



WIDE-VUE PANEL METERS



Black plastic case with clear acrylic window for wide-angle visibility. 1½" models have black knife-edge pointer; 2½", 3½", 4½" models have black spade pointer. Accuracy for all models show: ±2% i.s. Other ranges available; go online or call. For Wide-Vue bezel kits, external shunts and current transformers, go online or call.

DC VOLTMETERS WITH SELF-SHIELDING METER MOVEMENT

| Range | Resist. (Ω)        | Model 1212 1-1/2" |            | Model 1227 2-1/2" |            | Model 1327 3-1/2" |            | Model 1329 4-1/2" |            |
|-------|--------------------|-------------------|------------|-------------------|------------|-------------------|------------|-------------------|------------|
|       |                    | Stock No.         | Price Each | Stock No.         | Price Each | Stock No.         | Price Each | Stock No.         | Price Each |
| 0-5   | 1000 Ohms Per Volt | 55F436            | 77.70      | ...               | ...        | 55F1146           | 78.60      | ...               | ...        |
| 0-10  |                    | 55F437            | 77.70      | 55F1500           | 77.70      | 55F1550           | 78.60      | 55F1600           | 84.90      |
| 0-15  |                    | 55F438            | 77.70      | 55F1501           | 77.70      | 55F1551           | 78.60      | 55F1601           | 84.90      |
| 0-25  |                    | 55F439            | 77.70      | 55F1502           | 77.70      | ...               | ...        | 55F1602           | 84.90      |
| 0-30  |                    | 55F440            | 77.70      | 55F1503           | 77.70      | 55F1553           | 78.60      | 55F1603           | 84.90      |
| 0-50  |                    | 55F441            | 77.70      | 55F1504           | 77.70      | 55F1554           | 78.60      | 55F1604           | 89.49      |
| 0-100 |                    | 55F442            | 77.70      | 55F1505           | 77.70      | 55F1555           | 78.60      | ...               | ...        |
| 0-150 |                    | 55F443            | 77.70      | 55F1506           | 77.70      | 55F1556           | 78.60      | 55F1606           | 84.90      |
| 0-200 |                    | ...               | ...        | ...               | ...        | 55F1148           | 78.60      | ...               | ...        |
| 0-500 |                    | 2000              | ...        | ...               | ...        | 55F1558           | 82.80      | ...               | ...        |

DC AMMETERS WITH SELF-SHIELDING METER MOVEMENT

|        |        |        |       |         |       |         |       |         |       |
|--------|--------|--------|-------|---------|-------|---------|-------|---------|-------|
| 0-1    | 0.050  | 55F447 | 74.85 | 55F1172 | 73.65 | ...     | ...   | ...     | ...   |
| 0-1.5  | 0.033  | ...    | ...   | 55F1173 | 73.65 | 55F1181 | 77.70 | 55F1191 | 83.85 |
| 0-2    | 0.025  | 55F448 | 74.85 | ...     | ...   | 55F1560 | 77.70 | ...     | ...   |
| 0-3    | 0.0166 | 55F449 | 74.85 | ...     | ...   | 55F1561 | 77.70 | ...     | ...   |
| 0-5    | 0.010  | 55F466 | 74.85 | 55F1512 | 73.65 | 55F1562 | 77.70 | 55F1612 | 83.85 |
| 0-10   | 0.005  | ...    | ...   | 55F1513 | 73.65 | 55F1563 | 77.70 | 55F1613 | 83.85 |
| 0-15   | 0.0033 | ...    | ...   | 55F1176 | 73.65 | 55F1564 | 77.70 | 55F1614 | 83.85 |
| 0-25   | 0.0020 | ...    | ...   | 55F1177 | 73.65 | ...     | ...   | 55F1615 | 83.85 |
| 0-30   | 0.0017 | ...    | ...   | ...     | ...   | 55F1182 | 77.70 | 55F1192 | 83.85 |
| 0-50   | 0.001  | ...    | ...   | 55F1178 | 73.65 | 55F1566 | 77.70 | 55F1616 | 88.39 |
| 0-100* | 10.0   | ...    | ...   | 55F1179 | 73.65 | 55F1183 | 77.70 | 55F1193 | 83.85 |
| 0-200* | 10.0   | ...    | ...   | ...     | ...   | 55F1185 | 77.70 | 55F1195 | 83.85 |
| 0-300* | 10.0   | ...    | ...   | ...     | ...   | ...     | ...   | 55F1196 | 83.85 |
| 0-500* | 10.0   | ...    | ...   | ...     | ...   | ...     | ...   | 55F1197 | 83.85 |

\*Requires external shunt; order separately on [15727].

DC MILLIAMMETERS WITH SELF-SHIELDING METER MOVEMENT

|       |              |        |       |         |       |         |       |         |       |
|-------|--------------|--------|-------|---------|-------|---------|-------|---------|-------|
| 0-1   | 43.0         | 55F481 | 71.40 | 55F1517 | 73.20 | 55F1567 | 74.25 | 55F1617 | 79.95 |
| 0-3   | 2.0          | ...    | ...   | 55F1198 | 73.20 | 55F2501 | 78.26 | ...     | ...   |
| 0-5   | 2.0(2.0)**   | 55F482 | 71.40 | 55F1518 | 73.20 | ...     | ...   | ...     | ...   |
| 0-10  | 10.0(2.2)**  | 55F483 | 71.40 | 55F1519 | 73.20 | ...     | ...   | ...     | ...   |
| 0-15  | 6.6(2.2)**   | ...    | ...   | ...     | ...   | 55F2502 | 74.25 | ...     | ...   |
| 0-20  | 5.0          | ...    | ...   | ...     | ...   | 55F2503 | 74.25 | 55F2508 | 84.28 |
| 0-25  | 4.0(6.0)**   | 55F485 | 74.85 | 55F1520 | 73.65 | 55F1570 | 77.70 | ...     | ...   |
| 0-50  | 2.0(3.0)**   | 55F486 | 74.85 | 55F1521 | 73.65 | 55F1571 | 77.70 | ...     | ...   |
| 0-100 | 1.0(1.5)**   | 55F487 | 74.85 | ...     | ...   | 55F1572 | 77.70 | 55F1622 | 83.40 |
| 0-200 | 0.50(0.75)** | 55F489 | 74.85 | 55F1524 | 73.65 | ...     | ...   | 55F1624 | 83.40 |
| 0-250 | 0.40         | ...    | ...   | 55F2500 | 73.65 | ...     | ...   | ...     | ...   |
| 0-300 | 0.33(0.50)** | 55F491 | 74.85 | ...     | ...   | ...     | ...   | ...     | ...   |
| 0-500 | 0.20(0.30)** | 55F492 | 74.85 | 55F1527 | 73.65 | 55F1577 | 77.70 | 55F1627 | 83.40 |

\*\*Resistance shown in parenthesis for model 1212 only.

DC MICROAMMETERS WITH SELF-SHIELDING METER MOVEMENT

|           |      |         |       |         |       |         |       |         |        |
|-----------|------|---------|-------|---------|-------|---------|-------|---------|--------|
| 0-50      | 1800 | 55F473+ | 93.60 | 55F1529 | 93.00 | 55F1579 | 94.65 | 55F1629 | 102.15 |
| 0-100     | 1800 | 55F474  | 83.10 | 55F1530 | 84.15 | 55F1580 | 86.85 | 55F1630 | 96.45  |
| 0-200     | 1100 | ...     | ...   | 55F1531 | 76.20 | 55F1581 | 79.95 | 55F1631 | 86.85  |
| 25-0-25   | 1800 | 55F477+ | 93.60 | ...     | ...   | ...     | ...   | ...     | ...    |
| 50-0-50   | 1800 | 55F478  | 83.10 | 55F1533 | 85.05 | 55F1583 | 87.30 | 55F1633 | 102.61 |
| 100-0-100 | 1100 | 55F479  | 76.65 | 55F4850 | 77.70 | 55F2513 | 80.55 | ...     | ...    |

+Resistance is 5500Ω.

TAUT BAND DC MICROAMMETERS WITH SELF-SHIELDING METER MOVEMENT

| Range | Resist. (Ω) | Model 1227T 2-1/2" |            | Model 1327T 3-1/2" |            | Model 1329T 4-1/2" |            |
|-------|-------------|--------------------|------------|--------------------|------------|--------------------|------------|
|       |             | Stock No.          | Price Each | Stock No.          | Price Each | Stock No.          | Price Each |
| 0-10  | 4900        | ...                | ...        | 55F2228            | 162.06     | ...                | ...        |
| 0-25  | 1960        | 55F2225            | 134.87     | 55F2230            | 141.35     | ...                | ...        |
| 0-100 | 500         | ...                | ...        | ...                | ...        | 55F2237            | 110.36     |

AC VOLTMETERS WITH IRON VAN METER MOVEMENT

| Range   | Resist. (Ω) | Model 1257 2-1/2" |            | Model 1357 3-1/2" |            | Model 1359 4-1/2" |            |
|---------|-------------|-------------------|------------|-------------------|------------|-------------------|------------|
|         |             | Stock No.         | Price Each | Stock No.         | Price Each | Stock No.         | Price Each |
| 0-10    | 133         | 55F1534           | 77.63      | ...               | ...        | ...               | ...        |
| 0-50    | 3,333       | ...               | ...        | 55F2527           | 76.20      | 55F2534           | 83.85      |
| 0-150   | 25,000      | 55F1535           | 73.65      | 55F1585           | 78.90      | 55F1635           | 83.85      |
| 0-300   | 50,000      | 55F1536           | 73.65      | 55F1586           | 78.90      | 55F1636           | 83.85      |
| 0-500†† | 83,333      | ...               | ...        | 55F2530           | 99.75      | 55F2537           | 106.65     |

▶ CONTINUED ▶



DESIGNER PANEL METERS

Clean, uncluttered design offers maximum readability in minimum required height. Black plastic case with glass window. Both models feature  $\pm 2\%$  f.s. accuracy and red knife-edge pointer. Other ranges available; go online or call. Order external shunts and current transformers separately on pages 1882 and 1957.



DC VOLTMETERS, SELF-SHIELDING

| Range | Resistance         | Model 523 3.5" |            | Model 524 4.5" |            |
|-------|--------------------|----------------|------------|----------------|------------|
|       |                    | Stock No.      | Price Each | Stock No.      | Price Each |
| 0-5   | 1000 Ohms Per Volt | 62F3315        | 78.60      | ...            | ...        |
| 0-10  |                    | ...            | ...        | 62F3320        | 84.90      |
| 0-15  |                    | 55F735         | 78.60      | ...            | ...        |
| 0-30  |                    | 55F736         | 91.40      | ...            | ...        |
| 0-150 |                    | 62F3318        | 78.60      | ...            | ...        |

▶ CONTINUED ▶

DESIGNER PANEL METERS (CONT.)

DC MICROAMMETERS, SELF-SHIELDING

| Range     | Resistance | Model 523 3.5" |            | Model 524 4.5" |            |
|-----------|------------|----------------|------------|----------------|------------|
|           |            | Stock No.      | Price Each | Stock No.      | Price Each |
| 0-25*     | 2100       | 55F717         | 135.88     | ...            | ...        |
| 0-50      | 1800       | 55F718         | 94.80      | 55F724         | 118.78     |
| 0-100     | 1800       | 55F719         | 86.85      | 55F725         | 112.16     |
| 50-0-50   | 1800       | 55F721         | 101.51     | 55F727         | 97.35      |
| 100-0-100 | 1100       | 55F722         | 80.55      | ...            | ...        |

\* Tautband (2404)

NEW BIG LOOK PANEL METERS

- Accuracy:  $\pm 2\%$  of full scale
- Meet ANSI specifications C-39.1
- Elements: taut band or pivot jewel
- Front panel surface mount



DC VOLTMETERS — ZERO-LEFT

| Meter Range | Meter Movement | 1.5 inches    |           |            | 2.5 inches    |           |            | 3.5 inches    |           |            | 4.5 inches    |           |            |
|-------------|----------------|---------------|-----------|------------|---------------|-----------|------------|---------------|-----------|------------|---------------|-----------|------------|
|             |                | Mfg. Part No. | Stock No. | Price Each | Mfg. Part No. | Stock No. | Price Each | Mfg. Part No. | Stock No. | Price Each | Mfg. Part No. | Stock No. | Price Each |
| 0-1 VDC     | Taut Band      | 250 120 LALA  | 63K2380   | 54.60      | 250 220 LALA  | 63K2396   | 52.50      | ...           | ...       | ...        | ...           | ...       | ...        |
| 0-10 VDC    | Taut Band      | ...           | ...       | ...        | 250 220 MTMT  | 65K3124   | 52.50      | 250 320 MTMT  | 65K3145   | 53.55      | 250 420 MTMT  | 65K3167   | 57.75      |
| 0-50 VDC    | Taut Band      | ...           | ...       | ...        | 250 220 NTNT  | 65K3125   | 56.00      | 250 320 NTNT  | 65K3146   | 53.55      | ...           | ...       | ...        |
| 0-100 VDC   | Taut Band      | ...           | ...       | ...        | 250 220 PKPK  | 65K3126   | 52.50      | 250-320-PKPK  | 65K3147   | 57.00      | 250 420 PKPK  | 65K3169   | 57.75      |
| 0-300 VDC   | Taut Band      | 250 120 RXRX  | 63K2384   | 54.60      | 250 220 RXRX  | 63K2400   | 52.50      | ...           | ...       | ...        | ...           | ...       | ...        |

DC MICROAMMETERS — ZERO-LEFT

|                 |           |              |         |       |              |         |       |     |     |     |     |     |     |
|-----------------|-----------|--------------|---------|-------|--------------|---------|-------|-----|-----|-----|-----|-----|-----|
| 0-100 $\mu$ ADC | Taut Band | ...          | ...     | ...   | 250 200 DRDR | 63K2387 | 53.55 | ... | ... | ... | ... | ... | ... |
| 0-200 $\mu$ ADC | Taut Band | 250 100 EAEA | 63K2373 | 56.70 | 250 200 EAEA | 63K2388 | 53.55 | ... | ... | ... | ... | ... | ... |
| 0-500 $\mu$ ADC | Taut Band | 250 100 EMEM | 63K2374 | 56.70 | 250 200 EMEM | 63K2389 | 53.55 | ... | ... | ... | ... | ... | ... |

DC MILLIAMMETERS — ZERO-LEFT

|           |           |     |     |     |              |         |       |              |         |       |     |     |     |
|-----------|-----------|-----|-----|-----|--------------|---------|-------|--------------|---------|-------|-----|-----|-----|
| 0-1 mA DC | Taut Band | ... | ... | ... | 250 200 FAFA | 65K3122 | 50.40 | 250 300 FAFA | 65K3142 | 51.45 | ... | ... | ... |
|-----------|-----------|-----|-----|-----|--------------|---------|-------|--------------|---------|-------|-----|-----|-----|

DC AMMETERS — ZERO-LEFT

|          |           |              |         |       |              |         |       |              |         |       |              |         |       |
|----------|-----------|--------------|---------|-------|--------------|---------|-------|--------------|---------|-------|--------------|---------|-------|
| 0-1 ADC  | Taut Band | 250 100 LALA | 63K2378 | 56.70 | 250 200 LALA | 63K2393 | 53.55 | ...          | ...     | ...   | ...          | ...     | ...   |
| 0-5 ADC  | Taut Band | 250 100 LSLS | 65K3118 | 56.70 | 250-200-LSLS | 63K2394 | 57.00 | ...          | ...     | ...   | ...          | ...     | ...   |
| 0-10 ADC | Taut Band | ...          | ...     | ...   | 250 200 MTMT | 65K3123 | 57.00 | 250 300 MTMT | 65K3143 | 54.60 | 250 400 MTMT | 65K3165 | 57.75 |
| 0-20 ADC | Taut Band | ...          | ...     | ...   | ...          | ...     | ...   | ...          | ...     | ...   | 250 400 NGNG | 65K3166 | 57.75 |
| 0-30 ADC | Taut Band | ...          | ...     | ...   | 250 200 NLNL | 63K2395 | 58.00 | 250 300 NLNL | 65K3144 | 54.60 | ...          | ...     | ...   |

AC VOLTMETERS — SELF-CONTAINED, IRON VANE TYPE, 60Hz

|           |                 |     |     |     |              |         |       |               |         |       |              |         |       |
|-----------|-----------------|-----|-----|-----|--------------|---------|-------|---------------|---------|-------|--------------|---------|-------|
| 0-150 VAC | Pivot and Jewel | ... | ... | ... | 250 244 PZPZ | 65K3140 | 51.45 | 250 344 PZPZ  | 65K3160 | 58.42 | 250 444 PZPZ | 65K3181 | 58.80 |
| 0-300 VAC | Pivot and Jewel | ... | ... | ... | 250 244 RXRX | 65K3141 | 53.55 | 250 344 RXRX  | 65K3161 | 58.42 | 250 444 RXRX | 65K3182 | 65.10 |
| 0-500 VAC | Pivot and Jewel | ... | ... | ... | ...          | ...     | ...   | 250 344 SF SF | 65K3162 | 65.00 | ...          | ...     | ...   |
| 0-600 VAC | Pivot and Jewel | ... | ... | ... | ...          | ...     | ...   | 250-344-SJSJ  | 65K3163 | 64.04 | 250 444 SJSJ | 65K3184 | 70.00 |

AC AMMETERS — SELF-CONTAINED, 25-400Hz, IRON VANE

|          |                 |     |     |     |              |         |       |              |         |       |              |         |       |
|----------|-----------------|-----|-----|-----|--------------|---------|-------|--------------|---------|-------|--------------|---------|-------|
| 0-5 AAC  | Pivot and Jewel | ... | ... | ... | 250 240 LSLS | 65K3127 | 51.45 | 250 340 LSLS | 65K3148 | 56.70 | 250 440 LSLS | 65K3170 | 66.00 |
| 0-10 AAC | Pivot and Jewel | ... | ... | ... | 250 240 MTMT | 65K3139 | 51.45 | ...          | ...     | ...   | ...          | ...     | ...   |

AC AMMETERS — TRANSFORMER-RATED, 0-5A, 25-500Hz, IRON VANE

|           |                 |     |     |     |              |         |       |              |         |       |              |         |       |
|-----------|-----------------|-----|-----|-----|--------------|---------|-------|--------------|---------|-------|--------------|---------|-------|
| 0-50 AAC  | Pivot and Jewel | ... | ... | ... | 250 240 LSNT | 65K3128 | 59.55 | 250 340 LSNT | 65K3149 | 56.70 | 250 440 LSNT | 65K3171 | 66.00 |
| 0-75 AAC  | Pivot and Jewel | ... | ... | ... | 250 240 LSPB | 65K3129 | 51.45 | 250 340 LSPB | 65K3150 | 56.70 | 250 440 LSPB | 65K3172 | 60.90 |
| 0-100 AAC | Pivot and Jewel | ... | ... | ... | 250 240 LSPK | 65K3130 | 51.45 | 250 340 LSPK | 65K3151 | 60.67 | 250 440 LSPK | 65K3173 | 66.00 |
| 0-150 AAC | Pivot and Jewel | ... | ... | ... | 250 240 LSPZ | 65K3131 | 51.45 | 250 340 LSPZ | 65K3152 | 56.70 | 250 440 LSPZ | 65K3174 | 63.00 |
| 0-200 AAC | Pivot and Jewel | ... | ... | ... | 250 240 LSRL | 65K3134 | 51.45 | 250 340 LSRL | 65K3155 | 60.67 | 250 440 LSRL | 65K3175 | 60.90 |
| 0-300 AAC | Pivot and Jewel | ... | ... | ... | 250 240 LSRX | 65K3135 | 56.70 | 250 340 LSRX | 65K3156 | 61.00 | 250 440 LSRX | 65K3176 | 63.00 |
| 0-400 AAC | Pivot and Jewel | ... | ... | ... | 250 240 LSSC | 65K3136 | 56.00 | 250-340-LSSC | 65K3157 | 61.00 | 250 440 LSSC | 65K3177 | 64.04 |
| 0-500 AAC | Pivot and Jewel | ... | ... | ... | 250 240 LSSF | 65K3137 | 56.70 | ...          | ...     | ...   | 250 440 LSSF | 65K3178 | 60.90 |
| 0-800 AAC | Pivot and Jewel | ... | ... | ... | ...          | ...     | ...   | ...          | ...     | ...   | 250 440 LSSN | 65K3179 | 60.90 |
| 0-1 kAAC  | Pivot and Jewel | ... | ... | ... | 250 240 LSVA | 65K3138 | 51.45 | 250-340-LSVA | 65K3159 | 61.00 | 250 440 LSVA | 65K3180 | 60.90 |

(87060)



**ANALOG (2%)**

**HORIZON LINE PANEL METERS**



- Accuracy: ± 2% of full scale
- Meet ANSI specifications C-39.1
- Elements: taut band or pivot jewel
- Front panel surface mount
- Rear panel mounting available; *go online or call*

**DC VOLTMETERS — ZERO-LEFT**

| Meter Range | Meter Movement | 1.5 inches    |           |            | 2.5 inches    |           |            | 3.5 inches    |           |            | 4.5 inches    |           |            |
|-------------|----------------|---------------|-----------|------------|---------------|-----------|------------|---------------|-----------|------------|---------------|-----------|------------|
|             |                | Mfg. Part No. | Stock No. | Price Each | Mfg. Part No. | Stock No. | Price Each | Mfg. Part No. | Stock No. | Price Each | Mfg. Part No. | Stock No. | Price Each |
| 0-10 VDC    | Taut Band      | 251 120 MTMT  | 65K3186   | 52.50      | 251-220-MTMT  | 65K3192   | 52.50      | ...           | ...       | ...        | 251 420 MTMT  | 65K4615   | 57.75      |
| 0-50 VDC    | Taut Band      | 251 120 NTNT  | 65K3187   | 54.60      | 251 220 NTNT  | 65K3193   | 52.50      | 251-320-NTNT  | 65K3204   | 53.55      | 251 420 NTNT  | 65K4616   | 57.75      |
| 0-100 VDC   | Taut Band      | 251 120 PKPK  | 65K3188   | 54.60      | 251 220 PKPK  | 65K3194   | 52.50      | 251 320 PKPK  | 65K3205   | 53.55      | 251-420-PKPK  | 65K4617   | 57.75      |

**DC MILLIAMMETERS — ZERO-LEFT**

|           |           |     |     |     |              |         |       |     |     |     |              |         |       |
|-----------|-----------|-----|-----|-----|--------------|---------|-------|-----|-----|-----|--------------|---------|-------|
| 0-1 mA DC | Taut Band | ... | ... | ... | 251 200 FAFA | 65K3189 | 50.40 | ... | ... | ... | 251 400 FAFA | 65K4612 | 54.60 |
|-----------|-----------|-----|-----|-----|--------------|---------|-------|-----|-----|-----|--------------|---------|-------|

**DC AMMETERS — ZERO-LEFT**

|          |           |     |     |     |              |         |       |              |         |       |              |         |       |
|----------|-----------|-----|-----|-----|--------------|---------|-------|--------------|---------|-------|--------------|---------|-------|
| 0-5 ADC  | Taut Band | ... | ... | ... | 251 200 LSLS | 65K3190 | 53.55 | 251 300 LSLS | 65K3202 | 58.00 | 251 400 LSLS | 65K4613 | 57.75 |
| 0-10 ADC | Taut Band | ... | ... | ... | 251 200 MTMT | 65K3191 | 53.55 | 251 300 MTMT | 65K4611 | 54.60 | 251 400 MTMT | 65K4614 | 57.75 |

**AC VOLTMETERS — SELF-CONTAINED, IRON VANE TYPE, 60Hz**

|           |                 |     |     |     |               |         |       |               |         |       |               |         |       |
|-----------|-----------------|-----|-----|-----|---------------|---------|-------|---------------|---------|-------|---------------|---------|-------|
| 0-150 VAC | Pivot and Jewel | ... | ... | ... | 251 244 PZPZ  | 65K3199 | 51.45 | 251-344-PZPZ  | 19M0127 | 54.60 | 251-444-PZPZ  | 19M0135 | 61.00 |
| 0-300 VAC | Pivot and Jewel | ... | ... | ... | 251 244 RXR X | 65K3200 | 53.55 | 251-344-RXR X | 19M0131 | 58.00 | 251-444-RXR X | 19M0144 | 58.80 |

**AC AMMETER — SELF-CONTAINED, 25-400Hz, IRON VANE**

|         |                 |     |     |     |              |         |       |              |         |       |              |         |       |
|---------|-----------------|-----|-----|-----|--------------|---------|-------|--------------|---------|-------|--------------|---------|-------|
| 0-5 AAC | Pivot and Jewel | ... | ... | ... | 251 240 LSLS | 65K3195 | 56.00 | 251-340-LSLS | 87K2506 | 56.70 | 251-440-LSLS | 19M0149 | 66.00 |
|---------|-----------------|-----|-----|-----|--------------|---------|-------|--------------|---------|-------|--------------|---------|-------|

**AC AMMETERS — TRANSFORMER-RATED, 0-5a, 25-400Hz, IRON VANE**

|           |                 |     |     |     |              |         |       |              |         |       |              |         |       |
|-----------|-----------------|-----|-----|-----|--------------|---------|-------|--------------|---------|-------|--------------|---------|-------|
| 0-50 AAC  | Pivot and Jewel | ... | ... | ... | 251 240 LSNT | 65K3196 | 56.00 | 251-340-LSNT | 03M5322 | 60.00 | 251-440-LSNT | 89K7891 | 60.70 |
| 0-150 AAC | Pivot and Jewel | ... | ... | ... | 251 240 LSPZ | 65K3197 | 51.45 | 251-340-LSPZ | 19M0154 | 61.00 | 251-440-LSPZ | 19M0163 | 63.00 |
| 0-500 AAC | Pivot and Jewel | ... | ... | ... | 251 240 LSSF | 65K3198 | 51.45 | 251-340-LSSF | 19M0159 | 61.00 | 251-440-LSSF | 19M0546 | 63.00 |

**AC FREQUENCY METERS — SELF-CONTAINED, ACCURACY ±3% OF SPAN**

|             |                 |     |     |     |              |         |        |              |         |        |              |         |        |
|-------------|-----------------|-----|-----|-----|--------------|---------|--------|--------------|---------|--------|--------------|---------|--------|
| 45-55 Hz AC | Pivot and Jewel | ... | ... | ... | 254 250 AGAG | 63K2404 | 110.25 | 254-350-AGAG | 19M0558 | 113.40 | 254-450-AGAG | 19M0567 | 116.55 |
| 45-65Hz AC  | Pivot and Jewel | ... | ... | ... | 254 250 AJAJ | 63K2405 | 110.25 | 254-350-AJAJ | 19M0560 | 121.34 | 254-450-AJAJ | 19M0584 | 116.55 |
| 55-65 Hz AC | Pivot and Jewel | ... | ... | ... | 254 250 ANAN | 63K2406 | 115.50 | 254-350-ANAN | 81C7474 | 113.40 | 254-450-ANAN | 74K0694 | 102.40 |

**AC LOAD INDICATORS — 5A CURRENT TRANSFORMER RATED, 60Hz, IRON VANE TYPE**

|           |                 |     |     |     |                  |         |       |                  |         |       |                  |         |       |
|-----------|-----------------|-----|-----|-----|------------------|---------|-------|------------------|---------|-------|------------------|---------|-------|
| 0-150 AAC | Pivot and Jewel | ... | ... | ... | 251 240 LSPZ7AAA | 65K3132 | 57.75 | 251 340 LSPZ7AAA | 65K3153 | 59.85 | ...              | ...     | ...   |
| 0-150 AAC | Pivot and Jewel | ... | ... | ... | 251 240 LSPZ7AAB | 65K3133 | 67.20 | 251 340 LSPZ7AAB | 65K3154 | 69.30 | ...              | ...     | ...   |
| 0-150 AAC | Pivot and Jewel | ... | ... | ... | ...              | ...     | ...   | 251-340-LSPZAAAJ | 18M1367 | 59.85 | 251-440-LSPZ7AAJ | 19M0596 | 65.10 |
| 0-150 AAC | Pivot and Jewel | ... | ... | ... | ...              | ...     | ...   | 251-340-LSPZ7AAK | 19M1351 | 69.30 | 251-440-LSPZ7AAK | 19M0600 | 60.90 |

(87062)

**STYLIST SERIES PANEL METERS**



- Accuracy: ± 2% of full scale
- Meet ANSI specifications C-39.1
- Elements: taut band or pivot jewel
- Front panel surface mount
- Rear panel window mounting, rear panel surface mounting also available; *go online or call*
- Also available with optional bezel; *go online or call*

**DC VOLTMETERS — ZERO-LEFT**

| Meter Range | Meter Movement | 1.5 inches    |           |            | 2.5 inches    |           |            | 3.5 inches    |           |            | 4.5 inches    |           |            |
|-------------|----------------|---------------|-----------|------------|---------------|-----------|------------|---------------|-----------|------------|---------------|-----------|------------|
|             |                | Mfg. Part No. | Stock No. | Price Each | Mfg. Part No. | Stock No. | Price Each | Mfg. Part No. | Stock No. | Price Each | Mfg. Part No. | Stock No. | Price Each |
| 0-10 VDC    | Taut Band      | 260 120 MTMT  | 65K4619   | 53.55      | 260 220 MTMT  | 65K4629   | 51.45      | 260-320-MTMT  | 83K9438   | 52.50      | 260-420-MTMT  | 19M1153   | 56.70      |
| 0-50 VDC    | Taut Band      | 260 120 NTNT  | 65K4620   | 53.55      | ...           | ...       | ...        | 260-320-NTNT  | 19M0613   | 52.50      | 260-420-NTNT  | 19M1156   | 56.70      |
| 0-100 VDC   | Taut Band      | ...           | ...       | ...        | ...           | ...       | ...        | 260-320-PKPK  | 19M0617   | 52.50      | 260-420-PKPK  | 19M1158   | 56.40      |
| 0-600 VDC   | Taut Band      | ...           | ...       | ...        | 260 220 SJSJ  | 65K4627   | 51.45      | 260-320-SJSJ  | 19M0623   | 57.00      | 260-420-SJSJ  | 19M1159   | 57.75      |
| 0-750 VDC   | Taut Band      | ...           | ...       | ...        | ...           | ...       | ...        | 260-320-SMSM  | 19M0625   | 52.50      | 260-420-SMSM  | 19M1161   | 60.00      |

**DC MILLIAMMETERS — ZERO-LEFT**

|           |           |              |         |       |     |     |     |              |         |       |              |         |       |
|-----------|-----------|--------------|---------|-------|-----|-----|-----|--------------|---------|-------|--------------|---------|-------|
| 0-1 mA DC | Taut Band | 260 100 FAFA | 65K4618 | 51.45 | ... | ... | ... | 260-300-FAFA | 19M0631 | 50.40 | 260-400-FAFA | 16M4859 | 60.00 |
|-----------|-----------|--------------|---------|-------|-----|-----|-----|--------------|---------|-------|--------------|---------|-------|

**DC AMMETERS — ZERO-LEFT, SELF-CONTAINED**

|          |           |     |     |     |              |         |       |              |         |       |              |         |       |
|----------|-----------|-----|-----|-----|--------------|---------|-------|--------------|---------|-------|--------------|---------|-------|
| 0-5 ADC  | Taut Band | ... | ... | ... | 260 200 LSLS | 65K4622 | 52.50 | 260-300-LSLS | 19M0633 | 53.55 | 260-400-LSLS | 19M1168 | 57.75 |
| 0-10 ADC | Taut Band | ... | ... | ... | 260 200 MTMT | 65K4623 | 52.50 | 260-300-MTMT | 19M0637 | 53.55 | 260-400-MTMT | 19M1172 | 56.70 |
| 0-15 ADC | Taut Band | ... | ... | ... | 260 200 NDND | 65K4624 | 52.50 | 260-300-NDND | 19M0640 | 53.55 | 260-400-NDND | 19M1214 | 57.75 |
| 0-20 ADC | Taut Band | ... | ... | ... | 260 200 NGNG | 65K4625 | 52.50 | 260-300-NGNG | 19M0644 | 58.00 | 260-400-NGNG | 19M1216 | 57.75 |

**AC VOLTMETERS — IRON VANE, SELF CONTAINED, 60Hz**

|           |                 |     |     |     |              |         |       |              |         |       |              |         |       |
|-----------|-----------------|-----|-----|-----|--------------|---------|-------|--------------|---------|-------|--------------|---------|-------|
| 0-150 VAC | Pivot and Jewel | ... | ... | ... | 260-244-PZPZ | 19M1228 | 57.00 | 260-344-PZPZ | 19M1230 | 55.65 | 260-444-PZPZ | 03M5254 | 59.85 |
| 0-600 VAC | Pivot and Jewel | ... | ... | ... | 260-244-SJSJ | 19M1237 | 63.00 | 260-344-SJSJ | 19M1241 | 55.65 | 260-444-SJSJ | 83K9807 | 65.00 |

**AC AMMETERS — IRON VANE, SELF-CONTAINED, 50-400Hz**

|         |                 |     |     |     |              |         |       |              |         |       |              |         |       |
|---------|-----------------|-----|-----|-----|--------------|---------|-------|--------------|---------|-------|--------------|---------|-------|
| 0-5 AAC | Pivot and Jewel | ... | ... | ... | 260-240-LSLS | 02M6086 | 50.40 | 260-340-LSLS | 19M1243 | 55.65 | 260-440-LSLS | 19M1246 | 59.85 |
|---------|-----------------|-----|-----|-----|--------------|---------|-------|--------------|---------|-------|--------------|---------|-------|

**AC AMMETERS — IRON VANE, TRANSFORMER RATED, 0-5A, 50-400Hz**

|          |                 |     |     |     |              |         |       |              |         |       |              |         |       |
|----------|-----------------|-----|-----|-----|--------------|---------|-------|--------------|---------|-------|--------------|---------|-------|
| 0-10 AAC | Pivot and Jewel | ... | ... | ... | 260-240-LSMT | 19M1249 | 50.40 | 260-340-LSMT | 19M1251 | 60.00 | 260-440-LSMT | 19M1253 | 59.85 |
| 0-20 AAC | Pivot and Jewel | ... | ... | ... | 260-240-LSNG | 19M1266 | 59.55 | 260-340-LSNG | 19M1270 | 64.04 | 260-440-LSNG | 19M1273 | 59.85 |

(87063)



**ANALOG (5%) • ANALOG METER RELAYS • ANALOG SWITCHBOARDS**

**CK-900 AND 3100 SERIES PANEL METERS (CONT.)**

| 3100 SERIES — 3.5" RECTANGLE |                 |             |           |            |
|------------------------------|-----------------|-------------|-----------|------------|
| Mfg. Part No.                | Meter Function  | Meter Scale | Stock No. | Price Each |
| 3135-50ADC-SC                | DC Ammeter      | 0-50 ADC    | 84K7381   | 77.35      |
| 3100 SERIES — 4.5" RECTANGLE |                 |             |           |            |
| H3145-DMA-001                | DC Milliammeter | 0-1 mADC    | 84K7382   | 80.20      |

**M SERIES MOVING-MAGNET PANEL METERS**



- 5% Accuracy of Full Scale
- Flush or Surface Mount without Modification

Quality meters feature high-torque, powerful ballistic movements that permit mounting in steel panels without special calibration and production-engineered mounting and electrical connections. **OMS** and **MSQ** series are square meters with operating zero adjusters and scales printed on translucent plastic. **ME** series edgewise meters are interchangeable with many d'Arsonval meters. Feature flush-to-panel covers, no disfiguring bulge. **3MAS** series rectangular 3 1/2" meters have operating zero adjusters and scales printed on translucent plastic, permitting diffused lighting. All **M** series meters operating temperature range: 0° to +50°C.

**DC MILLIAMMETERS**

| Range | OMS Series 1-1/2" Square |           |            | MSQ Series 2-1/2" Square |           |            |
|-------|--------------------------|-----------|------------|--------------------------|-----------|------------|
|       | Mfg. Part No.            | Stock No. | Price Each | Mfg. Part No.            | Stock No. | Price Each |
| 0-1   | OMS-DMA-001-U            | 62F3541   | 20.25      | MSQ-DMA-001-U            | 54F1032   | 22.45      |
| 0-5   | OMS-DMA-005-U            | 62F3542   | 20.25      | ...                      | ...       | ...        |
| 0-10  | OMS-DMA-010-U            | 87F2559   | 20.25      | MSQ-DMA-010-U            | 87F2560   | 22.45      |
| 1-0-1 | OMS-DMA-1U1-U            | 44F4762   | 21.75      | MSQ-DMA-1U1-U            | 44F4779   | 23.95      |

**DC AMMETERS**

|      |               |         |       |               |         |       |
|------|---------------|---------|-------|---------------|---------|-------|
| 0-5  | OMS-DAA-005-U | 62F3544 | 20.25 | MSQ-DAA-005-U | 54F1024 | 22.45 |
| 0-10 | ...           | ...     | ...   | MSQ-DAA-010-U | 54F1025 | 22.45 |
| 0-20 | OMS-DAA-020-U | 44F4763 | 20.25 | MSQ-DAA-020-U | 44F4780 | 22.45 |
| 0-30 | ...           | ...     | ...   | MSQ-DAA-030-U | 54F1026 | 22.45 |

**DC VOLTMETERS**

|       |               |         |       |               |         |       |
|-------|---------------|---------|-------|---------------|---------|-------|
| 0-10  | OMS-DVV-010-U | 44F4766 | 21.35 | MSQ-DVV-010-U | 44F4782 | 23.55 |
| 0-15  | OMS-DVV-015-U | 62F3546 | 21.35 | MSQ-DVV-015-U | 54F1013 | 23.55 |
| 0-30  | OMS-DVV-030-U | 44F4767 | 21.35 | MSQ-DVV-030-U | 54F1014 | 23.55 |
| 0-50  | OMS-DVV-050-U | 62F3547 | 21.35 | MSQ-DVV-050-U | 54F1015 | 23.55 |
| 0-100 | OMS-DVV-100-U | 44F4768 | 21.35 | MSQ-DVV-100-U | 54F1016 | 23.55 |

**AC AMMETERS**

|      |               |         |       |               |         |       |
|------|---------------|---------|-------|---------------|---------|-------|
| 0-1  | OMS-AAA-001-U | 44F4771 | 24.65 | MSQ-AAA-001-U | 44F4785 | 26.85 |
| 0-5  | OMS-AAA-005-U | 44F4772 | 24.65 | MSQ-AAA-005-U | 44F4786 | 26.85 |
| 0-10 | OMS-AAA-010-U | 44F4773 | 24.65 | MSQ-AAA-010-U | 44F4787 | 26.85 |

**AC VOLTMETERS**

|       |               |         |       |               |         |       |
|-------|---------------|---------|-------|---------------|---------|-------|
| 0-150 | OMS-AVV-150-U | 62F3549 | 22.45 | MSQ-AVV-150-U | 54F1006 | 24.65 |
| 0-300 | OMS-AVV-300-U | 62F3550 | 22.45 | MSQ-AVV-300-U | 54F1007 | 24.65 |

**DC MILLIAMMETERS**

| Range | 3MAS Series 3-1/2" Rectangular |           |            | ME Series 2" Edgewise |           |            |
|-------|--------------------------------|-----------|------------|-----------------------|-----------|------------|
|       | Mfg. Part No.                  | Stock No. | Price Each | Mfg. Part No.         | Stock No. | Price Each |
| 0-1   | 3MAS-DMA-001-U                 | 54F1035   | 24.65      | ME-DMA-001-U          | 54F1029   | 19.15      |
| 0-10  | 3MAS-DMA-010-U                 | 87F2561   | 24.65      | ME-DMA-010-U          | 87F2543   | 19.15      |
| 1-0-1 | ...                            | ...       | ...        | ME-DMA-1U1-U          | 44F4795   | 20.65      |

**DC AMMETERS**

|      |                |         |       |              |         |       |
|------|----------------|---------|-------|--------------|---------|-------|
| 0-5  | 3MAS-DAA-005-U | 54F1027 | 24.65 | ME-DAA-005-U | 54F1020 | 19.15 |
| 0-10 | ...            | ...     | ...   | ME-DAA-010-U | 44F4798 | 19.15 |
| 0-20 | ...            | ...     | ...   | ME-DAA-020-U | 44F4799 | 19.15 |

**DC VOLTMETERS**

|       |                |         |       |              |         |       |
|-------|----------------|---------|-------|--------------|---------|-------|
| 0-10  | ...            | ...     | ...   | ME-DVV-010-U | 44F4802 | 19.15 |
| 0-15  | 3MAS-DVV-015-U | 54F1018 | 25.75 | ME-DVV-015-U | 54F1010 | 19.15 |
| 0-30  | ...            | ...     | ...   | ME-DVV-030-U | 44F4803 | 19.15 |
| 0-50  | 3MAS-DVV-050-U | 54F1019 | 25.75 | ME-DVV-050-U | 54F1011 | 19.15 |
| 0-100 | ...            | ...     | ...   | ME-DVV-100-U | 44F4804 | 19.15 |

**AC AMMETERS**

|      |     |     |     |              |         |       |
|------|-----|-----|-----|--------------|---------|-------|
| 0-1  | ... | ... | ... | ME-AAA-001-U | 44F4808 | 22.45 |
| 0-5  | ... | ... | ... | ME-AAA-005-U | 44F4809 | 22.45 |
| 0-10 | ... | ... | ... | ME-AAA-010-U | 44F4810 | 22.45 |

➔ CONTINUED ➔

**AC VOLTMETERS**

| Range | OMS Series 1-1/2" Square |           |            | MSQ Series 2-1/2" Square |           |            |
|-------|--------------------------|-----------|------------|--------------------------|-----------|------------|
|       | Mfg. Part No.            | Stock No. | Price Each | Mfg. Part No.            | Stock No. | Price Each |
| 0-150 | 3MAS-AVV-150-U           | 54F1008   | 26.85      | ...                      | ...       | ...        |
| 0-300 | 3MAS-AVV-300-U           | 54F1009   | 26.85      | ...                      | ...       | ...        |

**DC MICROAMMETERS WITH 500-0-500 RANGE**

| Mfg. Part No.  | Description                    | Stock No. | Price Each |
|----------------|--------------------------------|-----------|------------|
|                |                                |           | Each       |
| 3MAS-DJA-5H5-U | 3MAS Series 3 1/2" Rectangular | 87F2557   | 26.15      |

**MOTOR LOAD METER RELAYS**



In addition to offering action at one or two set points the Simpson motor load relay provides visual monitoring of motor load current. The controller measures the AC current of a motor and indicates the value on a 0-150% dial. The combined features of time delay, gain adjust, and auto/manual reset provide complete relay switching for alarm, motor shutdown or other corrective action. Specifically designed for harsh environments, the **Model 3300 series** is housed in a metal case that gives complete magnetic isolation for steel panel mounting. The "Rugged Seal" construction withstands rigorous environmental conditions. Each controller is moisture, dust and dirt proof. Size: 4 1/2". Input: 0-5ACA. Use with 5A current transformers *order separately on page 1957*.



| Mfg. Part No. | Size (in.) | Input (AC Amps) | Set Points | Stock No. | Price Each |
|---------------|------------|-----------------|------------|-----------|------------|
| 21643 +       | 4.5        | 0-5             | 2          | 01B7060   | 656.97     |
| 21683 +       | 4.5        | 0-5             | 1          | 01B7070   | 553.21     |

+ Use with 5A transformer; sold separately (79266)

**4 1/2" SWITCHBOARDS**



Ammeter



Frequency Meter



Voltmeter

**077 series** has one piece flame retardant polycarbonate window. The window is contoured to minimize reflection from adjacent light sources. General options include supplementary red pointer, slave pointer, calibration for non-standard ambient temperatures, special scales, trim potentiometers, and illuminated dials with white or red light sources.

**AMMETERS**

5A transformer rated.

| Mfg. Part No.    | Description      | Scaling | Stock No. | Price Each |
|------------------|------------------|---------|-----------|------------|
| 077-05FA-LSPK-C6 | Displays         | 0-100A  | 24C7651   | 264.16     |
| 077-05FA-LSRL-C7 | Switchboard      | 0-200A  | 70C4206   | 264.16     |
| 077-05FA-LSRX-C6 | Panel Instrument | 0-300A  | 97B3294   | 264.16     |
| 077-05FA-LSSJ-C6 | Panel Instrument | 0-600A  | 97B3292   | 264.16     |

**FREQUENCY METERS**

Use 10-32 UNF Terminals

| Mfg. Part No.    | Rating        | Scaling  | Stock No. | Price Each |
|------------------|---------------|----------|-----------|------------|
| 077-41LA-PNAN-AN | 60Hz +/- 0.15 | 55-65 Hz | 94B8728   | 810.16     |

**VOLTMETERS**

Transformer rated: 50/60Hz (Accuracy ±1%) 0.8VA @ 150V.

| Mfg. Part No.    | Rating (VAC) | Scaling | Stock No. | Price Each |
|------------------|--------------|---------|-----------|------------|
| 077-05GA-PZRX-C6 | 150          | 0-300V  | 09J4224   | 282.88     |
| 077-05GA-PZPZ-C6 | 150          | 0-600V  | 07H2938   | 282.88     |
| 077-05GA-PZSJ-C6 | 150          | 0-600V  | 88F1870   | 294.20     |
| 077-05GA-RXRX-C6 | 300          | 0-300V  | 09J4225   | 338.54     |
| 077-05GA-SJSJ-C7 | 600          | 0-600V  | 09J4226   | 346.32     |

(80268)

ANALOG SWITCHBOARDS

SWITCHBOARDS



DC VOLTMETERS — ZERO-LEFT

| Meter Range | Meter Movement | AB/DB-14      |           |            | AB/DB-40      |           |            | AB/DB-16      |           |            |
|-------------|----------------|---------------|-----------|------------|---------------|-----------|------------|---------------|-----------|------------|
|             |                | Mfg. Part No. | Stock No. | Price Each | Mfg. Part No. | Stock No. | Price Each | Mfg. Part No. | Stock No. | Price Each |
| 0-50 VDC    | Moving Coil    | 101 013 NTNT  | 63K4466   | 401.00     | 103 011 NTNT  | 63K4492   | 261.00     | ...           | ...       | ...        |
| 0-150 VDC   | Moving Coil    | 101 013 PZPZ  | 63K4467   | 401.00     | 103 011 PZPZ  | 63K4493   | 261.00     | ...           | ...       | ...        |
| 0-600 VDC   | Moving Coil    | 101 013 SJSJ  | 63K4471   | 434.00     | 103 011 SJSJ  | 63K4494   | 342.00     | 121 011 SJSJ  | 63K4559   | 480.00     |

DC MICROAMMETERS — ZERO-LEFT, SELF-CONTAINED

|            |             |     |     |     |              |         |        |              |         |        |
|------------|-------------|-----|-----|-----|--------------|---------|--------|--------------|---------|--------|
| 0-500 µADC | Moving Coil | ... | ... | ... | 103-111-EMEM | 74K0564 | 252.00 | 121 111 EMEM | 63K4551 | 413.00 |
|------------|-------------|-----|-----|-----|--------------|---------|--------|--------------|---------|--------|

DC MILLIAMMETERS — ZERO-LEFT, SELF-CONTAINED

|             |             |              |         |        |              |         |        |              |         |        |
|-------------|-------------|--------------|---------|--------|--------------|---------|--------|--------------|---------|--------|
| 0-1 mA DC   | Moving Coil | 101 113 FAFA | 63K4472 | 394.00 | 103-111-FAFA | 19M1298 | 394.00 | 121 111 FAFA | 63K4552 | 470.00 |
| 0-500 mA DC | Moving Coil | 101-113-KMKM | 19M1284 | 394.00 | 103-111-KMKM | 19M1287 | 274.00 | 121 111 KMKM | 63K4555 | 441.00 |

DC AMMETERS — ZERO-LEFT, SELF-CONTAINED

|          |             |              |         |        |              |         |        |              |         |        |
|----------|-------------|--------------|---------|--------|--------------|---------|--------|--------------|---------|--------|
| 0-5 ADC  | Moving Coil | 101 113 LLSL | 63K4476 | 424.00 | 103-111-LLSL | 19M1302 | 301.00 | 121 111 LLSL | 63K4556 | 425.00 |
| 0-15 ADC | Moving Coil | 101-113-NDND | 19M1288 | 424.00 | 103-111-NDND | 19M1289 | 274.00 | 121 111 NDND | 63K4557 | 441.00 |
| 0-30 ADC | Moving Coil | 101 113 NLNL | 63K4477 | 424.00 | 103-111-NLNL | 19M1313 | 281.00 | 121 111 NLNL | 63K4558 | 425.00 |

AC VOLTMETERS — ZERO-LEFT, SELF-CONTAINED

|           |             |              |         |        |              |         |        |              |         |        |
|-----------|-------------|--------------|---------|--------|--------------|---------|--------|--------------|---------|--------|
| 0-150 VAC | Moving Coil | 101 023 PZPZ | 63K4468 | 385.00 | 103 021 PZPZ | 63K4495 | 265.00 | 121 021 PZPZ | 63K4560 | 408.00 |
| 0-600 VAC | Moving Coil | 101 023 SJSJ | 63K4469 | 457.00 | 103 021 SJSJ | 63K4496 | 315.00 | 121 021 SJSJ | 63K4561 | 467.00 |

AC AMMETERS — ZERO-LEFT, SELF-CONTAINED

|          |             |              |         |        |              |         |        |              |         |        |
|----------|-------------|--------------|---------|--------|--------------|---------|--------|--------------|---------|--------|
| 0-1 AAC  | Moving Coil | 101-133-LALA | 19M1295 | 357.00 | 103 131 LALA | 63K4507 | 231.00 | 121 131 LALA | 63K4564 | 387.00 |
| 0-5 AAC  | Moving Coil | ...          | ...     | ...    | 103 131 LSL  | 63K4508 | 231.00 | 121 131 LSL  | 63K4565 | 387.00 |
| 0-30 AAC | Moving Coil | 101 133 NLNL | 63K4482 | 368.00 | 103 131 NLNL | 63K4509 | 231.00 | 121 131 NLNL | 63K4567 | 387.00 |

AC FREQUENCY METERS, 120V

|             |             |     |     |     |     |     |     |              |         |        |
|-------------|-------------|-----|-----|-----|-----|-----|-----|--------------|---------|--------|
| 45-55 Hz AC | Moving Coil | ... | ... | ... | ... | ... | ... | 121-372-AGAG | 19M1328 | 882.00 |
|-------------|-------------|-----|-----|-----|-----|-----|-----|--------------|---------|--------|

SYNCHROSCOPES, 120V

|           |                 |     |     |     |     |     |     |              |         |        |
|-----------|-----------------|-----|-----|-----|-----|-----|-----|--------------|---------|--------|
| Slow-Fast | Pivot and Jewel | ... | ... | ... | ... | ... | ... | 120 452 AAAA | 63K4576 | 948.00 |
|-----------|-----------------|-----|-----|-----|-----|-----|-----|--------------|---------|--------|

TEMPERATURE INDICATORS — (LEAD RESISTANCE = 0.3 OHMS)

|           |             |     |     |     |              |         |        |              |         |        |
|-----------|-------------|-----|-----|-----|--------------|---------|--------|--------------|---------|--------|
| 20-140° C | Moving Coil | ... | ... | ... | ...          | ...     | ...    | 121-502-CAAB | 19M1290 | 948.00 |
| 0-180°F   | Moving Coil | ... | ... | ... | 103 502 CDCD | 63K4521 | 779.00 | 121 502 CDCD | 63K4577 | 948.00 |

POWER-FACTOR METERS — 3-PHASE, 3- AND 4-WIRE, 50/60Hz, BALANCED SYSTEM ONLY

| Meter Range | Meter Movement | Rating (A) | Rating (L-L Volts) | AB-40         |           |            | AB-16         |           |            |
|-------------|----------------|------------|--------------------|---------------|-----------|------------|---------------|-----------|------------|
|             |                |            |                    | Mfg. Part No. | Stock No. | Price Each | Mfg. Part No. | Stock No. | Price Each |
| 0.5-1-0.5   | Moving Coil    | 5          | 120                | 103-402-FCAD  | 63K4517   | 657.00     | 121-402-FCAD  | 19M1319   | 747.00     |

(87067)

AB40 SWITCHBOARD STYLE AC HOUR METERS



- Six-digit counter with 1/2" high digits
- Frequency: 60Hz
- Polycarbonate cover
- Zinc-coated steel case
- Synchronous motor
- Burden: 3W typical

Contains the time-proven 240 elapsed meter in a 4.33" square weather-resistant case. Designed for use with other switchboard instruments on electrical switchgear and control panels. Resettable meters require the removal of the cover to perform the reset function. Meets ANSI C39.1 specifications for shock and vibration. UL recognized, CSA certified.



