | 06560             |
| 0-200  | .50 (.75)†                       | 06171                         | 06260             | 06410             | 06570             |
| 0-250  | .40 (.60)†                       | 06172                         | 06270             | 06420             | 06580             |
| 0-300  | .33 (.50)†                       | 06173                         | 06280             | 06430             | 06590             |
| 0-500  | .20 (.30)†                       | 06174                         | 06290             | 06440             | 06600             |
| 0-750  | .13                              | <>                            | <>                | 06450             | 06610             |
| 0-1000 | .05                              | <>                            | 06292             | 06460             | 06620             |

† Impedance of Model 1212 shown in ( )

<> Available on special order

### DC Ammeters, Self-Shielding Movement

| Range   | Approx. Impedance (Ohms) @ 60 Hz | Model/Size and Catalog Number |                   |                   |                   |
|---------|----------------------------------|-------------------------------|-------------------|-------------------|-------------------|
|         |                                  | 1-1/2" Model 1212             | 2-1/2" Model 1227 | 3-1/2" Model 1327 | 4-1/2" Model 1329 |
| 0-1     | .050                             | 02431                         | 02440             | 02640             | 02820             |
| 0-1.5   | .033                             | <>                            | 02450             | 02650             | 02830             |
| 0-2     | .025                             | 02432                         | 02460             | 02660             | 02840             |
| 0-3     | .0166                            | 02433                         | 02470             | 02670             | 02850             |
| 0-5     | .010                             | 02434                         | 02480             | 02680             | 02860             |
| 0-10    | .005                             | 02435                         | 02490             | 02690             | 02870             |
| 0-15    | .0033*                           | 02436†                        | 02500             | 02700             | 02880             |
| 0-25    | .0020*                           | 02437†                        | 02510             | 02710             | 02890             |
| 0-30    | .0017                            | <>                            | 02520             | 02720             | 02900             |
| 0-50    | .001*                            | 02438†                        | 02530             | 02730             | 02910             |
| 0-100   | 10.0                             | <>                            | 02540†            | 02740†            | 02920†            |
| 0-150   | 10.0                             | <>                            | 02550†            | 02750†            | 02930†            |
| 0-200   | 10.0                             | <>                            | 02552†            | 02760†            | 02940†            |
| 0-300   | 10.0                             | <>                            | 02554†            | 02770†            | 02950†            |
| 0-500   | 10.0                             | <>                            | <>                | 02780†            | 02960†            |
| 15-0-15 | .0033                            | <>                            | <>                | 02790             | <>                |
| 30-0-30 | .0017                            | <>                            | <>                | 02800             | <>                |
| 50-0-50 | .001                             | <>                            | <>                | 02810             | <>                |

† 1-1/2" DC current meters are self-contained through 10 amps. 15 amps and higher are supplied as 50mV meters to be used with external shunts. 2-1/2", 3-1/2" and 4-1/2" DC current meters are self-contained through 50 amps. Higher range DC current meters are 50mV meters to be used with external shunts.

<> Available on special order.

\*Model 1212 only - 10 ohms

### Wattmeters/Dynamometer Type, Not

| Range  | Maximum |      | Model/Size and Catalog Number |
|--------|---------|------|-------------------------------|
|        | Volts   | Amps |                               |
| 0-10   | 150     | .175 | 10930*                        |
| 0-20   | 150     | .400 | 10940*                        |
| 0-75   | 150     | 1.0  | 10960                         |
| 0-150  | 150     | 2.0  | 10970                         |
| 0-300  | 150     | 4.0  | 10975                         |
| 0-600  | 300     | 4.0  | 10980                         |
| 0-750  | 150     | 10.0 | 10990                         |
| 0-1500 | 300     | 10.0 | 11000                         |
| 0-3000 | 300     | 20.0 | 11010                         |

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

### DC Millivoltmeters, Self Shielding Movement

| Range   | Approx. Impedance (Ohms) @ 60 Hz | Model/Size and Catalog Number |                   |                   |                   |
|---------|----------------------------------|-------------------------------|-------------------|-------------------|-------------------|
|         |                                  | 1-1/2" Model 1212             | 2-1/2" Model 1227 | 3-1/2" Model 1327 | 4-1/2" Model 1329 |
| 0-50    | 10.0                             | 07005                         | 07010             | 07020             | 07030             |
| 50-0-50 | 20.0                             | <>                            | <>                | 07021             | 07031             |

<> Available on special order.

