

# MODEL 84

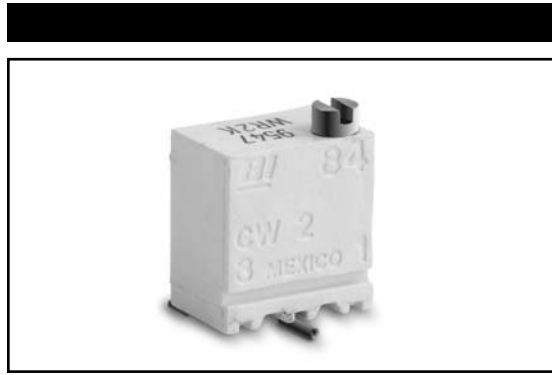
1/4" Square

Multiturn

Surface Mount

Cermet Trimming

Potentiometer



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## ELECTRICAL

|  |  |
|--|--|
| Standard Resistance Range, Ohms          | 10 to 1Meg                                     |
| Standard Resistance Tolerance            | ±10%   |
| Input Voltage, Maximum                   | 200 Vdc or rms not to exceed power rating      |
| Slider Current, Maximum                  | 100mA or within rated power, whichever is less |
| Power Rating, Watts                      | 0.25 at 85°C derating to 0 at 150°C            |
| End Resistance, Maximum                  | 2 Ohms   |
| Actual Electrical Travel, Turns, Nominal | 12   |
| Dielectric Strength                      | 900 Vrms                                       |
| Insulation Resistance, Minimum           | 1,000 Megohms                                  |
| Resolution                               | Essentially infinite                           |
| Contact Resistance Variation, Maximum    | 1% or 1 Ohms, whichever is greater             |

## ENVIRONMENTAL

|                                  |  |
|----------------------------------|--|
| Seal                             | 85°C Fluorinert® (No Leaks)                      |
| Temperature Coefficient, Maximum | ±100ppm/°C (<100 Ohms = ±250ppm/°C)              |
| Operating Temperature Range      | -65°C to +150°C                                  |
| Thermal Shock                    | 5 cycles, -65°C to +150°C (1% ΔRT, 1% ΔVR)       |
| Moisture Resistance              | Ten 24 hour cycles (1% ΔRT, IR 100 Megohms Min.) |
| Shock, 6ms Sawtooth              | 100G's (1% ΔRT, 1% ΔVR)                          |
| Vibration                        | 20G's, 10 to 2,000 Hz (1% ΔRT, 1% ΔVR)           |
| High Temperature Exposure        | 250 hours at 150°C (2% ΔRT, 2% ΔVR)              |
| Rotational Life                  | 200 cycles (3% ΔRT)                              |
| Load Life at 0.25 Watts          | 1,000 hours at 85°C (2% ΔRT)                     |
| Resistance to Solder Heat        | 260°C for 10 sec. (1% ΔRT)                       |
| Temperature Exposure, Maximum    | 215°C for 3 min. (1% ΔRT)                        |

## MECHANICAL

|                          |                          |
|--------------------------|--------------------------|
| Mechanical Stops         | Clutch action, both ends |
| Torque, Starting Maximum | 3 oz.-in. (0.021 N-m)    |
| Weight, Nominal          | .014 oz. (.40 grams)     |

Fluorinert® is a registered trademark of 3M Company.  
Specifications subject to change without notice.

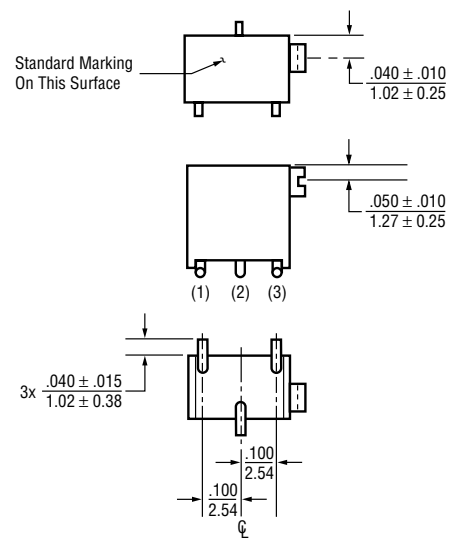
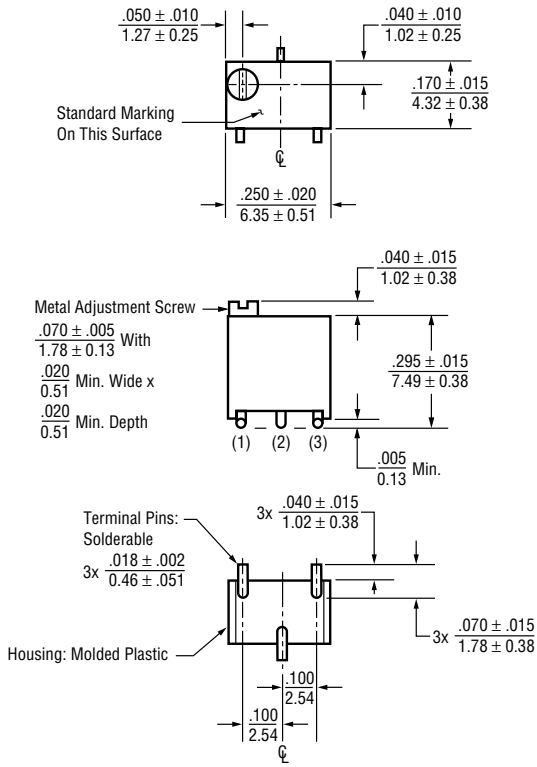