RESETTABLE METERS

| Mfg. Part No. | Voltage Rating (VAC) | Max. Hours | Stock No. | Price Each |
|---------------|----------------------|------------|-----------|------------|
| 103 822 AAAB  | 120                  | 99,999.9   | 63K4525   | 159.43     |
| 103 822 ABAB  | 240                  | 99,999.9   | 63K4526   | 212.86     |
| 103 822 ACAB  | 480                  | 99,999.9   | 63K4527   | 170.13     |

NON-RESETTABLE METERS

|              |     |          |         |        |
|--------------|-----|----------|---------|--------|
| 103 811 AAAB | 120 | 99,999.9 | 63K4522 | 149.00 |
| 103 811 ABAB | 240 | 99,999.9 | 63K4523 | 139.00 |
| 103 811 ACAB | 480 | 99,999.9 | 63K4524 | 149.00 |
| 240-211-AAAB | 120 | 99,999.9 | 74K0630 | 62.00  |

(87069)

DUAL-VIEW SWITCHBOARD METERS



- Feature analog and digital display
- Drop-in replacement for upgrade of existing control and switchgear panels
- Rugged switchboard style case and IP54 rated cover
- High-intensity LED digital displays with analog movements

DUAL-VIEW switchboard meters can be configured to accept ACV, ACA, DCV, or DCA input. Both the digital and analog displays can be modified to represent virtually any scaling or engineering units as required. Contained in a 4 1/4" switchboard housing. Utilizes a taut band moving element and a 0.56", 3 1/2" digit, 7 segment LED display for indication (+/- 1999 counts). Accuracy: +/- 1% of full scale deflection (analog); +/- 0.1% of reading +/- 3 counts (AC digital); +/- 0.1% of reading +/- 2 counts (DC digital).



| Mfg. Part No. | Meter Function  | Meter Range | LED Display Color | Stock No. | Price Each |
|---------------|-----------------|-------------|-------------------|-----------|------------|
| 123 011 ABAB  | DC Voltmeter    | 0-50 mVDC   | Red               | 63K4597   | 442.86     |
| 123 011 SJSJ  | DC Voltmeter    | 0-600 VDC   | Red               | 63K4598   | 442.86     |
| 123 111 EMEM  | DC Microammeter | 0-500 µADC  | Red               | 63K4601   | 442.86     |
| 123 021 PZPZ  | AC Voltmeter    | 0-150 VAC   | Red               | 63K4599   | 464.29     |
| 123 021 SJSJ  | AC Voltmeter    | 0-600 VAC   | Red               | 63K4600   | 348.00     |
| 123 131 LALA  | AC Ammeter      | 0-1 AAC     | Red               | 63K4602   | 464.29     |
| 123 131 LSL   | AC Ammeter      | 0-5 AAC     | Red               | 63K4603   | 464.75     |

(87070)



# SHUNTS

## EXTERNAL SWITCHBOARD AND PORTABLE SHUNTS



FN 100-50mV



TM-100-50



FJ-1500-50

**Features:**

- Accuracy +/- 1/4% (0.25%)
- Temperature coefficient of resistance: +/- 0.000015 between 40-60° C
- Standard 50mV drop

DC Shunts are a separately mounted device for extending the measured current beyond the limits of self-contained DC ammeters. Switchboards non-insulated style, are for use on Busbar in Switchgear applications. Base-mounted insulated types are for light control panels, educational and laboratory application. Lightweight insulated units are for Industrial application where strength and applications where space savings are needed, or for Military applications where dimension to MIL 10304 is required. For use with BUS. Standard 50mV drop; 60A, 70A, 100A, and 150mV units also available, call Newark.

**SWITCHBOARD TYPE**

| Mfg. Part No. | Amp   | Stock No. | Price Each |
|---------------|-------|-----------|------------|
| FH-15-50      | 15    | 42M3817   | 18.72      |
| FH-20-50      | 20    | 42M3820   | 18.72      |
| FH-30-50      | 30    | 42M3822   | 18.72      |
| FH-40-50      | 40    | 42M3823   | 18.72      |
| FH-50-50      | 50    | 42M3825   | 18.72      |
| FH-60-50      | 60    | 42M3826   | 18.72      |
| FH-75-50      | 75    | 42M3827   | 18.72      |
| FH-80-50      | 80    | 42M3828   | 18.72      |
| FH-100-50     | 100   | 42M3815   | 18.72      |
| FH-125-50     | 125   | 42M3816   | 18.72      |
| FH-150-50     | 150   | 42M3818   | 18.72      |
| FH-175-50     | 175   | 42M3819   | 18.72      |
| FH-200-50     | 200   | 09J4219   | 18.72      |
| FH-250-50     | 250   | 42M3821   | 18.72      |
| FH-300-50     | 300   | 09J4220   | 18.72      |
| FH-400-50     | 400   | 42M3824   | 22.88      |
| FH-500-50     | 500   | 09J4221   | 26.00      |
| FI-600-50     | 600   | 42M3830   | 40.56      |
| FI-750-50     | 750   | 17M9151   | 43.68      |
| FI-800-50     | 800   | 17M9508   | 46.80      |
| FI-1000-50    | 1000  | 11J6979   | 89.44      |
| FI-1200-50    | 1200  | 42M3829   | 98.80      |
| FJ-1500-50    | 1500  | 42M3831   | 114.40     |
| FJ-2000-50    | 2000  | 42M3832   | 134.16     |
| FL-2500-50    | 2500  | 22C8594   | 192.40     |
| FL-3000-50    | 3000  | 23H0204   | 241.80     |
| FL-4000-50    | 4000  | 42M3835   | 301.60     |
| FL-4500-50    | 4500  | 42M3836   | 347.36     |
| FL-5000-50    | 5000  | 42M3837   | 358.80     |
| FL-6000-50    | 6000  | 42M3838   | 424.32     |
| FL-7000-50    | 7000  | 42M3839   | 501.28     |
| FL-7500-50    | 7500  | 42M3840   | 551.20     |
| FL-8000-50    | 8000  | 42M3841   | 608.92     |
| FL-9000-50    | 9000  | 42M3842   | 692.64     |
| FL-10000-50   | 10000 | 42M3833   | 752.96     |
| FL-12000-50   | 12000 | 42M3834   | 965.12     |

**BASE MOUNT PORTABLE TYPE**

|           |     |         |       |
|-----------|-----|---------|-------|
| FN-1-50   | 1   | 09J4222 | 18.72 |
| FN-2-50   | 2   | 26H1403 | 18.72 |
| FN-5-50   | 5   | 92F5447 | 18.72 |
| FN-10-50  | 10  | 93B9571 | 18.72 |
| FN-20-50  | 20  | 42M3843 | 18.72 |
| FN-25-50  | 25  | 92F5449 | 18.72 |
| FN-50-50  | 50  | 92F5450 | 18.72 |
| FN-75-50  | 75  | 26H5927 | 18.72 |
| FN-100-50 | 100 | 92F5451 | 25.00 |
| FN-150-50 | 150 | 04H6680 | 18.72 |
| FN-200-50 | 200 | 92F5452 | 18.72 |
| FN-250-50 | 250 | 42M3844 | 20.80 |
| FN-300-50 | 300 | 42M3845 | 20.80 |
| FN-400-50 | 400 | 42M3846 | 22.88 |
| FN-500-50 | 500 | 83F9154 | 22.88 |

**LIGHTWEIGHT BASE MOUNT PORTABLE TYPE**

|          |    |         |       |
|----------|----|---------|-------|
| TM-1-50  | 1  | 67H6015 | 20.08 |
| TM-5-50  | 5  | 67H6016 | 20.80 |
| TM-10-50 | 10 | 72C5232 | 20.80 |
| TM-15-50 | 15 | 42M3849 | 20.80 |
| TM-20-50 | 20 | 66H8067 | 20.80 |
| TM-25-50 | 25 | 90B4652 | 22.88 |

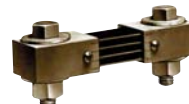
## EXTERNAL SWITCHBOARD AND PORTABLE SHUNTS (CONT.)

**LIGHTWEIGHT BASE MOUNT PORTABLE TYPE**

| Mfg. Part No. | Amp  | Stock No. | Price Each |
|---------------|------|-----------|------------|
| TM-30-50      | 30   | 04M7566   | 20.80      |
| TM-40-50      | 40   | 42M3852   | 20.80      |
| TM-60-50      | 60   | 42M3854   | 20.80      |
| TM-80-50      | 80   | 42M3855   | 20.80      |
| TM-85-50      | 85   | 42M3857   | 20.80      |
| TM-125-50     | 125  | 42M3848   | 20.80      |
| TM-150-50     | 150  | 50B5747   | 20.80      |
| TM-170-50     | 170  | 42M3850   | 29.12      |
| TM-200-50     | 200  | 04M7560   | 29.12      |
| TM-250-50     | 250  | 13C2688   | 29.12      |
| TM-300-50     | 300  | 04M7562   | 29.12      |
| TM-400-50     | 400  | 42M3853   | 29.12      |
| TM-500-50     | 500  | 13C2687   | 29.12      |
| TM-600-50     | 600  | 04M6932   | 29.12      |
| TM-800-50     | 800  | 42M3856   | 44.72      |
| TM-1000-50    | 1000 | 91B7456   | 44.72      |
| TM-1200-50    | 1200 | 42M3847   | 44.72      |

(80397)

## EXTERNAL PORTABLE AND SWITCHBOARD SHUNTS



Switchboard Shunts



Portable Shunts

Use with analog or digital DC ammeter panel or switchboard meters requiring external shunts. Available in 50mV or 100mV drop. Accuracy: ±1%. 5' leads included.

**50mV SWITCHBOARD SHUNTS**

| Mfg. Part No. | Amps | Stock No. | Price Each |
|---------------|------|-----------|------------|
| 06504         | 200  | 55F2572   | 59.65      |
| 06506         | 300  | 55F2573   | 59.65      |
| 06508         | 500  | 98F6076   | 84.88      |

**50mV PORTABLE SHUNTS**

|       |     |         |       |
|-------|-----|---------|-------|
| 06700 | 1   | 12C2429 | 55.59 |
| 06703 | 5   | 12C2431 | 55.59 |
| 06704 | 10  | 12C2432 | 55.59 |
| 06705 | 15  | 12C2435 | 55.59 |
| 06707 | 25  | 12C2437 | 55.59 |
| 06709 | 50  | 12C2438 | 55.59 |
| 06711 | 75  | 55F267  | 55.59 |
| 06713 | 100 | 55F2569 | 55.59 |
| 06715 | 200 | 55F2570 | 55.59 |

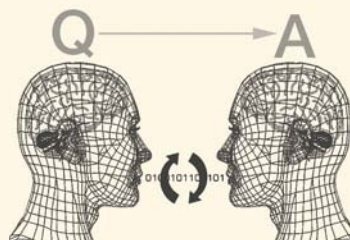
**100mV PORTABLE SHUNTS**

|       |     |         |       |
|-------|-----|---------|-------|
| 06716 | 10  | 90B8694 | 60.54 |
| 06717 | 100 | 94F8780 | 77.82 |

(3466)

## Expert technical support

Chat online to our team of engineers, or connect to them through your representative.



(116878)

➤ CONTINUED ➤

OPERATOR INTERFACES

HMI OPERATOR INTERFACES



OPERATOR INTERFACES



5.7", 5.7" with CC click

- True analog touchscreen
- Retentive internal data storage
- Real time trending
- Trend stored data
- Alarming and alarm storage

Real time operating system. 32-bit RISC micro-controller/206.4MHz. Positioned between ELC graphics panels and the ePro series of operator interfaces, HMI is the work horse of the industry. All units feature a touchscreen and function keys to suit all environments and applications. Range in screen size and color to fit available space and application needs. All units offer RS-232, RS-485 and RS-422 communications. Additional features include event storage (history), add I/O, macro programming, multi-language, recipe storage, auto-scale application from 10 to 4", on-line simulation, off-line simulation, 10-level password protection, 3V lithium backup battery CR2032 x 1 (5-year battery life) and 85dB buzzer. HMI programming software supports all of the features of HMI and can run on Windows 2000 and XP. This software is not included with the HMI Operator Interface; order separately below.

SPECIFICATIONS

| Model  | HMI04BU                         | HMI06BE                         | HMI06GE | HMI06CE                         | HMI08CE                 | HMI10CE |
|--|---------------------------------|---------------------------------|---------|---------------------------------|-------------------------|---------|
| NOR Flash ROM                                | 2MB<br>System: 1MB<br>User: 1MB | 4MB<br>System: 1MB<br>User: 3MB |         | 8MB<br>System: 1MB<br>User: 7MB |                         |         |
| SDRAM  | 4MB                             | 16MB                            |         | 32MB                            |                         |         |
| Backup Memory                                | 128KB                           | 512KB                           |         | 512KB                           | 512KB                   |         |
| Ext. Memory (SM Card)                        | ...                             | ✓                               | ✓       | ✓                               | ✓                       | ✓       |
| Ext. Memory (USB Disk)                       | ✓                               | ...                             | ...     | ...                             | ✓                       | ✓       |
| Extension Interface                          | ...                             | ✓                               | ✓       | ✓                               | ✓                       | ✓       |
| USB for Data Transfer/Printer (USB Host)     | ✓                               | ...                             | ...     | ...                             | ✓                       | ✓       |
| Function Key                                 |                                 | User Defined<br>Key x 4         |         | User Defined<br>Key x 7         | User Defined<br>Key x 8 |         |
| Perpetual Calendar (RTC)                     |                                 | Built-in                        |         |                                 |                         |         |
| Safety Approval (Waterproof for Front Panel) |                                 | IP45 / NEMA 4X / CE, UL         |         |                                 |                         |         |
| Dimensions (H x W x D)                       | 4.13 x 5.54 x 1.76"             | 5.67 x 7.25 x 1.85"             |         | 7.01 x 9.57 x 2.06"             | 8.74 x 11.70 x 2.01"    |         |

| Mfg. Part No. | Description   | Stock No. | Price Each |     |
|---------------|---|-----------|------------|-----|
|               |   |           | 1-2        | 3-5 |
| HMI04BU       | 4" Blue Mode Touchscreen, 3.8" STN LCD (16 Blue)                  | 40M7610   | 486.40     |     |
| HMI06BE       | 6" Blue Mode with Expansion Slot, 5.7" STN LCD (16 Blue)          | 40M7611   | 684.00     |     |
| HMI06GE       | 6" Gray Scale Mode with Expansion Slot, 5.7" FSTN LCD (16 Grays)  | 40M7613   | 722.00     |     |
| HMI06CE       | 6" Color Mode with Expansion Slot, 5.7" STN LCD (256 Colors)      | 40M7612   | 1056.40    |     |
| HMI08CE       | 8" Color Mode with Expansion Slot, 8" TFT LCD (65,536 Colors)     | 40M7614   | 1900.00    |     |
| HMI10CE       | 10" Color Mode with Expansion Slot, 10.4" TFT LCD (65,536 Colors) | 40M7615   | 2728.40    |     |

ACCESSORY

| Mfg. Part No. | Description              | Stock No. | Price Each |     |
|---------------|--------------------------|-----------|------------|-----|
|               |                          |           | 1-2        | 3-5 |
| HMI0SOFT      | HMI Programming Software | 46M5638   | 300.30     |     |

(92294)

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(116881)



12.1", 10.4"



4.6"

- Models available: HG1F: 4.6" STN LCD screen, 1MB of memory; HG2F: 5.7" STN LCD screen, 2MB of memory; HG3F: 10.4" TFT LCD screen, 8MB of memory; HG4F: 12.1" TFT LCD screen 8MB of memory
- Communication drivers supported (included with software): Allen Bradley Ethernet/IP driver (new); Modbus TCP/IP (new); IDEC, Allen Bradley DF1/DH485, Omron, Mitsubishi, Siemens, Modbus-RTU, Keyence, GE Fanuc, Aromat, Automation Direct and many more
- Supports RS232, RS485, or RS422 communication
- Supports compact flash card (5.7" and above)
- Ethernet port: HG3F (10.4" screen) and HG4F (12.1" screen) only
- Real time clock
- Recipe, alarm and trend logging capability
- O/I link support (multi-drop up to 15 O/Is)
- 1-N PLC communication
- Pass thru programming
- Printer / barcode reader support
- Programmable with WindO/I-NV2 Software (included over 5000 built-in symbol factory images)
- Class 1 Div 2 (for Hazardous Locations)
- HG1F/HG2F: NEMA 13, IP65
- HG3F/4F: IP66, NEMA 4, 4X, 13

IDEC touchscreens create an efficient interaction between the user and the equipment. All touchscreens come with high pixel resolution and super bright LCD display for sharp quality images. The 10.4" and 12.1" TFT LCD color screens have Web Server function and an Ethernet port to allow for remote programming, monitor, and control over the Ethernet network. User can monitor application right from the office. The 5.7" STN LCD screens are available in monochrome or color and also come with IDEC's patented CC Click technology, providing tactile feedback. The entire touchscreen family works with all of IDEC's PLCs, and drivers are available to make them compatible with PLCs from other manufacturers.

OPERATOR INTERFACES

| Mfg. Part No.          | Description   | Stock No. | Price Each |         |
|------------------------|---|-----------|------------|---------|
|                        |   |           | 1-2        | 3-5     |
| HG4F-JT22TFW           | 12.1" TFT LCD Touchscreen, 256 Color, Light Gray Bezel  | 08J5069   | 2532.43    | 2445.10 |
| HG4F-JT22TFW-DH485-500 | 12.1" TFT LCD Touchscreen with DF1/DH485 converter/cable package for SLC500 (w/RJ45 connector), Light Gray Bezel            | 81H5061   | 2684.68    | 2592.10 |
| HG3F-FT22TFW           | 10.4" TFT LCD Touchscreen, 256 Color, Light Gray Bezel  | 08J5067   | 2024.93    | 1955.10 |
| HG3F-FT22TFB           | 10.4" TFT LCD Touchscreen, 256 Color, Black Bezel   | 82K8314   | 2122.68    | 2066.82 |
| HG3F-FT22TFW-DH485-500 | 10.4" TFT LCD Touchscreen with DF1/DH485 converter/cable package for SLC500 (w/RJ45 connector), Light Gray Bezel            | 08J5068   | 2177.18    | 2102.10 |
| HG2F-SS22VCF           | 5.7" STN LCD Touchscreen, 256 Color, Light Gray Bezel   | 82K8311   | 1058.68    | 1030.82 |
| HG2F-SB22VCF           | 5.7" STN LCD Touchscreen, Monochrome, Light Gray Bezel  | 92C3143   | 705.43     | 681.10  |
| HG2F-SS22VCF-DH485-500 | 5.7" STN LCD Touchscreen with DF1/DH485 converter/cable package for SLC500 (w/RJ45 connector), 256 Color, Light Gray Bezel  | 82K8312   | 1218.28    | 1186.22 |
| HG2F-SB22VCF-DH485-500 | 5.7" STN LCD Touchscreen with DF1/DH485 converter/cable package for SLC500 (w/RJ45 connector), Monochrome, Light Gray Bezel | 08J5063   | 857.68     | 828.10  |
| HG2F-SS52VCF           | 5.7" STN LCD Touchscreen w/ CC, Click Tactile Touchbutton, 256 Color, Light gray bezel                                      | 82K8313   | 1111.88    | 1082.62 |
| HG2F-SB52VCF           | 5.7" STN LCD Touchscreen w/ CC Click Tactile Touchbutton, Monochrome, Light Gray Bezel                                      | 08J5064   | 756.18     | 730.10  |

➤ CONTINUED ➤

OPERATOR INTERFACES

OPERATOR INTERFACES (CONT.)

| Mfg. Part No.       | Description   | Stock No. | Price Each |        |
|---------------------|---|-----------|------------|--------|
|                     |   |           | 1-2        | 3-5    |
| ● HG1F-SB22BF-B4.6" | 4.6" STN Monochrome Touchscreen, Black Bezel, RS232, 500cd/m <sup>2</sup>     | 46M3454   | 332.25     | 322.48 |
| ● HG1F-SB22BF-W4.6" | 4.6" STN Monochrome Touchscreen, White Bezel, RS232, 500cd/m <sup>2</sup>     | 46M3456   | 332.25     | 322.48 |
| ● HG1F-SB22YF-B4.6" | 4.6" STN Monochrome Touchscreen, Black Bezel, RS485/422, 500cd/m <sup>2</sup> | 46M3457   | 332.25     | 322.48 |
| ● HG1F-SB22YF-W4.6" | 4.6" STN Monochrome Touchscreen, White Bezel, RS485/422, 500cd/m <sup>2</sup> | 46M3459   | 332.25     | 322.48 |

SOFTWARE

|              |  |         |        |        |
|--------------|--|---------|--------|--------|
| ● HG9Y-ZSS2W | WindO/I-NV2 Configuration software for HG4F/3F/2F/1F Series O/Is | 29H2810 | 177.63 | 171.50 |
|--------------|--|---------|--------|--------|

CABLES

|               |   |         |       |       |
|---------------|---|---------|-------|-------|
| ● HG9Z-XCM1A  | Programming cable for all Touchscreen   | 15C7023 | 26.43 | 25.55 |
| ● FC4A-KC2CA  | Cable between Microsmart Series and HG2F/3F/4F, RS232 Comm. Type using Microsmart built-in port or FC4A-PC1/HPC1(comm. Adaptor), 5ft. | 08J5058 | 34.30 | 32.55 |
| ● HG9Z-3C115A | Cable between Microsmart Series and HG2F/3F/4F, RS485 Comm. Type using Microsmarts' FC4A-PC2/HPC2 (comm. adaptor), 5ft.               | 92C3150 | 34.83 | 33.08 |
| ● HG9Z-2C145A | Cable between Microsmart Series and HG2F/3F/4F, RS485 Comm. Type using Microsmarts' FC4A-PC3/HPC3 (comm. adaptor), 5ft.               | 92C3147 | 34.83 | 33.08 |
| ● HG9Z-2C135A | Cable between AB-Micrologix series and HG2F/3F/4F - 5 ft  | 08J5070 | 25.38 | 24.50 |

ACCESSORIES

|            |                                    |         |       |       |
|------------|------------------------------------|---------|-------|-------|
| ● HG9Z-2B1 | Replacement backlight for HG2F     | 92C3146 | 81.90 | 79.28 |
| ● HG9Z-2D2 | Protective sheet for HG2F (5 pack) | 92C3148 | 38.22 | 37.00 |
| ● HG9Z-2K1 | Mounting clip for HG2F (10 pack)   | 92C3149 | 4.33  | 4.19  |

(72440)

OPERATOR INTERFACES AND SOFTWARE



Features:

- Assign multiple actions to all keys
- Screen password protection
- Programmable LEDs for on/off status
- Serial port for printing screens and alarms
- Import bitmap capability (8-line display only)

Specifications:

- 2-line, 16 character display, 24KB memory
- 4-line 20 character display, 24KB memory
- 8-line, 20 character display, 64KB memory

The **HG1X series** is a simple text interface. All models are highly-flexible, compact units featuring bright, backlit LCD screens, ideal for interfacing with PLCs that lack integrated displays. The function keys are user-definable for coil, register, screen or alarm operations. The **HG1X series** is compatible with all IDEC PLCs, including the new MicroSmart series, as well as several other major manufacturers' controllers. Some **HG1X** displays do not require an external power supply because the unit draws power from PLC support. Units have a serial port for printing screens and alarms. Panel cutout is 44.18 x 91.20mm for **mfg. part no. HG1X-252** and 78.5 x 160.7mm for **mfg. part no. HG1X-452**. Class 1 Div.2 (UL 1604), UL508, IP65

OPERATOR INTERFACES

| Mfg. Part No. | Description   | Stock No. | Price Each |        |        |
|---------------|---|-----------|------------|--------|--------|
|               |   |           | 1-4        | 5-9    | 10-14  |
| ● HG1X-252    | 2-line, 16 Character Display, RS232 comm type, No external power required | 74K3737   | 168.07     | 162.50 | 156.94 |
| ● HG1X-222    | 2-line, 16 Character Display, RS232/RS485 comm type, 24VDC Power Required | 26M8274   | 210.35     | 203.38 | 196.42 |
| ● HG1X-452    | 4-line, 20 Character Display, RS232 comm type, No external power required | 74K3738   | 273.77     | 264.70 | 255.64 |
| ● HG1X-422    | 4-line, 20 Character Display, RS232/RS485 comm type, 24VDC Power Required | 26M8275   | 316.05     | 305.58 | 295.12 |
| ● HG1X-822    | 8-line, 20 Character Display, RS232/RS484 comm type, 24VDC Power Required | 86H7630   | 379.47     | 366.90 | 354.34 |

SOFTWARE

|           |   |         |       |       |       |
|-----------|---|---------|-------|-------|-------|
| ● WINDMSG | Programming Software for all HG1X Series (PLC drivers included) | 92C3213 | 52.85 | 51.10 | 49.35 |
|-----------|---|---------|-------|-------|-------|

CABLES

|               |  |         |       |       |       |
|---------------|--|---------|-------|-------|-------|
| ● HG9Z-PC125A | Programming Cable for all HG1X Series                                      | 84C2741 | 26.43 | 25.55 | 24.68 |
| ● HG9Z-SCI25B | Cable between HG1X-252/452 and Micro3C/ONC/Microsmart PLC (RS232 type)     | 84C2743 | 26.43 | 25.55 | 24.68 |
| ● HG9Z-SCI200 | Cable between HG1X-222/422/822 and Micro3C/ONC/Microsmart PLC (RS232 type) | 82K8922 | 26.43 | 25.55 | 24.68 |

(72455)

OPTOTERM™-G70 OPERATOR INTERFACE



OPTO 22



- 10 Mbps Ethernet Connectivity
- Meets NEMA-4 Specification When Mounted Properly
- 320 x 240 Pixel Color Touch Screen
- Object-Based Screen Builder Software
- Low-Cost, Compact, and Durable
- Ideal for Plant Floor and Remote Locations

Opto Terminal™ Operator Interfaces

Ethernet-enabled, color graphics-based operator interfaces for use with Opto 22 SNAP Ethernet I/O™, SNAP Ultimate I/O™ and SNAP-IT™ systems. The mountable display terminals are used to send commands to and receive realtime data from plant floor equipment and other devices connected to Opto 22 hardware. Industrially hardened Opto Terminals offer low-cost, compact and durable operator interfaces for the plant floor and remote locations. Ideal for factory automation, discrete manufacturing and equipment monitoring applications.

| Mfg. Part No.  | Description  | Stock No. | Price Each |
|----------------|--|-----------|------------|
| OPTOTERMAL-G70 | Touchscreen Operator Interface, 5.7in. (145mm) Diagonal Display                                | 84C9370   | 1293.50    |
| OPTOTERMAL-G75 | Ethernet-enabled Operator Interface w/ Object-based Programming, 10.4 in (264mm) diag. Display | 09J4540   | 2528.50    |

(74821)

GT SERIES TOUCHSCREENS



Panasonic Electric Works Corporation of America

Just Added



- Improved visibility and operability, quick response
- 3 color LED backlights, check your HMI status at-a-glance
- High-flexibility screen design
- 3 to 5.7 inch screens

The response speed of programmable displays largely depends on the communication speed of the controller, such as a PLC; as well as that of the displays themselves. GT series displays support high-speed communications of up to 115.2 kbps.

| Mfg. Part No. | LCD Display          | Power Supply | Communicator Port | Backlight          | Stock No. | Price 1-2 |
|---------------|----------------------|--------------|-------------------|--------------------|-----------|-----------|
| ● AIGT0030B1  | 3" STN monochrome    | 5 VDC        | RS442 (RS485)     | Green, Orange, Red | 73H0867   | 201.99    |
| ● AIGT0030B   | 3" STN monochrome    | 24 VDC       | RS232C            | Green, Orange, Red | 73K7129   | 233.45    |
| ● AIGT2032B   | 4" STN monochrome    | 24 VDC       | RS442 (RS485)     | Green, Orange, Red | 73K7134   | 421.23    |
| ● AIG05M002D  | 3.5" STN monochrome  | 24 VDC       | RS232C            | White, Red, Pink   | 08N3193   | 299.43    |
| ● AIG05G002D  | 3.5" STN monochrome  | 24 VDC       | RS232C            | Green, Orange, Red | 08N3192   | 299.43    |
| ● AIG05S002D  | 3.5" STN 4096 colors | 24 VDC       | RS442 (RS485)     | 4096 Colors        | 08N3194   | 436.45    |
| ● AIGT2230B   | 4.7" STN 256 colors  | 24 VDC       | RS442 (RS485)     | 256 Colors         | 73K7136   | 506.49    |
| ● AIG32M002D  | 5.7" STN monochrome  | 24 VDC       | RS232C            | Blue, White        | 08N3195   | 426.30    |
| ● AIG32T002D  | 5.5" TFT 4096 colors | 24 VDC       | RS232C            | 4096 colors        | 08N3196   | 761.25    |
| ● AIG32T012D  | 5.5" TFT 4096 colors | 24 VDC       | RS232C            | 4096 colors        | 08N3197   | 954.10    |

ACCESSORIES

| Mfg. Part No. | Description                    | Stock No. | Price 1-2 |
|---------------|--------------------------------|-----------|-----------|
| ● AIGT8001V2  | Programmable Logic Controller; | 96H1390   | 157.33    |
| ● USB2.0-AB06 | Programmable Logic Controller; | 97M9855   | 25.20     |

(115550)

CONTROLLERS – PROCESS • CONTROLLERS – TEMPERATURE

PID TEMPERATURE CONTROLLERS



Durant



E45481010



E45241010

The **E4548** and **E4524** series have a 0.4" 4-digit LED display. Feature fuzzy logic PID control with Autotuning and On/Off control. °F or °C indication. Heat/cool outputs with fail-safe, sensor break protection, ramp with dwell or soak timer for soft start, and programming security. Feature 1 control output as relay, SSR, or 4-20mA, and 1 alarm output with 14 operating modes. Universal power: **E4548 series** 90-240VAC; **E4524 series** 90-264VAC. **E4548 series** is 1/16 DIN (48 x 48mm). Size: 1.77H x 1.77W x 3.70"D. Accepts thermocouple input, types J, K, T, E, B, R, S and N (switch selectable). **E4524 series** is 1/2 DIN (24 x 48mm). Size: 0.94H x 1.89W x 3.78"D. Front panel meets NEMA enclosure type 4 and IEC IP65 enclosure classification.

| Mfg. Part No. | Description                                | Stock No. | Price Each |     |
|---------------|--|-----------|------------|-----|
|               |  |           | 1-4        | 1-2 |
| E45481010     | Thermocouple Input, Relay and Alarm Output | 15C6900   | 287.26     |     |
| E45482010     | Thermocouple Input, SSR and Alarm Output   | 15C6904   | 287.26     |     |

(6628)

1/16 DIN ISERIES PID CONTROLLERS



The **iSeries** autotune PID controllers feature universal inputs for thermocouples (K, J, T, E, R, S, B, C, N & J DIN) RTDs: 100-, 500-, and 1000-ohm with 2-, 3-, and 4-wire connections, plus totally scalable process voltage 0-100mV, 0-1V, 0-10V ranges. Process current: 0-20mA. Features the innovative **iSeries** display that can be programmed to change between green, amber and red at any set or alarm point. Options include a 2nd display for setpoint, RS-232 & RS-485, Ethernet, and low-voltage power supply.



| Mfg. Part No. | Description   | Stock No. | Price Each |     |
|---------------|---|-----------|------------|-----|
|               |   |           | 1-2        | 1-4 |
| I1622         | PID Controller, 2 SSR's (0.5A)                                    | 96B0158   | 254.25     |     |
| I1633         | PID Controller, 2 SPDT Relays (3A)                                | 96B0159   | 254.25     |     |
| I1653-C24     | PID Controller, Analog, Relay, RS232 & RS485 Serial Comm. Outputs | 96B0162   | 322.05     |     |

(51575)

1/32 DIN ISERIES PID CONTROLLERS



Feature a color display that can be programmed to change between green, amber and red at any set- or alarm point. Offer a universal input for 10 thermocouples (K, J, T, E, R, S, B, C, N & J DIN), plus 100-, 500- and 1000-ohm RTD's with 2-, 3- and 4-wire connections for the most accurate RTD measurements. Features totally scalable process voltage 0-100mV, 0-1V, 0-10V ranges, and process current 0-20mA. Feature autotune PID control with a choice of dual-form C SPDT relays, SSR's, DC pulse and analog voltage or current. The universal power supply runs on 90-240VAC/DC. Low voltage power input of 12-36VDC and 24VAC is optional. Features built-in 24VDC@25mA excitation, standard, offering optional RS-232 and RS-485 serial communications.



| Mfg. Part No. | Description                                  | Stock No. | Price Each |     |
|---------------|--|-----------|------------|-----|
|               |  |           | 1-2        | 1-4 |
| I3200         | Temperature/Process (Monitor Only) 1/32 DIN  | 25C3530   | 177.00     |     |
| I3233         | PID Controller, 2 SPDT Relays                | 96B0165   | 230.10     |     |
| I3244         | PID Controller, 2 DC Pulse Outputs           | 96B0166   | 230.10     |     |
| I3253         | PID Controller, 1 Analog Out, 1 SPDT Relay   | 96B0167   | 230.10     |     |
| I3253-C24     | PID Controller, RS232 and RS485 Serial Comm. | 96B0168   | 290.70     |     |

(51977)

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(116880)

1/8 DIN SIZE METER/PID CONTROLLERS



The **iSeries** color display can be programmed to change between green, amber and red at any set or alarm point. Display features LEDs twice the size of typical 1/8 DIN meters for easier viewing. Contains a universal input for 10 thermocouples (K, J, T, E, R, S, B, C, N and J DIN), plus 100-, 500-, and 1000-ohm RTD's with 2-, 3-, and 4-wire connections for the most accurate RTD measurements. Totally scalable process voltage of 0-100mV, 0-1V, 0-10V ranges and process current of 0-20mA. Includes built-in 24VDC excitation, standard and optional RS-232 and RS-485 serial communications, and Ethernet output. Offers on/off or full autotune PID control with the optional outputs: relays, SSR's, DC pulse and analog. The universal power supply runs on 90-240VAC/DC. Low-voltage 12-36VDC and 24VAC is optional.

STANDARD VERSION - 48H x 96W x 104.1mML

| Mfg. Part No. | Description   | Stock No. | Price Each |     |
|---------------|---|-----------|------------|-----|
|               |   |           | 1-2        | 1-4 |
| I800          | Temperature/Process Monitor   | 96B0170   | 271.20     |     |
| I833          | PID Controller, 2 SPDT 3A Relays  | 96B0172   | 350.30     |     |
| I853-C24      | PID Controller, Analog Output, Relay, RS232 and RS485 Serial Communications | 96B0175   | 418.10     |     |

ULTRA COMPACT VERSION - 48H x 96W x 54.84mML

| Mfg. Part No. | Description                | Stock No. | Price Each |
|---------------|----------------------------|-----------|------------|
| I8C00         | Monitor 1/8 DIN Short Case | 31C0999   | 327.75     |

(51573)

1/16 DIN TEMPERATURE CONTROLLER



- Automatic Adjustment and PID Control in a 48x48mm Package
- Control Accuracy to ±1% of Full Scale
- Selectable Temperature Ranges in °C or °F
- Easy-to-read 13.4mm-High LED Display
- Models for Thermocouple Types J/L and K Inputs and Platinum RTD Inputs
- PID and On/Off Control Modes
- Wide Power Supply Range: 100 to 240VAC, 50/60Hz
- Tamper-proof Setting, Faulty Sensor Detection and Controller Diagnostics



ES6S

Versatile, low-cost controllers have °F/°C scales. Voltage output is rated 12VDC, 20mA with short-circuit protection. Relay output is rated 3A, 250VAC. Accepts J/L, K thermocouples, auto-tuning of P band. Accurate to ±0.5% of full scale. Eight-function alarm output (SPST-NO relay, 1A, 250VAC). Rated IP50 (NEMA 4 with optional cover *go online or call*). **ES6S**: 1.89H x 1.89W x 4.17"D (48 x 48 x 106mm). SPDT relay output, 7VA power consumption. **ES6SV**: 1.89H x 1.89W x 3.07"D (48 x 48 x 78mm). SPST-NO relay output, 5VA power consumption. Panel mounting adapter is supplied. UL recognized, CSA certified.

| Mfg. Part No.       | Output  | Input Type                  | Stock No. | Price Each |        |
|---------------------|---------|-----------------------------|-----------|------------|--------|
|                     |         |                             |           | 1-2        | 3-4    |
| ● ES6SVQ1TFAC100240 | Voltage | Thermocouple / Platinum RTD | 17M6596   | 263.06     | 233.42 |
| ● ES6SVR1TFAC100240 | Relay   | Thermocouple / Platinum RTD | 80K1834   | 242.82     | 215.46 |

(2446)

E5AN SERIES DIGITAL TEMPERATURE CONTROLLERS



Dual-display 1/8 DIN controllers provide accurate control with only 3.07"(78) panel depth. Accept a wide variety of inputs and feature 3 alarm points and heater burnout alarm. UL approved, CSA listed and CE compliant. NEMA 4X rated.



E5AN SERIES 1/4 DIN DUAL-DISPLAY TEMPERATURE CONTROLLERS

| Mfg. Part No.            | Output      | Voltage    | Stock No. | Price Each |        |
|--------------------------|-------------|------------|-----------|------------|--------|
|                          |             |            |           | 1-5        | 6-14   |
| E5ANQ3HMT500ACDC24       | Voltage/SSR | 24VAC/VDC  | 27K4604   | 326.33     | 305.46 |
| E5AN-R3HMT-C-500 AC/DC24 | Voltage/SSR | 100-240VAC | 19C7912   | 295.29     | 276.41 |

(60977)

CONTROLLERS – TEMPERATURE

**E5EN SERIES DIGITAL TEMPERATURE CONTROLLERS**

The E5EN series 1/2 DIN has various temperature inputs, auto-tuning and self-tuning available, heat or heat/cool control available. Event input option allows multiple SP selection and run/stop function. NEMA 4X front face, UL recognized, CSA certified, CE compliant. Other DC voltage types available; go online or call.



E5EN



**KT SERIES TEMPERATURE CONTROLLERS**



**Panasonic**

Panasonic Electric Works Corporation of America



**E5EN SERIES 1/2 DIN DIGITAL TEMPERATURE CONTROLLERS**

| Mfg. Part No.            | Output                           | Voltage    | Stock No. | Price Each |        |
|--------------------------|----------------------------------|------------|-----------|------------|--------|
|                          |                                  |            |           | 1-9        | 10-24  |
| E5EN-Q3HMC-500 AC100-240 | 3 Alarm, Heater Burnout, Voltage | 100/240VAC | 96B0109   | 235.16     | 223.47 |
| E5EN-C3MTC-500 AC100-240 | 3 Alarm, Current                 | 100/240VAC | 96B0107   | 257.21     | 244.42 |
| E5EN-R3MTC-500 AC/DC24   | 3 Alarm, Relay                   | 24VAC/VDC  | 96B0114   | 214.16     | 203.51 |
| E5EN-R3HMC-500 AC/DC24   | 3 Alarm, Heater Burnout, Relay   | 24VAC/VDC  | 96B0113   | 235.16     | 223.47 |

(51796)

**E5GN SERIES DIGITAL TEMPERATURE CONTROL**



- 1/2 Size DIN Controller
- 100mm Deep for Minimized Panel Space
- Accepts Thermocouple, Platinum RTD, Non-contact Temperature Sensor, and Analog Temperature Inputs
- Auto-tuning and Self-tuning Available; Functions can be used Simultaneously
- Heating or Heating/Cooling Control
- Water-resistant Construction (NEMA 4X, Equivalent to IP66)
- 3-Year Warranty



1/2 DIN controller features selectable auto-tune or self-tune available, on/off or PID. Accepts various temperature and analog inputs. NEMA4X front panel. UL listed, CSA certified, CE compliant.

**STANDARD TEMPERATURE CONTROLLERS**

| Mfg. Part No.         | Output  | Power Supply Voltage | Stock No. | Price Each |        |
|-----------------------|---------|----------------------|-----------|------------|--------|
|                       |         |                      |           | 1-9        | 10-24  |
| ● E5GN-R1TC-AC100240  | Relay   | 100-240VAC           | 93B8747   | 211.93     | 201.90 |
| ● E5GN-Q1TC AC100-240 | Voltage | 100-240VAC           | 08C3670   | 211.93     | 201.90 |
| ● E5GN-R1TC AC/DC24   | Relay   | 24VDC                | 18M7334   | 229.59     | 218.72 |
| ● E5GN-Q1TC AC/DC24   | Voltage | 24VDC                | 12C1052   | 229.59     | 218.72 |

**TEMPERATURE CONTROLLERS WITH COMMUNICATIONS**

|                            |         |            |         |        |        |
|----------------------------|---------|------------|---------|--------|--------|
| ● E5GN-R03TC-FLK AC100-240 | Relay   | 100-240VAC | 12C1059 | 229.37 | 218.51 |
| ● E5GN-Q03TC-FLK AC/DC24   | Voltage | 24VDC      | 12C1048 | 229.37 | 218.51 |
| ● E5GN-Q03TC-FLK AC100-240 | Voltage | 100-240VAC | 12C1049 | 229.37 | 218.51 |

(34471)

**Features**

- Control modes: PID, on/off control, Anti-Reset-Windup (ARW)
- Control output: Relay, non-contact voltage output (for SSR drive, DC current output)
- Accuracy: ± 0.2% span
- Simple operation
- Heater-burn-out alarm available
- Alarm output with 9 different operation modes
- RS485 ASCII/Modbus communication available
- Supply voltage: 24V AC/DC or 100 to 240V AC
- Compliant with UL, CSA standards and CE marking

**Multi-input:**

- Thermocouples K, J, R, S, B, E, T, N, PL-II, C(W/Re5-26)
- RTD Pt100, JPt100, 3-conductor system
- DC Current ¼ - 20mA
- DC Voltage 0 to 1V, 0 to 5V, 1 to 5V, 0 to 10V

The KT line of controllers is well suited for a wide variety of machine and process control applications.

| Mfg. Part No. | Output Type | Alarm 1 Output | Alarm 2 Output | Operating Voltage | Stock No. | Price Each |
|---------------|-------------|----------------|----------------|-------------------|-----------|------------|
| ● AKT2111200  | Relay       | Relay          | Open Collector | 100-120 VAC       | 73K7161   | 185.56     |
| ● AKT4111100  | Relay       | Relay          | ...            | 100-120 VAC       | 96H1434   | 131.93     |
| ● AKT4H111100 | Relay       | Relay          | ...            | 100-120 VAC       | 73K7183   | 179.62     |
| ● AKT7111100  | Relay       | Open Collector | ...            | 100-120 VAC       | 96H1537   | 141.90     |
| ● AKT7211100  | Relay       | Open Collector | ...            | 24 VDC            | 83H6394   | 141.90     |

**ACCESSORIES**

| Mfg. Part No. | Description                   | Stock No. | Price Each |
|---------------|-------------------------------|-----------|------------|
| ● AKT4801     | Terminal Cover for KT4 Series | 96H1534   | 5.08       |

(115546)

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(116864)

CONTROLLERS – TEMPERATURE • COUNTERS – LARGE DISPLAY

TEMPERATURE CONTROLLERS



Model TCU



Model T16



Model T48

Can operate in the PID control mode for both heating and cooling, with on-demand auto-tune or ON/OFF control mode with adjustable hysteresis. CE compliant, UL recognized.

RANGE AND ACCURACY FOR MODEL TCU TEMPERATURE CONTROLLERS

| TC Type   | Range                                  | Accuracy                       | Wire Color (ANSI) |
|-----------|--|--------------------------------|-------------------|
| T         | -200°C to +400°C<br>-328°F to +752°F   | 0.20% + 1.5°C<br>0.20% + 2.7°F | Blue              |
| E         | -200°C to +750°C<br>-328°F to +1382°F  | 0.20% + 1.5°C<br>0.20% + 2.7°F | Violet            |
| J         | -200°C to +760°C<br>-328°F to +1400°F  | 0.15% + 1.5°C<br>0.15% + 2.7°F | White             |
| K         | -200°C to +1250°C<br>-328°F to +2282°F | 0.20% + 1.5°C<br>0.20% + 2.7°F | Yellow            |
| R         | 0°C to +1768°C<br>+32°F to +3214°F     | 0.15% + 2.5°C<br>0.15% + 4.5°F | Black             |
| S         | 0°C to +1768°C<br>+32°F to +3214°F     | 0.15% + 2.5°C<br>0.15% + 4.5°F | Black             |
| B         | +200°C to +1820°C<br>+300°F to +3308°F | 0.15% + 2.5°C<br>0.15% + 4.5°F | Grey              |
| N         | -200°C to +1300°C<br>-328°F to +2372°F | 0.20% + 1.5°C<br>0.20% + 2.5°F | Orange            |
| mV        | -5.00 to 56.00                         | 0.15% + 1 LSD                  | ...               |
| RTD (385) | -200°C to +600°C<br>-328°F to +1100°F  | 0.10% + 0.5°C<br>0.10% + 0.9°F | ...               |
| RTD (392) | -200°C to +600°C<br>-328°F to +1100°F  | 0.10% + 0.5°C<br>0.10% + 0.9°F | ...               |
| OHMS      | 1.0 to 320.0                           | 0.15% + 1 LSD                  | ...               |

MODEL TCU TEMPERATURE CONTROL UNITS

Programmable user input (digital) for added flexibility. Manual/automatic and local/remote setpoint control modes. Setpoint ramping for process startup. Optional RS485 serial communications interface as well as additional options available; go online or call.

| Mfg. Part No. | Input Voltage | Input Type          | Output Type | Alarms  | Stock No. | Price Each |
|---------------|---------------|---------------------|-------------|---------|-----------|------------|
| TCU00000      | 115/230VAC    | Thermocouple or RTD | Voltage/SSR | ...     | 84K7518   | 249.00     |
| TCU01001      | 115/230VAC    | Thermocouple or RTD | Voltage/SSR | ...     | 84K7519   | 358.00     |
| TCU10001      | 115/230VAC    | Thermocouple or RTD | Voltage/SSR | 2 Relay | 84K7520   | 337.00     |
| TCU10002      | 115/230VAC    | Thermocouple or RTD | Voltage/SSR | Relay   | 84K7521   | 347.00     |

MODEL T16 TEMPERATURE/PROCESS CONTROLLERS

On demand auto-tuning. User programmable function button. Other options available; go online or call.

|          |           |                     |             |     |         |        |
|----------|-----------|---------------------|-------------|-----|---------|--------|
| T1610000 | 85-250VAC | Thermocouple or RTD | Relay       | ... | 84K7522 | 125.00 |
| T1620000 | 85-250VAC | Thermocouple or RTD | Voltage/SSR | ... | 84K7523 | 125.00 |

MODEL T48 1/2 DIN TEMPERATURE CONTROLLERS

On demand auto-tuning. Setpoint ramping for process startup. Programmable user input (digital) for added flexibility. Other options available; go online or call.

|            |           |                     |             |         |         |        |
|------------|-----------|---------------------|-------------|---------|---------|--------|
| T4810000   | 85-250VAC | Thermocouple or RTD | Relay       | ...     | 84K7524 | 197.00 |
| T4820000   | 85-250VAC | Thermocouple or RTD | Voltage/SSR | ...     | 84K7525 | 197.00 |
| T4821000*  | 85-250VAC | Thermocouple or RTD | Voltage/SSR | Relay   | 84K7526 | 223.00 |
| T4821100*† | 85-250VAC | Thermocouple or RTD | Voltage/SSR | 2 Relay | 84K7527 | 238.00 |

\*With NEMA 4X/P65 bezel.  
†With cooling output.  
(88725)

EPAX, LPAX AND MPAX LARGE DISPLAYS



EPAX AND LPAX DISPLAYS

Versatile displays that can increase productivity by offering the plant floor or production area a large visual display of their status. Supply voltage: 85-250VAC. 5-digit displays accept various analog inputs through the use of input modules (MPAX) which allow the unit to adapt to almost any application. 6-digit displays accept various digital inputs through the use of input modules (MPAX) which allow the unit to adapt to almost any application. NEMA 4X/IP65 casing. Additional plug-in cards; ordered separately below, can add alarms, analog output and communications/bus capabilities.

| Mfg. Part No. | No. of Digits | Digit Height | Readable Distance (ft.) | Stock No. | Price Each |
|---------------|---------------|--------------|-------------------------|-----------|------------|
| EPAX0500      | 5             | 4            | 180                     | 84K7449   | 485.00     |
| EPAX0600      | 6             | 4            | 180                     | 84K7450   | 519.00     |
| LPAX0500      | 5             | 1.5          | 70                      | 84K7465   | 260.00     |
| LPAX0600      | 6             | 1.5          | 70                      | 84K7466   | 290.00     |
| LPAXCK00      | 6             | 1.5          | 70                      | 84K7464   | 290.00     |

MPAX INPUT MODULES

Serve as the input to the EPAX or LPAX display. There are several different modules to cover a variety of inputs. The MPAX module provides input scaling which allows the EPAX and LPAX to display most any engineering unit. Once the MPAX is inserted into the EPAX or LPAX, the unit has the same functions and capabilities of the PAX Series intelligent panel meters. A full set of PAX programming instructions are included with the MPAX module. NOTE: The MPAX provides the operating power for the EPAX or LPAX display.