### DC Voltmeters, Self Shielding Movement

| Range  | Approx. Impedance (Ohms) @ 60 Hz | Model/Size and Catalog Number |                   |                   |                   |
|--------|----------------------------------|-------------------------------|-------------------|-------------------|-------------------|
|        |                                  | 1-1/2" Model 1212             | 2-1/2" Model 1227 | 3-1/2" Model 1327 | 4-1/2" Model 1329 |
| 0-5    | 1000 ohms per volt               | 09540                         | 09550             | 09720             | 09870             |
| 0-8    |                                  | <>                            | <>                | 09730             | 09880             |
| 0-10   |                                  | 09541                         | 09560             | 09740             | 09890             |
| 0-15   |                                  | 09542                         | 09570             | 09750             | 09900             |
| 0-25   |                                  | 09543                         | 09580             | 09760             | 09910             |
| 0-30   |                                  | 09544                         | 09590             | 09770             | 09920             |
| 0-50   |                                  | 09545                         | 09600             | 09780             | 09930             |
| 0-100  |                                  | 09546                         | 09610             | 09790             | 09940             |
| 0-150  |                                  | 09547                         | 09620             | 09800             | 09950             |
| 0-200  |                                  | <>                            | 09622             | 09810             | 09960             |
| 0-250  | 2000 ohms per volt               | <>                            | 09623             | 09820             | 09970             |
| 0-300  |                                  | <>                            | 09630             | 09830             | 09980             |
| 0-300  |                                  | 09548                         | <>                | <>                | <>                |
| 0-500  |                                  | 09549*                        | 09640             | 09840             | 09990             |
| 0-750  |                                  | <>                            | 09650*            | 09850             | 10000             |
| 0-1000 |                                  | <>                            | 09660*            | 09860*            | 10010*            |

\*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 1000 volts or higher. All others have self-contained multipliers.

<> Available on special order.

### Percent Motor Load Meters

| Type        | Rating | Model/Size and Catalog Number |           |                |           |
|-------------|--------|-------------------------------|-----------|----------------|-----------|
|             |        | 3-1/2" Model #                | Catalog # | 4-1/2" Model # | Catalog # |
| DC (Note 1) | 30mV   | 1327                          | 07028     | 1329           | 07029     |
| AC (Note 2) | 5 amps | 1357                          | 03171     | 1359           | 03301     |

**Note 1:** DC load meters require an external shunt and potentiometer (not supplied). Use 8 to 10Ω, 2 watt wire-wound potentiometer. The appropriate shunt should be selected from accessory section and ordered separately. To select the proper shunt, first obtain the full-load current rating of your motor from the name plate, manufacturer's specifications of N.E.C. listing. Multiply that rating by 1.25 and select and order the shunt with an amps rating as large or slightly larger than the calculated value. Installation and calibration instructions are included with the meter.

**Note 2:** AC load meters must be used with external donut transformers. Complete instructions for proper selection are included with each AC load meter. Advance assistance in selecting the appropriate transformer and determining the correct primary/secondary turns ratio can be obtained from a Simpson technical service representative or authorized service center.

### 4-20mA Process Meters

| Size   | Scale  | Model | Catalog No. |
|--------|--------|-------|-------------|
| 3-1/2" | 0-100% | 1327  | 35025       |
| 4-1/2" | 0-100% | 1329  | 35026       |

### Frequency Meters, Self-Shielding Movement

| Range      | Voltage | Model/Size and Catalog Number |                   |                   |
|------------|---------|-------------------------------|-------------------|-------------------|
|            |         | 2-1/2" Model 1287             | 3-1/2" Model 1387 | 4-1/2" Model 1389 |
| 45-55 Hz   | 120V    | 35100                         | 35106             | 35112             |
| 55-65Hz    | 120V    | 35102                         | 35108             | 35114             |
| 380-420 Hz | 120V    | 35104                         | 35110             | 35116             |
| 45-55 Hz   | 240V    | 35101                         | 35107             | 35113             |
| 55-65Hz    | 240V    | 35103                         | 35109             | 35115             |
| 380-420 Hz | 240V    | 35105                         | 35111             | 35117             |