**TOP ADJUSTMENT (Inch/mm)**

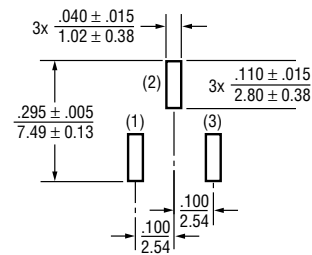
**SIDE ADJUSTMENT (Inch/mm)**

**Model 84W**

**Model 84X**



Recommended PCB Layout - Models 84W and 84X

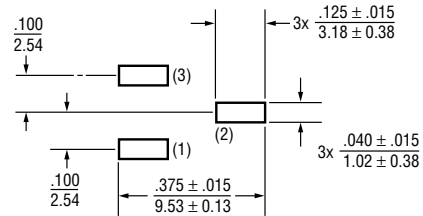
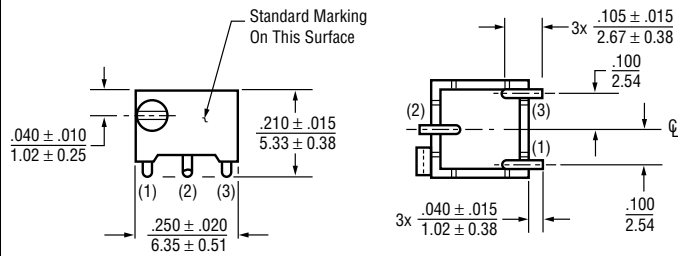


**Note:** Model 84W dimensions applicable to all models except as noted.

**SIDE ADJUSTMENT (Inch/mm)**

**Model 84P**

Recommend PCB Layout - Model 84P



## STANDARD RESISTANCE VALUES, OHMS

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|    |     |    |     |      |      |
|----|-----|----|-----|------|------|
| 10 | 100 | 1K | 10K | 50K  | 250K |
| 20 | 200 | 2K | 20K | 100K | 500K |
| 50 | 500 | 5K | 25K | 200K | 1Meg |

## PACKAGING

### Standard: Tubes

All units oriented with #1 pin to same side.

|          | Pin Style | = | P              | W/X                          |
|----------|-----------|---|----------------|------------------------------|
| Magazine | Width     | = | 0.47"(11.93mm) | 0.37"(9.39mm)                |
|          | Height    | = | 0.32"(8.13mm)  | 0.47"(11.93mm)               |
|          | Length    | = | 14.5"(368mm)   | 14.5"(368mm)<br>16.5"(429mm) |
|          | Capacity  | = | 50 Units       | 50 Units                     |

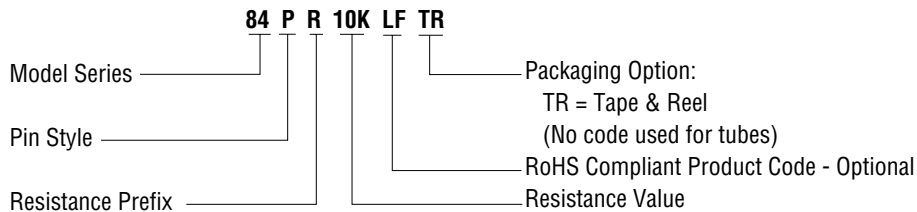
### Option: Embossed Tape & Reel (84P & 84W only)

All units oriented with #1 pin to the right of the direction of feed.

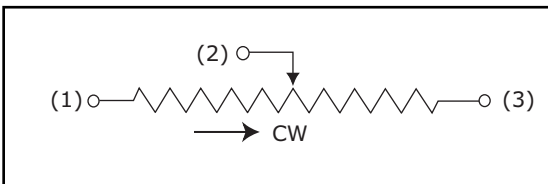
|      | Pin Style | = | P            | W/X         |
|------|-----------|---|--------------|-------------|
| Tape | Width     | = | 16 mm        | 24mm        |
|      | Sprocket  | = | 4 mm pitch   | 4mm pitch   |
|      | Capacity  | = | 500 Units    | 400 Units   |
| Reel | Diameter  | = | 13" (330 mm) | 13" (330mm) |

## ORDERING INFORMATION

### Standard:



## CIRCUIT DIAGRAM



## NOTES

Metric equivalents, based on 1 inch = 25.4mm are rounded to the same number of significant figures as in the original English units and are provided for general information only.

Tolerances unless otherwise specified:  
Linear = ± .01 inches (25mm)  
Angular = ± 2 degrees