MPAX MODULES INPUT RANGES

| Signal Type                 | Input Ranges   |
|-----------------------------|--|
| Universal DC Inputs         | DC Voltage: 200mV, 2V, 20V, 300V<br>DC Current: 200µA, 2mA, 20mA, 200mA, 2A<br>Resistance: 100Ω, 1000Ω, 10KΩ                     |
| Process Inputs              | 0-20mA or 0-10VDC  |
| Temperature Inputs          | Thermocouples: T, E, J, K, R, S, B, N, C, or Custom Scaling RTDs: 100Ω Pt (platinum) 385/392, 120Ω Nickel 672, or 10Ω Copper 427 |
| True RMS AC Voltage/Current | AC Voltage: 200mV, 2V, 20V, 300V<br>AC Current: 200µA, 2mA, 20mA, 200mA, 5A  |

MPAX MODULES FOR EPAX AND LPAX 5-DIGIT DISPLAYS (ANALOG UNITS)

| Mfg. Part No. | Signal Type                 | For Use With Display |          | Stock No. | Price Each |
|---------------|-----------------------------|----------------------|----------|-----------|------------|
|               |                             | EPAX                 | LPAX     |           |            |
| MPAXD000      | Universal DC Inputs         | EPAX0500             | LPAX0500 | 84K7470   | 221.00     |
| MPAXP000      | Process Inputs              | EPAX0500             | LPAX0500 | 84K7473   | 211.00     |
| MPAXT000      | Temperature Inputs          | EPAX0500             | LPAX0500 | 84K7476   | 211.00     |
| MPAXH000      | True RMS AC Voltage/Current | EPAX0500             | LPAX0500 | 84K7471   | 286.00     |

MPAX MODULES FOR EPAX AND LPAX 6-DIGIT DISPLAYS (DIGITAL UNITS)

|          |                         |          |          |         |        |
|----------|-------------------------|----------|----------|---------|--------|
| MPAXI000 | Count/Rate/Serial Slave | EPAX0600 | LPAX0600 | 84K7472 | 233.00 |
| MPAXC000 | Count                   | EPAX0600 | LPAX0600 | 84K7469 | 180.00 |
| MPAXR000 | Rate                    | EPAX0600 | LPAX0600 | 84K7474 | 180.00 |
| MPAXCK00 | Clock/Timer             | EPAX0600 | LPAXCK00 | 84K7468 | 180.00 |
| MPAXTM00 | Timer                   | EPAX0600 | LPAXCK00 | 84K7475 | 138.00 |

OPTIONAL PLUG-IN CARDS

| Mfg. Part No. | Description   | Stock No. | Price Each |
|---------------|---|-----------|------------|
| PAXCDS10      | Dual Setpoint Relay Output Card                             | 84K7483   | 37.00      |
| PAXCDS20      | Quad Setpoint Relay Output Card                             | 84K7484   | 48.00      |
| PAXCDS40      | Quad Setpoint Sourcing Open Collector Output Card           | 84K7485   | 37.00      |
| PAXCDC10      | RS485 Serial Communications Output Card with Terminal Block | 84K7477   | 48.00      |
| PAXCDC20      | RS232 Serial Communications Output Card with Terminal Block | 84K7478   | 48.00      |
| PAXCDC30      | DeviceNet Communications Card                               | 84K7479   | 116.00     |
| PAXCDC40      | Modbus Communications Card                                  | 84K7480   | 58.00      |
| PAXCDC50      | Profibus-DP Communications Card                             | 84K7481   | 143.00     |
| PAXCDL10      | Analog Output Card  | 84K7482   | 74.00      |

(88706)

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(116883)

COUNTERS – LARGE DISPLAY • COUNTERS – MINI

LD LARGE DISPLAYS AND TIMER AND CYCLE COUNTERS



- 2.25" or 4" high red LED digits
- Readable up to 130ft (2.25" high models) or 180ft (4" high models)
- Supply voltage: 85-250VAC/11-16VDC
- Constructed of NEMA 4 enclosure in lightweight aluminum



LARGE DISPLAYS

Versatile displays that can be configured as a single or dual counter with rate indication, scaling, serial communications and a relay output. The 6-digit programmable model has two signal inputs and a choice of eight different count modes including bi-directional, quadrature and anticoincidence counting as well as a dual counter mode. When programmed as a dual counter, each counter has separate scaling and decimal point selection. The meter display can be toggled either manually or automatically between the count and rate values. Programmable models come with 5A SPDT relay output and jumper selectable RS232 or RS485 communications.

| Mfg. Part No. | Function                            | Output Signal | No. of Digits | Digit Height (in.) | Stock No. | Price Each |
|---------------|-------------------------------------|---------------|---------------|--------------------|-----------|------------|
| LD200400      | Counter                             | ...           | 4             | 2.25               | 84K7457   | 345.00     |
| LD200600      | Counter                             | ...           | 6             | 2.25               | 84K7459   | 400.00     |
| LD400400      | Counter                             | ...           | 4             | 4                  | 84K7461   | 485.00     |
| LD400600      | Counter                             | ...           | 6             | 4                  | 84K7463   | 585.00     |
| LD2006P0      | Programmable Counter/Rate Indicator | Relay         | 4             | 2.25               | 84K7458   | 450.00     |
| LD4006P0      | Programmable Counter/Rate Indicator | Relay         | 6             | 4                  | 84K7462   | 635.00     |

LARGE DISPLAY TIMER AND CYCLE COUNTERS

Versatile displays that function as an elapsed timer or preset timer, with full-featured programmability. Includes a built-in cycle counter, 5A SPDT relay output and serial communications capability, two signal inputs and eight input operating modes. These modes provide level active or edge triggered stop/start operation. The timer features 18 selectable timer ranges. Built-in cycle counter can be linked to timer operation to count timing cycles, or function as a totally independent counter, accepting count speeds up to 500Hz. The display can be toggled either manually or automatically between the timer and counter values. DIP switches are used to configure the inputs for current sinking (active low) or current sourcing (active high) operation. Setpoint output can be assigned to the timer or counter value, and configured to a variety of control and alarm requirements. The meter also includes jumper selectable RS232 or RS485 serial communications.

|          |                     |       |   |      |         |        |
|----------|---------------------|-------|---|------|---------|--------|
| LD2T06P0 | Timer/Cycle Counter | Relay | 6 | 2.25 | 84K7456 | 450.00 |
| LD4T06P0 | Timer/Cycle Counter | Relay | 6 | 4    | 84K7460 | 635.00 |

TOTALIZING COUNTERS AND ELAPSED TIME INDICATORS



- DIN 24x48mm enclosure
- Remote or front-panel reset (can be disabled)
- Powered by lithium battery
- IP64 watertight seal on front panel



The 87610 Series accepts line voltage inputs.

| Mfg. Part No. | Description     | Inputs  | Stock No. | Price Each |       |
|---------------|-----------------|---------|-----------|------------|-------|
|               |                 |         |           | 1-14       | 15-24 |
| ● 87610340    | 8-digit counter | Contact | 17M8530   | 35.17      | 31.79 |
| 87610440      | 99999.9 hrs.    | Contact | 92F3718   | 35.17      | 31.79 |
| ● 87610050    | 8-digit counter | Voltage | 17M8528   | 95.04      | 85.92 |
| 87610150      | 99999.9 hrs.    | Voltage | 92F3720   | 95.04      | 85.92 |

TOTALIZERS, ELAPSED TIMERS & COUNT/TIME CONTROLS



Totalizer/Elapsed Timer



Preset Counter

Model E4148793 is a 45 x 45mm single-level preset counter/timer with a 2-line LCD and a NEMA 4/IP65 front panel. Input power: 94-240VAC provides sensor excitation of 12VDC @ 100mA. Count speeds to 10kHz with scaling. The SPDT relay output is rated at 5A @ 250V resistive load. Size: 2.01H x 2.01W x 3.54"D. Model E4148792, is a 48 x 48mm dual-level preset counter that can be configured as a single preset counter with batch control output. Model E402400 is an 8-digit totalizer. The E40 series is capable of count speeds of up to 10kHz. The E42 series are solid-state hour meters that record and display up to 999,999.9 hours, roll over and continue timing.

➔ CONTINUED ➔

TOTALIZERS, ELAPSED TIMERS & COUNT/TIME CONTROLS (CONT.)

| Mfg. Part No. | Description  | Stock No. | Price Each |
|---------------|--|-----------|------------|
|               |  |           | 1-4        |
| E5-024-C0400  | 8-Digit Totalizer (Count Up)                               | 53M4776   | 50.83      |
| ● E42DI2475H  | Elapsed Timer (Hours and Min. or Hours and 1/100 of Hours) | 16F8937   | 50.83      |

ACCESSORIES

|            |   |         |       |
|------------|---|---------|-------|
| ● E40VOLTC | Voltage Adapter for Model E402400                                 | 16F8945 | 22.90 |
| ● E40VOLTT | Voltage Adapter for Model E4DI2475 5-240VAC/VDC                   | 16F8946 | 22.90 |
| ● E40TERM  | Provides Screw Terminal Connections for Conductors Up To 14 Gauge | 91B6699 | 17.93 |

COMPACT COUNT/TIME/RPM TOTALIZERS



H7 series digital compact totalizers offer up, up/down, cumulative count, time, and rpm functions in self-powered (replaceable battery) or 100-240VDC supply voltage modes. Feature large easy-to-read displays, selectable input range and speeds. Color: black. Front meets NEMA enclosure type 4 and IEC enclosure IP66. All feature screw terminals for quick installation and a variety of inputs. UL recognized, CSA certified, CE compliant.

| Mfg. Part No. | Description   | Stock No. | Price Each |       |
|---------------|---|-----------|------------|-------|
|               |   |           | 1-14       | 15-24 |
| ● H7EC-N-B    | 8-Digit Self-Powered, Totalizer, No-Voltage Input, Selectable Between 30cps or 1Kcps.   | 94B7609   | 59.85      | 57.12 |
| ● H7EC-NV-B   | 8-Digit Self-Powered, Totalizer, NPN/PNP DC Voltage Input, Selectable Between 30cps or 1Kcps.   | 94B2566   | 73.50      | 70.14 |
| ● H7EC-NV-BH  | 8-Digit Self-Powered, Totalizer, AC/DC Multi-Voltage Input, Max. Count Speed: 20Hz  | 93K7587   | 64.86      | 63.87 |
| ● H7EC-NV-BH  | 8-Digit LCD Backlit Display, Self-Powered Totalizer, PNP/NPN Universal DC Voltage Input, Selectable Count Speed: 30 Hz/KHz  | 88K1951   | 81.90      | 79.38 |
| ● H7ET-N-B    | 7-Digit Self-Powered, Time Totalizer, No Voltage Input, Selectable Between 999999.9h and 3999d23.9h   | 88K1111   | 81.90      | 79.38 |
| ● H7ET-NV-B   | 7-Digit Self-Powered, Time Totalizer, NPN/PNP DC Voltage Input, Selectable Between 999999.9h and 3999d23.9h   | 88K1953   | 85.41      | 82.79 |
| ● H7ET-NV-BH  | 7-Digit LCD Backlit Display, Self Powered Hour Meter, PNP/NPN Universal Voltage (DC), Input, Selectable Time Range 999999.9 and 3999d23.9h.                       | 95B4029   | 76.65      | 73.15 |
| ● H7ER-NV1-B  | 7-Digit LCD Display, Self Powered Tachometer, PNP/NPN Universal Voltage (DC) Input, Selectable RPM Range 1000-10,000, Selectable RPS Range of 0- 1000 RPS.        | 08H0619   | 78.75      | 75.15 |
| ● H7ER-NV1-BH | 7-Digit LCD Backlit Display, Self Powered Tachometer, PNP/NPN Universal Voltage (DC) Input, Selectable RPM Range 1000-10,000, Selectable RPS Range of 0-1000 RPS. | 81C7942   | 80.04      | 76.38 |

COMPACT COUNT/TIME/RPM TOTALIZERS



- NEMA 4 Front Panel Protection
- Large, Easy-to-Read Displays
- Switch Between NPN and PNP Transistor Input
- High-Visibility Negative Transmissive LCD
- Both External and Manual Resets Provided



H7GP

Supply voltage: 100-240VAC. Power consumption: @100 to 240VAC: 6.5VA; @12 to 24VDC: 0.6W max. NEMA 4 front panel protection when used in conjunction with mfg. part no. Y92S-33 (for H7HP) and mfg. part no. Y92S-32 (for H7GP) rubber gasket. Panel mount adapter mfg. part nos. Y92F-33 (for H7HP) and Y92F-32 (for H7GP) also available; go online or call.

| Mfg. Part No. | Description                                       | Number of Digits | Case Color | Stock No. | Price Each |
|---------------|---|------------------|------------|-----------|------------|
| ● H7GP-C      | 6-Digit Up Totalizing Counter                     | 6                | Gray       | 52F4175   | 170.30     |
| ● H7GP-CB     | 6-Digit Up Totalizing Counter                     | 6                | Black      | 38B691    | 170.30     |
| ● H7GP-T      | 6-Digit Time Totalizer                            | 6                | Gray       | 52F4176   | 147.43     |
| ● H7GP-TB     | 6-Digit Time Totalizer                            | 6                | Black      | 38B692    | 170.30     |
| ● H7HP-A      | 6-Digit Up/Down Count Totalizer or Time Totalizer | 6                | Gray       | 52F4177   | 198.52     |
| ● H7HPAB      | 6-Digit Up/Down Count Totalizer or Time Totalizer | 6                | Black      | 38B693    | 220.44     |

➔ CONTINUED ➔

COUNTERS – MINI

COMPACT COUNT/TIME/RPM TOTALIZERS (CONT.)

| Mfg. Part No. | Description                     | Number of Digits | Case Color | Stock No. | Price Each |
|---------------|---------------------------------|------------------|------------|-----------|------------|
| ● H7HP-C8     | 8-Digit Up/Down Count Totalizer | 8                | Gray       | 52F4178   | 209.60     |
| ● H7HPC8B     | 8-Digit Count Totalizer         | 8                | Black      | 38B694    | 232.74     |

(3023)

94 SERIES ELECTRONIC COUNTERS



9415-001



9415-003



9415-005

Battery-powered 6-digit LCD counters feature 6-240VAC or VDC inputs. Interchangeable with most electromechanical counters. Digits are 0.50" high. Base-mount unit dimensions in inches: 1.65(H) x 3.81(W) x 2.97(D). Panel mount unit dimensions in inches: 1.50(H) x 4.44(W) x 2.90(D). Rated 2400cpm with sensor input. Load resistor (1500 ohms, 10 watts) across input terminals required when using AC sensors. Weight: 1.1 lbs. Hour Meter versions also available, go online or call.

| Mfg. Part No. | Mounting Type | Reset      | Stock No. | Price Each |        |
|---------------|---------------|------------|-----------|------------|--------|
|               |               |            |           | 1-5        | 6-14   |
| 9415-001      | Base          | Manual     | 48M1363   | 163.69     | 156.49 |
| 9415-003      | Panel         | Manual     | 81F474    | 173.55     | 165.91 |
| 9415-005      | Panel         | Lock & Key | 81F475    | 190.49     | 182.10 |

(2941)

5300 SERIES TOTALIZERS, HOURMETERS AND TACHOMETERS



Manual and Remote Reset



Remote Reset

Redington's model 53 digital electronic totalizers, hourmeters and tachometers use innovative technology to provide unparalleled accuracy and reliability over a wide range of applications. Positive locking mounting clip and compact size make it ideally suited for control panels, instrumentation assemblies, business machines or wherever space is a concern. Panel cutout 1.79" x 0.89". 7 figures, 0.32" high LCD display. Typical 20-yr. life with lithium battery. Termination: terminal block. Wire leads and 8-digit versions available, go online or call. Color: tan. Black versions available, go online or call. UL recognized, CSA certified and CE compliant.

TOTALIZERS

| Mfg. Part No. | Input Type         | Voltage       | Reset           | Stock No. | Price Each |       |
|---------------|--------------------|---------------|-----------------|-----------|------------|-------|
|               |                    |               |                 |           | 1-14       | 15-24 |
| ● 5300-0000   | 0-40 and 0-150 cps | None (Switch) | Remote          | 48M1307   | 55.98      | 55.05 |
| ● 5300-1000   | 0-40 and 0-150 cps | 3-30VDC       | Remote          | 66F1114   | 55.98      | 55.05 |
| ● 5300-0100   | 0-40 and 0-150 cps | None (Switch) | Manual & Remote | 66F1115   | 55.98      | 55.05 |
| ● 5300-1100   | 0-40 and 0-150 cps | 3-30VDC       | Manual & Remote | 66F1116   | 55.98      | 55.05 |

20-250VAC/VDC TOTALIZER

|             |          |           |        |         |       |       |
|-------------|----------|-----------|--------|---------|-------|-------|
| ● 5300-2000 | 0-40 cps | 20-250VAC | Remote | 48M1308 | 72.18 | 70.98 |
|-------------|----------|-----------|--------|---------|-------|-------|

HOURMETERS

| Mfg. Part No. | Voltage       | Reset           | Stock No. | Price Each |       |
|---------------|---------------|-----------------|-----------|------------|-------|
|               |               |                 |           | 1-14       | 15-24 |
| ● 5320-0000   | None (Switch) | Remote          | 48M1309   | 63.65      | 62.29 |
| ● 5320-0100   | None (Switch) | Manual & Remote | 66F1120   | 63.77      | 62.41 |
| ● 5320-1000   | 3-30VDC       | Remote          | 48M1310   | 49.05      | 48.24 |

20-250VAC/VDC HOURMETER

|             |          |           |        |         |       |       |
|-------------|----------|-----------|--------|---------|-------|-------|
| ● 5320-2000 | 0-40 cps | 20-250VDC | Remote | 66F1111 | 63.63 | 62.57 |
|-------------|----------|-----------|--------|---------|-------|-------|

TACHOMETER

| Mfg. Part No. | Input Type        | Voltage       | Reset  | Stock No. | Price Each |       |
|---------------|-------------------|---------------|--------|-----------|------------|-------|
|               |                   |               |        |           | 1-14       | 15-24 |
| ● 5330-0000   | 10,000 cps (max.) | None (Switch) | Remote | 66F1112   | 70.38      | 69.21 |

(2782)

TACHOMETERS AND RATE INDICATORS



A103 series tachometers provide readout of motor, machine shaft or other RPM. Rate indicators provide a readout of virtually any rate: gallons/minute, parts/hour, feet/minute, etc. LCD with backlighting capability. All units use an internal 3-volt single or dual battery. Magnetic input is capacitive coupled; 10kHz (50% duty cycle); 0.2V peak (28VDC max.). Fits 68 x 33 mm cutout. Input scale multipliers for rate (0.001 to 9,999) and total (0.0001 to 99,999.99). Weight: 2.25 oz. (64 g). Front panel is rated NEMA 4/IP65 for use in washdown environments. Order matching totalizing and preset counters and elapsed time indicators, and quick-action option modules separately on page 1919.

| Mfg. Part No. | Description             | Stock No. | Price Each |
|---------------|-------------------------|-----------|------------|
|               |                         |           | 1-5        |
| A103-003      | Tachometer              | 52F1235   | 99.92      |
| A103-004      | Programmable Rate Meter | 52F1236   | 114.20     |
| A103-005*     | Rate Meter & Totalizer  | 52F1237   | 131.76     |

\*Provides total count as well as rate.  
(2846)

A-103 SERIES TOTALIZING, PRESET COUNTERS, TACHOMETERS, AND PRESET TIMERS



Eagle Signal brand

A103 series totalizing and preset counters are compact and cost-efficient. Features include a supertwist LCD with .47" (12mm) high digits and green illumination display backlight capability. 3-volt lithium battery eliminates need for external power. Accepts input signals from dry contact, PNP, or NPN sensors and encoders. High and low speed count inputs. Reset on front panel or remotely. Fits 68 x 33 mm cut-out. Front panel rated NEMA 4/IP65. Order quick-attach option modules separately on page 1919.

| Mfg. Part No. | Description            | Stock No. | Price Each |
|---------------|------------------------|-----------|------------|
|               |                        |           | 1-5        |
| A103-000      | Totalizer              | 52F1232   | 86.75      |
| A103-001      | Add/Subtract Totalizer | 52F1233   | 114.20     |
| A103-002      | Position Indicator     | 52F1234   | 114.20     |
| A103-007      | Preset Counter         | 52F1239   | 131.76     |

(2844)

VEEDER-ROOT BRAND MITE SERIES ELECTRONIC TOTALIZING COUNTERS, RATE INDICATORS, AND TIME METERS



Veeder-Root brand

MITE series 7mm high (8-digit) LCD displays feature compact overall size. Fit 45 x 22mm panel cut-out. Totalizers are powered by an internal lithium cell, and available in model 79998D-110 unidirectional and model 79998D-410 bidirectional models that are capable of count speeds to 10kHz. Model 79998D-410 bidirectional totalizer provides count/direction operation—one input receives count pulses, while a second input controls counting direction. Self-powered timer model 79998D-510 has timing ranges for seconds or minutes and seconds; model 79998D-610 has timing ranges for hours or hours and 1/100ths. Model 79998D-801 tachometer with totalizer function has selectable frequency or period modes and allows application with a variety of sensors including one-pulse-per-revolution pickups. All units rated NEMA-4/IP65. Order input adaptors separately below.

| Mfg. Part No. | Description                        | Stock No. | Price Each |
|---------------|------------------------------------|-----------|------------|
| 79998D-110    | Totalizer-add                      | 63K9812   | 53.22      |
| 079998D-510   | Timer-seconds or minutes & seconds | 27C4586   | 59.73      |
| 079998D-610   | Timer-hours or hours and 100ths    | 27C7532   | 59.73      |
| 79998D 801    | Tachometer/Totalizer               | 31C8766   | 72.77      |

SNAP-ON INPUT ADAPTORS

|             |  |         |       |
|-------------|--|---------|-------|
| 108938-0001 | 5-240VAC/VDC for totalizers                  | 48F2261 | 21.18 |
| 108940-0001 | 5-240VAC/VDC for totalizers                  | 48F2262 | 21.18 |
| 108937-0001 | Screw terminal for MITE series 79998D models | 48F2263 | 17.92 |

(2918)

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(116882)



COUNTERS – MINI • COUNTERS – 1/16 DIN

C342 SERIES LCD AND LED COUNTERS, TIMERS AND TACHOMETERS



**Veeder-Root brand**

DIN-sized family of count totalizing, elapsed-time totalizing, and speed meters with LCD or LED displays. Self-powered models contain long-life lithium battery. Externally powered models accept 12-24VDC power supply and nonvolatile RAM to provide data memory. Counters and timers have panel and remote reset. Display: 7mm-high, 8-digit LCD, or 7.6mm-high, 6-digit LED. Dimensions: 0.94H x 1.9W x 1.25"D (24 x 48 x 32). Operating temperature: -10°C to +50°C. Front panel meets IEC enclosure IP65 classification.

COUNT TOTALIZERS

| Mfg. Part No. | Description                              | Display | Power Source | Stock No. | Price Each |  |
|---------------|--|---------|--------------|-----------|------------|--|
|               |  |         |              |           | 1-4        |  |
| C342-0462     | Contact or Logic-Count Input             | LCD     | External DC  | 01B2159   | 51.00      |  |
| C342-0464     | Contact or Logic-Count Input             | LCD     | Battery      | 48F2149   | 44.88      |  |
| C342-0474     | High-Voltage (12-250VAC/VDC) Count Input | LCD     | Battery      | 48F2150   | 59.16      |  |
| C342-0562     | Contact or Logic-Count Input             | LED     | External DC  | 48F2157   | 111.18     |  |

TIME TOTALIZERS

|           |  |     |             |         |        |  |
|-----------|--|-----|-------------|---------|--------|--|
| C342-1464 | Hours:Minutes:Seconds Resolution; Contact or Logic Input                   | LCD | Battery     | 48F2151 | 51.00  |  |
| C342-1474 | Hours:Minutes:Seconds Resolution; High-Voltage (12-250VAC/VDC) Count Input | LCD | Battery     | 48F2153 | 66.30  |  |
| C342-2474 | Hours and 1/100 Resolution. High-Voltage (12-250VAC/VDC) Count Input       | LCD | Battery     | 48F2154 | 66.30  |  |
| C342-1562 | Hours:Minutes:Seconds Resolution; Contact or Logic Input                   | LED | External DC | 48F2158 | 116.28 |  |

TACHOMETERS

|           |                              |     |             |         |       |  |
|-----------|------------------------------|-----|-------------|---------|-------|--|
| C342-3464 | Contact or Logic-Count Input | LCD | Battery     | 48F2155 | 59.16 |  |
| C342-3462 | Contact or Logic-Count Input | LCD | External DC | 48F2156 | 72.42 |  |

(33785)

AMBASSADOR™ SERIES LCD MULTIFUNCTION COUNT CONTROLS



**Durant**

Compact controls feature 8 decade totalizing counter, 6 decade 1/TAU rate indicator, 9 programmable count input modes, 4 control inputs, programmable count and rate scalers, programmable decimal point for count and rate display, 2 programmable open collector transistor outputs, and programmable RS-485 half-duplex serial interface. NEMA 4 rated sealed front panel has full alpha-numeric, 16 character, 0.3" (7) high dot matrix LCD backlit display with 8-position tactile feel keyboard. 74x74mm DIN package. Input power: 115VAC. Units have 12VDC (±25%) 100mA maximum DC power output for input device. Space-saving 2.677" x 2.677" (68 x 68) panel cut-out; 0.500" (12.7) maximum panel thickness. **Mfg. part nos. 57601-401 thru 57601-404** have 6 decade main counter with 1 or 2 preset levels. **Mfg. part nos. 57601-402 and 57601-404** also have 6 decade batch counter with 1 preset level. **Mfg. part no. 57601-405** has 6 decade batch counter with 4 preset levels.



57601-404

GREEN LCD DISPLAY

| Mfg. Part No. | Description  | Stock No. | Price Each |  |
|---------------|--|-----------|------------|--|
|               |  |           | 1-4        |  |
| ● 57601400    | Totalizer & Rate Indicator                                       | 50F927    | 344.02     |  |
| ● 57601401    | Single Preset Counter & Rate Indicator                           | 89M5408   | 407.88     |  |
| ● 57601402    | Single Preset Counter, Rate Indicator, Batch Counter & Totalizer | 89M5409   | 447.02     |  |
| 57601403      | Dual Preset Counter & Rate Indicator                             | 50F930    | 447.02     |  |
| ● 57601404    | Dual Preset Counter, Rate Indicator, Batch Counter & Totalizer   | 50F931    | 512.94     |  |
| ● 57601405    | Quad (4) Preset Counter w/ Batch, Rate, Totalizer                | 83F7295   | 561.35     |  |

(2704)

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(116881)

MULTIFUNCTION DIGITAL COUNTER



- Advanced 1/16 DIN Preset Counter with Enhanced Features
- Configure as 1- or 2-Stage, Total, Batch, or Dual Counter or Tachometer, Depending on Model
- High-Speed Response up to 5kHz. Can Be Scaled to 10kHz
- All Parameters Set Via Front Panel or DIP Switch Settings
- PNP/NPN Selectable Input
- Key Protection Function
- NEMA4/IP66 Front Panel
- Programmable Display Color Alerts Any Output Status Change



All units have 12VDC sensor power supply, contact output type and black case. UL listed, CE compliant. Units with no power supply, transistor output and light gray case are also available; go online or call.

STANDARD COUNTERS (1-STAGE)

| Mfg. Part No.              | Supply Voltage    | No. of Digits | Termination    | Stock No. | Price Each |        |
|----------------------------|-------------------|---------------|----------------|-----------|------------|--------|
|                            |                   |               |                |           | 1-24       | 25-49  |
| ● H7CX-A11-AC100-240       | 100-240VAC        | 4             | 11-Pin Socket  | 77C5953   | 208.62     | 201.78 |
| ● H7CX-A11D1 DC12-24/AC24  | 12-24VDC or 24VAC | 6             | 11-Pin Socket  | 77C5954   | 208.62     | 201.78 |
| ● H7CX-A AC100-240         | 100-240VAC        | 6             | Screw Terminal | 18M7372   | 197.64     | 191.16 |
| ● H7CX-A114 AC100-240      | 100-240VAC        | 4             | 11-Pin Socket  | 18M7373   | 197.64     | 191.16 |
| ● H7CX-A114D1 DC12-24/AC24 | 12-24VDC or 24VAC | 4             | 11-Pin Socket  | 77C5956   | 214.11     | 207.09 |
| ● H7CX-A4 AC100-240        | 100-240VAC        | 4             | Screw Terminal | 77C5957   | 197.64     | 191.16 |

ADVANCED COUNTERS (2-STAGE)

|                          |                   |   |                |         |        |        |
|--------------------------|-------------------|---|----------------|---------|--------|--------|
| ● H7CX-AW AC100-240      | 100-240VAC        | 6 | Screw Terminal | 77C5951 | 241.56 | 233.64 |
| ● H7CX-AWD1 DC12-24/AC24 | 12-24VDC or 24VAC | 6 | Screw Terminal | 77C5952 | 241.56 | 233.64 |
| ● H7CX-A4W AC100-240     | 100-240VAC        | 4 | Screw Terminal | 77C5958 | 241.56 | 233.64 |
| H7CX-AWSD DC12-24        | 12-24DC           | 6 | Screw Terminal | 97H3209 | 214.11 | 207.09 |

ACCESSORIES

| Mfg. Part No. | Description   | Stock No. | Price Each |       |
|---------------|---|-----------|------------|-------|
|               |   |           | 1-24       | 25-49 |
| ● Y92F-30     | Flush Mounting Adapter, Supplied with Screw Terminal Units                | 88K2030   | 8.58       | 8.30  |
| ● Y92S-29     | Waterproof Packing, Supplied with Screw Terminal Units                    | 88K1287   | 5.49       | 5.31  |
| ● Y92A-48F1   | Soft Cover  | 90B9875   | 17.99      | 17.40 |
| ● P2CF-11     | 11-Pin Track Mounting Front Connecting Socket                             | 85F300    | 9.34       | 9.03  |
| ● P2CF-11-E   | 11-Pin Track-Mounting, Front-Connecting Socket with Finger-Safe Terminals | 98B1828   | 9.72       | 9.06  |
| ● P3GA-11     | 11-Pin Track-Mounting, Back-Connecting Socket                             | 88K1976   | 9.34       | 9.03  |
| ● PFP-100N    | DIN Rail Mounting Track, 1m x 7.3 in                                      | 17M7511   | 6.84       | 5.82  |
| ● PFP-100N2   | DIN Rail Mounting Track, 1M x 16mm  | 34K8630   | 14.60      | 12.42 |
| ● PFP-50N     | DIN Rail Mounting Track, 50cm x 7.3mm                                     | 93B2043   | 5.57       | 4.74  |
| ● PFP-M       | End Plate   | 36K3451   | 0.76       | 0.64  |
| ● PFP-S       | Spacer  | 17M7510   | 0.49       | 0.42  |

(73802)

ELECTRONIC PRESET COUNTERS AND TIMERS



Counter Features:

- 1 and 2 Preset Capability
- Quadrature Sensing
- Prescaler on 2 Preset Modes
- Bi-Directional Counting, Up/Down Control
- Status Indicator for Outputs
- NEMA 4X/IP65 Sealed Bezel

Timer Features:

- 1 and 2 Preset Capability
- 12 Timing Ranges with 44 Operating Modes
- Programmable from Thousandths of a Second to Hours and Minutes



Both feature a 7-segment, 2 lines by 6-digit backlit LCD display. Models offer a choice of relay or solid-state outputs. Case design allows horizontal or vertical stacking of units.

PREDETERMINING COUNTER

Feature 85-250VAC or 18-36VDC/24VAC input. Available with solid state or relay output and offer pre-scaling and serial communications. UL, cUL listed, CE certified.

| Mfg. Part No. | Voltage        | Presets | Output       | Stock No. | Price Each |
|---------------|----------------|---------|--------------|-----------|------------|
|               |                |         |              |           | 1-5        |
| 8301-0110     | 18-36VDC/24VAC | 1       | NPN OC/Relay | 27C9689   | 289.50     |
| 8301-1110     | 85-250VAC      | 1       | NPN OC/Relay | 25C5215   | 272.64     |
| 8302-0100     | 18-36VDC/24VAC | 2       | NPN OC       | 27C9692   | 309.49     |
| 8302-1100     | 85-250VAC      | 2       | NPN OC       | 27C9696   | 267.25     |

PREDETERMINING TIMER

Provide serial communications, relay or solid state outputs. Programmable from thousandths of a second to hundreds of hours. Timing modules include: On delay, off delay, single shot and repetitive cycling. UL, cUL listed, CE compliant.

|           |                |   |              |         |        |
|-----------|----------------|---|--------------|---------|--------|
| 8321-0110 | 18-36VDC/24VAC | 1 | NPN OC/Relay | 27C9710 | 289.50 |
| 8321-1110 | 85-250VAC      | 1 | NPN OC/Relay | 27C9711 | 247.75 |

➔ CONTINUED ➔

COUNTERS – 1/16 DIN • COUNTERS – 36 X 72

**ELECTRONIC PRESET COUNTERS AND TIMERS (CONT.)**

**PREDETERMINING TIMER**

| Mfg. Part No. | Voltage        | Presets | Output | Stock No. | Price Each |
|---------------|----------------|---------|--------|-----------|------------|
|               |                |         |        |           | 1-5        |
| 8322-0010     | 18-36VDC/24VAC | 2       | Relay  | 27C9712   | 314.19     |
| 8322-1010     | 85-250VAC      | 2       | Relay  | 27C9716   | 270.09     |

(72449)

**VEEDER-ROOT BRAND C346 PRESET COUNTERS**



Simple button per digit setting and choice of single-line 6-digit LED or LCD display allow optimum operator interface. Very flexible input circuit with scaling feature accepts signals from encoders, NPN (sinking), PNP (sourcing), and contact-closure inputs. Suitable for most preset counting applications. Size: 1/16 DIN (48W x 48mmH) Display: 6 digit. LED or LCD. Power: 120VAC standard; optional 240VAC, 24VDC. Preset levels: 1 or 2.5 amp relay and NPN transistor per output. Input scaling: x0.001 to 9.999. Input: sinking, sourcing, contact closure, add/subtract, add/add, quadrature. Maximum count speed: 5kHz.

| Mfg. Part No. | Type                       | Stock No. | Price Each |
|---------------|----------------------------|-----------|------------|
|               |                            |           | 1-5        |
| C346-0411     | LCD/Single Preset/115VAC   | 16F4072   | 215.34     |
| C346-0412     | LCD/Single Preset/12-24VDC | 01B2178   | 208.68     |
| C346-0421     | LCD/Dual Preset/115VAC     | 16F4073   | 251.97     |
| C346-0511     | LED/Single Preset/115VAC   | 16F4074   | 259.74     |
| C346-0521     | LED/Dual Preset/115VAC     | 16F4075   | 290.82     |

(3061)

**VEEDER-ROOT BRAND SQUIRE™ PREDETERMINING COUNTERS**



Offer single or dual preset count capability, or single preset count capability with a presettable batch counter. Backlit LCD display provides simultaneous count and preset indication. Nonvolatile memory retains memory during power loss. Models with calibration feature input signal to appropriate engineering unit. Annunciators and simple key sequences make operation quick and easy. A variety of count sources are accommodated, including switch or relay contacts, photoelectrics, proximity switches, and unidirectional or bidirectional encoders. Solid-state outputs interface to light-duty devices, while relay contacts offer heavy-duty load switching. Maximum count speed: 2.4kHz. 115VAC, 50/60Hz. Fit panel cut-out: 1.772"x1.772" (45.01x45.01).

| Mfg. Part No. | Presets | Speed  | Features*         | Stock No. | Price Each |
|---------------|---------|--------|-------------------|-----------|------------|
|               |         |        |                   |           | 1-14       |
| SQC1100U      | 1       | 20Hz   | a/s               | 55M3754   | 202.54     |
| SQC1200U      | 1       | 2.4kHz | a/s;qu;cal;dp     | 95F5070   | 225.51     |
| SQC22000      | 2       | 2.4kHz | a/s;qu;cal;dp     | 95F5071   | 276.66     |
| SQB22000      | 1       | 2.4kHz | a/s;qu;cal;dp;bat | 95F5072   | 263.09     |

\* Features: a/s= add/subtract input; qu = quadrature input; cal = calibrator; dp = selectable decimal point; bat = batch preset

(2916)

**VEEDER-ROOT BRAND V4545 SERIES PRESET COUNTERS**



**Veeder-Root brand**



V4545-1 Counter, Single Preset

V4545 series counters are suited for applications such as cut-to-length and filling. Dual input channels accept input from a variety of sources, including encoders, dry contact, and PNP and NPN sensors. Prescale function translates signals into useful units of measure. Can be used for reversible or quadrature counting. Models available with single or dual preset, and the ability to direct batching operations. Each preset value features a transistor and a relay output. Outputs can be programmed for latching or timed operation. Large dual line LED. Scale function allows display of engineering units. High speed counting up to 10kHz. 48W x 48mm H. Panel mount (bracket supplied), fits 45 x 45mm cutout. 7 ounces (198 g).

| Mfg. Part No. | Description            | Stock No. | Price Each |
|---------------|------------------------|-----------|------------|
|               |                        |           | 1-9        |
| V45450-1      | Single Preset          | 52F1253   | 233.10     |
| V45450-2      | Dual Preset            | 52F1254   | 261.45     |
| V45450-3      | Single Preset, w/Batch | 52F1255   | 261.45     |

(2989)

**COURIER SERIES BATTERY POWERED LCD TOTALIZERS & RATEMETERS**



**Durant**



53300-405

Electronic totalizers, add/subtract counters, and ratemeters feature high-contrast LCD display with large 0.43" (10) high digits for easy readability and rear screw mount terminals. 36x72mm DIN size case. 1.42"H x 2.67"W (36 x 67) panel cut-out. Programmable independent scaling and remote reset. Powered by replaceable 3V lithium battery. NEMA 4X rating.

| Mfg. Part No. | Description                             | Stock No. | Price Each |
|---------------|---|-----------|------------|
|               |   |           | 1-9        |
| 53300400      | 8-Digit High-Speed Totalizer            | 89M5405   | 107.97     |
| 53300403      | 8-Digit Quadrature Totalizer            | 89M5406   | 154.94     |
| 53300404      | 4/5-Digit 1/TAU Ratemeter (10kHz)       | 89M5407   | 143.96     |
| 53300-405     | 8-Digit Totalizer/Ratemeter             | 53M5319   | 171.68     |
| 53302405      | 8-Digit Totalizer/Ratemeter w/Backlight | 52F1264   | 206.18     |

(2702)

**DITAK 8 - ADJUSTABLE TIMEBASE 5-DIGIT RATE INDICATORS**



- Adjustable timebase from 4 msec to 32 sec
- Internal lithium battery provides over 7 years of continuous operation
- NEMA 4X/IP65 sealed front panel bezel
- Accepts magnetic or logic type signal inputs
- Wire connections made via screw clamp type terminals

Self-powered rate indicators that feature selectable timebase increments by setting the appropriate DIP switches on the rear of the unit. 5-digit LCD display with 0.6" high digits. Displays are available in positive image reflective (black digits, reflective background) or negative image transmissive (illuminated digits, dark background). Backlight versions require power from an external 9-28VDC power supply. CE compliant. Yellow/Green backlight available; go online or call.

| Mfg. Part No. | Display Type                    | Backlight Color | Stock No. | Price Each |
|---------------|---------------------------------|-----------------|-----------|------------|
| DT800000      | LCD Positive Reflective         | ...             | 84K7447   | 77.00      |
| DT800020      | LCD Negative Image Transmissive | Red             | 84K7448   | 100.00     |

(88721)



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(116860)

COUNTERS – 36 X 72 • CONTROLLERS – SMART RELAY

MODEL MLPS1 - MICRO-LINE POWER SUPPLY



For use with DT8, DT9, CUB4 and CUB5 meters as an external power supply for backlighting. Model MLPS1 is a +12VDC power supply designed to attach to the rear of the Micro-Line Series. Can be powered from an 85-250VAC source. 12VDC output at 400mA.



| Mfg. Part No. | Supply Voltage | Stock No. | Price Each |
|---------------|----------------|-----------|------------|
| MLPS1000      | 85-250VAC      | 84K7467   | 32.00      |

(86722)

MODEL CUB5 36 x 72mm



5-Digit



8-Digit

- LCD reflective or red/green LED backlighting display
- NEMA 4X/IP65 sealed front bezel
- Operates from 9 to 28VDC power source
- Display color change capability at preset output
- Optional serial communications module (RS232 or RS485)

SPECIFICATIONS

|   |   |
|---|---|
| Display Options                                   | LCD, Reflective or Green/Red LED Backlighting*  |
| No. of Digits                                     | 5 or 8  |
| Digit Height                                      | 0.48" or 0.46"  |
| Input Voltage                                     | 9-28VDC   |
| Current Meters Input Range                        | 200µADC, 2mADC, 20mADC, 200mADC   |
| Voltage Meters Input Range                        | 200mVDC, 2VDC, 20VDC, 200VDC  |
| Count Modes (Counters and Rate Indicators)        | Count with Direction, Rate/Counter, Dual Counter, Quadrature x 1, Quadrature x 2, Quadrature x 4, 2 Input Add/Add, 2 Input Add/Subtract |
| Quadrature Sensing (Counters and Rate Indicators) | 1x, 2x, 4x  |

\*Backlight versions require an external 9-28VDC power supply

CUB5 CURRENT AND VOLTAGE METERS

Four selectable DC ranges. 0.48" high digits. Minimum and maximum display capture. Optional setpoint output modules. Front panel or crimson programmable.

CURRENT METER

| Mfg. Part No. | No. of Digits | Display Type                | Backlight Color | Stock No. | Price Each |
|---------------|---------------|-----------------------------|-----------------|-----------|------------|
| CUB5IB00      | 5             | LCD Selectable Transmissive | Red Or Green    | 17M9129   | 135.00     |

VOLTAGE METERS

|          |   |                             |              |         |        |
|----------|---|-----------------------------|--------------|---------|--------|
| CUB5VR00 | 5 | LCD Positive Reflective     | ...          | 18M8514 | 125.00 |
| CUB5VB00 | 5 | LCD Selectable Transmissive | Red Or Green | 17M9126 | 135.00 |

CUB5 MINIATURE DUAL COUNTERS AND RATE INDICATORS

Optional relay output module. Count speeds up to 20KHz. Can be programmed as a single or dual counter with rate indication capability. Programmable for one of eight different count modes. When programmed as a dual counter, each counter has a separate scale factor and decimal points. In the counter/rate indicator mode, each have their own scaling and decimal point read-outs in different engineering units. Two separate inputs provide different functions depending on which operating mode is selected.

| Mfg. Part No. | No. of Digits | Display Type                | Backlight Color | Stock No. | Price Each |
|---------------|---------------|-----------------------------|-----------------|-----------|------------|
| CUB5B000      | 8             | LCD Selectable Transmissive | Red Or Green    | 84K7434   | 109.00     |
| CUB5R000      | 8             | LED                         | ...             | 84K7438   | 98.00      |

OPTIONAL PLUG-IN CARDS

| Mfg. Part No. | Description                      | Stock No. | Price Each |
|---------------|----------------------------------|-----------|------------|
| CUB5COM1      | RS485 Serial Communications Card | 84K7435   | 30.00      |
| CUB5COM2      | RS232 Serial Communications Card | 84K7436   | 30.00      |
| CUB5RLYO      | Single Relay Option Card         | 84K7437   | 20.00      |

(86577)

**Expert technical support**

Chat online to our team of engineers, or connect to them through your representative.

(116882)

MODEL CUB7 COUNTERS AND MODEL CUB7T PROGRAMMABLE ELECTRONIC TIMERS



CUB7



CUB7T

- Count speeds up to 10KHz (counter)
- Replaceable internal lithium battery provides up to 6 years (timer) and 7 years (counter) of uninterrupted operation
- 10 programmable timer ranges (timer)
- Front panel program and reset buttons are individually enabled (timer)
- Front panel and remote reset input (counter)

SPECIFICATIONS

| Type                | Counter   | Timer   |
|---------------------|---|---|
| LCD Display Options | Reflective or Transmissive with Yellow/Green or Red LED Backlighting* | Reflective, Red Transmissive, Yellow/Green Transmissive with "Timer Active" Annunciator |
| No. of Digits       | 8   | 8   |
| Digit Height        | 0.35"   | 0.35"   |
| Wire Connection     | Screw clamp type terminals  | Screw clamp type terminals  |
| Casing              | NEMA 4X/IP65 Sealed Front Bezel                                       | NEMA 4X/IP65 Sealed Front Bezel   |

\*Backlight versions require an external 9-28VDC power supply

CUB7 MINIATURE ELECTRONIC 8-DIGIT COUNTERS

Low speed input: 30Hz from switch contact to open collector transistor with 50% duty cycle. High speed input: 10KHz max. from 3.0V bipolar output with 50% duty cycle.

| Mfg. Part No. | Signal Input | Display Type                    | Backlight Color | Stock No. | Price Each |
|---------------|--------------|---------------------------------|-----------------|-----------|------------|
| CUB70000      | Contact      | LED Positive Image Reflective   | ...             | 84K7445   | 48.00      |
| CUB70020      | Contact      | LCD Negative Image Transmissive | Red             | 84K7446   | 68.00      |

CUB7T PROGRAMMABLE ELECTRONIC TIMERS

Contact versions operate from a switch or an open collector NPN transistor. Contact burden 15µA. A maintained closed switch to COM will actuate the timer. Voltage versions operate from a signal voltage of 10-300V (AC 50/60Hz or DC), 150V max. for backlight versions. Any offstate leakage current may activate the timer. Constant voltage applied to the input will actuate the timer. Due to the internal digital filtering to this input, up to 30 msec. of error may be added per activation of the signal input.

| Mfg. Part No. | Signal Input | Display Type                    | Backlight Color | Stock No. | Price Each |
|---------------|--------------|---------------------------------|-----------------|-----------|------------|
| CUB7T000      | Contact      | LED Positive Image Reflective   | ...             | 84K7439   | 45.00      |
| CUB7T010      | Contact      | LCD Negative Image Transmissive | Yellow Green    | 84K7440   | 65.00      |
| CUB7T020      | Contact      | LCD Negative Image Transmissive | Red             | 84K7441   | 65.00      |
| CUB7T100      | Voltage      | LED Positive Image Reflective   | ...             | 84K7442   | 45.00      |
| CUB7T110      | Voltage      | LCD Negative Image Transmissive | Yellow Green    | 84K7443   | 65.00      |
| CUB7T120      | Voltage      | LCD Negative Image Transmissive | Red             | 84K7444   | 65.00      |

(86579)

FUSION™ SERIES COUNT CONTROL MODULES



- Combines high speed counter with micro PLC
- 10 digital and 4 analog inputs
- 7 digital and 2 analog outputs
- Built-in user configurable operator interface
- Modbus RS485 serial communication

The Fusion™ is a high-speed count control module and a logic controller capable of processing up to 100 rungs of ladder logic. Configuration can be done using the input display keys or utilizing the programming software, (available at no charge from www.durant.com). The Fusion™ has three form C and two form A relay output and two NPN transistor outputs. The 6kHz speed counter consists of a 5-digit ratemeter with high/low presets, a main counter with five presets, a totalizer and a batch counter (both pre-settable). The NEMA 4X operator interface can display counter data, alarms, operator prompts and ladder logic information. The display includes 18 pushbuttons for operator input. In addition to the 10 control inputs and three high-speed count inputs, the logic inputs also include: one power up signal, eight analog comparators for use with the four analog inputs, eight real time clock comparators, eight counters and eight timers. UL listed, cUL listed, CE certified.

| Mfg. Part No. | Display | No. of Digits | Supply Voltage | Stock No. | Price Each |
|---------------|---------|---------------|----------------|-----------|------------|
| 57550400      | LED     | 126           | 10-30VDC       | 27K6024   | 650.27     |
| 57551400      | LED     | 126           | 85-265VAC      | 27K6025   | 689.36     |

(84753)

**ECLIPSE SERIES COUNT, RATE, TEMPERATURE AND PROCESS INDICATORS**



**Durant**

Full-featured DPM/process meter offers simple front panel programming and calibration, universal input power and NEMA 4 rated front panel for installation in wet areas. AC (85-265VAC) power supply. 1/8 DIN cutout. LED display. Tactile keypad. Removable connectors. Panel depth: 3.6".



| Mfg. Part No. | Description   | Stock No. | Price Each |  |
|---------------|---|-----------|------------|--|
|               |   |           | 1-4        |  |
| ● 57701450    | Process (4-20mA, 0-10V, 1-5V), No Output                    | 89M5411   | 275.10     |  |
| ● 57701451    | Process Meter, 2 Alarms, Relay Out, 85-265VAC Power         | 16C1111   | 326.55     |  |
| ● 57701461    | Temperature Indicator, 2 Alarms, Relay Out, 85-265VAC Power | 94B7223   | 352.80     |  |
| ● 57701470    | Ratemeter, No Outputs                                       | 90B7449   | 259.35     |  |
| ● 57701471    | Ratemeter, 85-265VAC, Rate, Relay out, Alarm Outputs        | 50B3001   | 313.95     |  |
| ● 57701480    | Count/Totalizer, No Outputs                                 | 50B3002   | 301.04     |  |
| ● 57701481    | 6-digit, 1 or 2 Preset Count Control, Relay Output          | 90B7451   | 351.75     |  |

(68932)

**PRESIDENT SERIES LED TOTALIZERS/COUNT CONTROLS**



**Durant**

Electronic measuring systems feature color-coded keyboard control panel for simple selection and programmability. 0.56" (14) LED display for count and preset values. Sealed front panel meets NEMA 4 specifications. 120/240VAC, 12VDC power input. Units have 15VDC (+1, -2 volts) 100mA maximum DC power output for input device. Non-volatile memory. All models mount in 2.677"H x 5.433"W (67 x 136) panel cut-out except mfg. part no. 58B10 which mounts in 1.771"H x 5.433"W (44 x 137) panel cut-out.



57820-400

| Mfg. Part No. | Description  | Stock No. | Price Each |  |
|---------------|--|-----------|------------|--|
|               |  |           | 1-4        |  |
| ● 57820400    | 5-Digit, Single-Preset Control with Ratemeter  | 89M5412   | 540.44     |  |
| ● 58821-400   | 5-Digit, Single-Preset Control with Scaling  | 50F923    | 784.70     |  |
| ● 58831400    | 5-Digit, Dual-Preset Control with Scaling  | 98F3649   | 703.50     |  |
| 58851400      | 6-Digit, Dual-Preset Control with Presettable Batch Counter, Totalizer and Scaling     | 50F920    | 1092.10    |  |
| ● 58861400    | 6-Digit, Triple-Preset Control with Scaling  | 50F918    | 1092.10    |  |
| ● 58827400    | 6-Digit, Single-Preset Control with Presettable Totalizer, Batch Counter and Ratemeter | 50F916    | 1132.30    |  |
| ● 58810400    | 8-Digit Totalizer  | 50F924    | 587.64     |  |
| ● 58841400    | 6-Digit, Dual-Preset Control with Batch Counter, Scaling, and Crop Cut                 | 94F9798   | 1018.40    |  |

(2705)

**LAUREATE™ FREQUENCY, RATE AND PERIOD COUNTERS**



- Optional second channel allows both channels to be independently sealable
- Frequency from 0.005Hz to 1MHz
- 6-digit resolution at update rates up to 25/s
- Selectable "count by" of 10 or 100 with rounding
- NEMA 4X, 1/8 DIN case



The counter determines the frequency by timing an integral number of periods over a specified gate time and then taking the inverse of period. The inverse period approach allows greater accuracy and faster update times than conventional meters which count signal pulses over a specified time interval. Isolated 5, 10 or 24VDC excitation supply to power sensors. Green or red LED display. Display will flash and go into four-digit XXXEX scientific notation when count exceeds 999,999. Square root extraction is standard. Each channel (A or B) may be independently scaled for frequency, rate or period. An adaptive filter can reduce variations due to noise. Up to 180 data points can be input into a spreadsheet or text file for custom linearization. 1/8 DIN case meets NEMA 4X (IP-65) standards. Choice of isolated plug-in options for control and computer interface: dual relays, analog output, serial communications, parallel BCD output, low voltage AC and DC power available; go online or call. UL listed, CE certified.

**STANDARD MAIN BOARD**

Scalable to ±999,999 for frequency, rate, square root of rate, up or down total, period, A-to-B time interval.

| Mfg. Part No. | Setpoint Output | Analog Output             | Stock No. | Price Each |
|---------------|-----------------|---------------------------|-----------|------------|
| L60000FR      | ...             | ...                       | 84K0401   | 230.00     |
| L60010FR      | ...             | Isolated 0-20mA and 0-10V | 84K0402   | 310.00     |
| L60100FR      | Relay           | ...                       | 84K0403   | 310.00     |

**EXTENDED MAIN BOARD**

All of the features of the standard main board plus rate and total simultaneously, ration (A/B), draw (A/B-1), other arithmetic functions (AxB, A+B, A-B), phase angle, stopwatch, up/down counting, batching operation, custom curve linearization.

|          |       |                           |         |        |
|----------|-------|---------------------------|---------|--------|
| L80000FR | ...   | ...                       | 84K0404 | 270.00 |
| L80010FR | ...   | Isolated 0-20mA and 0-10V | 84K0405 | 350.00 |
| L80100FR | Relay | ...                       | 73K4854 | 350.00 |

➔ CONTINUED ➔

**LAUREATE™ FREQUENCY, RATE AND PERIOD COUNTERS (CONT.)**

**CABLE ACCESSORIES**

Mfg. part no. CBL01 connects the meter directly to a PC RS232 port. Mfg. part no. CBL02 is used on computers without an RS232 port but have a USB port.

| Mfg. Part No. | Cable Length (ft.) | Connector Type A | Connector Type B | Stock No. | Price Each |
|---------------|--------------------|------------------|------------------|-----------|------------|
| CBL01         | 7                  | DB9 Male         | RJ11             | 87K0754   | 19.00      |
| CBL02         | 2                  | DB9 Male         | 3 Terminal Plug  | 87K0755   | 39.00      |

(88534)

**UNIVERSAL COUNTER/TIMER/TOTALIZER**



Universal 6-digit 0.56" (14.22) LED display is a frequency meter, tachometer, rate meter, timer, or totalizer with RS-232 interface. 7MHz maximum frequency. Fast low-frequency measurements, such as power-line monitoring to 5-digit accuracy every 150 micro-seconds. Selection of operating mode, scaling and setpoints via front-panel push-buttons (with selectable hardware lockout). Units capable of handling TTL, NPN, PNP sensors, contact closures and passive magnetic pickups (not included). Fit 1/8 DIN panel cutout. Screw terminals for signal and power. 115VAC, 50/60Hz or non-isolated 9.5-32VDC power optional. Relay output provides dual 10A relays for ON/OFF control or alarm applications, with latched or unlatched modes.



**P5000 SERIES WITH NEMA4-RATED INFINITY STYLE BEZEL**

| Mfg. Part No. | Signal Input                          | Relay Output | Analog Output | Stock No. | Price Each |  |
|---------------|---------------------------------------|--------------|---------------|-----------|------------|--|
|               |                                       |              |               |           | 1-2        |  |
| P5001/E       | ±10mV to 240Vrms, 1-Channel-Pulse     | No           | No            | 71C8326   | 546.25     |  |
| P5004         | 1-5V, 0-10V, 4-20mA, 1-Channel-Analog | No           | No            | 94B3715   | 592.25     |  |

**P6000 SERIES WITH FRONT-REMOVABLE LENS ASSEMBLY**

|          |                              |     |     |         |        |
|----------|------------------------------|-----|-----|---------|--------|
| P6000A   | TTL/5V CMOS-level, 2 Channel | No  | No  | 89F1797 | 437.00 |
| P6020A/E | TTL/5V CMOS-level, 2 Channel | Yes | No  | 89F1798 | 529.00 |
| P6021A/E | ±10mV to 240Vrms, 1 Channel  | Yes | No  | 89F1799 | 638.25 |
| P6031A   | ±10mV to 240Vrms, 1 Channel  | No  | Yes | 28M8311 | 724.50 |

(2303)

**INFCTRA SERIES 1/8 DIN 6-DIGIT RATEMETER/TOTALIZER**



- Measures Rate from 0.5Hz to 30kHz
- Totalizes Up or Down from -99,999 to 999,999 or Acts as Accumulating Stopwatch
- Fast Low Frequency Measurements Every 0.3 Seconds
- Optional HI and LO Setpoints for Control or Alarm
- 1/8 DIN Case with 5 Programming Keys



INFCTRA Series ratemeter/totalizer offers user programming via 5 front panel keys. Programs are stored in non-volatile memory with 3 levels of program lockout for security. Selectable sensor excitation of 12.5VDC 50mA, 8.2VDC @ 40mA or 5.0VDC @ 30mA. Wide selection of signal inputs such as TTL compatible with protection to 25VDC, low level (25mVrms), high level signals protected to 115VAC, NAMUR or open collector PNP or NPN. 6-digit, 7-segment LED display. Accuracy: 0.01%. Power: 115VAC. Other configurations are available; go online or call.

| Mfg. Part No.  | Description                  | Stock No. | Price Each |  |
|----------------|------------------------------|-----------|------------|--|
|                |                              |           | 1-2        |  |
| INFCTRA-0100-R | Ratemeter, Dual Relay Output | 96F6827   | 381.90     |  |

(2352)

**DYNAPAR BRAND MAX JR TACH 1 & 2 PROGRAMMABLE RATE CONTROLLERS**



**Dynapar brand**



Choose from two compact, economical models, both offering high-accuracy measurement techniques and simple programming. Mfg. part no. MTJR1S00 MAXjr Tach 1 rate indicator/controller is ideal for basic rate or speed measurement functions. Mfg. part no. MTJR2S00 MAXjr Tach 2 rate/ratio/time interval controller provides a choice of operating modes: rate of input A, as in the MAXjr Tach 1 model; ratio of two independent inputs A and B; and time interval, which can be the period of A or the elapsed time between inputs A and B; and time interval, which can be the period of A or the elapsed time between inputs A (start) and (stop). Both MAXjr Tach 1 and 2 models feature programmable 0.0001 to 99999 calibration high/low setpoint alarm capability with outputs and built-in diagnostics. Large 5-digit 0.56" (14.22) red LED display, 0.01% accurate time interval measurement and programmable decimal point position. Sealed NEMA-4 rated front panel with panel mounting in 1/8 D 1.78x3.56" (45.21x90.42) cutout; 5.68" (144.27) depth. 115/230VAC, 50/60Hz.

| Mfg. Part No. | Description                           | Stock No. | Price Each |
|---------------|---------------------------------------|-----------|------------|
| MTJR1S00      | MAXjr Tach Rate Controller            | 84F765    | 588.00     |
| MTJR2S00      | MAXjr Tach Rate/Ratio/Time/Controller | 04F804    | 679.14     |

(2820)

COUNTERS – 1/8 DIN • COUNTERS – ELECTROMECHANICAL

C628 SERIES "AWESOME" DISPLAY COUNTERS, TIMERS AND RATEMETERS



Veeder-Root brand



1/8 DIN panel meters feature the ability to change display color when the monitored data exceed a preset limit, providing operators with instant visual alert to changes in application status. Large, super-bright 5-digit 0.71" LED display can also be set to a constant red or green color. Count and rate models can accept input frequency to 10kHz. Elapsed timer models operate in formats of seconds, minutes, hours, minutes and seconds, or hours and minutes. Fully programmable feature set accommodates a wide range of applications. Power source: 90 to 264VAC, 50/60Hz.

TOTALIZING COUNTERS

| Mfg. Part No. | Description                                    | Stock No. | Price Each |
|---------------|--|-----------|------------|
| C628-10000    | Bidirectional; Preset for Display Color Change | 48F2129   | 374.52     |

PRESET COUNTERS

|            |  |         |        |
|------------|--|---------|--------|
| C628-70000 | 1 Preset with Transistor Outputs                           | 88F5919 | 432.36 |
| C628-81000 | Bidirectional; 2 Presets with Relay and Transistor Outputs | 48F2131 | 482.97 |

RATEMETER

|            |   |         |        |
|------------|---|---------|--------|
| C628-41000 | 2 Presets with Relay and Transistor Outputs | 48F2133 | 419.34 |
|------------|---|---------|--------|

ELAPSED TIMER

|            |  |         |        |
|------------|--|---------|--------|
| C628-60000 | 1 Preset with Relay and Transistor Outputs | 48F2135 | 384.64 |
|------------|--|---------|--------|

(36071)

DYNAPAR BRAND MAX® JR. ELECTRONIC TOTALIZING AND PRESET COUNTERS



Dynapar brand

Mfg. part no. MCJR1S00 8-digit totalizing counter features bidirectional operation, with ± polarity indicator and reference preset function. Mfg. part no. MCJR2S00 is 5-digit predetermined counter for cut-to-length, filling, batching, locating, and similar applications. Features two presets with programmable output action. Mfg. part no. MCJR3S00 similar to MCJR2S00 but includes additional function that serves either as totalizer preset-batch counter. Programmable features include independent calibration and decimal point location for count and rate, allowing totals and speed to be displayed in different units, such as: totals in feet; speed in RPM. All models have bright, high-contrast red LED displays, NEMA-4 front panel rating with panel mounting in 1/8 DIN cut-out. Calibrator scales input signal for display in engineering units. Selectable decimal point positioning. Non-volatile memory retains count and program during power loss. 115/230VAC, 50/60Hz.

| Mfg. Part No. | Description                    | Stock No. | Price Each |
|---------------|--------------------------------|-----------|------------|
| MCJR1S00      | Count 1 Totalizing Counter     | 50F2679   | 536.20     |
| MCJR2S00      | Count 2 Predetermining Counter | 87F1084   | 631.03     |

(10625)

PRESET COUNTERS

The S660 series of counters are capable of handling count speeds of up to 20kHz (30kHz S661). Simple menu-driven programming features word prompts, not difficult codes. The rugged NEMA 4X case fits standard 1/8 DIN cutouts, and is equipped with large tactile buttons that can be pressed easily even when the user has gloves on. The counters feature a 6-digit LED display and 120VAC power. Optional features include quadrature inputs, two 5-amp mechanical relays and 12VDC excitation output @ 100mA (220VAC power upon request). Mfg. Part No. S660 is an up/down, add/subtract totalizing counter, mfg. part no. S661 is a rate counter, and mfg. part no. S662 is a totalizer/batch counter.



UP/DOWN, ADD/SUBTRACT TOTALIZER (S660 SERIES)

| Mfg. Part No.  | Input       | Relay/Excitation | Stock No. | Price Each |
|----------------|-------------|------------------|-----------|------------|
| S660-1-1-0-0-0 | Pulse Input | None/None        | 83F8782   | 211.58     |
| S660-1-1-1-0-0 | Pulse Input | One/None         | 83F8783   | 242.98     |
| S660-1-1-2-0-0 | Pulse Input | Two/None         | 83F7506   | 261.87     |
| S660-1-1-2-1-0 | Pulse Input | Two/12VDC        | 83F7507   | 295.04     |
| S660-1-2-0-0-0 | Quad Input  | None/None        | 83F8780   | 236.46     |
| S660-1-2-1-0-0 | Quad Input  | One/None         | 83F8781   | 267.88     |
| S660-1-2-2-0-0 | Quad Input  | Two/None         | 83F7508   | 286.75     |
| S660-1-2-2-1-0 | Quad Input  | Two/12VDC        | 83F7509   | 319.93     |

➔ CONTINUED ➔

PRESET COUNTERS (CONT.)

RATE (S661 SERIES)

| Mfg. Part No.  | Input       | Relay/Excitation | Stock No. | Price Each |
|----------------|-------------|------------------|-----------|------------|
| S661-1-1-0-0-0 | Pulse Input | None/None        | 83F7510   | 211.58     |
| S661-1-1-1-0-0 | Pulse Input | One/None         | 83F7511   | 242.98     |
| S661-1-1-2-0-0 | Pulse Input | Two/None         | 83F7512   | 261.87     |
| S661-1-1-2-1-0 | Pulse Input | Two/12VDC        | 83F7513   | 295.04     |
| S661-1-2-0-0-0 | Quad Input  | None/None        | 83F7514   | 236.46     |
| S661-1-2-1-0-0 | Quad Input  | One/None         | 83F7515   | 267.88     |
| S661-1-2-2-0-0 | Quad Input  | Two/None         | 83F7516   | 286.75     |

TOTALIZER/BATCH (S662 SERIES)

|                |             |           |         |        |
|----------------|-------------|-----------|---------|--------|
| S662-1-1-0-0-0 | Pulse Input | None/None | 83F7518 | 249.35 |
| S662-1-1-1-0-0 | Pulse Input | One/None  | 83F7519 | 280.75 |
| S662-1-1-2-0-0 | Pulse Input | Two/None  | 83F7520 | 299.64 |
| S662-1-1-2-1-0 | Pulse Input | Two/12VDC | 83F7521 | 332.80 |
| S662-1-2-0-0-0 | Quad Input  | None/None | 83F7522 | 274.23 |
| S662-1-2-1-0-0 | Quad Input  | One/None  | 83F7523 | 305.63 |
| S662-1-2-2-0-0 | Quad Input  | Two/None  | 83F7524 | 324.52 |
| S662-1-2-2-1-0 | Quad Input  | Two/12VDC | 83F7525 | 357.68 |

(33380)

FREQUENCY COUNTERS



Mfg. part no. S664 frequency counters provide a low cost 1/8 DIN frequency counter with ranges from 1Hz to 35kHz. The only programming required is range selection and input card setup. The rugged NEMA 4 case fits standard 1/8 DIN cutouts. The S664 comes standard with a 4-digit LED display and 120VAC power. Optional features include 12VDC excitation output @ 100mA and 220VAC power (upon request).



| Mfg. Part No.  | Input       | Excitation | Stock No. | Price Each |
|----------------|-------------|------------|-----------|------------|
| S664-1-1-0-0-0 | Pulse Input | None       | 83F7534   | 167.81     |
| S664-1-1-0-1-0 | Pulse Input | 12VDC      | 83F7535   | 201.00     |

(33379)

ELECTROMECHANICAL TOTALIZING IMPULSE COUNTERS



COUNTER 24 X 48

| Mfg. Part No. | Supply Voltage (VAC) | Digits | Mounting      | Stock No. | Price Each |       |
|---------------|----------------------|--------|---------------|-----------|------------|-------|
|               |                      |        |               |           | Each       | 2-5   |
| ● 99766902    | 115                  | 6      | Panel         | 73H5716   | 56.59      | 51.56 |
| ● 99766922    | 115                  | 5      | Panel/w reset | 73H5720   | 63.31      | 57.69 |

COUNTER 36 X 37

|            |     |   |               |         |       |       |
|------------|-----|---|---------------|---------|-------|-------|
| ● 99766611 | 115 | 5 | Panel/w reset | 17M8659 | 65.68 | 59.85 |
|------------|-----|---|---------------|---------|-------|-------|

COUNTER 36 X 48

|            |     |   |                |         |       |       |
|------------|-----|---|----------------|---------|-------|-------|
| ● 99766711 | 115 | 5 | Panel/wo reset | 17M8661 | 65.68 | 59.85 |
|------------|-----|---|----------------|---------|-------|-------|

(80116)

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(116879)

COUNTERS – ELECTROMECHANICAL

Y-RMF AND Y-MF HEAVY-DUTY TOTALIZING COUNTERS



32651-400



31083-403

Mfg. part nos. 32651-400 and 32654-400 are shaded pole electric counters with straight AC operation. They feature a non-rectified, shaded pole coil designed to withstand transient and high voltage spikes. This, combined with a simplified, hinged escapement drive, also eliminates the possibility of miscounts and greatly adds to the life of the counter. Tallies at speeds up to 750 cpm. Mfg. part nos. 31155-402, 31066-416 and 31083-403 provide accurate counts through a wide range of speeds up to 1000 cpm. Feature fast, silent DC electromagnet drive with built-in, higher capacity rectifier for dependable AC operation. Moving parts never need lubrication under normal operating conditions. 0.188"H (4.78) 6-digit readout. 115VAC operating voltage with 7 watt count coil. Available with knob reset in base, panel mounting, or panel mount key reset. Panel models fit 3.703W x 1.250H x 2.469"D (94.06 x 31.75 x 62.71) opening. UL recognized.

| Mfg. Part No. | Reset | Mounting | Stock No. | Price Each |  |
|---------------|-------|----------|-----------|------------|--|
|               |       |          |           | 1-4        |  |
| 31155402      | Knob  | Base     | 87F6150   | 143.10     |  |
| 31066416      | Knob  | Panel    | 87F6149   | 164.30     |  |
| 31083-403     | Key   | Panel    | 87F6151   | 235.32     |  |
| 32651400      | Knob  | Base     | 18C1644   | 156.22     |  |
| 32654400      | Key   | Panel    | 94F3855   | 254.40     |  |
| 32653400      | Knob  | Panel    | 94F3854   | 183.38     |  |

(2695)

MINIATURE ELECTRIC COUNTERS



Compact panel-mount 120VAC counters feature 0.188"H (4.78) 4- and 6-digit readout and tamperproof sealed window. Stainless steel self-lubricating shaft, nylon pinions and synchronous electromagnetic drive assures accuracy and long-life. Speed: up to 1000 cpm. Power: count coil 3 watts. Available non-reset or pushbutton reset. Includes 10" (254) wire leads.



| Mfg. Part No. | Description                                   | Cut-Out        | Stock No. | Price Each |  |
|---------------|---|----------------|-----------|------------|--|
|               |   |                |           | 1-4        |  |
| 41314402      | 4-Digit Panel Mount, 24VDC, Pushbutton Reset  | 1.72W x 1.11"H | 94F3839   | 72.36      |  |
| 41314-406     | 4-Digit Panel Mount, 120VAC, Pushbutton Reset | 1.72W x 1.11"H | 94F3858   | 105.27     |  |
| 41346406      | 6-Digit Panel Mount, 120VAC, Non Reset        | 1.72W x 1.11"H | 94F7375   | 71.28      |  |

(2694)

PD-Q AND PD-ER PREDETERMINED ELECTRIC COUNTERS

True subtracting devices with easy pushbutton operation for both predetermined count settings and reset. Units subtract one count for each contact closure or impulse and actuate a 4A, S.P.D.T. 250VAC switch when zero is reached. Return to predetermined number when reset and are immediately ready to control next lot or branch. 0.188"H (4.78) 5-digit readout. Count speed: 1000 cpm. Operates on 120VAC, 9 watts. Stainless steel shaft. Mfg. part no. 41625-406 has electric reset for control flexibility and remote operation. Both models fit 2.718W x 1.593"H (69.04 x 40.46) panel cut-out.



| Mfg. Part No. | Reset      | Mounting | Stock No. | Price Each |  |
|---------------|------------|----------|-----------|------------|--|
|               |            |          |           | 1-4        |  |
| 41433406      | Pushbutton | Panel    | 94F3864   | 380.54     |  |
| 41625406      | Electric   | Panel    | 94F3847   | 417.64     |  |

(2696)

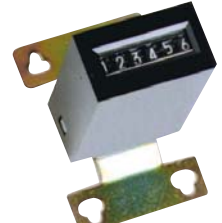
ELECTROMECHANICAL COUNTERS



Model 10 Panel Mount



Model 10 Base Mount



Model 44



P2-4816



Model 49

Model 10 6-figure electromechanical counter with heavy-duty rectifier, transient protection, convenient reset, 1000 cpm capability. Mfg. part no. 2-1006 dimensions in inches: 3.68(H) x 1.74(W) x 2.51(D). Panel cutout in inches: Mfg. part no. P21006, 3.85 x 1.75; Mfg. part no. P32-1206, 4.88 x 1.75. 8" wire leads, 22AWG. UL recognized, CSA certified, CE compliant. 7-figure counters available, go online or call.

| Mfg. Part No. | Voltage | Mount | Reset      | Stock No. | Price Each |  |
|---------------|---------|-------|------------|-----------|------------|--|
|               |         |       |            |           | 1-4        |  |
| 2-1006        | 115VAC  | Base  | Manual     | 57F3501   | 135.98     |  |
| P2-1006       | 115VAC  | Panel | Manual     | 57F3502   | 150.06     |  |
| P32-1026      | 115VAC  | Panel | Lock & Key | 44F3109   | 198.26     |  |

Model 44 rugged, low cost 6-figure non-resettable electromechanical counter in a variety of mounting styles. 0.18" high characters. Dimensions in inches: 1.4(H) x 0.8(W) x 2.4(D). 10" wire leads, 22AWG. UL recognized, CE compliant.

|           |        |              |  |         |       |
|-----------|--------|--------------|--|---------|-------|
| R8-4416   | 24VDC  | Behind Panel |  | 27B4547 | 27.33 |
| RV2-4416  | 115VAC | Combination  |  | 71M0095 | 54.38 |
| RV8-4416  | 24VDC  | Combination  |  | 44F3126 | 29.17 |
| RV23-4416 | 24VDC  | Combination  |  | 71M0096 | 72.02 |

Model 48 compact, economical 6-figure non-resettable electromechanical counter designed for general purpose industrial and commercial counting applications. Dimensions in inches: Panel mount, 1.80(H) x 1.80(W) x 2.25(D); base mount, 2.96(H) x 1.63(W) x 2.25(D). 12" wire leads, 22AWG. UL recognized, CSA certified, CE compliant.

|         |        |       |  |         |       |
|---------|--------|-------|--|---------|-------|
| P2-4816 | 115VAC | Panel |  | 90F1624 | 48.86 |
| P3-4816 | 24VAC  | Panel |  | 27B4538 | 59.07 |
| P8-4816 | 24VDC  | Panel |  | 27B4540 | 45.08 |
| V2-4816 | 115VAC | Base  |  | 51M9084 | 47.48 |
| V8-4816 | 24VDC  | Base  |  | 27B4554 | 44.26 |

Model 49 4- or 6-figure panel mount electromechanical counter with pushbutton reset. 0.16" high characters. Mfg. part no. 4904 panel cutout in inches: 1.46(H) x 1.01(W). Mfg. part no. 4906 panel cutout in inches: 2.00(H) x 1.01(W). 10" wire leads, 22AWG. UL recognized, CE compliant. Other mounting styles available, go online or call.

| Mfg. Part No. | Voltage | Mount | Figures | Stock No. | Price Each |  |
|---------------|---------|-------|---------|-----------|------------|--|
|               |         |       |         |           | 1-14       |  |
| P2-4904       | 115VAC  | Panel | 4       | 48M0898   | 53.36      |  |
| P8-4904       | 24VDC   | Panel | 4       | 48M0900   | 49.41      |  |
| P2-4906       | 115VAC  | Panel | 6       | 48M0899   | 66.34      |  |
| P8-4906       | 24VDC   | Panel | 6       | 48M0901   | 61.83      |  |

(2926)

300 SERIES ELECTROMECHANICAL COUNTERS

Extremely long life counter with 6-digits, white on black, 0.15" high. Panel mount. Panel cutout: 2.02x1.05". Power: 2.8 watts. Solder terminals. UL recognized, CSA certified, CE compliant.



| Mfg. Part No. | Description                             | Stock No. | Price Each |        |
|---------------|---|-----------|------------|--------|
|               |   |           | 1-2        | 3-4    |
| R2-3106       | 115VAC, 1,000cpm, 30ms "on"/30 ms "off" | 57F3505   | 194.99     | 185.56 |
| P8-3206       | 24VDC, 1500cpm, 20ms "on"/20 ms "off"   | 70B9191   | 189.23     | 180.07 |

(2935)

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(116881)

COUNTERS – ELECTROMECHANICAL • COUNTERS – MECHANICAL STROKE • COUNTERS – TALLY

ECONOMICAL ELECTRIC COUNTERS



7790 series (6-digit, nonreset) and series 7791 offer excellent performance and reliability characteristics for a minimal price. Body size: 1.0" x 1.3". Capable of speeds up to 600 counts/minute. UL recognized, CSA certified. Its count coil can be continuously energized without damage. 115VAC, 5W. Other AC and DC models also available; go online or call.

NONREST

| Mfg. Part No. | Description | Stock No. | Price Each |       |
|---------------|-------------|-----------|------------|-------|
|               |             |           | 1-14       | 15-24 |
| 0779086-001   | Base Mount  | 87F1086   | 44.27      |       |
| 0779086-201   | Panel Mount | 99F6253   | 45.57      |       |
| 0779086-401   | Rear Mount  | 01B3985   | 44.27      |       |

PUSH-BAR RESET

|             |             |         |       |  |
|-------------|-------------|---------|-------|--|
| 0779185-201 | Panel Mount | 01B3990 | 57.29 |  |
| 0779185-401 | Rear Mount  | 01B3993 | 54.69 |  |

(52082)

TYPE 5H11R HEAVY-DUTY MECHANICAL STROKE COUNTER

Durant

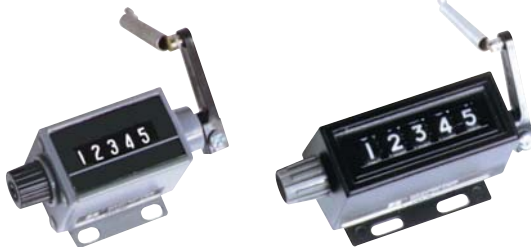
High-speed, heavy-duty unit delivers 800 counts per minute. Features 5-digit readout, right-hand lever drive, wing nut reset, stainless steel shaft, and oil-less bearings. Steel plate adjusts for bottom or back mounting.



| Mfg. Part No. | Description                          | Stock No. | Price Each |       |
|---------------|--------------------------------------|-----------|------------|-------|
|               |                                      |           | 1-4        | 15-24 |
| 40205400      | Heavy-duty mechanical stroke counter | 87F6146   | 192.60     |       |

(2699)

MECHANICAL STROKE COUNTERS



1-4635

1-2035

46 series mechanical stroke counter for limited space applications in office, vending and other small machinery. Speed: 1000cpm. Right hand, 5-digit, manual reset. Operating lever and spring assembly. Shaft diameter: 0.156". 20 series mechanical stroke counter for use in machinery. Speed: 1000cpm. Right hand, 5-digit, manual reset. With operating lever and spring assembly. Shaft diameter: 0.125".

| Mfg. Part No. | Description                                      | Stock No. | Price Each |       |
|---------------|--|-----------|------------|-------|
|               |  |           | 1-14       | 15-24 |
| ● 1-4635      | 5 Figures, 0.19" H., .81" x 1.20" Mounting Slots | 57F3516   | 46.36      | 44.47 |
| ● 1-2035      | 5 Figures, 0.19" H., .83" x 1.20" Mounting Slots | 57F1916   | 62.78      | 60.23 |

(2937)

SMALL STROKE/ REVOLUTION COUNTERS



Small flange mount, mechanical totalizers with large figure size. External and internal parts are corrosion-resistant for trouble-free and accurate performance indoors and out. Easy-to-see, 5-digit display feature high-contrast white-on-black numerals and stainless steel drive shaft. 7272 series is available with left- or right-hand ratchet drives.

RATCHET DRIVE

| Mfg. Part No. | Description                   | Stock No. | Price Each |
|---------------|-------------------------------|-----------|------------|
| 0727215-001   | Left-Hand, Clockwise          | 81F2971   | 134.59     |
| 0727225-001   | Left-Hand, Counter Clockwise  | 81F2972   | 133.05     |
| 0727245-001   | Right-Hand, Clockwise         | 81F2974   | 140.78     |
| 727235-001    | Right-Hand, Counter Clockwise | 81F2973   | 125.31     |

(52078)

MODEL E6 LCD TALLY COUNTER



- One hand operation
- Counts up to 9999
- Water resistant to 9' (3m)

- Bold display
- Replaceable battery
- Power off button extends battery life

Can be worn on the forefinger allowing you to use your hands for other functions. Features adjustable band, rugged case and programmable beeper. Can be used in general counting applications including inventory, traffic and attendance as well as counting laps in swimming and track. Battery life: 2 years if left on continuously. Dimensions: 1.4D x 1.1W x 0.5"D (35 x 27 x 14).

| Mfg. Part No. | No. of Digits | Digit Height (in.) | Reset      | Stock No. | Price Each |       |
|---------------|---------------|--------------------|------------|-----------|------------|-------|
|               |               |                    |            |           | 1-14       | 15-24 |
| E6-1804       | 4             | 0.2                | Pushbutton | 14M8977   | 21.27      | 20.37 |

(89422)

18 SERIES MECHANICAL TALLY COUNTERS



12-1804

13-1804

Mfg. part no. 12-1804 hand-operated reset counter has a pushbutton actuator. Case: chrome-plated steel. Mfg. part no. 13-1804 is the same, but with mounting base.

| Mfg. Part No. | Description                          | Stock No. | Price Each |       |
|---------------|--------------------------------------|-----------|------------|-------|
|               |                                      |           | 1-14       | 15-24 |
| 12-1804       | Hand Tally                           | 01C5544   | 14.14      | 13.53 |
| 13-1804       | Desk Tally, 0.14 dia. Mounting Holes | 92F2790   | 16.09      | 15.40 |

(2781)

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(116883)

COUNTERS – TALLY • VOLTS MINI • CURRENT 1/8 DIN

E2 AND E3 LCD TALLY COUNTERS

- Audible beep at every count with the option of switching to off for silent operation
- Large LCD display
- No mechanical parts to wear out
- Large rubber buttons for comfort of use
- Lightweight with carrying cord

Electronic version of mechanical hand tally counter offers Add Only or Add/Subtract models. Counts are input using large buttons, a single "Count" button for the add only, a "+" and "-" for the add/subtract. 4-digit LCD display with 0.35" characters. To reset, press On/Off/reset button for 3 seconds. Operates on one 1.5V type AG10 battery (included).



| Mfg. Part No. | Description                         | Stock No. | Price Each |       |       |
|---------------|-------------------------------------|-----------|------------|-------|-------|
|               |                                     |           | 1-14       | 15-24 | 25-49 |
| E2-1804       | Electronic hand tally, add only     | 31K1709   | 19.04      | 18.64 | 18.24 |
| E3-1804       | Electronic hand tally, add/subtract | 31K1710   | 19.76      | 19.34 | 18.93 |

(89491)

MODEL CUB4V DC VOLTAGE METER

- Four selectable DC voltage ranges
- Fits DIN standard cut-out 2.68 x 1.30" (68 x 33mm)
- NEMA 4X/IP65 sealed front panel bezel
- 9 to 28VDC powered
- Auto zeroing circuit and built-in scaling provided



3½-digit LCD, positive reflective display with 0.6" high digits and a DIP switch selectable decimal point. Wire connections are made with screw clamp type terminals. LCD negative transmissive with yellow/green or red backlighting also available; go online or call.

| Mfg. Part No. | DC Selectable Voltage Ranges      | Stock No. | Price Each |
|---------------|-----------------------------------|-----------|------------|
| CUB4V-000     | 0-199.9mV, 1.999V, 19.99V, 199.9V | 17M6444   | 95.00      |

(84359)

MODEL DP5 ½ DIN ANALOG INPUT PANEL METERS

- 5-digit 0.56" high LED display
- Programmable function keys/user input
- 9-digit totalizer (integrator) with batching
- NEMA 4X/IP65 sealed front bezel



INPUT SPECIFICATIONS

| Model    | Input Range  |
|----------|--|
| DP5D0010 | ±200µADC, ±2mADC, ±20mADC, ±200mADC, ±2ADC<br>±200mVDC, ±2VDC, ±20VDC, ±300VDC |
| DP5P0000 | 20mA (-2 to 26mA)<br>10VDC (-1 to 13VDC)                                       |

Meters provide a MAX and MIN reading memory with programmable capture time which is used to prevent detection of false max or min readings which may occur during start-up or unusual process events. The signal totalizer (integrator) can be used to compute a time-input product that can be used to provide a readout of totalized flow, calculate service intervals of motors or pumps, etc. The totalizer can also accumulate batch weighing operations. Once the meters have been initially configured, the parameter list may be locked out from further modification.

| Mfg. Part No. | Meter Function  | Supply Voltage  | Stock No. | Price Each |
|---------------|-----------------|-----------------|-----------|------------|
| DP5D0010      | Current/Voltage | 11-36VDC, 24VAC | 20M0569   | 239.00     |
| DP5P0000      | Process         | 85-250VAC       | 16M3716   | 201.00     |

(94366)

Expert technical support

Chat online to our team of engineers, or connect to them through your representative.

(116882)



1/8 DIN FALCON SERIES DIGITAL PANEL METERS



The Falcon series indicators are premium quality meters for industrial applications. These 1/8 DIN (92mm x 45mm) meters require only 2.94" (74.7mm) behind panel. All units feature jumper selectable decimal points, display scaling and 120VAC power. The Falcon has 0.56" bright red LED display for high visibility. Mfg. part nos. beginning with F35- are 3½-digit; F45- are 4½-digit. Screw terminal connector for easy wiring. Optional excitation output, 220VAC or 9-32VDC available; go online or call.



AC VOLTAGE INDICATORS (AC AND AC TRUE RMS)

| Mfg. Part No. | Input          | Stock No. | Price Each |
|---------------|----------------|-----------|------------|
| F35-1-31-0    | 200mV          | 93F9500   | 154.26     |
| F35-1-32-0    | 2V             | 93F9501   | 154.26     |
| F35-1-33-0    | 20V            | 93F9502   | 154.26     |
| F35-1-34-0    | 200V           | 93F9503   | 154.26     |
| F35-1-51-0    | 200mV True RMS | 93F9511   | 187.84     |
| F35-1-52-0    | 2V True RMS    | 93F9512   | 187.84     |
| F35-1-53-0    | 20V True RMS   | 93F9513   | 187.84     |
| F35-1-54-0    | 200V True RMS  | 93F9514   | 187.84     |
| F35-1-55-0    | 750V True RMS  | 93F9515   | 187.83     |
| F45-1-33-0    | 20V            | 95F5560   | 277.16     |
| F45-1-34-0    | 200V           | 95F5561   | 249.35     |

DC VOLTAGE INDICATORS

| Mfg. Part No. | Input | Stock No. | Price Each |
|---------------|-------|-----------|------------|
| F35-1-11-0    | 200mV | 93F9480   | 115.50     |
| F35-1-12-0    | 2V    | 93F9481   | 115.50     |
| F35-1-13-0    | 20V   | 93F9482   | 115.50     |
| F35-1-14-0    | 200V  | 93F9483   | 115.50     |
| F45-1-11-0    | 200mV | 95F5529   | 210.59     |
| F45-1-12-0    | 2V    | 95F5530   | 210.59     |
| F45-1-13-0    | 20V   | 95F5531   | 210.59     |
| F45-1-14-0    | 200V  | 95F5532   | 210.59     |
| H345215000    | 750V  | 47M7162   | 277.27     |

AC CURRENT INDICATORS

| Mfg. Part No. | Input       | Stock No. | Price Each |
|---------------|-------------|-----------|------------|
| F35-1-45-0    | 2A          | 93F9488   | 154.26     |
| F35-1-46-0†   | 5A          | 93F9499   | 154.26     |
| F351-66-0†    | 5A True RMS | 93F9510   | 187.84     |

† Scale display, requires use with Simpson current transformer for higher AC current levels; go online or call.

DC CURRENT INDICATORS

| Mfg. Part No. | Input | Stock No. | Price Each |
|---------------|-------|-----------|------------|
| F35-1-11-0‡   | 200mV | 93F9480   | 115.50     |
| F35-1-21-0    | 200µA | 93F9475   | 115.50     |
| F35-1-22-0    | 2mA   | 93F9476   | 115.50     |
| F35-1-23-0    | 20mA  | 93F9477   | 115.50     |
| F35-1-24-0    | 200mA | 93F9478   | 115.50     |
| F35-1-25-0    | 2A    | 93F9479   | 115.50     |
| F35-1-26-0    | 5A    | 91B3594   | 115.50     |
| F45-1-11-0‡   | 200mV | 95F5529   | 210.59     |
| F45-1-22-0    | 2mA   | 95F5535   | 210.59     |
| F45-1-23-0    | 20mA  | 95F5536   | 210.59     |
| F45-1-25-0    | 2A    | 95F5538   | 210.59     |

‡ Scale display, requires use with Simpson external shunt for higher DC current levels; go online or call.

FREQUENCY INDICATORS

| Mfg. Part No. | Input          | Stock No. | Price Each |
|---------------|----------------|-----------|------------|
| F35-1-91-0    | 20-199.9Hz RMS | 91F9700   | 129.88     |
| F35-1-92-0    | 20-1999Hz RMS  | 91F9701   | 129.88     |

TEMPERATURE INDICATORS

| Mfg. Part No. | Input      | Stock No. | Price Each |
|---------------|------------|-----------|------------|
| F45-1-80-0-C  | J T/C      | 95F5692   | 234.07     |
| F45-1-81-0-F  | K T/C      | 13C3536   | 210.59     |
| F45-1-810C    | K T/C      | 23C1953   | 210.59     |
| F45-1-90-0    | RTD PT 100 | 95F5551   | 206.50     |

DC PROCESS INDICATORS

| Mfg. Part No. | Input  | Stock No. | Price Each |
|---------------|--------|-----------|------------|
| F35-1-71-0    | 4-20mA | 93F9485   | 150.65     |
| F35-1-73-0    | 0-10V  | 93F9487   | 150.65     |
| F35-3-71-0*   | 4-20mA | 52F5891   | 222.99     |
| F45-1-71-0    | 4-20mA | 95F5539   | 210.59     |
| F45-1-73-0    | 0-10V  | 95F5541   | 210.59     |

DC PROCESS INDICATORS WITH 24VDC EXCITATION OUTPUT

| Mfg. Part No. | Input  | Stock No. | Price Each |
|---------------|--------|-----------|------------|
| F45-1-71-2    | 4-20mA | 95F5689   | 270.38     |

\* 9-32VDC power. (16728)



DC INPUT 1/8 DIN • LOOP POWERED 1/8 DIN • MULTI-FUNCTION 1/8 DIN

1/8 DIN BIG-DIGIT PANEL METERS



- 3 1/2 Digits with 0.8" LED or 0.98" LCD for Easy, Precise Viewing
- Requires Only 1.37" (35) Depth Behind Panel

Universal panel meters with large LCD or red or green LED displays for voltage or current. Standard 1/8 DIN industry panel cutout. Snap-in panel mount design for easy installation and secure mounting. Fit panels up to 0.08" thick. Standard 4-20mA input is displayed as 0-100.0. Decimal point selectable by solder jumpers. Overrange and polarity indication. Surface mount design. DCV power: +5VDC. DCA power: loop (4-20mA DC).

| Mfg. Part No. | Display   | Input     | Stock No. | Price Each |
|---------------|-----------|-----------|-----------|------------|
| 1801111       | Red LED   | 2VDC      | 83F8113   | 83.00      |
| 1802111       | Green LED | 2VDC      | 83F8114   | 83.00      |
| 1803111       | LCD       | 2VDC      | 83F8115   | 83.00      |
| 180500        | LCD       | 4-20mA DC | 83F8116   | 105.00     |

(32678)

2800 SERIES DIGITAL PANEL METERS



2800 series digital panel meters offer high accuracy and a two piece edge connector for easy wiring of the input signal. Fits 1.682" x 3.662" cutout. 3 1/2-digit LED display. Jumper selectable decimal points.

DC VOLTAGE INDICATORS

| Mfg. Part No. | Input | Input  | Stock No. | Price Each |
|---------------|-------|--------|-----------|------------|
| 24500 2865    | 200mV | 120VAC | 55F1688   | 178.00     |
| 24501 2865    | 2V    | 120VAC | 55F1689   | 181.05     |
| 24502 2865    | 20V   | 120VAC | 55F1690   | 181.05     |
| 24503 2865    | 200V  | 120VAC | 55F1691   | 178.00     |
| 24600 2866    | 200mV | 5VDC   | 55F1697   | 161.30     |
| 24601 2866    | 2V    | 5VDC   | 55F1698   | 161.30     |
| 24602 2866    | 20V   | 5VDC   | 55F1699   | 161.30     |
| 24603 2866    | 200V  | 5VDC   | 55F1700   | 161.30     |

AC VOLTAGE INDICATOR

|            |      |        |         |        |
|------------|------|--------|---------|--------|
| 24633 2869 | 200V | 120VAC | 89F3533 | 294.46 |
|------------|------|--------|---------|--------|

DC CURRENT INDICATORS

|            |       |        |         |        |
|------------|-------|--------|---------|--------|
| 24504 2865 | 20uA  | 120VAC | 55F1692 | 181.05 |
| 24505 2865 | 200uA | 120VAC | 55F1693 | 178.00 |
| 24506 2865 | 2mA   | 120VAC | 55F1694 | 178.00 |
| 24507 2865 | 20mA  | 120VAC | 55F1695 | 178.00 |
| 24508 2865 | 200mA | 120VAC | 55F1696 | 208.82 |

(16734)

2000 SERIES 1/8 DIN LOOP-POWERED METER



Process meters similar to 2000 series DC input models except self-powered from 4-20mA control loop. Accuracy: ±0.1% f.s. + 1 count. Conversion rate: 2.5 per second. Operating temperature range: -40° to +65°C. User-selectable decimal point.

| Mfg. Part No.  | Input Range         | Loop Drop Maximum | Stock No. | Price Each |
|----------------|---------------------|-------------------|-----------|------------|
| 2013-3019-00-U | 00.0 for 4mA Inputs | 2.2V              | 51F3596   | 168.75     |

(3407)

MODULAR DIGITAL PANEL METERS



BD35, BD40, BD60 Displays

BP Power Supply Card

BQ Input Card

- 1/8 DIN, 3.5, 4 or 6 digit digital indicators and controllers
- Selectable display color on DB40: red, amber or green
- Dual (analog/digital) backlight LCD display on DB60
- Modular design facilitates many different inputs/outputs
- Rugged IP67 / NEMA4x splash-proof front cover
- AC/DC voltage/current, frequency, tachometer, counter, temperature, rate and resistance inputs

- T<sub>True</sub> AC current and voltage measurements
- Microprocessor-based design
- Up to four optional alarm outputs
- Optional analog, excitation, serial output
- MODBUS, JBUS communication protocol

UDM series uP-based indicators/controllers feature a rugged 1/8 DIN housing, rated IP67 / NEMA4x. The UDM40's unique display can be programmed in one of three colors (red, amber or green), or it can be programmed to display in a different color should an alarm setting be eclipsed, (i.e., green: OK, amber: caution, red: trouble.) Indicator's features include min/max recording, data hold, display/input range scaling and password protection. Indicators become controllers by inserting one or more of the output cards, listed separately at the bottom of this page. Controllers feature up to four alarms, with adjustable hysteresis, delay and high/low input fault alarms. All parameter settings are controlled by the front keypad via easy-to-use menu-driven format. 120VAC supply, other voltages are available. When a power supply card and multirange configurable input card are slid into a BD type display, a UDM indicator is the end result. Indicators become controllers by inserting one of the output cards, listed separately at the bottom of this page.

DISPLAYS - A REQUIRED COMPONENT

| Mfg. Part No. | Description                | Max. Value | Stock No. | Price Each |
|---------------|----------------------------|------------|-----------|------------|
|               |                            |            |           | 1-4        |
| ● BD35        | 3.5 digit, red display     | 1999       | 27K4038   | 113.52     |
| BD40          | 4.0 digit, 3-color display | 9999       | 27K4039   | 173.12     |

POWER SUPPLY CARDS - A REQUIRED COMPONENT

| Mfg. Part No. | Description           | Supply Voltage Range | Stock No. | Price Each |
|---------------|-----------------------|----------------------|-----------|------------|
|               |                       |                      |           | 1-4        |
| BPH           | Universal Supply Card | 90-260 VAC/DC        | 27K4045   | 56.76      |
| BPL           | Universal Supply Card | 18-60 VAC/DC         | 27K4046   | 84.20      |

PRE-CALIBRATED INPUT CARDS - A REQUIRED COMPONENT

| Mfg. Part No. | Description                             | Input Range   | Stock No. | Price Each |
|---------------|---|---|-----------|------------|
|               |   |   |           | 1-4        |
| ● BQHSX       | High signal input                       | -200mA to +5A<br>-20V to +500V AC/DC  | 05M6312   | 130.55     |
| BQLSX         | Low signal output                       | -200uA to +20mA<br>-200mV to +20V AC/DC                                     | 27K4049   | 130.55     |
| ● BQLSE       | Low signal input with excitation output | -200uA to +20mA<br>-200mV to +20V AC/DC                                     | 05M3950   | 176.91     |
| BQTRX         | Ohm/temperature input                   | 0-20KΩ, J, K, E, S & T RTDs<br>Pt100, Pt250, Pt500,<br>Pt1000, & Ni100 RTDs | 27K4050   | 158.93     |

(84547)

LAUREATE™ CURRENT, VOLTAGE, STRAIN GAGE AND LOAD CELL PANEL METERS



- 0.2, 2, 20, 200, 300V and 600V ranges
- 2, 20, 200mA and 5A ranges
- 4 1/2 digit resolution
- 1GΩ input impedance on 200mV and 2V scales
- Field scalable from front panel to ±99,999 for use with external current shunts
- Up to 60 conversions per second
- Selectable adaptive digital filter

Supply voltage: 95-240VAC ±10% and 95-300VDC ±10%, or 10-34VAC and 10-48VDC. Concurrent slope conversion allows up to 60 conversions per second while integrating the signal over a full power cycle. Red or green LEDs. 1/8 DIN case meets NEMA 4X (IP65) standards. All ranges factory calibrated. 99.99% full scale accuracy. Peak value display. Selectable fixed zero or active least significant digit. 5, 10 or 24VDC sensor excitation supply. External controls for reset, meter hold and decimal points. Panel meters have a DC signal conditioner board, high accuracy, high read rate and isolated output options. Can be used with external shunts. Selectable signal filtering: unfiltered selection, batch average filter or adaptive moving average filter which provides a choice of 8 time constants from 80ms to 9.6s. Choice of isolated plug-in options for control and computer interface: dual relays, analog output, serial communications, parallel BCD output, low voltage AC and DC power available; go online or call. UL listed, CE certified.

AC AMMETERS

| Mfg. Part No. | Signal Input Current | Output Type | Stock No. | Price Each |
|---------------|----------------------|-------------|-----------|------------|
| L2000ORMA4    | 5.000 A              | ...         | 84K0376   | 245.00     |
| L2010ORMA4    | 5.000 A              | Relay       | 84K0394   | 325.00     |

➤ CONTINUED ➤

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(116881)





MULTI-FUNCTION 1/8 DIN • PROCESS 1/8 DIN

NEMA 4X COVER



NEMA-4 (IP-65) splash-proof lens cover fits all Simpson® 1/8 DIN controllers and indicators, providing protection against dust, falling dirt, salt spray, dripping water, and non-corrosive liquids. 4.30W x 2.41H x 0.96"D (109.22mm x 61.21mm x 24.38mm).

| Mfg. Part No. | Description       | Stock No. | Price Each |
|---------------|-------------------|-----------|------------|
| 45003         | NEMA-4 Lens Cover | 92F4277   | 47.30      |

(42170)

S628 SERIES "AWESOME" DIGITAL DISPLAY PANEL METERS



1/8 DIN panel meters feature the ability to change display color when the monitored data exceed a preset limit, providing operators with instant visual alert to changes in application status. Large, super-bright 5-digit 0.71" LED display can also be set to a constant red or green color. Fully programmable feature set includes minimum and maximum value capture and programmable alarms. 2 alarm presets, each with SPDT relay and transistor output. ±0.1% of span accuracy. Power source: 90 to 264VAC, 50/60Hz.



DC PROCESS METERS

Input for popular current and voltage standards.

| Mfg. Part No. | Description                      | Stock No. | Price Each |
|---------------|----------------------------------|-----------|------------|
| S628-21000    | SPDT Relay and Transistor Output | 48F2137   | 365.74     |

DC VOLTS/AMPS METERS

Fully scalable, wide-range current and voltage input.

|            |                                  |         |        |
|------------|----------------------------------|---------|--------|
| S628-51000 | SPDT Relay and Transistor Output | 48F2143 | 364.80 |
|------------|----------------------------------|---------|--------|

AC VOLTS/AMPS METERS

Fully scalable, wide-range current and voltage input.

|            |                                  |         |        |
|------------|----------------------------------|---------|--------|
| S628-31000 | SPDT Relay and Transistor Output | 48F2146 | 420.00 |
|------------|----------------------------------|---------|--------|

TEMPERATURE METERS

Input for B, J, K, N, S, and T thermocouples and 3- and 4-wire RTD.

|            |                                  |         |        |
|------------|----------------------------------|---------|--------|
| S628-11000 | SPDT Relay and Transistor Output | 48F2140 | 373.20 |
|------------|----------------------------------|---------|--------|

(33798)

SENSOTEC MODEL GM SINGLE-CHANNEL SIGNAL CONDITIONERS

Features:

- Versatile full function signal conditioner, amplifier, and power supply
- Large 0.56" readout display size
- Short circuit protected
- 20,000 count resolution
- 14+ bit accuracy (20,000 steps)

Specifications:

- 4 1/2 digit LED display
- ±0.03% accuracy
- Supply voltage: 115VAC
- Operating temperature range: 32°F to 130°F
- Panel mount bracket included
- Bench mount bracket and NEMA 4 splash cover also available; order separately below



AE213 (shown with Bench Mount Bracket)

SIGNAL CONDITIONERS

| Mfg. Part No. | Description          | Input (mV/V) | Output (V) | Stock No. | Price Each |
|---------------|----------------------|--------------|------------|-----------|------------|
| AE213         | Model GM             | 0.5-5        | ±5         | 27M1753   | 713.01     |
| AE213.58C     | Model GM w/Peak Hold | 0.5-5        | ±5         | 27M1754   | 749.26     |

ACCESSORIES

| Mfg. Part No. | Description                     | Stock No. | Price Each |
|---------------|---------------------------------|-----------|------------|
| AA923         | NEMA-4 Splash proof front cover | 29M9214   | 76.55      |
| AA924         | Bench mount bracket             | 29M9215   | 37.70      |

(90235)

2000 SERIES UNIVERSAL SELECTABLE METERS

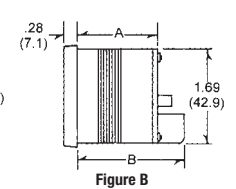
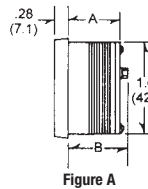


Figure A

Figure B

- High-Impact Polycarbonate Case
- NEMA 4, 12, and IPC 55 (Splash-Proof / Hose Down) Standards
- DIN Industry Standard Cutout

Universal selectable true RMS AC voltage and current model or Process DC voltage/DC current meters allow you to select different inputs, scale in engineering units, select decimal point and calibrate from the rear of the instrument without opening the case. Surface mount and special design features result in unit that is only 1" deep behind the panel (1 1/2" for mfg. part no. 2153-3419-04) and is splash- and hose-down proof. Screw terminals eliminate added cost of plug-in screw terminals or solder connectors. Operating temperature: -20° to +60°C. Over-range indication.

DIMENSIONS

| Input Type     | Figure | A            | B            |
|----------------|--------|--------------|--------------|
| AC             | A      | 0.99" (25.1) | 1.15" (29.2) |
| DC             | A      | 0.99" (25.1) | 1.15" (29.2) |
| 4-20mA Process | B      | 1.49" (37.8) | 2.00" (50.8) |

UNIVERSAL SELECTABLE: PROCESS, DC VOLTAGE OR DC CURRENT TYPE, 115VAC

| Mfg. Part No. | Input    | Scaled  | Stock No. | Price Each |
|---------------|----------|---------|-----------|------------|
| 2153-3406-04  | 10VDC    | 0-10.00 | 93F7500   | 202.50     |
| 2153-3419-04  | 4-20mADC | 0-100.0 | 93F7502   | 202.50     |

UNIVERSAL SELECTABLE: POWER RANGES (TRUE RMS)

|              |        |         |         |        |
|--------------|--------|---------|---------|--------|
| 2353-1024-10 | 200VAC | 0-200.0 | 93F7507 | 234.50 |
| 2353-1026-10 | 250VAC | 0-250   | 93F7508 | 234.50 |

(3469)

QUANTA PROCESS INDICATORS AND CONTROLLERS



The QUANTA process indicators and controllers feature 0.56" (14.22) LED displays, screw terminal barrier strip for power and signal connection. Units are standard 1/8 DIN panel cutout. Input signal is selectable via jumpers for 0-1mA, 4-20mA, 10-50mA, ±200mV to ±20VDC and pot adjustable to display engineering units. Dual set point option includes 2 internal Form C relays rated at 10A at 20VDC or 240VAC resistive. 2 LED lamps indicate on/off status of either relay. Set points are screwdriver adjustable over entire display range or over narrower ranges selected by jumpers on screw terminal strip. Analog output is adjustable for 4-20mA or 0-10VDC. Factory scaling available for different display range (FS), other input signal and outputs are available.



INPUT SIGNAL CURRENT

| Mfg. Part No. | Description                              | Display Range    | Stock No. | Price Each |
|---------------|--|------------------|-----------|------------|
| Q2000-P       | Process Monitor                          | 4-20mA = 0-100.0 | 50B5920   | 310.50     |
| Q2001-P       | Process Controller, 2 Relay (10A) Output | 4-20mA = 0-100.0 | 50B5921   | 500.25     |

INPUT SIGNAL VOLTS

|         |                                     |                  |         |        |
|---------|-------------------------------------|------------------|---------|--------|
| Q9000-P | Process Monitor                     | 4-20mA = 0-99.99 | 98B5720 | 409.20 |
| Q9040-P | Process Meter, Analog Output 4-20mA | 4-20mA = 0-99.99 | 02E6855 | 433.20 |

(3733)

SPLASH-PROOF LENS COVERS FOR PANEL METERS



Meet NEMA enclosure type 4 and IEC enclosure IP65 Classification. Protects against dust, falling dirt, salt spray, dripping water, and non-corrosive liquids.



| Mfg. Part No. | Description                        | Stock No. | Price Each |
|---------------|------------------------------------|-----------|------------|
| SPC18         | 1/8 DIN w/Quick-release Snap Locks | 92F4398   | 38.70      |
| SPC4          | 1/8 DIN Heavy-Duty w/Thumb Screws  | 89F1847   | 34.20      |

(2492)

PROCESS 1/8 DIN • TEMPERATURE 1/8 DIN

**INFINITY® SERIES 1/8 DIN INDICATORS/CONTROLLERS**



**Options Include:**

- Dual 7A Form C Relays
- 4 Setpoints
- Isolated RS-485, Addressable up to 199 Units
- Isolated Parallel BCD Output
- Isolated Serial RS-232
- Isolated Analog Output of 0-10VDC, 0-5VDC, 1-5VDC, 0-20mA DC and 4-20mA DC

**TEMPERATURE METERS**

| Mfg. Part No.   | Signal Inputs (Standard)  | Stock No. | Price Each |     |
|-----------------|---------------------------|-----------|------------|-----|
|                 |                           |           | 1-2        | 1-4 |
| INFT-0000-KF    | T/C Input                 | 84F866    | 684.25     |     |
| INFT-0210-KF    | T/C Input, Relays, Analog | 84F868    | 897.00     |     |
| INFT-0200-RTD2F | RTD Input, Relays         | 84F870    | 770.50     |     |

**STRAIN METERS**

|               |                              |        |        |  |
|---------------|------------------------------|--------|--------|--|
| INFS-0000-DC1 | Strain Input                 | 84F872 | 615.85 |  |
| INFS-0210-DC1 | Strain Input, Relays, Analog | 84F874 | 832.20 |  |

**PROCESS METERS**

|              |                                   |         |        |  |
|--------------|-----------------------------------|---------|--------|--|
| INFP-0000-C2 | Process Input                     | 24C5184 | 626.75 |  |
| INFP-0200-C2 | Process Input, Relays             | 96B0765 | 713.00 |  |
| INFP-0210-C2 | Process Input, Relays, Analog Out | 18C0417 | 839.50 |  |

(2457)

**INFINITY "C" SERIES INDICATORS/CONTROLLERS**



**Common Specifications:**

- Display: 4-Digit, 9-Segment, 21mm (0.83") Color-Selectable (Red, Green, Amber) LED
- Analog-To-Digital Technique: Dual Scope
- Internal Resolution: 15 Bits
- Polarity: Automatic
- Read Rate: 3/Sec.
- Step Response: 2 Seconds
- Power: 115VAC, 230VAC, 10-32VDC, 26-56VDC
- Operating Temperature: 0°C to 60°C
- Dimensions: 48H x 96W x 152mm D (1.89 x 3.78 x 6.0")



The **Infinity C Series** features the biggest and brightest 1/8 DIN panel meter display. Red, green or amber LED color is menu-selectable. Options include dual 5A Form C relays for alarm or control, plus a choice of isolated or non-isolated analog output scalable from 0-10VDC, 0-20mA, or 4-20mA. Covers many signal inputs including: process (DC voltage and current), strain gauge, thermocouple, RTD, dual-differential thermocouple, RTD, PH, ORP, and AC voltage and current.

**INFCTRA SERIES 1/8 DIN 6-DIGIT RATEMETER/TOTALIZER**

- Measures Rate from 0.5Hz to 30kHz
- Totalizes Up or Down from -99,999 to 999,999 or Acts as Accumulating Stopwatch
- Fast Low Frequency Measurements Every 0.3 Seconds
- Optional HI and LO Setpoints for Control or Alarm
- 1/8 DIN Case with 5 Programming Keys

**INFCTRA Series** ratemeter/totalizer offers user programming via 5 front panel keys. Programs are stored in non-volatile memory with 3 levels of program lockout for security. Selectable sensor excitation of 12.5VDC 50mA, 8.2VDC @ 40mA or 5.0VDC @ 30mA. Wide selection of signal inputs such as TTL compatible with protection to 25VDC, low level (25mVrms), high level signals protected to 115VAC, NAMUR or open collector PNP or NPN. 6-digit, 7-segment LED display. Accuracy: 0.01%. Power: 115VAC. Other configurations are available; *go online or call*.

| Mfg. Part No.  | Description                  | Stock No. | Price Each |     |
|----------------|------------------------------|-----------|------------|-----|
|                |                              |           | 1-2        | 1-4 |
| INFCTRA-0000-R | Ratemeter, No Outputs        | 96F6826   | 296.40     |     |
| INFCTRA-0100-R | Ratemeter, Dual Relay Output | 96F6827   | 381.90     |     |

**INFCTP PROPORTIONAL THERMOCOUPLE TEMPERATURE PANEL METERS**

Features time-proportional relay and open-collector outputs, 0.1° or 1.0° resolution, dual 5A relay and analog outputs. Rated 115VAC. Red LED display.

| Mfg. Part No. | Signal Input | Control Output | Analog Output | Stock No. | Price Each |     |
|---------------|--------------|----------------|---------------|-----------|------------|-----|
|               |              |                |               |           | 1-2        | 1-4 |
| INFCTP-011    | J,K,T,J-DIN  | Yes            | Yes           | 93F9331   | 621.30     |     |

**INFCTRTD TEMPERATURE PANEL METERS**

Standard features include a choice of 0.00385 or 0.00392 alpha curves; 2, 3 or 4 wire RTDs, 0.1° or 1.0° resolution, dual set points. Rated 115VAC. Red LED display.

| Mfg. Part No. | Signal Input       | Control Output | Analog Output | Stock No. | Price Each |     |
|---------------|--------------------|----------------|---------------|-----------|------------|-----|
|               |                    |                |               |           | 1-2        | 1-4 |
| INFCTR-010B   | 0.00385 or 0.00392 | Yes            | No            | 92F6552   | 362.25     |     |
| INFCTR-011B   |                    | Yes            | Yes           | 93F9334   | 454.25     |     |

Optional Power: 25-56VDC and 10-32VDC are available on all models; *go online or call*.

**INFCT THERMOCOUPLE INPUT TEMPERATURE METERS**

Standard features include 0.1° or 1.0° resolution and dual setpoints. Rated 115VAC. Red, green or amber LED color display is menu selectable. Dual setpoint, analog output and DC power optional.

| Mfg. Part No. | Signal Input | Control Output | Analog Output | Stock No. | Price Each |     |
|---------------|--------------|----------------|---------------|-----------|------------|-----|
|               |              |                |               |           | 1-2        | 1-4 |
| INFCT-000B    | J,K,T,J-DIN  | No             | No            | 67C1854   | 264.60     |     |
| INFCT-010B    | J,K,T,J-DIN  | Yes            | No            | 67C1808   | 340.20     |     |
| INFCT-011B    | J,K,T,J-DIN  | Yes            | Yes           | 67C1850   | 426.60     |     |

➔ CONTINUED ➔

**INFINITY "C" SERIES INDICATORS/CONTROLLERS (CONT.)**

**INFCP PROCESS PANEL METERS**

Accepts a wide range of DC voltage and current inputs to cover any typical process application. Features easy front panel scaling to virtually any engineering units, selectable excitation of four voltages to work with most transducers and transmitters. Red, green or amber LED color is menu selectable. Signal Input: 0-100mV (±50mV), 0-10V ±5V, 0-20mA, 4-20mA.

| Mfg. Part No. | Control Output | Analog Output | Stock No. | Price Each |     |
|---------------|----------------|---------------|-----------|------------|-----|
|               |                |               |           | 1-4        | 1-2 |
| INFCP000B     | No             | No            | 24C7158   | 270.48     |     |
| INFCP-010B    | Yes            | No            | 25C3532   | 352.80     |     |
| INFCP-001B    | No             | Yes           | 25C2386   | 358.80     |     |

**INFCS SERIES STRAIN PANEL METERS**

The Newport Infinity C Strain meter accepts a wide range of DC voltage and current inputs to cover any typical application. Easy front scaling to virtually any engineering units. Selectable excitation of 4 voltages. Front panel and remote tare function for weighing applications and a hardware lockout to prevent unauthorized changes in setup. Red, green or amber LED color is menu selectable. Input ranges: 0-100mV, ±50mV, 0-10V, ±5V, 0-20mA, 4-20mA. Excitation voltage: 24V at 25mA or 12V at 50mA; 10V at 120mA or 5V at 60mA. Max. error strain/process: ±0.03% rdg.

| Mfg. Part No. | Control Output | Analog Output | Stock No. | Price Each |     |
|---------------|----------------|---------------|-----------|------------|-----|
|               |                |               |           | 1-2        | 1-4 |
| INFCS-000B    | No             | No            | 39C1940   | 284.20     |     |
| INFCS-001B    | Yes            | Yes           | 81C7707   | 377.00     |     |

(2473)

**PROCESS INDICATORS**



202A-E



2002A-P

Indicators, when integrated with sensors or transducer, reflect changes in voltage or current by displaying calibrated engineering units for pressure, loads or distance (depending on transducer) once indicator is scaled in the field. All units feature 0.56" (14.22) LED displays, screw terminal barrier strip for power and signal connections. Units are standard 1/8 DIN panel cut-out (45 x 92mm). 120VAC. Units with excitation output provide voltage supply (10-24VDC) to power transmitters, active transducers or passive networks. Input signal: 4-20mA, 1-5VDC and 0-10VDC.

**INPUT SIGNAL-CURRENT**

| Mfg. Part No. | Display Range | Excitation | Stock No. | Price Each |     |
|---------------|---------------|------------|-----------|------------|-----|
|               |               |            |           | 1-2        | 1-4 |
| 202A-P        | ±1,999        | No         | 98F9201   | 218.30     |     |
| 202A-E        | ±1,999        | Yes        | 19C9684   | 274.40     |     |

**INPUT SIGNAL-VOLTS**

| Mfg. Part No. | Display Range | Excitation | Stock No. | Price Each |     |
|---------------|---------------|------------|-----------|------------|-----|
|               |               |            |           | 1-2        | 1-4 |
| 2002B-P       | ±19,999       | No         | 90B7044   | 356.40     |     |
| 2002B-E       | ±19,999       | Yes        | 19C9687   | 319.20     |     |

(2298)

**IDP SERIES PROCESS METER**



4-digit LED process meter that has user-selectable inputs of 4-20mA, 20-4mA, 0-5V, 1-5V or 0-10V. Features are easy scaling to engineering units with or without an input signal to meter, front panel and remote tare, peak or valley recall and memory. 1/8 DIN case 4" deep. Removable screw terminals for easy connections. 230VAC, 10-32VDC and green displays are optional. CE compliant.



| Mfg. Part No. | Power  | Display          | Stock No. | Price Each |     |
|---------------|--------|------------------|-----------|------------|-----|
|               |        |                  |           | 1-2        | 1-4 |
| IDP-0/E       | 115VAC | Red LED, 4-Digit | 92F4386   | 226.20     |     |

(2387)

**2000 SERIES 1/8 DIN TEMPERATURE METER**



Industrial temperature meter similar to 2000 series DC input models except thermocouple input. User-selectable °C or °F. Accuracy: ±0.1% + 1 count. Non-backlit display. DPM and backlit power: 115VAC. Order thermocouples separately-see Product Index for selection.



| Mfg. Part No. | Thermocouple Input Type             | Stock No. | Price Each |     |
|---------------|-------------------------------------|-----------|------------|-----|
|               |                                     |           | 1-2        | 1-4 |
| 2013-3480-04  | J: -23° to +650°C / -10° to +1200°F | 80K8560   | 110.00     |     |

(3405)

TEMPERATURE 1/8 DIN • TRUE RMS 1/8 DIN • VOLTS 1/8 DIN

**LAUREATE™ THERMOCOUPLE AND RTD TEMPERATURE PANEL METERS**



- Selectable 1° or 0.1° resolution
- Upscale or downscale open sensor indication
- Up to 60 conversions per second
- Peak value display
- AC or DC powered
- NEMA 4X, 1/8 DIN case



Concurrent slope conversion allows up to 60 conversions per second while integrating the input over a full power cycle. High accuracy and repeatability. Celsius, Fahrenheit, Kelvin or Rankine scales. Green or red display. Automatic cold junction compensation. Open sensor indication is standard. 2-, 3-, or 4-wire RTD connection with lead resistance compensation. For 3- and 4-wire connections, the meter automatically compensates for the lead resistance of the sensor. All ranges for all temperature sensor types are digitally calibrated at the factory. Choice of isolated plug-in options for control and computer interface: dual relays, analog output, serial communications, parallel BCD output, low voltage AC and DC power available; go online or call. UL listed, CE certified.

**THERMOCOUPLES**

| Setting | Thermocouple | Temperature Range |
|---------|--------------|-------------------|
| JC      | Type J       | -210°C to +760°C  |
| JF      | Type J       | -347°F to +1400°F |
| KC      | Type K       | -347°C to +1372°C |
| KF      | Type K       | -408°F to +2501°F |
| TC      | Type T       | -257°C to +400°C  |
| TF      | Type T       | -430°F to +752°F  |
| EC      | Type E       | -240°C to +1000°C |
| EF      | Type E       | -400°F to +1830°F |
| NC      | Type N       | -240°C to +1000°C |
| NF      | Type N       | -410°F to +2370°F |
| SC      | Type S       | -46°C to +1768°C  |
| SF      | Type S       | -51°F to +3214°F  |
| RC      | Type R       | -45°C to +1768°C  |
| RF      | Type R       | -49°F to +3213°F  |

**RTDs (100 Ohm PLATINUM)\***

| Setting | RTD            | Temperature Range |
|---------|----------------|-------------------|
| P385C   | Alpha 0.00385  | -202°C to +850°C  |
| P385F   | Alpha 0.00385  | -331°F to +1562°F |
| P392C   | Alpha 0.003925 | -202°C to +631°C  |
| P392F   | Alpha 0.003925 | -331°F to +1168°F |

\*Note: The same temperature signal conditioner board can be user configured for all thermocouple and RTD types listed. Temperatures for each type are spanned by a single range.

| Mfg. Part No. | Stock No. | Price Each |
|---------------|-----------|------------|
| L20000TC      | 84K0382   | 220.00     |
| L20000RTD     | 84K0380   | 210.00     |

**CABLE ACCESSORIES**

Mfg. part no. CBL01 connects the meter directly to a PC RS232 port. Mfg. part no. CBL02 is used on computers without an RS232 port but with a USB port.

| Mfg. Part No. | Cable Length (ft.) | Connector Type A | Connector Type B | Stock No. | Price Each |
|---------------|--------------------|------------------|------------------|-----------|------------|
| CBL01         | 7                  | DB9 Male         | RJ11             | 87K0754   | 19.00      |
| CBL02         | 2                  | DB9 Male         | 3 Terminal Plug  | 87K0755   | 39.00      |

**IDT SERIES THERMOCOUPLE METER**



4-digit LED temperature meter has user selectable inputs of: J, J DIN, K, T, E, R/S and N. Selections are made via the front pushbuttons. Features are: C/F switchable, 1.0 and 0.1 resolution, min/max recall, external display HOLD input. 1/8 DIN case 4" deep. Removable screw terminals for easy connections. 115VAC and red display standard. 230VAC, 10-32VDC and green displays are optional. CE compliant.

| Mfg. Part No. | Signal Input Range, Vdc | Display Range  | Relay Output | Stock No. | Price Each |
|---------------|-------------------------|----------------|--------------|-----------|------------|
| IDT-00        | J                       | -346 to 1400°F | N/A          | 92F4387   | 274.50     |
|               | JDIN                    | -200 to 1652°F | N/A          |           |            |
|               | K                       | -337 to 2500°F | N/A          |           |            |
|               | T                       | -454 to 752°F  | N/A          |           |            |
|               | E                       | -454 to 1832°F | N/A          |           |            |
|               | R/S                     | -58 to 3214°F  | N/A          |           |            |
|               | N                       | -454 to 2372°F | N/A          |           |            |
| IDT-00/E      | E                       | -454 to 1832°F | N/A          | 05C0628   | 274.50     |

**AC AMMETERS**



3 1/2-digit units feature bright 0.56"(14.22) LED displays, screw terminal barrier strip for power and signal connections, operate on 120VAC, fit standard 1/8 DIN panel cut-out. Decimal point programmable at barrier strip. Factory-calibrated precision op-amp rectifier circuit to read true RMS values of sinusoidal waves. 5A signal input range for direct connection to current transformer with 5A secondary without a step-down transformer.



➔ CONTINUED ➔

**AC AMMETERS (CONT.)**

| Mfg. Part No. | Display Range | Stock No. | Price Each |
|---------------|---------------|-----------|------------|
|               |               |           | 1-2        |
| Q2000-DCR7-1  | 1-10/100/1000 | 89F1835   | 316.25     |
| Q2000DCR7-6   | 0-50/500      | 89F1826   | 316.25     |

(37270)

**INFCAC SERIES TRUE RMS VOLTAGE AND CURRENT METERS**



The Newport INFCAC true RMS meters compute the true root-mean-square value of complex signals. Both DC + AC and AC coupled connections are included. AC coupling allows the measurement of the AC component (or ripple) from a signal with both AC and DC components. True RMS meters are especially useful in monitoring voltage and current supplied to motors or heaters controlled by an SCR or Triac circuit. Optional user scalable analog output of 4-20mA or 0-10V allows either control or recorder interface. Optional dual 5A relays give additional control capability. The optional plug-in communication options can be added at any time allowing the instrument to grow with your application.

| Mfg. Part No.  | Signal Inputs           | Description                                    | Stock No. | Price Each |
|----------------|-------------------------|--|-----------|------------|
|                |                         |  | 1-2       |            |
| INFCAC-0000-C5 | 0-1mA, 0-10mA, 0-100mA, | True RMS Ammeter, No Output                    | 90B6647   | 396.75     |
| INFCAC-0100-C5 | 0-1A, 0.5A ac           |  | 31C2009   | 477.25     |
| INFCAC-0110-C5 |                         | True RMS Ammeter, Dual Relay and Analog Output | 11C0687   | 569.25     |
| INFCAC-0000-V5 | 0-1V, 0-10V, 0-100V,    | True RMS Voltmeter, No Output                  | 88F6316   | 396.75     |
| INFCAC-0110-V5 | 0-750V ac               |  | 93B5745   | 569.25     |

(73302)

**AC POWER-LINE MONITORS**



3 1/2-digit units feature bright 0.56" (14.22) LED displays, screw terminal barrier strip for power and signal connections, operate on 120VAC and fit standard 1/8 DIN panel cut-out. Decimal point programmable at barrier strip. 201AN-AC series AC power-line monitors use factory-calibrated half-wave rectifier to read RMS values of sinusoidal signals. Provide AC voltmeter performance for AC ranges.



201AN-AC

| Mfg. Part No. | Signal Input Range, VAC | Display Range | Stock No. | Price 1-2 |
|---------------|-------------------------|---------------|-----------|-----------|
| 201AN-AC5     | 20-199.9                | ±1,999        | 89F1833   | 219.60    |
| 201AN-AC6     | 20-650                  | ±1,999        | 89F1834   | 219.60    |

(2297)

**DC VOLTMETERS**



201AN



2001

Factory calibrated for DC input range indicated. Bright, 0.56" (14.22) LED display. Decimal point programmable at connector. 201AN and 2001 series are 120VAC and fit standard 1/8 DIN panel cutout; screw-terminal barrier strip standard for signal and power. 215 series are 5VDC and fit half-height 1/8 DIN panel cutout; solder-tab board edge connector standard. Display range is 3 1/2-digits (±1,999 counts) or 4 1/2-digits (±19,999 counts).



215

| Mfg. Part No. | Signal Input Range, VDC | Display Range | Operating Voltage | Stock No. | Price Each |
|---------------|-------------------------|---------------|-------------------|-----------|------------|
|               |                         |               |                   |           | 1-2        |
| 201AN-2,D4    | 0.1999                  | ±1,999        | 120VAC            | 89F1836   | 193.20     |
| 201AN-3D4     | 1.999                   | ±1,999        | 120VAC            | 89F1837   | 193.20     |
| 201AN-4,D4    | 19.99                   | ±1,999        | 120VAC            | 89F1838   | 193.20     |
| 201AN-5,D4    | 199.9                   | ±1,999        | 120VAC            | 89F1839   | 193.20     |
| 2001A-3,D4    | 1.9999                  | ±19,999       | 120VAC            | 89F1840   | 240.54     |
| 2001A-4,D4    | 19.999                  | ±19,999       | 120VAC            | 89F1841   | 240.54     |
| 2001A-5,D4    | 199.99                  | ±19,999       | 120VAC            | 89F1842   | 240.54     |
| 215-3         | 1.999                   | ±1,999        | 5VDC              | 89F1830   | 114.00     |
| 215-4         | 19.99                   | ±1,999        | 5VDC              | 89F1831   | 114.00     |

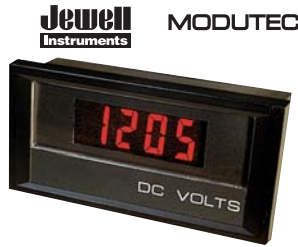
(2296)

VOLTS 1/8 DIN • CURRENT MINI

2000 SERIES 1/8 DIN DC INPUT VOLTMETERS

- Meet NEMA 4, 12 and IPC 55 (Splash-Proof/Hose Down) Standards
- Shallow, 1" (25.40) Depth

Fit 1/8 DIN panel cutout. Ideal for dairy, pharmaceutical, food, petrochemical, and other demanding applications. Accuracy: ±0.1% + 1 count typical; ±0.2% + 1 count maximum. 0.5" (12.70)H, 3.5-digit, 7-segment backlight, positive green LCD visible in sun or bright light. User-selectable decimal. Screw terminal connector. Polycarbonate case has gasket. Temperature range: -20° to +60°C. DPM and backlight power: 115VAC.



| Mfg. Part No.  | Input Range | Input Resistance | Stock No. | Price Each |
|----------------|-------------|------------------|-----------|------------|
| 2033-3401-04-U | 200mVDC     | ≥100mΩ           | 51F3579   | 132.50     |
| 2033-3402-04   | 2VDC        | ≥100mΩ           | 51F3580   | 132.50     |
| 2033-3403-04-U | 20VDC       | 1mΩ              | 51F3581   | 132.50     |
| 2033-3404-04   | 200VDC      | 1mΩ              | 73K5231   | 126.00     |

(3403)

DATEL® ACA-20PC SERIES AC AMMETERS WITH BUILT-IN CURRENT TRANSFORMERS



- Built-in current transformers for direct measurement of 0 to 2/20/50/100 Amps
- On-board current transformers
- Scaling/interface circuitry
- Precision A/D converters
- Bright red LED displays
- Subminiature, 1.38" x 0.88" package



SPECIFICATIONS:

|            |                                       |
|------------|---------------------------------------|
| Accuracy:  | ±0.15%                                |
| Input:     | 85-264Vac @ 50/60Hz with "self-power" |
| Display:   | 0.37"/9.4mm 3-1/2 digit Red           |
| Isolation: | 2000V between load and supply         |

| Mfg. Part No.         | Input Range (A) | Stock No. | Price Each |
|-----------------------|-----------------|-----------|------------|
| ● ACA-20PC-1-AC1-RL-C | 1.999A Voltage  | 39M6189   | 78.00      |
| ● ACA-20PC-2-AC1-RL-C | 19.99A          | 39M6191   | 78.00      |
| ● ACA-20PC-3-AC1-RL-C | 50.0            | 39M6193   | 84.00      |
| ● ACA-20PC-4-AC1-RL-C | 100.0A          | 39M6195   | 84.00      |

(83941)

DATEL® ACA5-20PC SERIES 5AMP INPUT AC AMMETERS



- Scales and displays the output of 50:5A to 2000:5A current transformers
- On-board 5A current transformers
- Scaling/interface circuitry
- Precision A/D converters
- Bright red LED displays
- Subminiature, 1.38" x 0.88" package
- Digital replacements for analog ammeters



SPECIFICATIONS:

|            |                             |
|------------|-----------------------------|
| Accuracy:  | ±0.15%                      |
| Input:     | 85-264Vac @ 50/60Hz         |
| Display:   | 0.37"/9.4mm 3-1/2 digit Red |
| Isolation: | 2000V                       |

| Mfg. Part No.          | Input Range (A) | Stock No. | Price Each |
|------------------------|-----------------|-----------|------------|
| ACA5-20PC-1-AC1-RL     | 50.0A           | 53K5583   | 72.00      |
| ● ACA5-20PC-3-AC1-RL-C | 100.0A          | 39M6241   | 72.00      |
| ● ACA5-20PC-5-AC1-RL-C | 199.9A          | 39M6243   | 72.00      |
| ● ACA5-20PC-9-AC1-RL-C | 500A            | 39M6247   | 72.00      |

5A current transformers for all ACA5-20PC series AC ammeters are available, go online or call Newark

➔ CONTINUED ➔

● Indicates RoHS Compliant

DATEL® ACA5-20PC SERIES 5AMP INPUT AC AMMETERS (CONT.)

| Mfg. Part No.  | Current Ratio | Accuracy | Current Transformer for      | Stock No. | Price Each |
|----------------|---------------|----------|------------------------------|-----------|------------|
| ● 7020-01036-0 | 50:5 A        | ±2%      | Use with ACA5-20PC-1 ammeter | 40M4740   | 25.00      |
| ● 7020-01038-0 | 100:5 A       | ±1%      | Use with ACA5-20PC-3 ammeter | 40M4742   | 25.00      |
| ● 7020-01040-0 | 200:5 A       | ±1%      | Use with ACA5-20PC-5 ammeter | 40M4744   | 25.00      |

(83942)

DATEL® DCA-20PC SERIES DC AMMETERS WITH BUILT-IN SHUNTS



- Built-in shunts for digitally measuring DC currents from 200µA to 20A
- Functionally complete, no additional components required
- 20mV internal shunt minimizes power loss
- Includes load connections for easy 3- or 4-wire operation
- Available with red, blue or green LED displays
- Subminiature, 1.38" x 0.88" package



SPECIFICATIONS:

|           |                         |
|-----------|-------------------------|
| Accuracy: | ±0.1%                   |
| Input:    | 8-36Vdc, isolated power |
| Display:  | 0.37"/9.4mm 3-1/2 digit |

| Mfg. Part No.         | Input Range (A) | Display Color | Stock No. | Price Each |
|-----------------------|-----------------|---------------|-----------|------------|
| ● DCA-20PC-4-DC4-RL-C | 199.9mA         | Red           | 87K3618   | 64.00      |
| ● DCA-20PC-5-DC4-RL-C | 1.999A Voltage  | Red           | 87K3619   | 64.00      |
| ● DCA-20PC-6-DC4-RL-C | 19.99A          | Red           | 87K3620   | 64.00      |

(83946)

DATEL® DCA5-20PC SERIES DC AMMETERS AND EXTERNAL SHUNTS



- Scales and displays the output of 5A to 2000A, 50mV AND 100mV shunts
- Wide power supply inputs: 5 to 40Vdc for 12V/24V/28V
- 48V option for telecom supplies
- Isolated-supply models for high-side shunts
- Available in red, blue or green LED displays
- Subminiature, 1.38" x 0.88" package with screw-style terminal blocks
- Digital upgrade for analog meters



SPECIFICATIONS:

|           |                             |
|-----------|-----------------------------|
| Accuracy: | ±0.1%                       |
| Input:    | 8-36Vdc, isolated power     |
| Display:  | 0.37"/9.4mm 3-1/2 digit Red |

| Mfg. Part No.         | Input Range (A)   | Stock No. | Price Each |
|-----------------------|---|-----------|------------|
| ● DCA5-20PC-1-DC4-RLC | 50mV shunt: 5.00A/50.0A/500A<br>100mV shunt: 10.00A/100.0A/1000A                  | 29M7392   | 59.00      |
| ● DCA5-20PC-2-DC4-RLC | 50mV shunt: 1.000A/10.00A/100.0A/1000A<br>100mV shunt: 1.999A/19.99A/199.9A/1999A | 39M7983   | 59.00      |
| ● DCA5-20PC-6-DC4-RLC | 50mV shunt: 1.999A/19.99A/199.9A/1999A  | 39M7987   | 59.00      |

50mV and 100mV base-mounted current shunts are designed for measuring DC currents from 5A to 1200A. These precision shunts (±0.25% accuracy) connect directly to DCA5-20PC series DC ammeters.

| Mfg. Part No.  | Rated Current/Output | Resistance (Ohms @ 25°C) | Stock No. | Price Each |
|----------------|----------------------|--------------------------|-----------|------------|
| ● 3020-01096-0 | 50A/50mV             | 0.001                    | 40M4326   | 20.00      |
| ● 3020-01097-0 | 5A/50mV              | 0.01                     | 40M4327   | 20.00      |
| ● 3020-01098-0 | 20A/50mV             | 0.0025                   | 40M4328   | 20.00      |
| ● 3020-01099-0 | 100A/50mV            | 0.0005                   | 40M4329   | 20.00      |
| ● 3020-01101-0 | 200A/50mV            | 0.00025                  | 40M4331   | 25.00      |
| ● 3020-01103-0 | 500A/50mV            | 0.0001                   | 40M4333   | 25.00      |

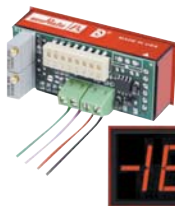
(83948)

CURRENT LOOP POWERED MINI • DC INPUT MINI • SINGLE FUNCTION MINI

**DATEL® LOCALLY POWERED 4-20mA INPUT PANEL METERS**



DMS-30PC



DMA-40PC

- 3 1/2 and 4 1/2 digit resolutions; LED/LCD displays
- 4 LED options including low-current and high-intensity red
- 3 power supply options: +5, +24V "Y" or 7.5-32V
- 24V "Y" models isolate loop inputs from power ground

- DIP-switch selectable span/offset/decimal points
- On-board gain/span and zero/offset trim pots
- Vibration-resistant package; reliable screw-terminal input connections
- Miniature size: 2.17 x 0.92 x 1.02"

| Mfg. Part No.             | Display                        | Description                                  | Stock No. | Price Each |
|---------------------------|--------------------------------|--|-----------|------------|
| ● DMS-30PC-4/20S-24BS-I-C | 3-1/2 digit 0.56" high Blue    | +24V isolated supply, high-intensity LED     | 87K3682   | 94.00      |
| ● DMS-30PC-4/20S-24RS-I-C | 3-1/2 digit 0.56" high Red LED | +24V isolated supply, high-intensity LED     | 87K3683   | 84.00      |
| ● DMS-40PC-4/20S-24RS-I-C | 4-1/2 digit 0.52" high Red LED | +24V isolated supply, standard-intensity LED | 87K3694   | 116.00     |

(83955)

**DATEL® LOOP-POWERED 4-20mA PROCESS MONITORS**



DMS-20PC



DMS-30LCDA

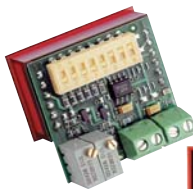
- Self-powered, no separate supply required
- 3 1/2 and 4 1/2 digit resolutions; LED/LCD displays
- Industry's only loop-powered, full-size LED readouts
- Small packages; Large digits: 0.37"/9.4mm
- DIP-switch selectable span/offset/decimal points

- On-board gain/span and zero/offset trim pots
- Hundreds of different input/readout combinations
- Vibration-resistant package; reliable screw-terminal input connections

| Mfg. Part No.        | Description   | Stock No. | Price Each |
|----------------------|---|-----------|------------|
| ● DMS-20PC-4/20S-C   | Unipolar reading, 3.5-digit, loop-powered LED meter | 16M5699   | 72.00      |
| ● DMS-20LCD-4/20S-C  | Unipolar reading, 3.5-digit, loop-powered LCD meter | 87K3634   | 54.00      |
| ● DMS-30LCDA-4/20S-C | Unipolar reading, 3.5-digit, loop-powered LCD meter | 87K3667   | 72.00      |
| ● DMS-40LCD-4/20S-C  | 4.5-digit, loop-powered LCD meter                   | 87K3686   | 110.00     |

(83949)

**DATEL® 0-5V AND 0-10V PROCESS MONITORS**



- Accepts 0-5V and 0-10V inputs
- Easy to read 0.37"/9.4mm LED display
- High input impedance
- DIP-switch selectable span/offset/decimal points
- On-board gain/span and zero/offset trim pots
- Vibration-resistant package
- Reliable screw-terminal input connections
- Miniature size: 1.38 x 1.25 x 0.95"

| Mfg. Part No.         | Display                       | Description          | Stock No. | Price Each |
|-----------------------|-------------------------------|----------------------|-----------|------------|
| ● DMS-20PC-0/5-24RL-C | 3-1/2 digit, Red, 0.37" high  | 5.00V to +40V supply | 87K3641   | 78.00      |
| ● DMS-20PC-0/5-5BS-C  | 3-1/2 digit, Blue, 0.37" high | 5.00V supply         | 87K3642   | 82.00      |

(83960)

**TWO-WIRE LOOP POWERED PROCESS INDICATORS**



508B-2  
508B-1 in Explosion Proof Housing



558B

LCD display indicators show such process variables as pressure, flow, temperature or level, depending on sensor and application. 3 1/2 active digit 0.35" (8.89) display to ±1,999 and selectable dummy right hand zero for displays to ±19,990. Powered by 4-20mA input signal and jumper selectable for 1-5 and 10-50mA input signal applications. Standard electrical configuration for readout from 0 to 100.0 for 4-20mA. Explosion housing (NEMA4 and NEMA7) is optional; go online or call.

| Mfg. Part No. | Description                                    | Stock No. | Price Each |
|---------------|--|-----------|------------|
| 508B-2        | 1/2" EMT Male Conduit Fitting w/2-#18AWG Wires | 89F1816   | 534.75     |
| 558B          | 1/8" DIN Panel Cutout Indicator                | 89F1818   | 178.50     |

(2299)

**MINIATURE DIGITAL PANEL METERS**



**1000 SPM Series** are 3 1/2-digit, 7-segment backlit digital panel meters. Input: 200mVDC. Input resistance: ≥100MΩ. Conversion rate: 2.5 per second. Operating temperature: 0°C to +60°C. Accuracy: ±0.25% + 1 count maximum. 13-pin terminals. Window mount. **Mfg. part nos. 1030-00-19 and 1060-00-19** are loop-powered from signal and input: 4-20mA DC. Accuracy: ±0.1% of F.S. + 1 count. Operating temperature: -30°C to +80°C. Window mount. For bezel mounting, order snap bezel separately; go online or call.

| Mfg. Part No. | Display Color  | DPM Power    | Stock No. | Price Each |
|---------------|----------------|--------------|-----------|------------|
| 1030-01-01-U  | Positive Green | 9VDC         | 51F3573   | 101.25     |
| 1030-00-19-U  | Positive Green | Loop Powered | 51F3577   | 101.25     |
| 1060-00-19-U  | Positive Red   | Loop Powered | 51F3578   | 101.25     |

(6605)

**10 SERIES SNAP-IN PANEL METERS**



DPM 1AS-BL



DPM 3AS-BL



DPM 342

- 3 1/2-Digit LCD with LED Backlighting, or 3 1/2-Digit LED
- Accuracy: 0.10% (±1 Count) Typical
- Auto-Zero, Auto-Polarity
- 1-Piece, Snap-In Design
- 3.0V to 7.5V or 6.0-15.0VDC Power Supply



DPM 340

Voltmeters feature full-scale reading of ±200mVDC. LCD versions use a supply of 3.0 to 7.5V at 350µA (typ.) or 6.0 to 15.0VDC at 175µA (typ.); LED versions use a 5VDC supply at 50mA (typ.). **Mfg. part no. DPM 342** is a loop-powered 4-20mA meter with screw terminals.

**VOLTMETERS**

| Mfg. Part No. | Display | W x H         | Digit Height | Stock No. | Price Each |       |
|---------------|---------|---------------|--------------|-----------|------------|-------|
|               |         |               |              |           | 1-9        | 10-24 |
| DPM 1AS-BL    | LCD     | 1.18" x 0.55" | 0.22"        | 72C6419   | 42.29      | 38.80 |
| DPM 3AS-BL    | LCD     | 1.57" x 0.79" | 0.43"        | 89C2660   | 48.34      | 44.35 |
| DPM 340       | LED     | 1.57" x 0.79" | 0.31"        | 36C2798   | 48.34      | 44.35 |

**LOOP-POWERED METER, 4-20mA**

| Mfg. Part No. | Display | W x H         | Digit Height | Stock No. | Price Each  |
|---------------|---------|---------------|--------------|-----------|-------------|
| DPM 342       | LCD     | 1.57" x 0.79" | 0.43"        | 36C2799   | 81.51 74.77 |

(69455)

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(116880)



SINGLE FUNCTION MINI

700 AND 900 SERIES PANEL METERS WITH WATERPROOF OPTION



- Large 3½ Digit LCD Displays
- 4-20mA Loop Powered Meters
- AC Voltmeter
- DC Voltmeter
- NEMA 4X Rated Bezel Option
- LED Backlighting on most meters

This range of 3½ digit LCD meters includes ±200mVDC full scale reading voltmeters, a 500VAC voltmeter, 4-20mA loop powered meters and a dual channel LCD voltmeter. Optional NEMA 4X rated bezels fit all meters.

700 SERIES

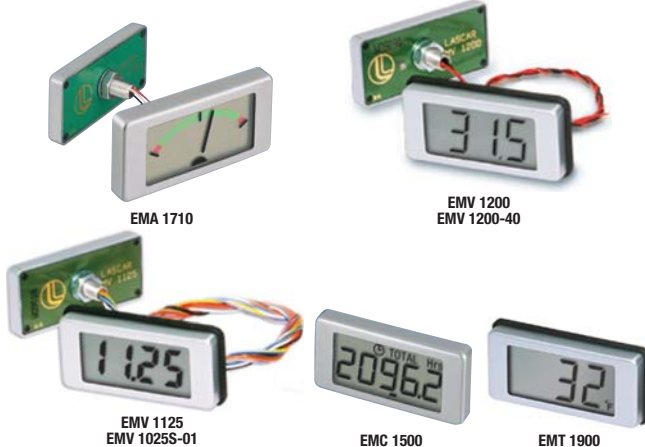
| Mfg. Part No. | Description   | W x H        | Digit Height | Stock No. | Price Each |
|---------------|---------------|--------------|--------------|-----------|------------|
| DPM 742-BL    | Loop Powered  | 2.36 x 1.18" | 0.5"         | 02H6481   | 81.96      |
| DPM 750S-BL   | DC Voltmeter  | 2.36 x 1.18" | 0.5"         | 02H6482   | 55.89      |
| ● BEZ 700-IP  | Nema 4X Bezel | 2.57 x 1.39" | ...          | 02H6394   | 15.00      |

900 SERIES

| Mfg. Part No. | Description   | W x H        | Digit Height | Stock No. | Price Each |
|---------------|---------------|--------------|--------------|-----------|------------|
| DPM 942       | Loop Powered  | 2.99 x 1.73" | 0.75"        | 02H6483   | 95.50      |
| DPM 950       | DC Voltmeter  | 2.99 x 1.73" | 0.75"        | 02H6484   | 67.41      |
| DPM 970       | AC Voltmeter  | 2.99 x 1.73" | 0.75"        | 02H6485   | 86.78      |
| ● BEZ 900-IP  | Nema 4X Bezel | 3.17 x 1.91" | ...          | 02H6395   | 17.15      |

(73562)

EM SERIES SPLASHPROOF ROUND-HOLE FITTING PANEL METERS



A splashproof range of LCD meters each fitted with a threaded stud, allowing users to mount the product through a ½" hole. A rubber seal (supplied) provides splashproof protection when fitted between the meter and mounting panel.

| Mfg. Part No. | Description                            | Digits | Digit Ht. | Stock No. | Price Each |       |
|---------------|--|--------|-----------|-----------|------------|-------|
|               |  |        |           |           | 1-9        | 10-24 |
| EMA 1710      | 9-Segment Analog Style Voltmeter       | ...    | ..        | 36C2800   | 24.38      | 23.16 |
| EMV 1200      | 2-wire, 4-25VDC Self-Powered Voltmeter | 3      | 0.5"      | 36C2804   | 32.61      | 31.02 |
| EMV 1200-40   | 2-wire, 4-40VDC Self-Powered Voltmeter | 3      | 0.5"      | 28K2619   | 31.92      | 30.36 |
| EMV 1125      | User Set Voltmeter                     | 3½     | 0.5"      | 73C7319   | 37.33      | 35.51 |
| EMV 1025S-01  | Preset Voltmeter                       | 3½     | 0.5"      | 36C2803   | 32.61      | 31.02 |
| EMC 1500      | Hour Meter                             | 5      | 0.35"     | 36C2801   | 30.69      | 29.19 |
| EMT 1900      | Thermometer                            | 3      | 0.5"      | 36C2802   | 30.69      | 29.19 |

(69456)

World-class website

- Fast, intuitive search
- Real-time availability
- Complete order history

(116679)

EM SERIES WATERPROOF ROUND-HOLE FITTING PANEL METERS



Waterproof LCD and LED units feature 200mV full-scale reading, auto-zero, auto-polarity plus jumper link selection. NEMA 4X/IP67 protection. Metal bezel, rubber seal and mounting nut. Screw terminal connection. Designed for mounting in a 1.28" diameter cutout.



| Mfg. Part No. | Description   | Digits | Digit Ht. | Stock No. | Price Each |       |
|---------------|---------------|--------|-----------|-----------|------------|-------|
|               |               |        |           |           | 1-9        | 10-24 |
| EM32-1B       | LCD Voltmeter | 3½     | 0.31"     | 50H3922   | 66.31      | 63.07 |
| EM32-1B-LED   | LED Voltmeter | 3½     | 0.31"     | 50H3923   | 66.31      | 63.07 |

(85041)

SP5 SERIES SPLASHPROOF PANEL METERS



- Seal provides splashproof protection
- LED Backlighting
- Panel Cutout: 1.85 x 1.38"

| Mfg. Part No. | Description                               | Digit Ht. | Stock No. | Price Each |       |
|---------------|---|-----------|-----------|------------|-------|
|               |   |           |           | 1-9        | 10-24 |
| ● SP 5-GFX1   | 128 x 64 Pixel Graphic Display            | ...       | 50H5429   | 42.28      | 39.91 |
| SP 5-1200-BL  | 2-Wire, 3-Digit, Signal-Powered Voltmeter | 0.7"      | 50H5430   | 48.06      | 45.36 |
| SP5-1710-BL   | 17 Segment Analog Style Voltmeter         | ...       | 28K2623   | 42.28      | 39.91 |

(85047)

3½-DIGIT PANEL MINI-METERS



Indicators have 0.56" (14.22) red LED display, 115VAC. Panel space 37.5% of standard ½ DIN meter. Process meters provide zero and span adjustments for readout in engineering units. Thermocouple meters include cold junction compensation, linearization, jumper selection of C or F, thermocouple break detection and analog output (1mV/count). Connection to sensor can be 2, 3 or 4 wire (RTD). Other power options available; go online or call.



| Mfg. Part No. | Signal Input | Display Span     | Stock No. | Price Each |       |
|---------------|--------------|------------------|-----------|------------|-------|
|               |              |                  |           | 1-9        | 10-24 |
| 205-PA1-R-CO  | 4-20mA       | ±1,999           | 90F8938   | 172.55     |       |
| 205-PV3-R-CO  | 1-5V         | ±1,999           | 90F8939   | 176.90     |       |
| 205-PV4-R-CO  | 0-10V        | ±1,999           | 90F8940   | 176.90     |       |
| 205-JF1-R-CO  | "J"/T/C      | -346° to +1400°F | 90F8941   | 237.90     |       |
| 205-KF1-R-CO  | "K"/T/C      | -157° to +1999°F | 90F8943   | 237.90     |       |

(2301)

3/64 DIN MINI SERIES DIGITAL PANEL METERS



Red Backlight

No Backlight

Mfg. part no. M135 is 3½-digits and Mfg. part no. M145 is 4½-digits. Provides high quality accuracy and reliability in a compact, shallow 1.25" (31.75mm) deep case. Fits 3/64 DIN cutout (22mm x 68mm). The 0.5" high LCD display is available with a negative image, bright red backlit option. User selectable decimal point and display hold. Includes a 12 pin mating connector with 6" wire leads. +9VDC power option available; go online or call.

DC VOLTAGE INDICATORS (5 VDC POWER)

| Mfg. Part No. | Input | Backlight    | Stock No. | Price Each |
|---------------|-------|--------------|-----------|------------|
| M135-0-0-11-0 | 200mV | None         | 95F5604   | 74.29      |
| M135-0-0-12-0 | 2V    | None         | 95F5605   | 74.29      |
| M135-0-0-14-0 | 200V  | None         | 95F5607   | 74.29      |
| M135-1-0-11-1 | 200mV | Negative Red | 95F5616   | 98.99      |
| M135-1-0-12-1 | 2V    | Negative Red | 95F5617   | 98.99      |

➔ CONTINUED ➔

SINGLE FUNCTION MINI • TRUE RMS MINI

3/64 DIN MINI SERIES DIGITAL PANEL METERS (CONT.)

| Mfg. Part No. | Input | Backlight    | Stock No. | Price Each |
|---------------|-------|--------------|-----------|------------|
| M135-1-0-13-1 | 20V   | Negative Red | 95F5618   | 98.99      |
| M135-1-0-14-1 | 200V  | Negative Red | 95F5619   | 98.99      |
| M145-0-0-11-0 | 200mV | None         | 92F4197   | 97.94      |
| M145-0-0-12-0 | 2V    | None         | 92F4198   | 97.94      |
| M145-0-0-13-0 | 20V   | None         | 92F4199   | 97.94      |
| M145-0-0-14-0 | 200V  | None         | 92F4200   | 97.94      |
| M145-1-0-11-1 | 200mV | Negative Red | 92F4191   | 122.64     |
| M145-1-0-12-1 | 2V    | Negative Red | 92F4192   | 122.64     |
| M145-1-0-13-1 | 20V   | Negative Red | 92F4193   | 122.64     |
| M145-1-0-14-1 | 200V  | Negative Red | 92F4194   | 122.64     |

DC VOLTAGE INDICATORS (±5VDC POWER)

|               |       |              |         |        |
|---------------|-------|--------------|---------|--------|
| M145-0-1-11-0 | 200mV | None         | 92F4203 | 97.94  |
| M145-0-1-13-0 | 20V   | None         | 92F4205 | 97.94  |
| M145-0-1-14-0 | 200V  | None         | 92F4188 | 97.94  |
| M145-1-1-11-1 | 200mV | Negative Red | 92F4206 | 122.64 |
| M145-1-1-12-1 | 2V    | Negative Red | 92F4207 | 122.64 |
| M145-1-1-13-1 | 20V   | Negative Red | 92F4208 | 122.64 |
| M145-1-1-14-1 | 200V  | Negative Red | 92F4209 | 122.64 |

DC CURRENT INDICATORS (5VDC POWER)

|               |       |      |         |       |
|---------------|-------|------|---------|-------|
| M135-0-0-23-0 | 20mA  | None | 95F5608 | 74.29 |
| M135-0-0-24-0 | 200mA | None | 95F5609 | 74.29 |
| M145-0-0-23-0 | 20mA  | None | 92F4201 | 97.94 |
| M145-0-0-24-0 | 200mA | None | 92F4202 | 97.94 |

DC CURRENT INDICATORS (±5VDC POWER)

|               |       |              |         |        |
|---------------|-------|--------------|---------|--------|
| M145-0-1-23-0 | 20mA  | None         | 92F4189 | 97.94  |
| M145-1-1-23-1 | 20mA  | Negative Red | 92F4210 | 122.64 |
| M145-1-1-24-1 | 200mA | Negative Red | 92F4211 | 122.64 |

(16729)

MICROMITE SERIES PC BOARD MOUNT COUNTERS, TIMERS AND PANELMETERS



TOTALIZING COUNTERS

8-digit, 8mm-high LCD. 2.6-3.4VDC @ 10µA maximum. Count and direction inputs, 5kHz maximum count speed. 20Hz switch bounce filter. Operating temperature: -10°C to +60°C.

| Mfg. Part No. | Fig. | Description            | H x W x D                               | Stock No. | Price Each |
|---------------|------|------------------------|---|-----------|------------|
| 0799988-412   | 1    | Panel and Remote Reset | 0.83 x 1.85 x 0.53"<br>(21 x 47 x 13.5) | 48F2119   | 31.35      |
| 0799988-402   | 1    | Remote Reset Only      | 0.83 x 1.85 x 0.53"<br>(21 x 47 x 13.5) | 48F2120   | 31.35      |

6-digit, 6mm-high LCD. 2.6-3.4VDC @ 10µA maximum. 10kHz maximum count speed. Remote reset. With supplied bezel, fits 1.16 x 0.87" cutout. Operating temperature -10°C to +60°C.

|             |   |               |  |         |       |
|-------------|---|---------------|--|---------|-------|
| 0799986-302 | 2 | Count Up Only | 0.70 x 1.09 x 0.26"<br>(17.7 x 27.6 x 6.5) | 48F2123 | 31.35 |
|-------------|---|---------------|--|---------|-------|

4-digit, 6mm-high LCD. Powered by replaceable internal 1.5V button cell, 4 years expected life. 12kHz maximum count speed from contact input, reset by removing battery. With supplied bezel, fits 1.16 x 0.87" cutout. Operating temperature: -10°C to +60°C.

|             |   |               |   |         |       |
|-------------|---|---------------|---|---------|-------|
| 0799984-322 | 3 | Count Up Only | 0.70 x 1.09 x 0.42"<br>(17.7 x 27.6 x 10.7) | 48F2125 | 16.93 |
|-------------|---|---------------|---|---------|-------|

8-digit, 8mm-high LCD. Wiring option for backlighting. 3VDC @ 10µA maximum. 10kHz maximum count speed. Operating temperature -10°C to +60°C.

|            |   |               |                                       |         |       |
|------------|---|---------------|---------------------------------------|---------|-------|
| 079998-302 | 4 | Count Up Only | 0.94 x 1.89 x 0.55"<br>(24 x 48 x 14) | 48F2126 | 42.64 |
|------------|---|---------------|---------------------------------------|---------|-------|

ELAPSED TIME INDICATORS

8-digit, 8mm-high LCD. 2.6-3.4VDC @ 10µA maximum. Timing modes: seconds, mins/secs, hrs/mins, hrs/hundredths ±20ppm accuracy. Operating temperature: -10°C to +60°C.

|             |   |                        |   |         |       |
|-------------|---|------------------------|---|---------|-------|
| 0799988-612 | 1 | Panel and Remote Reset | 0.83 x 1.85 x 0.53"<br>(21 x 47 x 13.5) | 48F2121 | 30.30 |
| 0799988-602 | 1 | Remote Reset Only      | 0.83 x 1.85 x 0.53"<br>(21 x 47 x 13.5) | 48F2122 | 30.30 |

➔ CONTINUED ➔

MICROMETER SERIES PC BOARD MOUNT COUNTERS, TIMERS AND PANELMETERS (CONT.)

| Mfg. Part No. | Fig. | Description   | H x W x D                             | Stock No. | Price Each |
|---------------|------|---------------|---------------------------------------|-----------|------------|
| 07999F3-001   | 5    | 14mm-High LCD | 1.42 x 2.83 x 0.55"<br>(36 x 72 x 14) | 48F2127   | 54.65      |
| 07999F3-002   | 5    | 8mm-High LCD  | 0.94 x 1.89 x 0.55"<br>(24 x 48 x 14) | 48F2128   | 54.65      |

(33786)

3/64 DIN MINI-MAX SERIES DIGITAL PANEL METERS



Mfg. part no. M235 3½-digit, M240 4-digit and M245 4½-digit Mini-Max indicators have 0.5" (12.7mm) high LCD or negative image red backlighting display, user selectable decimal point and display scaling. Indicator fits 3/64 DIN cutout (22mm x 68mm) and requires only 2.36" (60mm) behind front panel. Mounting bracket provided to allow vertical or horizontal stacking of multiple indicators. Screw terminal connectors and 85-250VAC power standard. Optional excitation output and 9-32VDC power available; go online or call.

AC CURRENT INDICATORS

| Mfg. Part No. | Input | Backlight    | Stock No. | Price Each |
|---------------|-------|--------------|-----------|------------|
| M235-0-0-33-0 | 20V   | None         | 95F5651   | 137.94     |
| M235-0-0-34-0 | 200V  | None         | 95F5652   | 137.94     |
| M235-1-0-34-0 | 200V  | Negative Red | 95F5659   | 159.90     |
| M245-0-0-34-0 | 200V  | None         | 92F4227   | 171.05     |

DC VOLTAGE INDICATORS

|                |       |              |         |        |
|----------------|-------|--------------|---------|--------|
| M235-0-0-11-0  | 200mV | None         | 95F5628 | 110.23 |
| M235-0-0-12-0  | 2V    | None         | 95F5629 | 99.18  |
| M235-0-0-13-0  | 20V   | None         | 95F5630 | 99.18  |
| M235-0-0-14-0  | 200V  | None         | 95F5631 | 99.17  |
| M235-0-2-13-0* | 20V   | None         | 51B1090 | 132.76 |
| M235-1-0-11-0  | 200mV | Negative Red | 95F5634 | 121.14 |
| M235-1-0-12-0  | 2V    | Negative Red | 95F5635 | 121.14 |
| M235-1-0-13-0  | 20V   | Negative Red | 95F5636 | 121.14 |
| M235-1-2-13-0* | 20V   | Negative Red | 90B5878 | 154.73 |
| M235-1-0-14-0  | 200V  | Negative Red | 95F5637 | 121.14 |
| M235-0-2-14-0* | 200V  | None         | 90B2969 | 132.76 |
| M245-0-0-11-0  | 200mV | None         | 92F4239 | 132.29 |
| M245-0-0-12-0  | 2V    | None         | 92F4240 | 132.29 |
| M245-0-0-13-0  | 20V   | None         | 92F4241 | 132.29 |
| M245-0-0-14-0  | 200V  | None         | 92F4242 | 132.29 |
| M245-1-0-11-0  | 200mV | Negative Red | 92F4245 | 154.26 |
| M245-1-0-12-0  | 2V    | Negative Red | 92F4246 | 154.26 |
| M245-1-0-13-0  | 20V   | Negative Red | 92F4247 | 154.26 |
| M245-1-0-14-0  | 200V  | Negative Red | 92F4221 | 154.26 |

\* 9-32VDC power.

AC CURRENT INDICATORS

|                |       |              |         |        |
|----------------|-------|--------------|---------|--------|
| M235-0-0-44-0  | 200mA | None         | 95F5653 | 137.94 |
| M235-0-0-45-0  | 2A    | None         | 95F5654 | 137.94 |
| M235-0-0-46-0† | 5A    | None         | 95F5655 | 137.94 |
| M235-1-0-46-0† | 5A    | Negative Red | 95F5662 | 159.90 |
| M245-0-0-44-0  | 200mA | None         | 92F4228 | 190.12 |
| M245-0-0-45-0  | 2A    | None         | 92F4229 | 171.05 |
| M245-0-0-46-0† | 5A    | None         | 92F4230 | 171.05 |
| M245-1-0-44-0  | 200mA | Negative Red | 92F4235 | 214.54 |
| M245-1-0-45-0  | 2A    | Negative Red | 92F4236 | 214.54 |
| M245-1-0-46-0† | 5A    | Negative Red | 92F4237 | 193.02 |

† Scale display needs Simpson current transformer for higher current levels; go online or call.

DC CURRENT INDICATORS

|                |       |              |         |        |
|----------------|-------|--------------|---------|--------|
| M235-0-0-11-0‡ | 200mV | None         | 95F5628 | 110.23 |
| M235-0-0-24-0  | 200mA | None         | 95F5632 | 99.18  |
| M235-0-0-25-0  | 2A    | None         | 95F5633 | 99.18  |
| M235-0-0-26-0  | 5A    | None         | 88F1583 | 99.18  |
| M235-1-0-24-0  | 200mA | Negative Red | 95F5638 | 121.14 |
| M235-1-0-25-0  | 2A    | Negative Red | 95F5639 | 121.14 |
| M245-0-0-11-0‡ | 200mV | None         | 92F4239 | 132.29 |
| M245-0-0-24-0  | 200mA | None         | 92F4243 | 132.29 |
| M245-0-0-25-0  | 2A    | None         | 92F4244 | 147.05 |
| M245-1-0-24-0  | 200mA | Negative Red | 92F4222 | 154.26 |
| M245-1-0-25-0  | 2A    | Negative Red | 92F4223 | 154.26 |

➔ CONTINUED ➔

TRUE RMS MINI • FREQUENCY MINI • VOLTS MINI

3/64 DIN MINI-MAX SERIES DIGITAL PANEL METERS (CONT.)

| Mfg. Part No.  | Input          | Backlight    | Stock No. | Price Each |
|--|----------------|--------------|-----------|------------|
| ‡ Scaled display requires Simpson external shunt for higher DC current levels. |                |              |           |            |
| <b>FREQUENCY INDICATORS (LED DISPLAY)</b>                                      |                |              |           |            |
| M235-0-0-81-0  | 20-199.9Hz RMS | None         | 91F9696   | 110.23     |
| M235-0-0-82-0  | 20-1999Hz RMS  | None         | 91F9697   | 110.23     |
| M235-1-0-81-0  | 20-199.9Hz RMS | Negative Red | 91F9698   | 134.65     |
| M235-1-0-82-0  | 20-1999Hz RMS  | Negative Red | 91F9699   | 134.65     |
| <b>TEMPERATURE INDICATORS</b>  |                |              |           |            |
| M2400-910F   | J T/C          | ...          | 52F6604   | 196.76     |
| M2400-920F   | K T/C          | ...          | 52F6605   | 196.76     |
| <b>DC PROCESS INDICATORS</b>   |                |              |           |            |
| M235-0-0-71-0  | 4-20mA         | None         | 95F5663   | 115.97     |
| M235-0-0-73-0  | 0-10V          | None         | 16F2260   | 115.97     |
| M235-1-0-71-0  | 4-20mA         | Negative Red | 95F5665   | 137.94     |
| M235-1-0-73-0  | 0-10V          | Negative Red | 16F2261   | 137.94     |
| M235-0-2-71-0*   | 4-20mA         | None         | 95F5667   | 149.55     |
| M235-1-2-71-0*   | 4-20mA         | Negative Red | 95F5669   | 171.52     |
| M245-0-0-71-0  | 4-20mA         | None         | 92F4238   | 149.08     |
| M245-1-0-71-0  | 4-20mA         | Negative Red | 92F4213   | 171.05     |
| M245-0-2-71-0*   | 4-20mA         | None         | 92F4215   | 182.66     |

\*9-32VDC power (16738)

DATel® 2-WIRE AC LINE FREQUENCY METERS



- Self-powered, no external supplies required
- Screw terminals simplify panel mounting
- Ideal for emergency power equipment
- Epoxy encapsulated for harsh environments



SPECIFICATIONS:

|             |                          |
|-------------|--------------------------|
| Accuracy:   | ±0.01V                   |
| Display:    | 3 digit, Red, 0.40" high |
| Dimensions: | 1.38 x 0.88 x 1.00"      |

| Mfg. Part No.     | Frequency Range (Hz) | Voltage Range (Vac) | Stock No. | Price Each |  |
|-------------------|----------------------|---------------------|-----------|------------|--|
|                   |                      |                     |           | 1-4        |  |
| ● DMS-20PC-1-FM-C | 47.0-99              | 85-140              | 87K3646   | 56.00      |  |
| ● DMS-20PC-3-FM-C | 47.0-99              | 170-264             | 87K3659   | 56.00      |  |

(83958)

DATel® 2-WIRE AC LINE VOLTAGE MONITORS



- Plugs directly into 120V wall outlet
- Screw terminals for panel mounting
- Large easy to read, red, green or blue LED displays
- Fully encapsulated for harsh environments
- Half-wave averaging, rms calibrated
- UL, CSA and IEC1010-1 certified



SPECIFICATIONS:

|                  |                          |
|------------------|--------------------------|
| Accuracy:        | ±1V                      |
| Input Range:     | 85-264Vrms               |
| Frequency Range: | 47-63Hz                  |
| Display:         | 3 digit, Red, 0.37" high |
| Dimensions:      | 1.38 x 0.88 x 1.00"      |

| Mfg. Part No.       | Description  | Stock No. | Price Each |  |
|---------------------|--|-----------|------------|--|
|                     |  |           | 1-4        |  |
| ● DMS-20PC-1-LM-C   | LED AC Voltmeter with threaded terminations and screws | 87K3649   | 56.00      |  |
| ● DMS-20PC-1-LM-B-C | LED AC Voltmeter with threaded terminations and screws | 87K3648   | 65.00      |  |
| ● DMS-20PC-1-LM-F-C | LED AC Voltmeter with blade terminals (installed)      | 87K3650   | 56.00      |  |

(83957)

DATel® 3 1/2 DIGIT, SUBMINIATURE LED/LCD PANEL METERS



- Large 0.37" display
- Epoxy-encapsulated, 12-pin DIP package
- 4 differential input voltage ranges
- High accuracy, ±1 count
- User-selectable decimal point placement
- 0 to 60°C temperature rating

The DMS-20PC series, includes built-in color filter and bezel, high-intensity or low-power red LED options, a "DISPLAY ENABLE", "DISPLAY TEST" and an optional "DISPLAY HOLD". LED subminiature size: 1.38 x 0.88 x 0.48". The DMS-20LCD series is panel or pc-board mountable, provides low-battery annunciator, and optional backlit display and 9V battery power. LCD Subminiature size: 1.38 x 0.88 x 0.48".

3 1/2 DIGIT, RED LED

| Mfg. Part No.        | Power Supply (V) | Input Range | Display Intensity | Stock No. | Price Each |
|----------------------|------------------|-------------|-------------------|-----------|------------|
|                      |                  |             |                   |           | 1-4        |
| ● DMS-20PC-0-RS-C    | 5.00             | ±200mV      | Standard          | 87K3640   | 42.00      |
| ● DMS-20PC-0-RL-C    | 5.00             | ±200mV      | Low-Power         | 87K3639   | 46.00      |
| ● DMS-20PC-1-RS-C    | 5.00             | ±2V         | Standard          | 87K3653   | 42.00      |
| ● DMS-20PC-1-RL-C    | 5.00             | ±2V         | Low-Power         | 87K3652   | 46.00      |
| ● DMS-20PC-1-RH-C    | 5.00             | ±2V         | High-Intensity    | 87K3651   | 46.00      |
| ● DMS-20PC-2-RS-C    | 5.00             | ±20V        | Standard          | 87K3657   | 42.00      |
| ● DMS-20PC-2-RS-H-C* | 5.00             | ±20V        | Standard          | 16M5688   | 46.00      |
| ● DMS-20PC-2-RL-C    | 5.00             | ±20V        | Low-Power         | 87K3656   | 46.00      |
| ● DMS-20PC-3-RL-C    | 5.00             | ±200V       | Low-Power         | 87K3660   | 46.00      |

3 1/2 DIGIT, BLUE LED

|                   |      |        |          |         |       |
|-------------------|------|--------|----------|---------|-------|
| ● DMS-20PC-0-BS-C | 5.00 | ±200mV | Standard | 87K3635 | 50.00 |
| ● DMS-20PC-1-BS-C | 5.00 | ±2V    | Standard | 87K3643 | 50.00 |
| ● DMS-20PC-2-BS-C | 5.00 | ±20V   | Standard | 87K3654 | 50.00 |

3 1/2 DIGIT, GREEN LED

|                   |      |        |          |         |       |
|-------------------|------|--------|----------|---------|-------|
| ● DMS-20PC-0-GS-C | 5.00 | ±200mV | Standard | 87K3638 | 42.00 |
| ● DMS-20PC-1-GS-C | 5.00 | ±2V    | Standard | 87K3647 | 42.00 |
| ● DMS-20PC-2-GS-C | 5.00 | ±20V   | Standard | 87K3655 | 42.00 |

3 1/2 DIGIT, LCD

|                   |      |        |     |         |       |
|-------------------|------|--------|-----|---------|-------|
| ● DMS-20LCD-0-5-C | 5.00 | ±200mV | LED | 87K3628 | 32.00 |
| ● DMS-20LCD-1-5-C | 5.00 | ±2V    | LED | 87K3631 | 32.00 |
| ● DMS-20LCD-2-5-C | 5.00 | ±20V   | LED | 87K3633 | 32.00 |
| ● DMS-20LCD-0-9-C | 9.00 | ±200mV | LED | 87K3629 | 30.00 |
| ● DMS-20LCD-1-9-C | 9.00 | ±2V    | LED | 87K3632 | 30.00 |

\*H suffix calls out DISPLAY HOLD option (83962)

DATel® 3 1/2 DIGIT, MINIATURE LED/LCD PANEL METERS



- Epoxy-encapsulated, 12-pin DIP package
- 4 differential input voltage ranges
- High accuracy, ±1 count
- User-selectable decimal point placement
- Numerous "plug-on" application boards
- 0 to 60°C temperature rating

The DMS-30PC series includes built-in color filter and bezel, is panel or pc-board mountable and optional high-intensity or low-power red LED. LED miniature size: 2.17 x 0.92 x 0.56". The DMS-30LCD series provides autopolarity changeover and overrange indication, consumes power as low as 3.2mW, and offers optional backlit display and 9V battery power. LCD miniature size: 2.17 x 0.92 x 0.43".

3 1/2 DIGIT, 0.56" RED LED

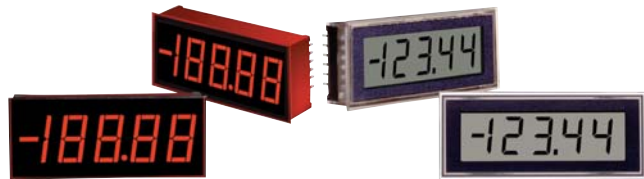
| Mfg. Part No.     | Power Supply (V) | Input Range | Display Intensity | Stock No. | Price Each |
|-------------------|------------------|-------------|-------------------|-----------|------------|
|                   |                  |             |                   |           | 1-4        |
| ● DMS-30PC-0-RS-C | 5.00             | ±200mV      | Standard          | 87K3671   | 54.00      |
| ● DMS-30PC-0-RL-C | 5.00             | ±200mV      | Low-Power         | 87K3670   | 58.00      |
| ● DMS-30PC-1-RS-C | 5.00             | ±2V         | Standard          | 87K3676   | 54.00      |
| ● DMS-30PC-1-RL-C | 5.00             | ±2V         | Low-Power         | 87K3675   | 58.00      |
| ● DMS-30PC-1-RH-C | 5.00             | ±2V         | High-Intensity    | 87K3674   | 58.00      |
| ● DMS-30PC-2-RS-C | 5.00             | ±20V        | Standard          | 87K3680   | 54.00      |
| ● DMS-30PC-2-RL-C | 5.00             | ±20V        | Low-Power         | 87K3679   | 58.00      |
| ● DMS-30PC-3-RL-C | 5.00             | ±200V       | Low-Power         | 87K3681   | 58.00      |

► CONTINUED ►

**DATEL® 3 1/2 DIGIT, MINIATURE LED/LCD PANEL METERS (CONT.)**

| Mfg. Part No.                       | Power Supply (V) | Input Range | Display Intensity | Stock No. | Price Each |  |
|-------------------------------------|------------------|-------------|-------------------|-----------|------------|--|
|                                     |                  |             |                   |           | 1-4        |  |
| ● DMS-30PC-1-BS-C                   | 5.00             | ±2V         | Standard          | 87K3672   | 65.00      |  |
| ● DMS-30PC-2-BS-C                   | 5.00             | ±20V        | Standard          | 87K3677   | 65.00      |  |
| <b>3 1/2 DIGIT, 0.56" GREEN LED</b> |                  |             |                   |           |            |  |
| ● DMS-30PC-0-GS-C                   | 5.00             | ±200mV      | Standard          | 87K3669   | 54.00      |  |
| ● DMS-30PC-1-GS-C                   | 5.00             | ±2V         | Standard          | 87K3673   | 54.00      |  |
| ● DMS-30PC-2-GS-C                   | 5.00             | ±20V        | Standard          | 87K3678   | 54.00      |  |
| <b>3 1/2 DIGIT, 0.40" LCD</b>       |                  |             |                   |           |            |  |
| ● DMS-30LCD-0-5-C                   | 5                | ±200mV      | LCD               | 87K3662   | 48.00      |  |
| ● DMS-30LCD-1-5-C                   | 5                | ±2V         | LCD               | 87K3664   | 48.00      |  |
| ● DMS-30LCD-0-9-C                   | 9                | ±200mV      | LCD               | 87K3663   | 46.00      |  |
| ● DMS-30LCD-1-9-C                   | 9                | ±2V         | LCD               | 87K3665   | 46.00      |  |
| ● DMS-30LCD-2-5B-C                  | 5                | ±20V        | LCD               | 16M5707   | 50.00      |  |

**DATEL® 4 1/2 DIGIT, MINIATURE LED/LCD PANEL METERS**



- Epoxy-encapsulated, 12-pin DIP package
- Panel or board mountable
- Display HOLD function standard
- 3 differential, dual, input voltage ranges
- Scientific-grade accuracy, ±2 counts
- 0 to 50°C temperature rating

The **DMS-40PC series** includes built-in color filter and bezel, precision, autozeroing, factory calibrated A/D converter, and optional high-intensity or low-power red LED's and BCD data outputs for CPU interface. LED miniature size: 2.17 x 0.92 x 0.56". The **DMS-40LCD series** includes user-selectable decimal point placement, low-battery annunciator, consumes typically 12.5mW, and offers optional backlit display and 9V battery power. LCD miniature size: 2.17 x 0.92 x 0.43".

**4 1/2 DIGIT, 0.52" RED LED**

| Mfg. Part No.          | Power Supply (V) | Input Range | Display Intensity | Stock No. | Price Each |  |
|------------------------|------------------|-------------|-------------------|-----------|------------|--|
|                        |                  |             |                   |           | 1-4        |  |
| ● DMS-40PC-1-RH-C      | 5.00             | ±2V         | High-Intensity    | 87K3688   | 82.00      |  |
| ● DMS-40PC-1-RL-C      | 5.00             | ±2V         | Low-Power         | 87K3690   | 82.00      |  |
| ● DMS-40PC-1-RL-BCD-C* | 5.00             | ±2V         | Low-Power         | 87K3689   | 86.00      |  |
| ● DMS-40PC-1-RS-C      | 5.00             | ±2V         | Standard          | 87K3691   | 78.00      |  |
| ● DMS-40PC-2-RL-C      | 5.00             | ±20V        | Low-Power         | 87K3692   | 82.00      |  |
| ● DMS-40PC-2-RS-C      | 5.00             | ±20V        | Standard          | 87K3693   | 78.00      |  |

**4 1/2 DIGIT, 0.52" GREEN LED**

|                   |      |     |          |         |       |  |
|-------------------|------|-----|----------|---------|-------|--|
| ● DMS-40PC-1-GS-C | 5.00 | ±2V | Standard | 87K3687 | 78.00 |  |
|-------------------|------|-----|----------|---------|-------|--|

**4 1/2 DIGIT, 0.40" LCD**

|                     |      |          |     |         |       |  |
|---------------------|------|----------|-----|---------|-------|--|
| ● DMS-40LCD-0/1-5-C | 5.00 | ±200mV   | LCD | 87K3684 | 78.00 |  |
| ● DMS-40LCD-1/2-5-C | 5.00 | ±2V/±20V | LCD | 87K3685 | 78.00 |  |

\*BCD data outputs for CPU interface (83967)

**DATEL® DMS-30DR SERIES DAYLIGHT READABLE, AUTO-DIMMING 3 1/2 DIGIT LED PANEL METERS**



- Super-bright LED display is readable in direct sunlight
- Autodim circuitry automatically adjusts display brightness
- External brightness adjustment for customizing intensity
- Large 0.56", easy-to-read red LED display
- 4 differential input ranges provide ±1 count accuracy
- Single +5V supply — less than 1W power consumption



**DMS-30DR series** digital panel meters offer LED displays that are readable in direct sunlight — no special filters or shading devices are required. Features Autodim circuitry that automatically adjusts the display's brightness to suit viewing environments, ranging from total darkness to full, brilliant sunlight. A user-accessible brightness adjustment pin allows custom intensity settings or display matching in multiple display applications. Available in four differential input voltage ranges: ±200mV, ±2V, ±20V and ±200V. Each meter incorporates a precision, ultra-stable voltage reference and is factory calibrated prior to encapsulation. The meter's 12-pin, component-like, DIP package is both vibration- and moisture-proof, making them ideal for harsh environments. Each meter includes a built-in color filter and bezel, and is easily mounted in either panels or PC boards. Miniature housing size: 0.92H x 2.17W x 0.56"D.

| Mfg. Part No.    | Input Range | Power Supply (V) | Stock No. | Price Each |  |
|------------------|-------------|------------------|-----------|------------|--|
|                  |             |                  |           | 1-4        |  |
| ● DMS-30DR-0-R-C | ±200mV      | 5.00             | 29M7512   | 65.00      |  |
| ● DMS-30DR-1-R-C | ±2V         | 5.00             | 29M7513   | 65.00      |  |

➔ CONTINUED ➔

**DATEL® DMS-30DR SERIES DAYLIGHT READABLE, AUTO-DIMMING 3 1/2 DIGIT LED PANEL METERS (CONT.)**

| Mfg. Part No.    | Input Range | Power Supply (V) | Stock No. | Price Each |  |
|------------------|-------------|------------------|-----------|------------|--|
|                  |             |                  |           | 1-4        |  |
| ● DMS-30DR-2-R-C | ±20V        | 5.00             | 29M7514   | 65.00      |  |
| ● DMS-30DR-3-R-C | ±200V       | 5.00             | 29M7515   | 65.00      |  |

**DATEL® SELF-POWERED 2-WIRE DC VOLTMETERS**

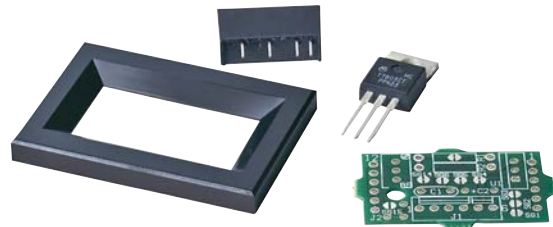


- Self-powered, only two connections required
- Low power consumption
- -25 to +60°C operating temperature
- Subminiature 1.38 x 0.88 x 1.0" package

**DMS-20LCD-0/1** and **DMS-20PC-3/7** are reverse polarity protected and epoxy-encapsulated. **DMS-20LCD-0** and **1** has built-in "Vdc" annunciator and constructed with rugged ABS plastic. **DMS-30PC-0/1/3** provide ideal digital replacements for analog panel meters. Accessories available, go online or call Newark.

| Mfg. Part No.        | Input Range (Vdc) | Display                         | Stock No. | Price Each |  |
|----------------------|-------------------|---------------------------------|-----------|------------|--|
|                      |                   |                                 |           | 1-4        |  |
| ● DMS-20LCD-0-DCM-C  | 6.50 to 18.00     | 3-1/2 digit 0.37" high LED      | 87K3627   | 30.00      |  |
| ● DMS-20LCD-1-DCM-C  | 8.00 to 50.00     | 3 digit 0.37" high LED          | 87K3630   | 30.00      |  |
| ● DMS-20PC-0-DCM-C   | 4.50 to 19.99     | 3-1/2 digit 0.37" high Red      | 87K3637   | 50.00      |  |
| ● DMS-20PC-0-DCM-B-C | 4.50 to 19.99     | 3-1/2 digit 0.37" high Blue     | 87K3636   | 59.00      |  |
| ● DMS-20PC-1-DCM-C   | 8.00 to 50.00     | 3-1/2 digit 0.37" high Red      | 87K3645   | 50.00      |  |
| ● DMS-20PC-1-DCM-B-C | 8.00 to 50.00     | 3-1/2 digit 0.37" high Blue LED | 87K3644   | 59.00      |  |
| ● DMS-20PC-3-DCM-C   | 2.00 to 11.00     | 3 digit 0.37" high Red          | 87K3658   | 50.00      |  |
| ● DMS-20PC-7-DCM-C   | -36.0 to -75.0    | 3 digit 0.37" high Red          | 87K3661   | 50.00      |  |

**DATEL® DMS PANEL METER ACCESSORIES**



| Mfg. Part No.  | Description  | Stock No. | Price Each |
|----------------|--|-----------|------------|
| ● 7805SR-C     | High-Efficiency Switch Regulator   | 87K6146   | 9.90       |
| ● DMS-PS1-CM-C | High-Efficiency, AC/DC Instrumentation Power Supply with Individually Isolated Outputs | 16M5643   | 54.00      |
| DMS-20-CP      | DMS-20 Panel Cutout Punch  | 01K5530   | 280.00     |
| DMS-30-CP      | DMS-30 Panel Cutout Punch  | 01K5609   | 280.00     |
| ● DMS-BZL3C    | DMS-20 Bezel Assembly  | 28M9623   | 4.00       |
| ● DMS-BZL4-C   | DMS-20 Bezel Assembly with EPDM Rubber Gasket  | 28M0113   | 6.00       |
| DMS-BZL1       | DMS-30/40 Bezel Assembly   | 11J1970   | 4.00       |
| ● DMS-BZL2-C   | DMS-30/40 Bezel Assembly with EPDM Rubber Gasket                                       | 39M8063   | 6.00       |
| ● DMS-EB2-C    | Multi-Purpose Application Board for DMS-20   | 16M5642   | 14.00      |
| ● DMS-EB-C     | Multi-Purpose Application Board for DMS-30 and DMS-40 Series Meters                    | 16M5635   | 14.00      |

(83969)

**FIND IT • BUY IT • GET IT • DONE**

*"It's easy to do business with Newark online or by phone."*

(116883)

VOLTS MINI • POWER MONITOR

DIGITAL VOLTMETERS FOR OEMS



OEM4-LED

OEM 1B

OEM 1B-LED

- Ultra-miniature, component-style
- Ultra-low current 150µA (LCD) and 50mA (LED) typical
- Selectable decimal points

- 200mV full scale reading
- 4-digit data display module

Provided in a compact DIL package, the OEM series can be easily integrated into applications where space constraints exist and the full functionality of a digital voltmeter is required. Mfg. part no. OEM 1B is a metal framed LCD meter and mfg. part no. OEM 1B-LED is a potted LED meter with an integral red filter. Both meters have on-board calibration adjustment. Mfg. part no. OEM4-LED has four digits and three decimal places. It accepts a clocked serial bitstream which corresponds with the segments to be displayed, and a data enable input to latch the data on the LEDs and up to four external LEDs.

| Mfg. Part No. | Display | W x H        | Digits | Digit Height | Stock No. | Price Each |       |
|---------------|---------|--------------|--------|--------------|-----------|------------|-------|
|               |         |              |        |              |           | 1-4        | 5-9   |
| OEM 1B        | LCD     | 0.92 x 0.65" | 3 1/2  | 0.31"        | 02H6797   | 45.76      | 41.08 |
| OEM 1B-LED    | LED     | 0.92 x 0.65" | 3 1/2  | 0.31"        | 02H6798   | 26.35      | 23.66 |
| OEM4-LED      | LED     | 0.92 x 0.65" | 4      | 0.31"        | 28K2621   | 20.72      | 18.60 |

(73563)

SP SERIES SPLASHPROOF PANEL METERS



SP 100 and SP 300

SP 200 and SP 400

SP 400-BLUE

- Seal provides splashproof protection
- Ultra-low profile

- Low current: 50mA (LED), 350µA (LCD) typical
- Ultra-high accuracy: 0.1% (±1 count) typical

3 1/2 digit voltmeters with ±200VDC full-scale reading, 12-pin dual in-line connection versions are compatible with competing meters, while lower-cost 8- and 9-pin versions are better suited to new designs. 1.38"W x 0.88"H.

| Mfg. Part No. | Display | Digit Height | Pins | Stock No. | Price Each |       |
|---------------|---------|--------------|------|-----------|------------|-------|
|               |         |              |      |           | 1-9        | 10-24 |
| SP 100        | LED     | 0.37"        | 12   | 36C2858   | 42.70      | 40.30 |
| SP 200        | LCD     | 0.38"        | 12   | 36C2859   | 33.12      | 31.26 |
| SP 300        | LED     | 0.37"        | 8    | 36C2860   | 36.33      | 34.29 |
| SP 400        | LCD     | 0.38"        | 9    | 36C2861   | 28.84      | 27.22 |
| SP 400-BLUE   | LCD     | 0.38"        | 9    | 28K2622   | 32.48      | 30.66 |

(69457)

BIG-LITTLE LCD 3 1/2-DIGIT PANEL METERS



BL100202-U

BL-300202-01-U

- High-Contrast LCD Readout
- User-Selectable Decimal Point
- Low Power Consumption
- Auto-Polarity (-) Displayed



BL-531201-01-U

BL series digital panel meters feature 0.5" (12.70) high digits on high-contrast LCD. 1999-count maximum. Accuracy: ±0.1% reading +2 count. Resolution: one art in 2000. User-selectable decimal point. Automatic polarity (-) displayed. BL-100 is surface/window mount. BL-130 is bezel mount. Both types have a 13-pin terminal. BL-176 is flat pack DPM with solder pad connections. Order 176-BK bezel kit with mounting hardware separately below. BL-300 and BL-500 are LCD digital panel meters with LED backlighting. Easily read in dark or bright sunlight. Digits are 0.5" (12.70) high. 1999-count maximum. Decimal point user-selectable. Auto polarity. Red or green backlight. Backlight power: 5VDC. Voltage range: 4.7V to 5.25V maximum. Red current: 130mA to 200mA, 165mA nominal. Green current: 75mA to 160mA, 115mA nominal. 13-pin terminal. Operating temperature range: -20° to +60°C. BL-300 positive image dark on green background; BL-500 negative image, red segments on dark background.

➔ CONTINUED ➔

BIG-LITTLE LCD 3 1/2-DIGIT PANEL METERS (CONT.)

WINDOW-MOUNT DIGITAL PANEL METERS

| Mfg. Part No. | Power         | Input   | Stock No. | Price Each |
|---------------|---------------|---------|-----------|------------|
| BL100202-U    | +5V and -5VDC | 2VDC    | 46F164    | 59.25      |
| BL-100-301-U  | +5VDC         | 200mVDC | 46F165    | 67.05      |
| BL-100-302-U  | +5VDC         | 2VDC    | 46F166    | 67.05      |
| BL-100-303-U  | +5VDC         | 20VDC   | 90F9684   | 67.05      |

BEZEL-MOUNT DIGITAL PANEL METERS

| Mfg. Part No. | Power         | Input   | Stock No. | Price Each |
|---------------|---------------|---------|-----------|------------|
| BL130201-U    | +5V and -5VDC | 200mVDC | 46F169    | 63.15      |
| BL130202-U    | +5V and -5VDC | 2VDC    | 46F170    | 63.15      |
| BL-130-301-U  | +5VDC         | 200mVDC | 46F171    | 70.95      |
| BL-130-302-U  | +5VDC         | 2VDC    | 46F172    | 70.95      |
| BL130303U     | +5VDC         | 20VDC   | 90F9686   | 70.95      |

FLAT-PACK DIGITAL PANEL METERS

| Mfg. Part No. | Power         | Input   | Stock No. | Price Each |
|---------------|---------------|---------|-----------|------------|
| BL176201-U    | +5V and -5VDC | 200mVDC | 46F175    | 41.25      |
| BL-176-202    | +5V and -5VDC | 2VDC    | 46F176    | 41.25      |
| BL176301-U    | +5VDC         | 200mVDC | 46F177    | 59.25      |
| BL-176-302    | +5VDC         | 2VDC    | 46F178    | 59.25      |
| BL176303U     | +5VDC         | 20VDC   | 90F9688   | 59.25      |

GREEN BACKLIGHT, WINDOW-MOUNT DPMs

|                 |       |      |         |       |
|-----------------|-------|------|---------|-------|
| BL-300-302-01-U | +5VDC | 2VDC | 87F2572 | 83.60 |
|-----------------|-------|------|---------|-------|

GREEN BACKLIGHT, BEZEL-MOUNT DPMs

|                 |               |         |         |       |
|-----------------|---------------|---------|---------|-------|
| BL-330-202-01-U | +5V and -5VDC | 2VDC    | 87F2574 | 79.70 |
| BL-330-301-01-U | +5VDC         | 200mVDC | 87F2575 | 87.50 |
| BL330302-01U    | +5VDC         | 2VDC    | 87F2562 | 87.50 |

RED BACKLIGHT, BEZEL-MOUNT DPMs

|              |       |      |         |       |
|--------------|-------|------|---------|-------|
| BL530302-01U | +5VDC | 2VDC | 87F2536 | 94.00 |
|--------------|-------|------|---------|-------|

BEZEL KIT

| Mfg. Part No. | Description | Stock No. | Price Each |
|---------------|-------------|-----------|------------|
| 176BK         | Bezel kit   | 89F4226   | 5.50       |

(3468)

D-CK 920 SERIES MULTIFUNCTION 2 1/2 DIGITAL PANEL METERS



AC



DC

- Display: 0.38" LED high intensity
- AC voltage accuracy: 1% of reading ±1 count between 45 and 65Hz
- AC current TRMS sensing accuracy: 2% of reading ±1 count
- Frequency accuracy: 0.5% from 45-65Hz ±1 count
- DC volts accuracy: 0.1% of reading ±1 count
- DC amperes accuracy: 1% of reading ±1 count

Operating temperature: -20°C to +60°C. Storage temperature: -40°C to +85°C. Relative humidity non-condensing: 0-95%

| Mfg. Part No. | Signal Input Type                 | Stock No. | Price Each |
|---------------|-----------------------------------|-----------|------------|
| D-CK920-AC-3  | Selectable AC Voltage and Current | 84K7373   | 257.40     |
| D-CK920-DC-2  | Selectable DC Voltage and Current | 84K7374   | 140.00     |

(88770)

GIMA® SERIES 3-PHASE METERS



Simpson's GIMA® series replaces ammeters, voltmeters, switches, power factor and kW indicators, and kWh meters. Provides a single source of instrumentation for all measurement and metering requirements. Offers accurate, high-speed, continuous measurement, regardless of harmonics and waveform interruptions. "Auto-Commissioning" ensures that a reverse current transformer connection will not cause reading errors. Per phase kW and power factor allow cross-phase connection errors to be quickly and easily detected. Full 4-digit resolution of single-phase values and 5-digit resolution of 3-phase values. Offers maximum visibility with a custom backlit LCD display. The display is fully visible under most conditions and from all angles. Clear display legends ensure simple reading with no multipliers required. Power: 115VAC. Input current: 5A. Also available with 230VAC power; go online or call. CE compliant.



MEASUREMENT CAPABILITIES

| Parameter      | Type G100 | Type G200 | Type G300 | Type G400 |
|----------------|-----------|-----------|-----------|-----------|
| Phase Amps     | Yes       | Yes       | Yes       | Yes       |
| Phase Volts    | Yes       | Yes       | Yes       | Yes       |
| Line Volts     | Yes       | Yes       | Yes       | Yes       |
| Per Phase PF   | Yes       | Yes       | Yes       | Yes       |
| Per Phase kW   | Yes       | Yes       | Yes       | Yes       |
| Per Phase kvar | No        | No        | Yes       | Yes       |
| Per Phase kva  | No        | No        | No        | Yes       |

➔ CONTINUED ➔

POWER MONITOR • TIMERS – 1/16 DIN

GIMA® SERIES 3-PHASE METERS (CONT.)

| Parameter           | Type G100 | Type G200 | Type G300 | Type G400 |
|---------------------|-----------|-----------|-----------|-----------|
| 3-Phase PF          | Yes       | Yes       | Yes       | Yes       |
| 3-Phase kW          | Yes       | Yes       | Yes       | Yes       |
| 3-Phase kvar        | No        | No        | Yes       | Yes       |
| 3-Phase kva         | No        | No        | No        | Yes       |
| Frequency           | Yes       | Yes       | Yes       | Yes       |
| kWh                 | No        | Yes       | Yes       | Yes       |
| Capacitive kvarh    | No        | No        | Yes       | Yes       |
| Inductive kvarh     | No        | No        | Yes       | Yes       |
| Total kvarh         | No        | No        | Yes       | Yes       |
| Import kvarh        | No        | No        | No        | Yes       |
| Current Demand      | Yes       | Yes       | Yes       | Yes       |
| Voltage Demand      | Yes       | Yes       | Yes       | Yes       |
| kW Demand           | No        | No        | Yes       | Yes       |
| Peak Amps           | No        | No        | No        | Yes       |
| Peak Phase Volts    | No        | No        | No        | Yes       |
| Peak Current Demand | Yes       | Yes       | Yes       | Yes       |
| Peak Voltage Demand | Yes       | Yes       | Yes       | Yes       |
| Neutral Current     | No        | No        | No        | Yes       |

GIMA® SERIES 3 PHASE METERS

| Mfg. Part No. | Input    | Stock No. | Price Each |
|---------------|----------|-----------|------------|
| G100-1-1-1-0  | 120/208V | 25C4129   | 477.16     |
| G100-1-3-1-0  | 277/408V | 25C4130   | 477.16     |
| G200-1-1-1-0  | 120/208V | 20C3982   | 532.20     |
| G200-1-2-1-0  | 120/240V | 20C3984   | 532.20     |
| G200-1-3-1-0  | 277/480V | 20C3986   | 532.20     |
| G200-1-4-1-0  | 63/110V  | 20C3987   | 532.20     |
| G300-1-1-1-0  | 120/208V | 25C4131   | 587.27     |
| G300-1-3-1-0  | 277/480V | 25C4132   | 587.27     |
| G400-1-1-1-0  | 120/208V | 20C3978   | 666.31     |
| G400-1-3-1-0  | 277/480V | 20C3981   | 666.31     |

(61276)

GIMA® ACCESSORIES



370xx



3-PHASE CURRENT TRANSFORMERS

Can be used to monitor AC current when the current level is too high for the meter.

| Mfg. Part No. | Current Ratio | Stock No. | Price Each |
|---------------|---------------|-----------|------------|
| 37026         | 50:5          | 20C3988   | 105.53     |
| 37027         | 100:5         | 25C2456   | 105.53     |
| 37028         | 150:5         | 25C4197   | 105.53     |
| 37029         | 200:5         | 20C3991   | 105.53     |
| 37030         | 300:5         | 27C0306   | 105.53     |

(72388)

POWER LOGIC POWER METER 800 INPUT/OUTPUT MODULE

Features:

- Plug and play design in a compact (96 x 96mm) unit
- Link several analog and digital I/O inputs to a single PM820
- View 3 phases, plus neutral, for current or voltage at the same time
- Modular design allows for easy upgrade path
- Samples continuously at 128 times per cycle; no blind spots in data collection

Specifications:

- Digital input voltage range: 20-150VAC/DC
- Digital output voltage range: 0-240VAC, 0-30VDC
- Analog input voltage/current range: 0-5VDC or 4-20mA user selectable
- 80kb onboard logging



**SQUARE D**  
Schneider Electric



| Mfg. Part No. | Description  | Stock No. | Price Each |
|---------------|--|-----------|------------|
| PM820         | Power Meter with integrated display, THD, alarming | 89H5544   | 2474.61    |

(90756)

MODEL PR300 POWER AND ENERGY METERS

Just Added

YOKOGAWA



- Save on cost, wiring and space
- Demand measurement
- Convert the phase and wire system of an AC power system and an input voltage circuit to a universal format
- Compatible with ANSI 4-inch round for size and DIN 96-square instrument size
- Standard equipped with an RS-485 communication function and capable of Ethernet communication

Panel-mount power and energy meters with large, three-row displays integrate all the measuring functions required for power management in locations such as factories and buildings into a single unit. With the objective of working toward the preservation of the global environment by saving energy and performing equipment maintenance, the PR300 series is designed to display and output the energy of various types of electrical equipment. Equipped with a transducer function for power (active, regenerative, reactive and apparent), voltage current, frequency and power factor (4 to 20mA DC). Enable the measurement of the maximum and minimum values of current as well as the use of the external digital input to measure energy at arbitrary times. Capable of outputting pulses proportional to energy (one measurement item from active, regenerative, reactive and apparent energy). Power line indications A, B and C provided for overseas use, in addition to R, S and T.

UNIVERSAL VOLTAGE INPUT (150V, 300V, 600V) / 1A AC

| Mfg. Part No.          | Phase and Wire System     | Output Function   | Stock No. | Price Each |
|------------------------|---------------------------|-------------------|-----------|------------|
| PR300-3-1-0-0-0-6-A-0  | Universal 3-Phase, 3-Wire | ...               | 59M6604   | 595.00     |
| PR300-3-1-1-0-0-6-A-0  | Universal 3-Phase, 3-Wire | 1 Analog          | 59M6605   | 625.00     |
| PR300-3-1-2-0-0-6-A-0  | Universal 3-Phase, 3-Wire | 1 Pulse           | 59M6606   | 635.00     |
| PR300-3-1-3-3-3-6-A-0  | Universal 3-Phase, 3-Wire | 1 Analog, 1 Pulse | 59M6607   | 895.00     |
| PR300-4-1-0-0-0-6-A-0  | Universal 3-Phase, 4-Wire | ...               | 59M6612   | 595.00     |
| PR300-4-1-1-0-0-6-A-0  | Universal 3-Phase, 4-Wire | 1 Analog          | 59M6613   | 625.00     |
| PR300-4-1-2-0-0-6-A-0  | Universal 3-Phase, 4-Wire | 1 Pulse           | 59M6614   | 635.00     |
| PR300-4-1-3-3-3-6-A-0* | Universal 3-Phase, 4-Wire | 1 Analog, 1 Pulse | 59M6615   | 985.00     |
| PR300-5-1-0-0-0-6-A-0  | 3-Phase, 4-Wire           | ...               | 59M6620   | 595.00     |
| PR300-5-1-1-0-0-6-A-0  | 3-Phase, 4-Wire           | 1 Analog          | 59M6621   | 625.00     |
| PR300-5-1-2-0-0-6-A-0  | 3-Phase, 4-Wire           | 1 Pulse           | 59M6622   | 635.00     |
| PR300-5-1-3-3-3-6-A-0* | 3-Phase, 4-Wire           | 1 Analog, 1 Pulse | 59M6623   | 985.00     |

UNIVERSAL VOLTAGE INPUT (150V, 300V, 600V) / 5A AC

| Mfg. Part No.          | Phase and Wire System     | Output Function   | Stock No. | Price Each |
|------------------------|---------------------------|-------------------|-----------|------------|
| PR300-3-2-0-0-0-6-A-0  | Universal 3-Phase, 3-Wire | ...               | 59M6608   | 595.00     |
| PR300-3-2-1-0-0-6-A-0  | Universal 3-Phase, 3-Wire | 1 Analog          | 59M6609   | 625.00     |
| PR300-3-2-2-0-0-6-A-0  | Universal 3-Phase, 3-Wire | 1 Pulse           | 59M6610   | 635.00     |
| PR300-3-2-3-3-3-6-A-0* | Universal 3-Phase, 3-Wire | 1 Analog, 1 Pulse | 59M6611   | 895.00     |
| PR300-4-2-0-0-0-6-A-0  | Universal 3-Phase, 4-Wire | ...               | 59M6616   | 595.00     |
| PR300-4-2-1-0-0-6-A-0  | Universal 3-Phase, 4-Wire | 1 Analog          | 59M6617   | 625.00     |
| PR300-4-2-2-0-0-6-A-0  | Universal 3-Phase, 4-Wire | 1 Pulse           | 59M6618   | 725.00     |
| PR300-4-2-3-3-3-6-A-0* | Universal 3-Phase, 4-Wire | 1 Analog, 1 Pulse | 59M6619   | 985.00     |
| PR300-5-2-0-0-0-6-A-0  | 3-Phase, 4-Wire           | ...               | 59M6624   | 595.00     |
| PR300-5-2-1-0-0-6-A-0  | 3-Phase, 4-Wire           | 1 Analog          | 59M6625   | 625.00     |
| PR300-5-2-2-0-0-6-A-0  | 3-Phase, 4-Wire           | 1 Pulse           | 59M6626   | 635.00     |
| PR300-5-2-3-3-3-6-A-0* | 3-Phase, 4-Wire           | 1 Analog, 1 Pulse | 59M6627   | 985.00     |

\* RS-485 communication, Ethernet communication. Demand measurement (1 demand alarm output). (101630)

48 x 48 PROGRAMMABLE TIMERS



TMR series are multi/mono-function timers based in a 1/16th DIN (48 x 48mm) enclosure. Large dial allows easy setting and direct reading. Times are adjustable from 0.005sec to 300hrs. LEDs monitor power and output relays. Output relays rated 2 x 5A at 250VAC, SPDT. Supply voltage: 12-240VDC, 24-240VAC. Can be panel mounted.



| Function    | Description  |
|-------------|--|
| A, A1, A2   | Delay-On-Make  |
| H1, H2      | Timing on Energization - Interval                                    |
| Q1          | Star-Delta   |
| Q2          | Star-Delta 2   |
| D-Di        | Cycle-Timing: Repeat-Cycle: Symmetric Recycler                       |
| B           | Timing on Impulse: Single Shot                                       |
| C           | Timing After Impulse - Delay-On-Break - Delay-Off w/ constant supply |
| W           | Timing After Impulse on Control Contact                              |
| G           | Cyclic Function  |
| Ac          | Timing After Closing and Opening of Control Contact                  |
| Bw          | Pulse Output (Adjustable)  |
| L/Li - G/Gi | Cyclic Timing: Asymmetrical Recycler                                 |

| Mfg. Part No. | Mounting | Function                     | Stock No. | Price Each |
|---------------|----------|------------------------------|-----------|------------|
| 88886016      | 11-pin   | A, Ac, B, Bw, G, W           | 17M8555   | 73.12      |
| 88886116      | 8-pin    | A1, A2, D-Di, H1, H2, Q1, Q2 | 17M8557   | 73.12      |

➤ CONTINUED ➤

TIMERS – 1/16 DIN

48 x 48  
PROGRAMMABLE TIMERS (CONT.)

| Mfg. Part No. | Mounting | Function     | Stock No. | Price Each |  |
|---------------|----------|--------------|-----------|------------|--|
|               |          |              |           | 1-14       |  |
| ● 88886106    | 8-pin    | A            | 17M8556   | 70.20      |  |
| ● 88886516    | 11-pin   | L, Li, G, Gi | 18M4438   | 73.12      |  |

(79441)

EAGLE SIGNAL BRAND B856  
SERIES MULTIFUNCTION TIMERS



Feature a compact 1/16 DIN housing, precise digital setting, versatile functionality, and straightforward button-per-digit interface. Programmable to perform On-Delay, Off-Delay, Interval, or Repeat Cycle timing functions. Capable of performing the function of 2 separate timers. DPDT relay contact output. All programming is done from the front panel. Display: dual-line LCD.

| Mfg. Part No. | Description                          | Stock No. | Price Each |  |
|---------------|--------------------------------------|-----------|------------|--|
|               |                                      |           | 1-5        |  |
| B856-500      | Timed DPDT Output                    | 91F3079   | 110.25     |  |
| B856-511      | 1 Timed, 1 Instantaneous SPDT Output | 91F3080   | 116.55     |  |

(15427)

EAGLE SIGNAL BRAND  
SERIES B846 TIMER



Combine simplicity of dial entered time presetting with advanced multimode functionality. Housed in a compact 1/16 DIN package. Selectable time ranges from 0.05 seconds to 100 hours. Field configurable to operate in On-Delay, Off-Delay, Interval or repeat cycle timing modes. B866-511 includes instantaneous contacts. Industry standard 8 or 11 pin socket connection. DIN rail mounted or panel mounted with optional hardware. NEMA 4 front panel and IEC 801 level 4 noise immunity. Universal power supply for 100-240VAC or 24-240VDC operation. Setting accuracy: ±5%. Repeat accuracy: ±0.3%.

| Mfg. Part No. | Description                             | Stock No. | Price Each |  |
|---------------|---|-----------|------------|--|
|               |   |           | 1-24       |  |
| B866-500      | Dial Set Timer with Multi-Function      | 20K7201   | 72.54      |  |
| B866-511      | Dial Set Timer w/Instantaneous Contacts | 23K8375   | 79.24      |  |

ACCESSORIES

| Mfg. Part No. | Description   | Stock No. | Price Each |
|---------------|---------------|-----------|------------|
| 60SR2P06      | 8-Pin Socket  | 16F6462   | 13.02      |
| 60SR3P06      | 11-Pin Socket | 16F6463   | 18.88      |

(3059)

MULTI-MODE  
TIMERS



Analog Type



Digital Type

- Analog and digital available
- Delayed DPDT or delayed SPDT plus instantaneous SPDT
- 60 msec. max. reset

- 8- or 11-pin termination
- Dimensions: 1.57H x 1.42W x 2.53"D (40 x 36 x 64.2mm)
- UL listed, CE

GT3A is analog setting type, has contacts rated 250VAC/5A, 30VDC/5A max. POWER indicator flashes during time-delay operation, OUT indicator remains on while output on. Life expectancy: 20,000,000 operations mechanical, 100,000 electrical. GT3D is digital set type with contacts rated 240VAC/5A, 24VDC/5A max. Back-lit LCD display shows elapsed time or time remaining, LED OUT indicator remains lit while output on. Life expectancy: 10,000,000 operations mechanical, 100,000 electrical. Other time ranges available; go online or call.

ANALOG MODELS

| Mfg. Part No. | Contacts             | Time Range            | Voltage    | Pins | Stock No. | Price Each |  |
|---------------|----------------------|-----------------------|------------|------|-----------|------------|--|
|               |                      |                       |            |      |           | 1-14       |  |
| GT3A-2AF20    | Delayed SPDT         | 0.05 sec. to 180 hr.  | 100-240VAC | 8    | 96F3881   | 66.24      |  |
| GT3A-3AF20    | Delayed DPDT         | 0.05 sec. to 180 hr.  | 100-240VAC | 8    | 96F3884   | 60.94      |  |
| GT3F-2AF20    | Delayed SPDT + Relay | 0.05 sec. to 600 sec. | 100-240VAC | 8    | 50B4190   | 78.83      |  |
| GT3W-A11AF20N | Delayed DPDT         | 0.1 sec. to 6 hr.     | 100-240VAC | 8    | 26H1600   | 78.83      |  |
| GT3A-4AF20    | Delayed DPDT         | 0.05 sec. to 180 hr.  | 100-240VAC | 11   | 96F3887   | 60.94      |  |
| GT3A-4AD24    | Delayed DPDT         | 0.05 sec. to 180 hr.  | 24VAC/VDC  | 11   | 92B4668   | 60.94      |  |

➔ CONTINUED ➔

● Indicates RoHS Compliant

MULTI-MODE TIMERS (CONT.)

DIGITAL MODELS

| Mfg. Part No. | Contacts             | Time Range            | Voltage    | Pins | Stock No. | Price Each |  |
|---------------|----------------------|-----------------------|------------|------|-----------|------------|--|
|               |                      |                       |            |      |           | 1-14       |  |
| GT3D-2AF20    | Delayed SPDT + Relay | 0.01 sec. to 99.9 hr. | 100-240VAC | 8    | 96F3894   | 105.99     |  |
| GT3D-3AD24    | Delayed DPDT         | 0.01 sec. to 99.9 hr. | 24VAC/VDC  | 8    | 96F3898   | 105.99     |  |
| GT3D-3AF20    | Delayed DPDT         | 0.01 sec. to 99.9 hr. | 100-240VAC | 8    | 96F3897   | 105.99     |  |
| GT3D-4AD24    | Delayed DPDT         | 0.01 sec. to 99.9 hr. | 24VAC/VDC  | 11   | 96F3901   | 105.99     |  |
| GT3D-4AF20    | Delayed DPDT         | 0.01 sec. to 99.9 hr. | 100-240VAC | 11   | 96F3900   | 105.99     |  |

SOCKETS AND ACCESSORIES

| Mfg. Part No. | Description                         | Stock No. | Price Each |       |
|---------------|-------------------------------------|-----------|------------|-------|
|               |                                     |           | 1-14       | 15-24 |
| ● SR3B-05     | 11-Blade Snap-Mount DIN Rail Socket | 13M2994   | 7.14       | 6.45  |
| ● SR2P-06     | 8-Pin Snap-Mount DIN Rail Socket    | 13M2991   | 4.46       | 4.03  |
| ● SR3P-06     | 11-Pin Snap-Mount DIN Rail Socket   | 18M9335   | 7.14       | 6.45  |
| ● SR6P-M08G   | 8-Pin Wiring Socket Adapter         | 13M3003   | 7.49       | 6.77  |
| ● SR6P-M11G   | 11-Pin Wiring Socket Adapter        | 13M3004   | 15.63      | 14.13 |
| ● RTB-G01     | Panel Mount Adapter                 | 96F3910   | 3.81       | 3.44  |

(2738)

10A MULTIFUNCTION  
TIMERS



- Time range: 0.1 sec-600 hrs
- DPDT (delayed outputs) contacts
- Reset time: 0.1 sec. max
- Mechanical life expectancy: 50,000,000 operations

Feature ON-delay/interval or signal OFF-delay/single shot and high-repeat accuracy of ±0.25%. Contacts rated 10A resistive at 240VAC/30VDC; 7A inductive at 240VAC/30VDC. 1.575"(40H) x 1.417"(36W) x 2.362"(60D). 11-blade socket SR3B-05. 8-pin socket SR2P-06. 11-pin sockets SR3P-05 and SR3P-05C.

| Mfg. Part No. | Timing Function                         | Input Voltage | Termination | Stock No. | Price Each |  |
|---------------|---|---------------|-------------|-----------|------------|--|
|               |   |               |             |           | 1-14       |  |
| RTE-P2AF20    | ON/OFF delay, OFF-delay, 1-shot         | 100-240VAC    | 11-pin      | 83H4153   | 60.53      |  |
| RTE-P2D12     | ON/OFF delay, OFF-delay, 1-shot         | 12VDC         | 11-pin      | 82H8176   | 60.53      |  |
| RTE-P2AD24    | ON/OFF delay, OFF-delay, 1-shot         | 24V AC/DC     | 11-pin      | 83H4152   | 60.53      |  |
| RTE-B2AF20    | ON/OFF delay, OFF-delay, 1-shot         | 100-240VAC    | 11-blade    | 83H4147   | 60.53      |  |
| RTE-B2D12     | ON/OFF delay, OFF-delay, 1-shot         | 12VDC         | 11-blade    | 83H4148   | 60.53      |  |
| RTE-B2AD24    | ON/OFF delay, OFF-delay, 1-shot         | 24V AC/DC     | 11-blade    | 78H1740   | 60.53      |  |
| RTE-P1AF20    | On-Delay, Interval, cycle OFF, cycle ON | 100-240VAC    | 8-pin       | 83H4150   | 48.95      |  |
| RTE-B1AF20    | On-Delay, Interval, cycle OFF, cycle ON | 100-240VAC    | 11-blade    | 82H2304   | 56.67      |  |
| RTE-P1D12     | On-Delay, Interval, cycle OFF, cycle ON | 12VDC         | 8-pin       | 83H4151   | 48.95      |  |
| RTE-P1AD24    | On-Delay, Interval, cycle OFF, cycle ON | 24V AC/DC     | 8-pin       | 83H4149   | 48.95      |  |
| RTE-B1D12     | On-Delay, Interval, cycle OFF, cycle ON | 12VDC         | 11-blade    | 83H4146   | 56.67      |  |
| RTE-B1AD24    | On-Delay, Interval, cycle OFF, cycle ON | 24V AC/DC     | 11-blade    | 83H3624   | 56.67      |  |

(2740)

ON-DELAY  
TIMERS



- Delay-on-make (ON delay) function
- DPDT or SPDT + instantaneous SPDT contacts
- Contact rating: 24VDC/120VAC 5A, 240VAC 3A
- 8 time ranges
- Adjustable from 0.1 sec. to 10 min. or 0.1 min. to 10 hours
- Large, clear knob for easy setting
- Repeat error ±0.2% maximum
- Instant monitoring of operational status by LED indicators
- 8-pin, octal base

GE1A series timers are single-function (On Delay) time-delay relays. Extremely easy to configure for a wide variety of set times, the GE1A series serves as a simple "plug-and-play" timing solution. Handles settings up to 10 hours. 2 different contact configurations are designed to meet most application requirements. With IDEC's accessories, DIN rail, socket or through-panel (with a clear plastic protective cover) mounting configurations are available.

➔ CONTINUED ➔

**ON-DELAY TIMERS (CONT.)**  
TIMERS

| Mfg. Part No. | Contacts                 | Time Range        | Rated Voltage | Stock No. | Price Each |       |
|---------------|--------------------------|-------------------|---------------|-----------|------------|-------|
|               |                          |                   |               |           | 1-14       | 15-24 |
| GE1A-B10HA110 | Del. SPDT and Inst. SPDT | 0.1min. to 10hr.  | 110-120VAC    | 83C9524   |            | 27.83 |
| GE1A-B10HA220 | Del. SPDT and Inst. SPDT | 0.1min. to 10hr.  | 220-240VAC    | 83C9525   |            | 27.83 |
| GE1A-B10HAD24 | Del. SPDT and Inst. SPDT | 0.1min. to 10hr.  | 24VAC/VDC     | 83C9523   |            | 27.83 |
| GE1A-B10MA110 | Del. SPDT and Inst. SPDT | 0.1sec. to 10min. | 110-120VAC    | 83C9527   |            | 25.84 |
| GE1A-B10MAD24 | Del. SPDT and Inst. SPDT | 0.1sec. to 10min. | 24VAC/VDC     | 83C9526   |            | 25.84 |
| GE1A-C10HAD24 | Delayed DPDT             | 0.1min. to 10hr.  | 24VAC/VDC     | 83C9529   |            | 27.83 |
| GE1A-C10HA110 | Delayed DPDT             | 0.1min. to 10hr.  | 110-120VAC    | 83C9530   |            | 27.83 |
| GE1A-C10MA110 | Delayed DPDT             | 0.1sec. to 10min. | 110-120VAC    | 83C9532   |            | 25.84 |
| GE1A-C10MAD24 | Delayed DPDT             | 0.1sec. to 10min. | 24VAC/VDC     | 72C6940   |            | 25.84 |

**ACCESSORIES**

| Mfg. Part No. | Description   | Stock No. | Price Each |       |
|---------------|---|-----------|------------|-------|
|               |   |           | 1-24       | 25-49 |
| ● SR6P-M08G   | Screw Terminal Socket Adapter for Panel Mounting                  | 13M3003   | 7.49       | 6.77  |
| ● GE9Z-AD     | Panel Mount Adapter   | 83C9534   | 2.07       | 1.90  |
| ● GE9Z-C48    | Clear Plastic Dust Cover  | 83C9535   | 2.59       | 2.38  |
| ● SR2P-06     | 8-Pin Snap Mount DIN Rail Socket                                  | 13M2991   | 4.46       | 4.03  |
| ● SY4S-05     | Standard DIN Rail, for use with Optional Mounting Clip SFA-202    | 13M3022   | 8.70       | 7.69  |
| ● SY4S-05C    | Finger-Safe DIN Rail, for use with Optional Mounting Clip SFA-202 | 13M3023   | 10.41      | 9.19  |
| ● SFA-202     | Mounting Clip for use with DIN Rails                              | 16F5300   | 0.28       | 0.25  |

(72441)

**ON-DELAY TIMERS**



**GT5Y series** on-delay timers with four selectable time ranges feature control setting set by hand or screwdriver. Power ON and timing and LED indicators. Operating temperature -10°C to +50°C.



**100-120VAC**

| Mfg. Part No. | Time Range          | Contacts | Stock No. | Price Each |       |
|---------------|---------------------|----------|-----------|------------|-------|
|               |                     |          |           | 1-14       | 15-24 |
| GT5Y-4SN1A100 | 0.1 sec. to 10 min. | 4PDT     | 66F4213   | 39.53      | 35.43 |
| GT5Y-4SN3A100 | 0.1 sec. to 30 min. | 4PDT     | 16F281    | 39.53      | 35.43 |
| GT5Y-4SN6A100 | 0.1 sec. to 60 min. | 4PDT     | 16F5291   | 39.53      | 35.43 |
| GT5Y-2SN1A100 | 0.1 sec. - 10 min.  | DPDT     | 16F280    | 39.53      | 35.43 |
| GT5Y-2SN3A100 | 0.1 sec. to 30 min. | DPDT     | 30B6301   | 39.53      | 35.43 |
| GT5Y-2SN6A100 | 0.1 sec. to 60 min. | DPDT     | 30B6306   | 39.53      | 35.43 |

**24VDC**

|              |                     |      |         |       |       |
|--------------|---------------------|------|---------|-------|-------|
| GT5Y-4SN1D24 | 0.1 sec. to 10 min. | 4PDT | 16F5292 | 39.53 | 35.43 |
| GT5Y-4SN3D24 | 0.1 sec. to 30 min. | 4PDT | 16F5293 | 39.53 | 35.43 |
| GT5Y-4SN6D24 | 0.1 sec. to 60 min. | 4PDT | 16F5294 | 37.21 | ...   |

**12VDC**

|              |                     |      |         |       |       |
|--------------|---------------------|------|---------|-------|-------|
| GT5Y-2SN1D12 | 0.1 sec. to 10 min. | DPDT | 30B6300 | 39.53 | 35.43 |
|--------------|---------------------|------|---------|-------|-------|

**SOCKETS AND ACCESSORIES**

Snap on to 1.38" (35mm) DIN rails.

| Mfg. Part No. | Description                                | Mounting Clip (Opt.) | Stock No. | Price Each |       |
|---------------|--|----------------------|-----------|------------|-------|
|               |  |                      |           | 1-24       | 25-49 |
| ● SY4S-51     | Panel Mt. Socket w/Solder Terms.           | SFA-302              | 13M3024   | 1.24       | 1.10  |
| ● SY4S-61     | PC Board Mount Socket                      | SFA-302              | 13M3025   | 1.38       | 1.22  |
| ● SY4S-62     | PC Board Mount Socket                      | SY4S-51F1            | 13M3026   | 1.38       | 1.22  |
| ● SFA-302     | Mounting Clip for SY4S-51, SY4S-61 Sockets |                      | 16F5301   | 0.20       | 0.18  |
| ● SFA-201     | Hold-down Clip                             |                      | 16C0565   | 0.54       | 0.48  |

(3071)

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(116882)

**E42DP SERIES MULTIFUNCTION/ MULTIRANGE TIMERS**



**Durant**

**Model E42DP55** DIN rail- or base-mounted multi-function timer has a 3-digit LCD display that provides 2 lines of data and function annunciators: upper row, 0.275", indicates elapsed or time remaining; the lower row, 0.157", the setpoint. User selectable operation functions include: On Delay, Off Delay, Cycle One Shot, Single Shot, Repeat Cycle, Repeat Cycle Delay =, and Repeat Cycle =. Time setting ranges can be programmed in seconds, minutes, or hours. The inputs range from 12-260VAC/VDC and work with contact closure or NPN or PNP devices. The SPST output is programmable as a NO or NC, 10A 380VAC or 220VDC relay. Size: 3.07H x 0.88W x 3.94"D. **Model E42DP50** is a door-mounted timer with similar characteristics as model E42DP55 plus a full 6-digit LCD and 6 keys. Size: 1.88H x 1.88W x 2.36"D.



E42DP55



E42DP50

| Mfg. Part No. | Description            | Stock No. | Price Each |        |
|---------------|------------------------|-----------|------------|--------|
|               |                        |           | 1-4        | 5-24   |
| ● E42DP55     | DIN Rail or Base Mount | 16F8939   |            | 80.25  |
| ● E42DP50     | Panel Mount            | 16F8936   |            | 116.63 |

(6626)

**MULTIFUNCTION TIME-DELAY RELAYS**



- 12A carry current
- 12-240VAC supply voltage
- Timing range: 0.1 sec to 9990 hrs.
- Tamper proof dust cover
- Universal power supply
- Thumb wheel adjustment for function / timing
- 2 LED status indicators
- 5 timing functions controlled via supply voltage
- 4 timing functions controlled via trigger input 1
- Timing function of memory latching relay
- Retains settings / keeps dust out
- Indicate coil power / timing out / output state



The TDRPRO 5100 series is a programmable multi-function, multi-voltage time-delay relay with 10 time ranges. The 2 indicator LED's allow the user to know when power is present at the coil, output is energized or if the relay is performing one of its 10 timing functions. Contact rating horsepower: 1/2 @ 120VAC, 1/2 @ 240VAC. Dimensions: 48L x 48W x 121.3H mm. For use with sockets **70-464-1** (8-pin screw terminals), **70-465-1** (11-pin screw terminals), **70-750D18-1** (8-pin DIN/panel mount logic style touch-safe), **70-740D11-1** (11-pin DIN/panel mount logic style touch-safe), **70-750E8-1** (8-pin DIN touch-safe), **70-750E11-1** (11-pin DIN touch-safe).

| Mfg. Part No. | Contacts | Input Voltage (VAC/VDC) | Pins | No. of Functions | Stock No. | Price Each |       |
|---------------|----------|-------------------------|------|------------------|-----------|------------|-------|
|               |          |                         |      |                  |           | 1-5        | 6-14  |
| ● TDRPRO-5100 | DPDT     | 12-240                  | 11   | 10               | 93K5594   | 102.34     | 93.94 |
| ● TDRPRO-5101 | SPDT     | 12-240                  | 8    | 10               | 93K5595   | 97.50      | 89.50 |
| ● TDRPRO-5102 | DPDT     | 12-240                  | 8    | 3                | 93K5596   | 102.34     | 93.94 |

(88936)

**1/16 DIN MULTIFUNCTION DIGITAL TIMER**



- ON-Delay, Twin Timer, Repeat Cycle, Interval and Cumulative Timing Functions Available
- Large Backlit Negative LCD Display for Dim Lighting Conditions and Wide Angles
- Wide Variety of Timing Ranges from 0.0015 to 9999h
- Finger-Safe Terminal Sockets and Cover Available
- Supply Voltage: 100 to 240VAC, 50/60Hz or 24VAC/12 to 24VDC, 20% P-P Max. Ripple
- Operating Voltage: 85% to 110% VAC or 90% to 110% VDC
- Power Consumption: Approx. 6.2VA at 264VAC; 5.1VA at 26.4VAC; 2.4W at 12VDC
- Display: 11.5mm High Characters (Present Value); 6mm High Characters (Set Value); 7-Segment Negative Transmissive LCD
- Input Signals: Start, Gate (H5CX-A) and Reset; 1 or 20 ms Input Signal Width



Use the external DIP switch to configure the timer for simple jobs and the front panel switches for more complex settings. Screw terminal and 11-pin socket types have full functionality. Twin timer available on all models. 5A at 250VAC, SPDT contact output. Control output: SPDT contact, rated 5A@250VAC resistive load. Units with transistor output also available; Go online or call. UL listed, UL recognized, CE compliant.

➤ CONTINUED ➤



TIMERS – 1/16 DIN

1/16 DIN MULTIFUNCTION DIGITAL TIMER (CONT.)

| Mfg. Part No.            | Supply Voltage    | Termination    | Stock No. | Price Each |        |
|--------------------------|-------------------|----------------|-----------|------------|--------|
|                          |                   |                |           | 1-14       | 15-24  |
| ● H5CX-A AC100-240       | 100-240VAC        | Screw Terminal | 29C7981   | 167.40     | 159.30 |
| ● H5CX-AD AC24/DC12-24   | 12-24VDC or 24VAC | Screw Terminal | 18M7369   | 167.40     | 159.30 |
| ● H5CX-A11 AC100-240     | 100-240VAC        | 11-Pin Socket  | 18M7370   | 167.40     | 159.30 |
| ● H5CX-A11D AC24/DC12-24 | 12-24VDC or 24VAC | 11-Pin Socket  | 74C6498   | 181.35     | 172.58 |
| ● H5CX-L8 AC100-240      | 100-240VAC        | 8-Pin Socket   | 18M7371   | 157.17     | 149.57 |
| ● H5CX-L8D AC24/DC12-24  | 12-24VDC or 24VAC | 8-Pin Socket   | 79C4151   | 137.27     | 130.63 |

ACCESSORIES

| Mfg. Part No. | Description   | Stock No. | Price Each |       |
|---------------|---|-----------|------------|-------|
|               |   |           | 1-24       | 25-49 |
| ● Y92F-30     | Flush Mounting Adapter, Supplied with Screw Terminal Units                | 88K2030   | 8.58       | 8.30  |
| ● P2CF-08-E   | 8-Pin Track or Flush-Mount Socket   | 84C9861   | 8.49       | 8.08  |
| ● P2CF-11-E   | 11-Pin Track-Mounting, Front-Connecting Socket with Finger-Safe Terminals | 98B1828   | 9.72       | 9.06  |
| ● P3G-08      | 8-Pin Panel-Mount Socket  | 88K1975   | 8.60       | 8.38  |
| ● P3GA-11     | 11-Pin Track-Mounting, Back-Connecting Socket                             | 88K1976   | 9.34       | 9.03  |
| ● Y92A-48G    | Finger-safe Terminal Cover for P3G-08 or P3GA-11 Socket                   | 88K1286   | 5.73       | 5.46  |

(72211)

1/16 DIN NEMA 4 ON-DELAY TIMER WITH LED DISPLAY



H5CL digital timer provides NEMA 4 protection for use in water washdown and dusty environments. Large, easy-to-read four-digit LED display. ON-delay and cumulative operation functions with eight timing ranges from 0.001 second to 999.9 hours. Wide supply voltage range (100-240VAC or 12-24VDC) with SPDT 3A, 250VDC control output. Four no-voltage inputs include: gate, reset, start, and key protection. Rated NEMA 4 and IEC IP66 when using supplied rubber gasket. Dimensions: 1.89H x 1.89W x 2.87"D (48 x 48 x 73). Panel mounting adapter included. Requires 11-pin socket, *ordered separately; go online or call.* UL recognized, CSA certified, CE compliant.



| Mfg. Part No.          | Description      | Stock No. | Price Each |        |
|------------------------|------------------|-----------|------------|--------|
|                        |                  |           | 1-14       | 15-24  |
| ● H5CX-A11 AC100-240   | 100-240VAC Timer | 18M7370   | 167.40     | 159.30 |
| ● H5CX-AD AC24/DC12-24 | 12-24VDC Timer   | 18M7369   | 167.40     | 159.30 |

(3019)

SOLID-STATE TIMERS WITH HIGH SWITCHING CAPACITY



- ON-Delay Timing Function Only
- Multiple, Predetermined Time Range Selections: 5s, 5m, 10s, 10m, 30s, 30m, 60s, 60m
- Up to 7A Switching Capacity
- Choose SPDT or DPDT Contact Form
- Fit Standard 8-Pin Sockets
- Ideal Replacement for Time Relays
- Subminiature DIN Size 36 x 36mm
- LED Power-ON Indicator
- Timer Hold-Down Clips Supplied



For panel mount, use **Y92F-31** mounting adapter and **P3G-08** back mount socket. 12VDC and 24VDC supply voltages and time ranges available; *go online or call.* UL recognized, CSA certified SEV approved.

| Mfg. Part No.           | Switching Capacity (125-250VAC) | Output Configuration | Supply Voltage (VAC) | Timing Range | Stock No. | Price Each |
|-------------------------|---------------------------------|----------------------|----------------------|--------------|-----------|------------|
|                         |                                 |                      |                      |              |           | 1-9        |
| ● H3JA8AC2002405M       | 7A                              | SPDT                 | 200-240              | 0.5-5 min.   | 66J9336   | 48.51      |
| ● H3JA-8C AC100-120 30S | 5A                              | DPDT                 | 100-120              | 3-30 sec.    | 27M2455   | 48.51      |
| ● H3JA-8C AC100-120 5M  | 7A                              | DPDT                 | 100-120              | 0.5-5 min.   | 27M2456   | 48.51      |
| ● H3JA-8C AC100-120 60S | 5A                              | DPDT                 | 100-120              | 6 to 60 sec. | 09J1494   | 48.51      |
| ● H3JA-8C AC100-120 10S | 5A                              | DPDT                 | 100-120              | 1-10 sec.    | 09J1491   | 48.51      |

(60677)

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(116881)

● Indicates RoHS Compliant

1/16 DIN ANALOG SET ON-DELAY TIMERS



Choose ON-delay, Repeat Cycle, Interval, and One-shot timing functions with 8-pin model and these functions plus Signal ON/OFF delay, Signal OFF-delay with 11-pin model. Universal supply voltage (AC100-240/DC100-125) OR (AC24-48/DC12-24), short, 80mm (3.15 in) panel depth with socket. Socket for mounting, *ordered separately on page 1952.* UL recognized, CSA certified, CE compliant.

- Analog-Set Dial
- Field-Selectable Time Ranges from 0.05 Second to 300 Hours or 0.1 Second to 600 Hours
- Select 2-, 4-, or 6-Function Models to Handle Most Applications
- Wide-Range AC/DC Supply Voltage Models (AC100-240/DC100-125 or AC24-48/DC12-24)
- NPN Input; PNP Available
- Short, 80mm (3.15") Panel Mounting Depth with Socket Allows Space-Efficient Control Panel Design
- 8- or 11-Pin Mounting
- DPDT 5A@240VAC/30VDC Relay Output
- Choice of Light Gray, Medium Gray, or Black Panel Covers to Match Panel Aesthetics



100-120VAC SUPPLY VOLTAGE

| Mfg. Part No.          | Pins | No. of Timing Functions | Time Range           | Stock No. | Price Each |       |
|------------------------|------|-------------------------|----------------------|-----------|------------|-------|
|                        |      |                         |                      |           | 1-14       | 15-24 |
| ● H3CR-H8L AC100-120 S | 8    | 2                       | 0.05 sec. to 12 sec. | 52F4142   | 82.99      | 78.20 |

100-240VAC SUPPLY VOLTAGE

|                         |    |   |                     |         |       |       |
|-------------------------|----|---|---------------------|---------|-------|-------|
| ● H3CR-F AC100-240      | 11 | 2 | 0.05 sec. to 30 hr. | 38B610  | 74.22 | 69.93 |
| ● H3CR-F8 AC100-240     | 8  | 2 | 0.05 sec. to 30 hr. | 93K7586 | 71.63 | 67.49 |
| ● H3CR-F8-300 AC100-240 | 8  | 2 | 1.2 sec. to 300 hr. | 52F4140 | 74.22 | 69.93 |

100-240VAC/100-125VDC SUPPLY VOLTAGE

|                                |    |   |                      |         |       |       |
|--------------------------------|----|---|----------------------|---------|-------|-------|
| ● H3CR-A8-AC100-240/DC100-125  | 8  | 4 | 0.05 sec. to 300 hr. | 94B1633 | 67.47 | 63.57 |
| ● H3CR-A8E AC100-240/DC100-125 | 8  | 4 | 0.05 sec. to 300 hr. | 88K1948 | 78.39 | 73.86 |
| ● H3CR-A AC100-240/DC100-125   | 11 | 6 | 0.05 sec. to 300 hr. | 95B5375 | 64.62 | 60.88 |

24-48VAC/12-48VDC SUPPLY VOLTAGE

|                           |    |   |                      |         |       |       |
|---------------------------|----|---|----------------------|---------|-------|-------|
| ● H3CR-A AC24-48/DC12-48  | 11 | 6 | 0.05 sec. to 300 hr. | 93B4352 | 64.62 | 60.88 |
| ● H3CR-A8 AC24-48/DC12-48 | 8  | 4 | 0.05 sec. to 300 hr. | 94B1639 | 67.47 | 63.57 |

(3013)

1/16 DIN DIGITAL SET TIMER WITH BAR GRAPH DISPLAY



H3CA timer offers accurate digital thumbwheel setting and easy-to-read LCD bar graph display for time remaining and LCD indicator of output status. Eight field-selectable operation modes include ON-delay, signal interval/OFF-delay I, repeat cycle, signal OFF-delay (I and II), interval, cycle, and signal ON-delay/OFF-delay. Seven selectable timing ranges from 0.1 second to 9990 hours. Universal voltage 24-240VAC or 12-240VDC, control output SPST 3A, 250VAC. Includes three no-voltage inputs for start, reset, and gate. Dimensions: 1.89H x 1.89W x 3.50"D (48 x 48 x 89). Requires 11-pin socket, *ordered separately; go online or call.* UL recognized, CSA certified.



| Mfg. Part No. | Description                  | Stock No. | Price Each |        |
|---------------|------------------------------|-----------|------------|--------|
|               |                              |           | 1-14       | 15-24  |
| ● H3CA-A      | Digital Set Multi-Mode Timer | 18M7364   | 132.48     | 123.84 |

(3015)

P&B 10A MULTIFUNCTION TIME-DELAY RELAY



DPDT multifunction time-delay relay for plug-in or panel mounting. Five timing functions selectable via rotary switch. 0.1 sec. to 9,990 hr. timing range. Fixed input type (120VAC ±15%). Rated 10A @ 30VDC/277VAC resistive. 1/16 DIN style enclosure with 11-pin octal plug-in base. Thumbwheel switches for programming delay time. Outline dimensions in inches (mm): 2.83 (71.9L x 1.88(47.8)H x 1.88(47.8)W. Use **SSA-24C667** mounting clip to secure relay in panel-mount applications. UL recognized E22575, CSA certified LR15734.



RELAY

| Mfg. Part No. | Nominal Voltage | Power Consumption | Stock No. | Price Each |       |       |
|---------------|-----------------|-------------------|-----------|------------|-------|-------|
|               |                 |                   |           | 1-4        | 5-9   | 10-24 |
| CNM5          | 120VAC          | 3VA @ 120VAC      | 93F1051   | 92.42      | 87.09 | 83.09 |

► CONTINUED ►

TIMERS – 1/16 DIN • TIMERS – DIN RAIL

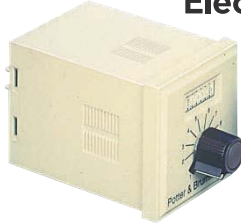
**P&B 10A MULTIFUNCTION TIME-DELAY RELAY (CONT.)**

**11-PIN OCTAL SOCKETS**

| Mfg. Part No. | Dimensions (in)      | Mounting         | Stock No | Price Each |       |       |
|---------------|----------------------|------------------|----------|------------|-------|-------|
|               |                      |                  |          | 1-24       | 25-49 | 50-99 |
| ● 27E123      | 2.322 x 2.385 x .925 | Screw            | 57F3432  | 4.82       | 4.43  | 4.08  |
| ● 27E892      | 2.035 x 2.332 x .970 | Screw, DIN Mount | 46F3588  | 7.07       | 6.49  | 5.98  |

(2711)

**P&B 10A PROGRAMMABLE TIME-DELAY RELAYS**



**CNS Series** are economical, multi-functional, programmable, time-delay relays housed in 1/16 DIN style enclosures. 8 programmable timing modes (4- on 8-pin models). Timing function and range selected by DIP switch, and actual delay time is set with adjustment knob and calibrated dial. Delay selectable from 0.1 sec. to 100 min. DPDT contacts rated 10A @ 240VAC/30VDC. Fixed input type 3VA @ 120VAC. Transient and reverse voltage protection. Temperature range: -10°C to +55°C. UL recognized, CSA certified.

**RELAYS**

| Mfg. Part No. | Input Voltage | Pins | Stock No. | Price Each |       |       |
|---------------|---------------|------|-----------|------------|-------|-------|
|               |               |      |           | 1-4        | 5-9   | 10-24 |
| CNS-35-72     | 120VAC        | 8    | 90F7645   | 61.65      | 58.80 | 55.95 |
| CNS-35-76     | 120VAC        | 11   | 90F7646   | 78.57      | 74.94 | 71.29 |
| CNS-35-92     | 24-240VAC/VDC | 8    | 90F7647   | 68.71      | 65.53 | 62.35 |
| CNS-35-96     | 24-240VAC/VDC | 11   | 90F7648   | 81.92      | 78.14 | 74.35 |

**SCREW TERMINAL OCTAL SOCKETS**

27E891 and 27E892 are DIN rail snap mountable; for use with mounting track 24A110. For use with mounting clip SSA-24C667 for securing relay in panel-mount applications.

| Mfg. Part No. | Pins | Mounting                  | Dimensions (in)      | Stock No. | Price Each |       |       |
|---------------|------|---------------------------|----------------------|-----------|------------|-------|-------|
|               |      |                           |                      |           | 1-24       | 25-49 | 50-99 |
| ● 27E122      | 8    | Screw Terminal            | 2.385 x 1.572 x .925 | 57F3431   | 4.36       | 4.00  | 3.69  |
| ● 27E891      | 8    | Screw Terminal, DIN Mount | 2.010 x 1.575 x .970 | 46F3587   | 5.16       | 4.69  | 4.30  |
| ● 27E123      | 11   | Screw Terminal            | 2.322 x 2.385 x .925 | 57F3432   | 4.82       | 4.43  | 4.08  |
| ● 27E892      | 11   | Screw Terminal, DIN Mount | 2.035 x 2.332 x .970 | 46F3588   | 7.07       | 6.49  | 5.98  |

(13928)

**P&B 10A MULTIFUNCTION, DIGITAL TIME-DELAY RELAY/COUNTER**



- 1/16 DIN enclosure
- 10 programmable timing modes
- 2 counting modes
- Thumbwheel switches for digital programming
- LCD digital readout
- 11-pin octal plug-in base
- Time-delay from 0.1sec to 9990 hr.

**CNT Series** are multi-functional, digitally programmable, time-delay relays/counters. DPDT, silver-cadmium oxide alloy contacts, rated 10A @ 240VAC/30VDC. Temperature range: -10°C to +55°C. Outline dimensions in inches (mm): 2.83 (71.9L) x 1.88 (48.8H) x 1.88 (47.8)W. UL recognized, CSA certified.

**RELAYS**

| Mfg. Part No. | Input Voltage | Stock No. | Price Each |        |        |
|---------------|---------------|-----------|------------|--------|--------|
|               |               |           | 1-24       | 25-49  | 50-99  |
| CNT-35-26     | 12VDC         | 90F7642   | 106.20     | 96.70  | 87.75  |
| CNT-35-76     | 120VAC        | 90F7643   | 106.20     | 96.70  | 87.75  |
| CNT-35-96     | 24-240VAC/VDC | 90F7644   | 123.16     | 112.15 | 101.78 |

**11-PIN OCTAL SOCKETS**

For use with mounting clip mfg. part no. SSA-24C667 for securing relay in panel-mount applications.

| Mfg. Part No. | Dimensions (in)      | Mounting                 | Stock No. | Price Each |       |       |
|---------------|----------------------|--------------------------|-----------|------------|-------|-------|
|               |                      |                          |           | 1-24       | 25-49 | 50-99 |
| ● 27E123      | 2.322 x 2.385 x .925 | Screw-Terminal           | 57F3432   | 4.82       | 4.43  | 4.08  |
| ● 27E892      | 2.035 x 2.332 x .970 | Screw Terminal, DIN Rail | 46F3588   | 7.07       | 6.49  | 5.98  |

(3089)

**MINI DIN RAIL MOUNT TIME-DELAY RELAYS**



- Compact DIN rail mount housing
- Economically priced
- Universal power supply
- 0.1 seconds to 100 hours



**Mini D-Series** housed in 3H x 0.7W x 2"D housing (except the **DMB71**, which is 1.4W"). Snaps onto DIN rail. Provides an 8A SPDT output (with the exception of the **DMB71**, which provides a 5A DPDT output). All timers (with the exception of the **DBB series**) provide 6-switch selectable timing ranges from 0.1 seconds to 100 hours. Timing functions are listed below. The **DMB series** multifunction timers offer the following switch selectable choice of delays: delay-on-operate, interval, interval with external trigger, double interval, delay on release, and symmetrical recycler. Repeat accuracy: <math>\leq 0.2\%</math>. UL recognized, CSA certified, CE compliant.

| Mfg. Part No.  | Timing Function             | Supply Voltage     | Stock No. | Price Each |        |
|----------------|-----------------------------|--------------------|-----------|------------|--------|
|                |                             |                    |           | 1-4        | 5-9    |
| ● DAA51CM24    | On Delay                    | 24-230VAC or 24VDC | 05M4078   | 53.17      | 50.20  |
| ● DBB51CM2410M | Off Delay (1 to 10 Minutes) | 24-230VAC or 24VDC | 05M4081   | 83.31      | 78.41  |
| DBB51CM2410S   | Off Delay (1 to 10 Seconds) | 24-230VAC or 24VDC | 89C4336   | 79.75      | 75.29  |
| ● DMB51CM24    | Multi-Function              | 24-230VAC or 24VDC | 05M4092   | 62.03      | 58.56  |
| ● DMB51CW24    | Multi-Function (12VDC)      | 24-230VAC or 12VDC | 05M4093   | 77.14      | 72.60  |
| DCB51CM24      | Asymmetrical Recycler       | 24-230VAC or 24VDC | 89C4354   | 113.22     | 106.90 |
| DMB71DW24      | Multi-Function              | 12-240VAC/DC       | 26K5686   | 107.31     | 101.32 |

(60577)

**CHRONOS II TIMERS**



- Multi-function or mono-function
- Multi-range (7 ranges, available options)
- SPDT relay output: 10A - 250V, or DPDT (Octal Plug-In Style)
- Screw or spring terminals (17.5 and 22.5 mm)
- LED status indicator
- 3-wire sensor control option



8- and 11-pin plug-in models are 35 x 35 x 79mm. 17.5mm DIN rail models are 17.5 x 81 x 69mm. 22.5mm DIN rail models are 22.5 x 78 x 99mm. All Chronos II timers rated at 10A@250VAC. Time range is selectable from 0.1 seconds to 100 hours.

**17.5mm DIN MOUNT**

| Mfg. Part No. | Supply Voltage   | Function       | Con-tacts | Current Rating (A) | Stock No. | Price Each |       |
|---------------|------------------|----------------|-----------|--------------------|-----------|------------|-------|
|               |                  |                |           |                    |           | 1-14       | 15-24 |
| ● 88 826 135  | 24VDC, 24-240VAC | Delay-On-Break | SPDT      | 10                 | 91B6258   | 47.23      | 44.29 |
| ● 88826115    | 24VDC, 24-240VAC | Delay-On-Make  | SPDT      | 10                 | 17M8546   | 39.03      | 36.60 |
| ● 88826044    | 24-240VAC        | Interval       | SPDT      | 0.7                | 28C6588   | 39.03      | 36.60 |
| ● 88826105    | 24VDC, 24-240VAC | Multifunction  | SPDT      | 10                 | 17M8545   | 56.21      | 52.71 |
| ● 88826503    | 12VAC/DC         | Multifunction  | SPDT      | 10                 | 28C6595   | 68.09      | 63.86 |
| ● 88826004    | 24-240VAC        | Multifunction  | SPDT      | 0.7                | 28C6586   | 56.21      | 52.71 |
| ● 88 826 155  | 24VDC, 24-240VAC | Repeat Cycle   | SPDT      | 10                 | 17M8532   | 48.10      | 45.11 |
| ● 88826054    | 24-240VAC        | Repeat Cycle   | SPDT      | 0.7                | 17M8543   | 65.18      | 61.13 |
| ● 88 826 125  | 24VDC, 24-240VAC | Single Shot    | SPDT      | 10                 | 17M8531   | 47.23      | 44.29 |

**22.5mm DIN MOUNT**

|              |                  |               |      |    |         |       |       |
|--------------|------------------|---------------|------|----|---------|-------|-------|
| ● 88 865 115 | 24VDC, 24-240VAC | Delay-On-Make | SPDT | 10 | 17M8533 | 39.24 | 36.80 |
| ● 88 865 215 | 24VDC, 24-240VAC | Delay-On-Make | DPDT | 10 | 91B6332 | 56.21 | 52.71 |
| ● 88865155   | 24VDC, 24-240VAC | Repeat Cycle  | SPDT | 10 | 17M8551 | 50.59 | 47.44 |
| ● 88865265   | 24VDC, 24-240VAC | Off Delay     | DPDT | 10 | 17M8552 | 79.98 | 75.01 |

**8-PIN OCTAL PLUG-IN**

|              |                  |                |      |    |         |       |       |
|--------------|------------------|----------------|------|----|---------|-------|-------|
| ● 88 867 135 | 24VDC, 24-240VAC | Delay-On-Break | SPDT | 10 | 17M8537 | 48.85 | 45.82 |
| ● 88867215   | 24VDC, 24-240VAC | Delay-On-Make  | DPDT | 10 | 17M8553 | 46.69 | 43.79 |
| ● 88 867 105 | 24VDC, 24-240VAC | Multifunction  | SPDT | 10 | 17M8536 | 56.21 | 52.71 |
| ● 88 867 100 | 12VAC/DC         | Multifunction  | SPDT | 10 | 91B6339 | 57.29 | 53.72 |
| 88867801     | 24VDC, 24-240VAC | Repeat Cycle   | SPDT | 8  | 28C6621 | 56.21 | 52.71 |
| ● 88867155   | 24VDC, 24-240VAC | Repeat Cycle   | SPDT | 10 | 68K9127 | 53.29 | 49.98 |

**11-PIN OCTAL PLUG-IN**

| Mfg. Part No. | Supply Voltage   | Function       | Con-tacts | Current Rating (A) | Stock No. | Price Each |       |
|---------------|------------------|----------------|-----------|--------------------|-----------|------------|-------|
|               |                  |                |           |                    |           | 1-14       | 15-24 |
| 88867435      | 24VDC, 24-240VAC | Delay-On-Break | DPDT      | 10                 | 90B2436   | 56.21      | 52.71 |
| ● 88 867 415  | 24VDC, 24-240VAC | Delay-On-Make  | DPDT      | 10                 | 17M8540   | 46.90      | 43.99 |
| ● 88 867 305  | 24VDC, 24-240VAC | Multifunction  | DPDT      | 10                 | 17M8539   | 79.98      | 75.01 |
| ● 88 867 300  | 12VAC/DC         | Multifunction  | DPDT      | 10                 | 17M8538   | 82.14      | 77.04 |
| ● 88 867 455  | 24VDC, 24-240VAC | Repeat Cycle   | DPDT      | 10                 | 17M8541   | 74.58      | 69.94 |

(52485)

TIMERS – DIN RAIL

MULTIFUNCTION DIN MOUNT TIMER



a company of Schneider Electric



- Universal voltage input
- DIN mount 17.5mm wide
- Finger-safe
- Ten time scales - 1 seconds to 10 days
- 2 status LEDs



**10 Functions.** On-delay, Interval, Repeat - Off-first, Repeat - On-first, Pulse generator, Off-delay, Interval - S make, Interval - S break, On and Off. Memory latch. **Specifications:** Input Voltage: 12 to 240VAC/VDC 50-60 Hz. Burden 3VA, 1.7W, Accuracy 0.2%, Operating temperature: -20 to 55°C, Output: SPDT 15A @ 240VAC, 24VDC, B300 pilot duty.

| Mfg. Part No.  | Stock No. | Price Each |       |       |       |
|----------------|-----------|------------|-------|-------|-------|
|                |           | 1-14       | 15-24 | 25-49 | 50-99 |
| ● 821TD10H-UNI | 10M6579   | 59.86      | 56.76 | 53.21 | 50.33 |

(79165)

ANALOG MULTIFUNCTION SOLID-STATE TIMERS



- High Immunity to Inverter Noise
- Programmable Contact Enables Building of Self-Holding Relay Circuit
- Wide-Range Time Setting of 0.10s to 120h
- Finger Protection Terminal Block
- Enables Easy Sequence Checks Through Instantaneous Outputs for a Zero Set Value at Any Time Range
- UL Recognized, CSA Certified, CE Compliant

Series H3DE analog set multifunction timers have a slim design for track mounting. Wide AC/DC power supply range of 24 - 230VAC/DC minimizes inventory. To cover a wide range of applications, there are 8 operating modes for H3DE-M and 4 operating modes for H3DE-S.

OPERATING MODES

| H3DE-M2 & M1  | H3DE-S2 & S1   |
|---|--|
| A: ON-Delay (Signal or Power)<br>B: Flicker OFF Start (Signal or Power)<br>B2:Flicker ON Start (Signal or Power)<br>C: Signal ON/OFF Delay<br>D: Signal OFF Delay<br>E: Interval (Signal or Power)<br>G: Signal ON/OFF Delay<br>J: One-Shot (Signal or Power) | A: ON-Delay<br>B: Flicker ON Start<br>E: Interval<br>J: One-Shot |

| Mfg. Part No.        | Output | Stock No. | Price Each |
|----------------------|--------|-----------|------------|
|                      |        |           | 1-5        |
| ● H3DE-M1AC/DC24-230 | SPDT   | 18M7365   | 53.40      |
| ● H3DE-M2AC/DC24-230 | DPDT   | 19C7107   | 64.08      |
| ● H3DE-S1AC/DC24-230 | SPDT   | 18M7366   | 40.59      |
| ● H3DE-S2AC/DC24-230 | DPDT   | 19C7109   | 53.40      |

(61878)

S1DXM-M SERIES TIMERS



Just Added



Panasonic Electric Works Corporation of America



Features

- 12 Time Ranges Available
- S1DXM-M Multifunctional
- Useable with HJ Relay Terminal Socket
- Space-Saving Design - 22.1 x 51.7 x 29.5mm
- UL Recognized, CSA Approved
- Easy and Safe Handling
- Wide Time Range
- Indicator LEDs Provide Status at a Glance
- Flush Mountable with Accessories



The S1DXM is a small, low-cost time delay relay available in Power On-Delay, Power Flicker, Power One-Shot, and Power One-Cycle configurations. Other features include flush mount capability, quickset dial, LED status indicators, and more.

| Mfg. Part No.         | Contacts | Time Range         | Operating Voltage | Stock No. | Price 1-14 |
|-----------------------|----------|--------------------|-------------------|-----------|------------|
| ● S1DXM-M2C10M-DC24V  | DPDT     | 0.05 sec to 10 min | 24 VDC            | 08N3186   | 32.57      |
| ● S1DXM-M2C30M-DC24V  | DPDT     | 0.2 sec to 30 min  | 24 VDC            | 08N3188   | 32.57      |
| ● S1DXM-M2C60M-DC24V  | DPDT     | 0.5 sec to 60 min  | 24 VDC            | 08N3190   | 32.57      |
| ● S1DXM-M2C10H-DC24V  | DPDT     | 0.05 min to 10 hr  | 24 VDC            | 08N3184   | 32.57      |
| ● S1DXM-M2C10M-AC120V | DPDT     | 0.05 sec to 10 min | 100-120 VAC       | 08N3185   | 32.57      |
| ● S1DXM-M2C30M-AC120V | DPDT     | 0.2 sec to 30 min  | 100-120 VAC       | 08N3187   | 32.57      |

➔ CONTINUED ➔

S1DXM-M SERIES TIMERS (CONT.)

| Mfg. Part No.         | Contacts | Time Range        | Operating Voltage | Stock No. | Price 1-14 |
|-----------------------|----------|-------------------|-------------------|-----------|------------|
| ● S1DXM-M2C60M-AC120V | DPDT     | 0.5 sec to 60 min | 100-120 VAC       | 08N3189   | 32.57      |
| ● S1DXM-M2C10H-AC120V | DPDT     | 0.05 min to 10 hr | 100-120 VAC       | 08N3183   | 32.57      |

(115549)

PM SERIES ANALOG TIMERS



Just Added



Panasonic Electric Works Corporation of America



DIN48



DIN24

- Multiple time ranges — 1 s to 500 h (Max.)
- Built-in Screw terminals
- 0 setting instantaneous output operation
- **PM4H:**
  - 100-240V AC free-voltage input, 48-125V DC type available
  - Short body — 62.5mm 2.461 inch (screw terminal type)
  - Front panel of IP65 type is protected against water-splash and dust
  - Screw terminal type is used for easy wiring and reducing additional cost for accessories
  - 8 different operation modes: (PM4H-A)
- **PM5S:**
  - 24-240V AC/DC free-voltage input
  - Slim body — DIN 22.5 mm .886 inch
  - 6 different operation modes: (PM5S-A)

DIN48 SIZE TIMERS

| Mfg. Part No.    | Time Range        | Operating Voltage | Operation Mode | Stock No. | Price Each |
|------------------|-------------------|-------------------|----------------|-----------|------------|
|                  |                   |                   |                |           | 1-14       |
| ● PM4HA-H-24V    | 1 sec. to 500 hr. | 24VAC             | Multiple       | 16F1376   | 37.39      |
| ● PM4HA-H-AC240V | 1 sec. to 500 hr. | 100-240VAC        | Multiple       | 10C8923   | 40.30      |
| ● PM4HS-H-AC240V | 1 sec. to 500 hr. | 100-240VAC        | Power ON-delay | 10C9027   | 39.21      |

DIN24 SIZE TIMERS

|                  |                   |           |          |         |       |
|------------------|-------------------|-----------|----------|---------|-------|
| ● PM5S-A-24-240V | 1 sec. to 500 hr. | 24-240VAC | Multiple | 93B3742 | 47.90 |
|------------------|-------------------|-----------|----------|---------|-------|

(115548)

P&B MULTIFUNCTION SOLID-STATE TIME-DELAY RELAYS



- 15 time ranges
- 0.05 sec. to 100 hour time ranges
- Contacts rated 3A @ 250VAC
- Breaking capacity is 2000VA
- DIN rail mountable
- 24VDC nominal input voltage

**3RP Series** relays tolerance is ±5% of full scale value. Reset time: 150ms. Contacts: silver tin oxide. Contact expected mechanical life: 200,000 operations at 3A, 250VAC, AC-15. Rated DC power supply: 2W. Rated AC power: 6VA. Temp. range: -25° to +60°C for operating and -40° to +80°C for storage. Mechanical life: 30 x 10<sup>6</sup> operations. Max. switching rate at a rated load: 2500 ops/h. Mounts directly on 35mm DIN track with screw terminal termination. Switch adjustable available; go online or call.

MULTIFUNCTION

| Mfg. Part No. | Nominal Voltage       | Contacts | Functions | Stock No. | Price Each |        |
|---------------|-----------------------|----------|-----------|-----------|------------|--------|
|               |                       |          |           |           | 1-24       | 25-49  |
| 3RP1505-1AQ30 | 24VAC/VDC, 100-127VAC | SPDT     | 1-8       | 48F4079   | 148.18     | 137.66 |
| 3RP1505-1BQ30 | 24VAC/VDC, 100-127VAC | DPDT     | 9-24      | 48F4081   | 155.97     | 144.90 |

DELAY ON

|               |                           |      |   |         |       |       |
|---------------|---------------------------|------|---|---------|-------|-------|
| 3RP1525-1AQ30 | 24VAC/VDC, 100-127VAC     | SPDT | 1 | 48F4083 | 92.18 | 85.63 |
| 3RP1525-1AP30 | 24VAC/VDC, 200-240VAC/VDC | SPDT | 1 | 48F4084 | 92.18 | 85.63 |
| 3RP1525-1BQ30 | 24VAC/VDC, 100-127VAC     | DPDT | 9 | 48F4085 | 99.26 | 92.21 |

(37870)



TIMERS – 24 HR • TIMERS – ELAPSED

DIGITAL DAILY TIMERS



- Precise Control of Both Regular and Special (e.g., Half-day Operation) ON/OFF Times
- Can be Set for Timed or Pulsed Operation and for Multiple-day Operation
- 2 Mounting Types Available: Panel or Track Mounting
- Timing Chart Displayed for At-a-glance Confirmation
- DIN-sized 1/8 (48 x 48mm)
- SPST-NO 15A Relay Output
- Supply Voltage: 100-240VAC, 50/60Hz
- Power Consumption: Approximately 5VA



Panel Mount

NEMA 4 cover mfg. part no. Y92A-48N available; go online or call. UL recognized, CSA approved, SEV approved.

| Mfg. Part No. | Mounting      | Outside Dimensions<br>H x W x L" (mm) | Stock No. | Price Each |  |  |
|---------------|---------------|---------------------------------------|-----------|------------|--|--|
|               |               |                                       |           | 1-9        |  |  |
| ● H5FB        | Panel         | 1.89 x 1.89 x 3.41 (48 x 48 x 86.7)   | 88K1950   | 208.28     |  |  |
| ● H5F-KB      | Surface/Track | 3.93 x 1.97 x 2.87 (99.8 x 50 x 73)   | 88K1110   | 195.44     |  |  |

(51887)

PROGRAMMABLE AM/PM WEEKLY TIMER



- AM/PM Display
- 24 Program Steps
- A Different Program Possible Each Day
- Over Midnight Setting Possible
- 2 Independent 15A Control Circuits with Manual Mode
- Automatic or Manual Operation Following Power Failure
- Field-adjustable ON/OFF, Cycle, and Pulse Input
- Easy-to-use Prompted Programming
- Wide Supply Voltage Range
- 10-year Battery Backup for Memory Protection
- DIN Size 72 x 72mm
- Contact Type: 2 SPST-NO Time-limit Contacts with Manual Override Switches
- Cycle Length: 1-minute to a Full Week



Surface/Track Mount

Ideal for HVAC, lighting, and other system operations in commercial or industrial environments. UL recognized, CSA certified, SEV approved. Hard plate cover Y92A-72C, track mounting adapter Y92F-90, and NEMA 4 cover Y92A-72N available; go online or call.

| Mfg. Part No. | Mount         | Outside Dimensions<br>H x W x L" (mm) | Stock No. | Price Each |        |        |
|---------------|---------------|---------------------------------------|-----------|------------|--------|--------|
|               |               |                                       |           | 1-5        | 6-14   | 15-24  |
| ● H5SWFB2     | Surface/track | 4.99x2.83x2.68 (126.7x72x68)          | 80K0833   | 204.16     | 195.17 | 186.18 |

(3042)

PROGRAMMABLE 24-HOUR TIMER



H5L series programmable 24-hour weekly timer features easy front-panel set-up, 24-hour (military time), 7-day programming, and large, easy-to-read LCD display. Unit offers 2 independent SPST 15-amp circuits (with manual override switches) and wide operating voltage: 100-240VAC. Ideal for HVAC, lighting, and other system operations in commercial or industrial environments. Programs may be tailored to daily routines within single 24-hour periods. Built-in 10-year battery protects programming. Unit may be panel, surface or DIN rail mounted. Dimensions: 3.8H x 3.8W x 2.25"D (96 x 96 x 57mm). UL recognized, CSA certified.



| Mfg. Part No. | Stock No. | Price Each |        |        |        |
|---------------|-----------|------------|--------|--------|--------|
|               |           | 1-5        | 6-14   | 15-24  | 25-49  |
| ● H5L-A       | 52F4158   | 217.16     | 207.17 | 197.19 | 188.45 |

(3040)

ELAPSED TIME INDICATORS



Elapsed time indicators are ruggedly constructed true-time mechanisms for recording the ON time of electrical equipment and machinery. 7-digit display has capacity of 99999.99 hrs. 1.9"W x 1.6"L. UL recognized, CSA certified.



INDICATORS

| Mfg. Part No. | Input Voltage | Input Type     | Stock No. | Price Each |       |       |
|---------------|---------------|----------------|-----------|------------|-------|-------|
|               |               |                |           | 1-24       | 25-49 | 50-99 |
| ● 99761715    | 115VAC/60Hz   | On input power | 96F1859   | 54.34      | 49.44 | 45.61 |
| ● 99761718    | 24VAC/60Hz    | On input power | 17M8658   | 52.76      | 48.00 | 44.28 |

➔ CONTINUED ➔

ELAPSED TIME INDICATORS (CONT.)

ACCESSORIES

| Mfg. Part No. | Description      | Stock No. | Price Each |       |       |
|---------------|------------------|-----------|------------|-------|-------|
|               |                  |           | 1-24       | 25-49 | 50-99 |
| ● 26546803    | DIN Rail Adapter | 17M8383   | 8.29       | 7.54  | 6.96  |

(2842)

LCD ELAPSED TIMERS/HOUR METERS



Durant



E42DIR



E42DI24

The E42DIR (round) and E42DI24 series (rectangular) are solid-state hour meters that record and display up to 99,999.9 hours, roll over and continue timing. Feature an EEPROM that can retain data for 25+ years. Operating temperature: 40°F to 185°F (-40°C to 85°C). Able to function in harsh conditions of vibration, shock, moisture and dust. Feature minimal power consumption, compact behind-panel depth and operating indicator (hourglass icon). Size: 2.30W x 1.125"D (round); 0.89H x 2.09W x 0.86"D (rectangular).

| Mfg. Part No.  | Description                        | Stock No. | Price Each |  |
|----------------|------------------------------------|-----------|------------|--|
|                |                                    |           | 1-4        |  |
| ● E42DIR48230  | Round, 48-150VDC, 100-230VAC       | 89M5166   | 44.42      |  |
| ● E42DIR1260   | Round, 12-48VDC, 20-60VAC          | 89M5165   | 50.87      |  |
| ● E42DI2448230 | Rectangular, 48-150VDC, 100-230VAC | 18C2536   | 43.61      |  |
| ● E42DI241260  | Rectangular, 12-48VDC, 20-60VAC    | 89M5167   | 43.61      |  |

(60973)

DIOCHRON ECONOMY HOUR METER BY HOBBS



Honeywell

Sensing and Control

Features:

- Honeywell / Hobbs economy line of hourmeters
- Sealed, shock-resistant case
- Polycarbonate case and lens
- Run indicator

Specification:

- Quartz accuracy: ±0.02% (±200ppm)
- Temperature range: -40°F to 185°F
- Termination: 1/4" blade
- Number size: 0.12"



| Mfg. Part No. | Meter Shape | Operating Voltage (VDC) | Number of Digits | Mounting | Stock No. | Price Each |       |
|---------------|-------------|-------------------------|------------------|----------|-----------|------------|-------|
|               |             |                         |                  |          |           | 1-14       | 15-24 |
| 082450 83     | Rectangular | 12-60                   | 5                | 2-Screw  | 64K2420   | 28.90      | 27.88 |
| 082451 84     | Round       | 12-60                   | 5                | Panel    | 64K2421   | 19.97      | 19.27 |
| 082453 85     | Round       | 12-60                   | 5                | 3-Screw  | 64K2422   | 19.97      | 19.27 |

(85746)

HOBBS 20000 SERIES AC HOUR METERS



Honeywell

Sensing and Control

Specification:

- Accuracy: 0.02%
- Records up to 99,999 hours
- Automatic recycle to zero
- Operating frequency: 60Hz
- Power rating: 3.0W
- Operating temperature: -54°C to 68°C
- Weight: 3oz
- Lens material: 3-screw mount: Glass, 2-screw mount: Polycarbonate
- Number size: 0.12" (3mm)

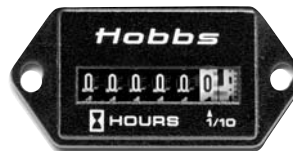


Fig. 1



Fig. 2

Features:

- Polycarbonate, shock resistant, tamper proof case
- Totally sealed
- Single phase, synchronous, permanently lubricated motor

These deluxe AC meters are totally sealed and benefit from a design which integrates the motor and frame into substructure.

| Mfg. Part No. | Fig. | Operating Voltage (VDC) | Number of Digits | Termination | Stock No. | Price Each |  |
|---------------|------|-------------------------|------------------|-------------|-----------|------------|--|
|               |      |                         |                  |             |           | 1-14       |  |
| 020001 17     | 1    | 108-132                 | 6                | Screw       | 64K2417   | 31.35      |  |
| 020017 14     | 2    | 108-132                 | 6                | Screw       | 64K2418   | 34.57      |  |

(85745)

TIMERS – ELAPSED

**HOBBS 85000 SERIES QUARTZ PLUS HOUR METERS**



**Honeywell**  
Sensing and Control



Fig. 1



Fig. 2



Fig. 3



Fig. 4

**Specification:**

- 10,000hour version standard, with automatic recycle to zero
- Temperature range: -40°C to 85°C
- Quartz accuracy: ±200ppm, ±0.02%
- Precision built relay driven odometer

**Features:**

- Custom CMOS integrated circuit
- Indicates operating time in hours and tenths, plus has a running indicator

- Standard terminals: 1/4" male blade
- Lens material: Glass
- Case material: Polyester
- Number size: 0.12" (3mm)

- Totally sealed
- Excellent vibration and shock
- Battery system voltages: 6, 12, 24, 36, 48, 60, 72 and 80VDC

The Quartz Plus features a highly reliable drive mechanism, an improved odometer gear train, and a snap-together integrated chassis. The chassis fits into a shockproof, totally sealed case made of an engineered plastic that is impervious to acids and solvents.

| Mfg. Part No. | Fig. | Operating Voltage (VDC) | Number of Digits | Mounting | Stock No. | Price Each |       |
|---------------|------|-------------------------|------------------|----------|-----------|------------|-------|
|               |      |                         |                  |          |           | 1-14       | 15-24 |
| 085331 12     | 1    | 6.5-16                  | 5                | Screw    | 64K2426   | 60.44      | 57.40 |
| 085094 12     | 1    | 10-80                   | 5                | Screw    | 64K2424   | 49.93      | 47.41 |
| 085097 02     | 2    | 10-80                   | 5                | Screw    | 64K2425   | 54.43      | 51.68 |
| 085342 03     | 3    | 10-80                   | 5                | Panel    | 64K2427   | 60.74      | 57.68 |
| 085093 03     | 4    | 10-80                   | 5                | Panel    | 64K2423   | 63.78      | 60.56 |

**ACCESSORIES**

| Mfg. Part No. | Description   | For Use With                                  | Stock No. | Price Each |       |
|---------------|---------------|---|-----------|------------|-------|
|               |               |   |           | 1-14       | 15-24 |
| 023944 01     | Angle Bracket | Two-screw flange AC and DC rectangular meters | 64K2419   | 2.92       | 2.77  |

(85744)

**HONEYWELL HOBBS 98000 SERIES LCD HOUR METERS**



**Honeywell**  
Sensing and Control

**Features:**

- Totally sealed from moisture and dirt
- Direct replacement current hour meter
- No battery backup needed
- Fits in existing panel openings
- Snap-in retainer mount combines easy installation with rugged design
- Compact depth

**Specification:**

- Run accuracy: ±200ppm; ±0.02%
- Start time: Maximum 1 second
- 6-digit display
- Digit height: 6mm
- Termination: 1/4" blade
- Operating temperature: -40°C to 85°C
- Display: 0 to 99,999.9 (hours); 0 to 999,999 (counter)

The Hobbs 98000 series LCD hour meters provide a large easy-to-read display in a conventional size package.



| Mfg. Part No. | Operating Voltage (VDC) | Number of Digits | Termination            | Stock No. | Price Each |       |
|---------------|-------------------------|------------------|------------------------|-----------|------------|-------|
|               |                         |                  |                        |           | 1-14       | 15-24 |
| 098313 12     | 9-64                    | 6                | 2 terminal             | 64K2429   | 35.31      | 33.62 |
| 098323 92     | 9-64                    | 6                | 3 terminal with enable | 64K2430   | 36.95      | 35.19 |
| 098303 92     | 9-64                    | 6                | 4 terminal resettable  | 64K2428   | 37.53      | 35.73 |

(85743)

**AC ELAPSED TIME INDICATOR**

This non-resettable running time meter features a 5-digit readout enclosed in a glass and metal housing. Indicates hours and tenths. Tamperproof no-reset feature. Dust and moisture resistant. Panel mount with 4 holes; 1.670" diameter panel cutout. Voltage: 120V/60Hz, -12°C to +55°C. **Mfg. part no. ED72-12** is UL recognized; **mfg. part no. ED71-12** is UL recognized and CSA certified. **Series 7010** hermetically sealed versions also available; *go online or call.*



| Mfg. Part No. | Lead Configuration           | Stock No. | Price Each |
|---------------|------------------------------|-----------|------------|
|               |                              |           | 1-24       |
| ● ED7212      | 11 1/4"                      | 31C7201   | 243.00     |
| ● ED7112      | Glass-Fused Solder Terminals | 40C1626   | 216.11     |

(3084)

**H/CH SERIES TIME DELAY TIMERS**

External wiring is connected to terminal strip. Isolated SPDT load switch rated 10A non-inductive, 120VAC. **H series** have clutch motor, repeat accuracy ±1 full scale, and reset time 5% of dial setting. **CH series** have external clutch, repeat accuracy ±1-1/2% full scale, and reset time 0.5 second at max. setting. Both provide automatic reset upon removal of power and are panel-mounted. UL recognized, CSA certified.



CH Series

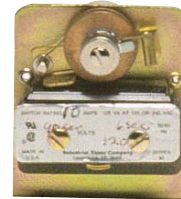


| Mfg. Part No. | Time Cycle | Dial Div. | Stock No. | Price Each |
|---------------|------------|-----------|-----------|------------|
|               |            |           |           | 1-2        |
| ● H-15S       | 15 sec.    | 0.25 sec. | 24F296    | 190.92     |
| ● CH-1M       | 1 min.     | 1 sec.    | 24F297    | 251.60     |

(2901)

**90 SERIES DELAY TIMERS**

For applications requiring infrequent adjustment. Isolated SPDT load switch, rated 10A, non-inductive, 120V/60Hz. Repeat accuracy: +1% full scale. Reset time: 5% of set time delay. Auto-reset upon power removal. UL recognized, CSA certified. 6, 30 and 60 second time cycles versions are available; *go online or call.*



| Mfg. Part No. | Setting |          | Stock No. | Price Each |
|---------------|---------|----------|-----------|------------|
|               | Max.    | Min.     |           | 1-2        |
| 90-15S        | 15 sec. | 1.5 sec. | 24F1844   | 120.69     |
| 90-90S        | 90 sec. | 9 sec.   | 24F1847   | 221.27     |

(2903)

**TDAB SERIES HIGH-PRECISION BACK-MOUNT TIMERS**

For applications requiring high repetitive accuracy, fast reset, and anticipate heavy usage. Accuracy: ±0.25% full scale. Reset time: 0.5 seconds max. at full setting. Feature automatic reset and infinite-resolution clutch. Isolated SPDT switch rated 15A, 120V/60Hz. UL recognized, CSA certified. 6,15,60 second, 60 minutes, and 3 hour time cycles are available. *Go online or call.*



TDAB



| Mfg. Part No. | Time Cycle | Dial Division | Stock No. | Price Each |
|---------------|------------|---------------|-----------|------------|
|               |            |               |           | 1-2        |
| ● TDAB-15S    | 15 sec.    | 0.25 sec.     | 24F302    | 309.32     |

(2905)

**EG AND EF SERIES ELAPSED TIME INDICATORS**

These elapsed time indicators feature a 6-digit readout with no reset capabilities. **EG series** is a basic timer without a housing or bezel and is designed for mounting behind a panel. **EF series** timers are provided with their own bezels. **EF13 series** has a round bezel. **EF27 series** has a square bezel. **EG series** and **EF13 series** units feature an operational indicator. Voltage: 120V/60Hz. **EF series** is UL recognized. All are CSA certified. Minutes and tenths available. *Go online or call.*



EF13



EF27

| Mfg. Part No. | Description                               | Stock No. | Price Each |
|---------------|---|-----------|------------|
|               |   |           | 1-2        |
| ● EF1335      | Round Bezel, Indicates Hours and Tenths   | 54F062    | 98.80      |
| ● EF2735      | Square Bezel, Indicates Hours and Tenths  | 54F170    | 83.60      |
| ● EG1335      | Without Bezel, Indicates Hours and Tenths | 87F5238   | 85.84      |

(3083)

TIMERS – ELAPSED

ELAPSED AND PRESET TIMERS



**A103 series** elapsed time indicators and preset timers can be programmed to meet your needs. They display in seconds, minutes, hours, or hours: minutes: seconds. All units use an internal 3-volt single or dual battery. Features include a 7-digit supertwist LCD with .47" (12mm) high digits and green illumination display backlight capability. Accepts input signals from dry contact, PNP, or NPN sensors. Timing start/stop can be initiated by solid-state signals or mechanical switches. Reset on front panel or remotely. Ranges and resolution: seconds, minutes to 1/10, hours to 1/10, hours: minutes: seconds. Connections made at screw terminals. Weight: 2.25 oz. (64 g). Front panel rated NEMA 4/IP65 for use in washdown environments. Order matching counters, rate indicators, and quick-attach option modules separately on this page.

| Mfg. Part No. | Description            | Stock No. | Price Each |        |
|---------------|------------------------|-----------|------------|--------|
|               |                        |           | 1-5        |        |
| A103-006      | Elapsed Time Indicator | 52F1238   |            | 87.69  |
| A103-008      | Preset Timer           | 52F1240   |            | 133.20 |

(2848)

A103 SERIES OPTION MODULES



These quick-attach option modules provide a power supply for sensors, display backlighting, timing signals, and mechanical relay output. They accept high or low voltage AC or DC input signals. Low voltage input accepts 15 to 30VAC or VDC for count input. High voltage input accepts 100 to 260 volt AC/DC for count input. Mechanical relay output is SPDT (Form C); 120/240VAC, 30VDC contacts.

| Mfg. Part No. | Description                        | Stock No. | Price Each |
|---------------|------------------------------------|-----------|------------|
| A103-A10      | HV Input Module                    | 52F1242   | 30.36      |
| A103-A11      | Relay Output Module                | 52F1243   | 30.36      |
| A103-A12      | AC Power Supply                    | 52F1244   | 55.60      |
| A103-A14      | HV Input/Power Supply Module       | 52F1246   | 74.58      |
| A103-A16      | HV Input/Power Supply/Relay Module | 52F1248   | 90.58      |
| A103-A17      | LV Input Module                    | 52F1249   | 30.36      |
| A103-A18      | LV Input/Relay Out Module          | 52F1250   | 48.82      |
| A103-A20      | LV Input/Power Supply/Relay Module | 52F1252   | 90.58      |

(2850)

VEEDER-ROOT BRAND HOURMETERS



**Series 7795** rugged and reliable electric hourmeters fit 2" diameter round or 0.95 x 1.45" rectangular panel cutouts. 1/10 hour increments with capacity to 99999.9 hours (DC models: 9999.9) and 1% accuracy. Models for 120VAC or 10 to 32VDC operation. Compact, easy to install. Sealed against dirt and moisture and non-resettable. Ideal for use on any equipment to determine usage, maintenance and warranty periods. Temperature range: AC models: -65° to +154°F (-18° to +68°C); DC models: -40° to +185°F (-40° to +85°C).

| Mfg. Part No. | Description                      | Stock No. | Price Each |
|---------------|----------------------------------|-----------|------------|
| 0779555-216   | Round, DC, Spade Terminals       | 87F1090   | 110.32     |
| 0779565-216   | Rectangular, DC, Spade Terminals | 87F1091   | 110.32     |
| 0779516-201   | Round, AC, Screw Terminals       | 71C9395   | 78.61      |
| 0779526-201   | Round, AC, 7" Leads              | 27C7866   | 77.23      |
| 0779536-201   | Rectangular, AC, Screw Terminals | 87F1089   | 77.23      |

(2758)

MODEL 720 ELECTRONIC LCD HOUR METER



- Rugged steel housing
- Non-reset
- Self-powered hour meter memory (internal lithium battery)
- Quartz accuracy (better than 0.01%)

Large 7-digit LCD display, (999999.9), 0.32" (8mm) high. Front of the unit is totally sealed. Rugged steel enclosure is interchangeable with Redington Model 720 electro-mechanical hour meters.

| Mfg. Part No. | Operating Voltage (VAC) | Mounting      | Termination   | Stock No. | Price Each |        |
|---------------|-------------------------|---------------|---------------|-----------|------------|--------|
|               |                         |               |               |           | 1-14       | 15-24  |
| 7205300       | 85-500                  | 3-Hole, Panel | 6" Wire Leads | 42J8417   | 150.03     | 141.49 |

(89427)

MODEL 722 AND 732 ELECTROMECHANICAL TOTALLY SEALED HOUR METERS



Fig. 1



Fig. 2



Fig. 3



Fig. 4



Fig. 5



Fig. 6



Fig. 7

- Model 722 operating range: 90-240VAC 50/60Hz
- Model 732 operating range: 18-30VDC
- Totally Sealed
- UL/CUL Recognized, CE & RoHS Compliant
- 6 Figure, 99999.9

The Reding Model 722 (AC Hour Meter) no longer requires two separate meters, one for 115VAC and one for 230VAC. The Redington Model 732 (DC Hour Meter) are protected for 2x battery voltage and/or reverse polarity. A quartz time base insures accurate long-term time keeping. Models have a square front panel dimension of 1.90" [48mm x 48mm]. Three adapter panels are also available for fitting additional panel dimensions.

AC HOUR METERS

| Mfg. Part No. | Fig. | Operating Voltage (VAC) | Mounting              | Meter Shape | Stock No. | Price Each |       |
|---------------|------|-------------------------|-----------------------|-------------|-----------|------------|-------|
|               |      |                         |                       |             |           | 1-14       | 15-24 |
| 722-0001      | 1    | 90-240                  | 2-Hole Panel          | Rectangular | 78H0980   | 77.70      | 75.00 |
| 722-0002      | 2    | 90-240                  | Flush-Panel           | Rectangular | 52M1956   | 77.70      | 75.00 |
| 722-0003      | 3    | 90-240                  | Flush-Round           | Round       | 97H1577   | 77.70      | 75.00 |
| 722-0004      | 4    | 90-240                  | 3-Hole Panel          | Round       | 97H1578   | 77.70      | 75.00 |
| 722-0030      | 5    | 90-264                  | Flush-Panel with Clip | Square      | 05N0105   | 25.00      | ...   |

DC HOUR METERS

| Mfg. Part No. | Fig. | Operating Voltage (VDC) | Mounting              | Meter Shape | Stock No. | Price Each |       |
|---------------|------|-------------------------|-----------------------|-------------|-----------|------------|-------|
|               |      |                         |                       |             |           | 1-14       | 15-24 |
| 732-0004      | 1    | 10-80                   | 2-Hole Panel          | Rectangular | 88H4282   | 77.70      | 75.00 |
| 732-0001      | 4    | 10-80                   | 3-Hole Panel          | Round       | 82H1901   | 77.70      | 75.00 |
| 732-0030      | 5    | 10-80                   | Flush-Panel with Clip | Square      | 05N0108   | 25.00      | ...   |
| 732-0013      | 6    | 10-80                   | Cup-Panel             | Round       | 05N0106   | 25.00      | ...   |
| 732-0023      | 7    | 10-80                   | Stirrup-Panel         | Round       | 05N0107   | 25.00      | ...   |

ACCESSORIES

| Mfg. Part No. | Description   | Stock No. | Price Each |       |
|---------------|---|-----------|------------|-------|
|               |   |           | 1-14       | 15-24 |
| 5003-005S     | Sealing Gasket for 722-0004, 732-0001                     | 97H1504   | 3.37       | 3.25  |
| 5003-008      | Sealing Gasket for 732-0013, 732-0014, 732-0023, 732-0024 | 05N0093   | 0.80       | ...   |
| 5003-009      | Sealing Gasket for 722-0002, 732-0002                     | 05N0094   | 0.80       | ...   |
| 5003-010      | Sealing Gasket for 722-0001, 732-0004                     | 05N0095   | 0.80       | ...   |
| 5003-011      | Sealing Gasket for 722-0004, 732-0001                     | 66M8751   | 1.33       | 1.25  |
| 1662-024      | Square Pane Bezel 72mm                                    | 05N0075   | 0.80       | ...   |
| 1662-025      | Round Pane Bezel 72mm                                     | 05N0076   | 0.80       | ...   |
| 1662-026      | Square Pane Bezel 55mm                                    | 05N0077   | 25.00      | ...   |

(89428)

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(116880)

TIMERS – ELAPSED

HOURLMETERS



7 digit, numerals magnified to 0.14", 2 oz., 2 watts (nominal AC), 0.4 watts (DC). Temperature range -13°F to +185°F, mounting by retaining clip or 2-screw mounting kit not included, 1.45" x .87" panel cutout. 1/4" spade terminals obtainable by removing screws from clamp. All are 99,999.99 hrs. AC models UL recognized, CSA certified, CE compliant. DC models CE compliant only.

AC HOURLMETERS

| Mfg. Part No. | Voltage Max. (VAC) | Mount  | Style       | Stock No. | Price Each |
|---------------|--------------------|--------|-------------|-----------|------------|
|               |                    |        |             |           | 1-9        |
| ● 711-0130    | 115                | 2-Hole | Rectangular | 48M1317   | 42.03      |
| ● 711-0131    | 230                | 2-Hole | Rectangular | 48M1318   | 42.03      |
| ● 711-0113    | 115                | Panel  | Rectangular | 48M1316   | 42.03      |

DC HOURLMETERS

| Mfg. Part No. | Voltage Max. (VDC) | Mount  | Style       | Stock No. | Price Each |
|---------------|--------------------|--------|-------------|-----------|------------|
|               |                    |        |             |           | 1-9        |
| ● 731-0040    | 28                 | 2-Hole | Rectangular | 48M1323   | 39.54      |

FLUSH MOUNT AC HOURMETER

Flush mount, AC hourmeter, 15" leads, 2 watts (nominal), 1.98 x 0.99" panel cutout. 711-0019 is 6 figures with bracket retainer for mounting. 711-0020 is 7 figures with snap-in mounting. UL recognized, CSA certified, CE compliant.

| Mfg. Part No. | Voltage Max. (VAC) | Mount | Style       | Stock No. | Price Each |
|---------------|--------------------|-------|-------------|-----------|------------|
|               |                    |       |             |           | 1-9        |
| ● 711-0020    | 115                | Panel | Rectangular | 48M1315   | 55.38      |
| ● 711-0019    | 115                | Panel | Rectangular | 48M1314   | 145.73     |

AC ROUND AND SQUARE HOURLMETERS

7 digit, 0.14" numerals, 4 oz, 3 watts (nominal), temperature range -22°F to +158°F; panel cutout 1.99" dia. or 1.81" sq; incorporates retaining clip or 3-screw mounting kit included. 1/4" spade terminals obtainable by removing screws from clamp. All are 99,999.99 hrs. UL recognized, CSA certified, CE compliant.

| Mfg. Part No. | Voltage Max. (VAC) | Mount  | Style  | Stock No. | Price Each |
|---------------|--------------------|--------|--------|-----------|------------|
|               |                    |        |        |           | 1-9        |
| ● 711-0160    | 115                | 3-Hole | Round  | 48M1320   | 36.95      |
| ● 711-0162    | 230                | 3-Hole | Round  | 48M1321   | 38.51      |
| ● 711-0150    | 115                | Panel  | Round  | 48M1319   | 36.13      |
| ● 711-0190    | 115                | Panel  | Square | 48M1322   | 40.27      |

(2772)

710 AC HOURLMETERS



Widely used in panel applications where number size and visibility are critical. Tough Lexan bezel and distinctive styling enhance appearance and durability. 5-digit reset or 6-digit non-reset, 0.19" numerals, 6 oz., 3 watt (nominal), 2.84" diameter bezel. 230, 115 or 24VAC versions. Temperature range: -20°F to +160°F; panel cutout 2.21" dia., 2.44 to 2.53" slotted mounting holes. All are 99,999.99 hrs. UL recognized, CSA certified, CE compliant.

NON-RESET

| Mfg. Part No. | Voltage (VAC) | Termination    | Stock No. | Price Each |       |
|---------------|---------------|----------------|-----------|------------|-------|
|               |               |                |           | 1-14       | 15-24 |
| ● 710-0001    | 115           | 8" Leads       | 48M1311   | 44.72      | 42.56 |
| ● 710-0002    | 115           | Terminal Block | 48M1312   | 49.48      | 47.09 |

RESET

|            |     |          |         |        |        |
|------------|-----|----------|---------|--------|--------|
| ● 710-0013 | 115 | 8" Leads | 48M1313 | 112.41 | 106.98 |
|------------|-----|----------|---------|--------|--------|

(2771)

MODEL 34 LCD COUNTERS AND HOUR METERS

Just Added



- AC or DC voltage input in the same unit
- Tachometer/Hour Meter/Preset Counter versions
- Preset Hour Meter/time up or down and can be programmed with starting time
- Preset Counter with programmable output thresholds and a choice of reset modes
- Totally sealed from moisture and dirt

The Redington Model 34 LCD provides a large, always ON display, with 0.28" [7mm] high characters, in the standard industry size housings (1.45 x 0.95" [36.8 x 24.1mm]). The Hour Meters are available in 8 different housings, including a surface mount inductive input model. All models are totally sealed and are capable of submersion in 6' [2 meters] of water. A wide operating voltage, 10-300VDC and 20-300VAC, and inductive input make the Model 34 versatile for all indoor and outdoor applications. All models are NEMA 4/4X, 12, & IP66 rated when used with the optional gasket and have a polarized lens which assures high visibility in an outdoor environment.

Maintenance Meters are offered with a maximum of 3 "Redi-Alerts" icons 0.08" [2mm] to alert users when service is due. Models are available with front panel field or three factory programmable alerts. Not only does the display flash to get attention, but it displays a choice of 7 different maintenance icons. Models are available as a Preset Timer with a MOSFET output for the actuation of external alarms or indicator lamps. Users can program or specify the service interval and flash duration for each Redi-Alert. Flash duration is the amount of time in hours that the specific icon flashes before and after the service interval. If a front panel manual reset of the Redi-Alert is required the front panel models with switches must be specified.

LCD COUNTERS

| Mfg. Part No. | Mounting Type | No. of Digits | Stock No. | Price Each |
|---------------|---------------|---------------|-----------|------------|
| ● 3400-0000   | Panel Plug-In | 8             | 05N0078   | 31.50      |
| ● 3400-1000   | Panel Plug-In | 8             | 05N0079   | 31.50      |
| ● 3400-2000   | Panel Plug-In | 8             | 05N0080   | 31.50      |
| ● 3400-3000   | Panel Plug-In | 8             | 05N0081   | 31.50      |
| ● 3400-4000   | Panel Plug-In | 8             | 05N0082   | 31.50      |
| ● 3400-5000   | Panel Plug-In | 8             | 05N0083   | 31.50      |
| ● 3400-7000   | Panel Plug-In | 8             | 05N0084   | 31.50      |

LCD HOUR METERS

|             |               |   |         |       |
|-------------|---------------|---|---------|-------|
| ● 3410-0000 | Panel Plug-In | 8 | 05N0085 | 31.50 |
| ● 3410-1000 | Panel Plug-In | 8 | 05N0086 | 31.50 |
| ● 3410-2000 | Panel Plug-In | 8 | 05N0087 | 31.50 |
| ● 3410-3000 | Panel Plug-In | 8 | 05N0089 | 31.50 |
| ● 3410-4000 | Panel Plug-In | 8 | 05N0090 | 31.50 |
| ● 3410-5000 | Panel Plug-In | 8 | 05N0091 | 31.50 |
| ● 3410-7000 | Panel Plug-In | 8 | 05N0092 | 31.50 |

(115440)

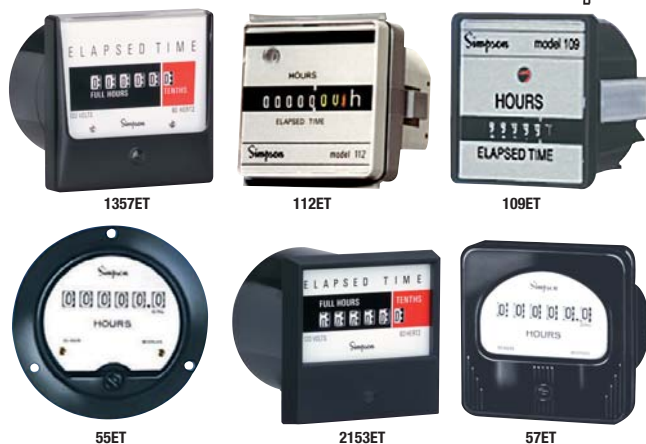
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(116879)

TIMERS – ELAPSED • TIMERS – ELECTRO-PNEUMATIC • TIMERS – INTERVAL

ELAPSED TIME METERS



Style 55ET 3.5" size, 120VAC or 240VAC input power. Accuracy synchronous with AC power. Styles 57ET and 2153ET 3.5", 120VAC input power. Accuracy synchronous with AC power. Style 112ET 1.5" size, 120VAC input power. Accuracy  $\leq 0.01\%$  /24 hrs. Style 109ET 1.5" size, 10-80VDC input power or 100-265VAC with optional style 03619 adapter. Accuracy  $\leq 0.01\%$  /24 hrs. All styles totalizing, non-resettable.

| Mfg. Part No. | Style                              | Stock No. | Price Each |
|---------------|------------------------------------|-----------|------------|
| 03580         | 55ET/120VAC                        | 55F4359   | 108.35     |
| 03600         | 55ET/240VAC                        | 55F4363   | 108.87     |
| 03590         | 57ET                               | 55F4361   | 108.35     |
| 03595         | 1357ET                             | 55F4360   | 108.35     |
| 17720         | 2153ET                             | 57F2473   | 108.35     |
| 03622         | 112ET                              | 12C8566   | 42.01      |
| 03618         | 109ET                              | 46F1399   | 53.65      |
| 03619         | AC Converter Module for Type 109ET | 46F1438   | 15.18      |

(2378)

AGASTAT INDUSTRIAL ELECTROPNEUMATIC TIMING RELAYS



- Available in On-delay, true Off-delay and On/Off-delay
- Timing from 0.1 s to 60 min., fully calibrated in linear increments
- Operating voltages: 6 to 550VAC and 12 to 550VDC with special voltages available
- Available in 2-pole or 4-pole models
- Many enclosure options: explosion proof, dust tight, watertight, hermetically-sealed, NEMA 1
- Mounting options: surface mount, panel mount, octal plug-in mounting
- Options and accessories: quick-connect terminals, dial stops and transient protection module
- Front terminals: easy-to-reach screw terminals



Initiate, delay, sequence and program equipment actions over wide range of applications. 7000 series dielectric withstands 1500Vrms 60Hz between terminals and ground. Normal mounting in vertical position, from back of panel. A front mounting bracket is also supplied with each basic unit. Standard screw terminals (8-32 truss head screws supplied) located on front of unit, with permanent schematic markings. Barrier isolation accommodates spade or ring tongue terminals. Seismic and radiation tested E700 models available; go online or call. UL listed, CSA certified, CE compliant.

DPDT, ON-DELAY, 120V 60Hz, 110V 50Hz

| Mfg. Part No. | Timing Range   | Stock No. | Price Each |        |        |
|---------------|----------------|-----------|------------|--------|--------|
|               |                |           | 1-4        | 5-9    | 10-24  |
| 7012AB        | 0.5 to 5 sec.  | 57F1550   | 253.78     | 243.07 | 233.21 |
| 7012AK        | 1 to 300 sec.  | 28F1929   | 253.78     | 243.05 | 233.23 |
| 7012AD        | 5.0 to 50 sec. | 57F1551   | 256.05     | 245.24 | 235.29 |
| 7012AE        | 20 to 200 sec. | 57F1583   | 266.88     | 246.53 | 230.10 |
| 7012AF        | 1 to 10 min.   | 57F1585   | 280.60     | 268.75 | 257.84 |
| 7012AH        | 3 to 30 min.   | 57F1552   | 335.38     | 321.22 | 308.19 |

DPDT, OFF-DELAY, 120V 60Hz, 110V 50Hz

|        |                |         |        |        |        |
|--------|----------------|---------|--------|--------|--------|
| 7022AB | 0.5 to 5 sec.  | 57F1556 | 256.05 | 245.25 | 235.29 |
| 7022AK | 1 to 300 sec.  | 28F1931 | 236.87 | 226.87 | 217.66 |
| 7022AC | 1.5 to 15 sec. | 57F1582 | 253.78 | 243.07 | 233.21 |
| 7022AD | 5.0 to 50 sec. | 57F1557 | 254.81 | 246.53 | 230.10 |
| 7022AF | 1 to 10 min.   | 57F1586 | 280.60 | 268.75 | 257.84 |
| 7022AH | 3 to 30 min.   | 57F1558 | 290.72 | 281.25 | 262.51 |
| 7022BK | 1 to 300 sec.  | 28F1932 | 253.78 | 243.07 | 233.21 |

➔ CONTINUED ➔

AGASTAT INDUSTRIAL ELECTROPNEUMATIC TIMING RELAYS (CONT.)

DPDT, ON-DELAY, 125VDC

| Mfg. Part No. | Timing Range  | Stock No. | Price Each |        |        |
|---------------|---------------|-----------|------------|--------|--------|
|               |               |           | 1-4        | 5-9    | 10-24  |
| 7012PB        | 0.5 to 5 sec. | 50F3837   | 275.25     | 263.61 | 252.93 |
| 7012PK        | 1 to 300 sec. | 50F3840   | 275.27     | 263.59 | 252.94 |
| 7012PF        | 1 to 10 min.  | 50F3615   | 302.02     | 289.30 | 277.54 |

(2706)

MPB SERIES INTERVAL TIMERS

Automatic reset, pushbutton-operated timers feature metal bezel-framed dial with time selector ring and start button in one assembly. SPDT snap action switch is rated 15A non-inductive, 125/250VAC. Time rated 120V/60Hz, 1/4" push-on terminals. 4H x 4W x 2 1/2"D. UL recognized, CSA certified.



| Mfg. Part No. | Setting |         | Stock No. | Price Each |
|---------------|---------|---------|-----------|------------|
|               | Max.    | Min.    |           | 1-2        |
| ● MPB-5M      | 5 min.  | 5 sec.  | 24F1757   | 139.84     |
| ● MPB-15M     | 15 min. | 15 sec. | 24F1758   | 139.84     |
| ● MPB-60M     | 60 min. | 1 min.  | 24F1759   | 139.84     |

LPB panel-mount units also available, go online or call. (2807)

P SERIES INTERVAL TIMERS



Portable timers have 3-wire power cord and load receptacles, automatic reset, infinite resolution clutch, and remote or local momentary start. Housed in metal case for surface mounting. Toggle switch provided for continuous power. Accuracy  $\pm 0.25\%$  full scale. Set time 0.5 seconds max. at full setting. 120V/60Hz. 15 second, 30 second, and 3 minute time cycle versions also available; go online or call. CSA certified.



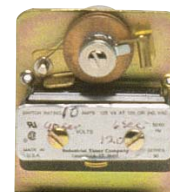
| Mfg. Part No. | Time Cycle | Dial Division | Stock No. | Price Each |
|---------------|------------|---------------|-----------|------------|
|               |            |               |           | 1-2        |
| P-1M          | 60 sec.    | 1 sec.        | 81F031    | 338.92     |
| P-5M          | 5 min.     | 5 sec.        | 81F033    | 338.92     |

(2899)

C-2 AND C-5 SERIES ELAPSED TIME INDICATORS



C-2 series is non-reset running time indicator enclosed in panel-mount housing with 2.81" mounting hole. C-5 series is a reset time totalizer mounted in steel housing with 2.875" mounting hole. 120V/60Hz. CSA certified.



C-2

C-5

| Mfg. Part No. | Max. Hours | Reading    | Stock No. | Price Each |
|---------------|------------|------------|-----------|------------|
|               |            |            |           | 1-2        |
| ● C-2         | 10,000     | Hr. & 1/10 | 55F670    | 205.62     |
| C-5           | 10,000     | Hr. & 1/10 | 55F680    | 312.90     |

(2910)

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"It's easy to do business with Newark online or by phone."

(116883)



TIMERS – INTERVAL, PROGRAMMABLE CAM, DELAY MOTOR & PROGRAMMABLE CAM

AB52 SERIES INTERVAL TIMER



Interval must be reset manually at beginning of each cycle. Feature an external friction providing low setting-torque and enabling setting to be changed during cycle without damage. For appliances, amusement devices, medical equipment, battery chargers. SPDT load switch certified rated 25 amps. 120V/60Hz. UL recognized, CSA certified. 15-, 30- and 60-minute and 6- and 24-hour time cycles are available. Dials available for all time cycles; go online or call.



TIMERS

| Mfg. Part No.      | Time Cycle | Stock No. | Price Each |
|--------------------|------------|-----------|------------|
|                    |            |           | 1-2        |
| AB52-007 (6 HR)    | 6 HR       | 95C0832   | 57.24      |
| ● AB52-009 (12 HR) | 12 HR      | 95C0835   | 57.24      |
| ● AB52-006 (2 HR)  | 2 HR       | 95C0831   | 57.24      |

DIALS

| Mfg. Part No.  | Dial Calibration | Stock No. | Price Each |
|----------------|------------------|-----------|------------|
|                |                  |           | 1-2        |
| ● AT5-1143-901 | 12 HR            | 90F1692   | 11.84      |
| ● AT51148-901  | 2 HR             | 96F5334   | 11.84      |

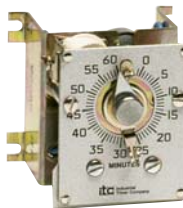
KNOBS

| Mfg. Part No.  | Description                 | Stock No. | Price Each |
|----------------|-----------------------------|-----------|------------|
|                |                             |           | 1-2        |
| ● 55-00121-000 | Fits All Series AB52 Timers | 54F090    | 5.18       |

(3077)

SF AND CSF SERIES TIME DELAY TIMERS

For remote surface mounting where infrequent adjustment of time delay setting is anticipated. SF series offers clutch motor, repeat accuracy of ±1% full scale, and reset time of 5% dial setting. CSF series offers external clutch, repeat accuracy of ±1.5% full scale, and reset time of 0.5 seconds at max. setting. All feature auto-reset upon power removal, operate with isolated SPDT load switch rated 10A non-inductive. 120V/60Hz. UL recognized, CSA certified.



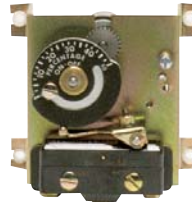
| Mfg. Part No. | Time Cycle | Dial Div. | Stock No. | Price Each |
|---------------|------------|-----------|-----------|------------|
|               |            |           |           | 1-2        |
| ● SF-15S      | 15 sec.    | 0.25 sec. | 24F1853   | 199.80     |
| ● SF-30S      | 30 sec.    | 0.5 sec.  | 24F1854   | 515.04     |

➔ CONTINUED ➔

| Mfg. Part No. | Time Cycle | Dial Div. | Stock No. | Price Each |
|---------------|------------|-----------|-----------|------------|
|               |            |           |           | 1-2        |
| ● CSF1M       | 60 sec.    | 1 sec.    | 24F280    | 281.20     |
| ● CSF-30M     | 30 min.    | 30 sec.   | 70B5829   | 230.88     |
| ● CSF-5M      | 5 min.     | 5 sec.    | 24F282    | 216.08     |

(2897)

CM SERIES SINGLE CAM AND MC SERIES MULTI-CAM PROGRAMMABLE TIMERS



CM



MC

CM series and MC series recycling timers repeat a continuous adjustable on/off time cycle. A heavy duty synchronous motor, which offers 13 different speeds, is linked with a choice of gear racks ordered separately on this page, to allow for a variety of time cycles to be selected. SPDT switches on the cams are rated 10 amps non-inductive at 120VAC. Cams are adjustable 2-98% of total cycle time. Order cam timers and gear racks separately from "how to order" table on this page. Other versions available, up to 20 switches; go online or call. UL recognized, CSA certified.

CM SERIES

| Mfg. Part No. | Stock No. | Price Each |
|---------------|-----------|------------|
|               |           | 1-2        |
| ● CM0 115/60  | 24F1827   | 141.36     |
| ● CM-3        | 24F1829   | 124.64     |
| ● CM-5        | 24F251    | 124.64     |
| ● CM-6        | 24F252    | 124.64     |
| ● CM-7        | 24F1819   | 124.64     |
| ● CM-10       | 24F254    | 124.64     |

MC SERIES

| Mfg. Part No. | Chassis  | Stock No. | Price Each |
|---------------|----------|-----------|------------|
|               |          |           | 1-2        |
| ● MC3-4SW     | 4 Switch | 62F2067   | 270.84     |
| ● MC5-4SW     | 4 Switch | 62F2014   | 270.84     |
| ● MC5-6SW     | 6 Switch | 62F2022   | 338.92     |

(3079)

HOW TO ORDER CAM TIMERS AND GEAR RACKS

1. Locate in table below time cycle for one revolution of camshaft.
2. Note the model of cam timer designated at top of column.

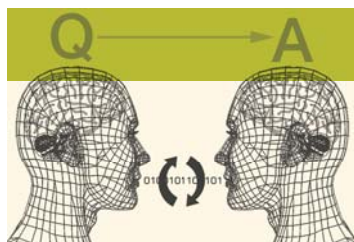
3. Note across the column from time cycle the gear rack model number.
4. Specify for MC multiple cam timers the required number of load switches.

Example: should you require a single cam 30 second time cycle, you would look in table for 30S (see abbreviation code below table). 30S appears across from gear rack mfg. part no. A12 and under cam timer CM2. So you order gear rack mfg. part no. 24F315, with cam timer CM2.

GEAR RACKS — TOTAL TIME CYCLE\*

| Mfg. Part No. | MCO CMO | MC1 CM1 | MC2 CM2 | MC3 CM3 | MC4 CM4 | MC5 CM5 | MC6 CM6 | MC7 CM7 | MC8 CM8 | MC9 CM9 | MC10 CM10 | MC12 CM12 | Stock No. | Price Each |
|---------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|-----------|-----------|-----------|------------|
|               |         |         |         |         |         |         |         |         |         |         |           |           |           | 1-2        |
| ● E12         | 40c     | 4S      | 10S     | 20S     | 40S     | 2M      | 3M20S   | 10M     | 20M     | 40M     | 2H        | 8H        | 24F306    | 19.85      |
| ● C12         | 1S      | 6S      | 15S     | 30S     | 60S     | 3M      | 5M      | 15M     | 30M     | 60M     | 3H        | 12H       | 24F308    | 19.85      |
| ● B12         | 80c     | 8S      | 20S     | 40S     | 80S     | 4M      | 6M40S   | 20M     | 40M     | 80M     | 4H        | 16H       | 24F311    | 19.85      |
| ● B15         | 100c    | 10S     | 25S     | 50S     | 100S    | 5M      | 8M20S   | 25M     | 50M     | 100M    | 5H        | 20H       | 24F313    | 19.14      |
| ● A12         | 2S      | 12S     | 30S     | 60S     | 2M      | 6M      | 10M     | 30M     | 60M     | 2H      | 6H        | 24H       | 24F315    | 19.85      |
| ● A18         | 3S      | 18S     | 45S     | 90S     | 3M      | 9M      | 15M     | 45M     | 90M     | 3H      | 9H        | 36H       | 24F321    | 19.14      |
| ● A24         | 4S      | 24S     | 60S     | 2M      | 4M      | 12M     | 20M     | 60M     | 2H      | 4H      | 12H       | 48H       | 24F324    | 19.85      |
| ● A36         | 6S      | 36S     | 90S     | 3M      | 6M      | 18M     | 30M     | 90M     | 3H      | 6H      | 18H       | 72H       | 24F330    | 19.85      |

\*c = cycles (refers to 60 cps current; e.g. 50 c = ½ sec), S = seconds, M = minutes, H = hours. (3081)



Expert technical support

Chat online to our team of engineers, or connect to them through your representative.