

# Multi-Turn Trimmer

## Model 89 and 90



### Features:

- 1/4" square
- Surface mount
- Cermet



## Electrical

|  |  |
|--|--|
| Standard Resistance Range, Ohms          | 10 to 2Meg                                     |
| Standard Resistance Tolerance            | ±10% (<100 Ohms = ±20%)                        |
| 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                      | 0.75 at 85°C derating to 0 at 125°C            |
| End Resistance, Maximum                  | 2 Ohms   |
| Actual Electrical Travel, Turns, Nominal | 20   |
| Dielectric Strength                      | 1,000 Vrms                                     |
| Insulation Resistance, Minimum           | 1,000 Megohms                                  |
| Resolution                               | Essentially infinite                           |
| Contact Resistance Variation, Maximum    | 1% or 1 Ohm, whichever is greater              |

## Environmental

|                                  |  |
|----------------------------------|--|
| Seal                             | 85°C Fluorinert® (No Leaks)                      |
| Temperature Coefficient, Maximum | ±100ppm/°C                                       |
| Operating Temperature Range      | -55°C to +125°C                                  |
| Thermal Shock                    | 5 cycles, -55°C to +125°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 125°C (2% ΔRT, 2% ΔVR)              |
| Rotational Life                  | 200 cycles (3% ΔRT)                              |
| Load Life at 0.75 Watts          | 1,000 hours at 70°C (2% ΔRT)                     |
| Resistance to Solder Heat        | 260°C for 10 sec. (1% ΔRT)                       |

## Mechanical

|                          |                          |
|--------------------------|--------------------------|
| Mechanical Stops         | Clutch Action, both ends |
| Torque, Starting Maximum | 5 oz.-in. (0.035 N-m)    |
| Weight, Nominal          | .05 oz. (1.4 grams)      |

### General Note

TT Electronics reserves the right to make changes in product specification without notice or liability. All information is subject to TT Electronics' own data and is considered accurate at time of going to print.

TT Electronics | BI Technologies  
4200 Bonita Place, Fullerton, CA USA 92835-1053 | Ph: +1 714-447-2300  
www.ttelectronics.com | sensors@ttelectronics.com

# Multi-Turn Trimmer

## Model 89 and 90



### Packaging Information

**Standard:** Boxes

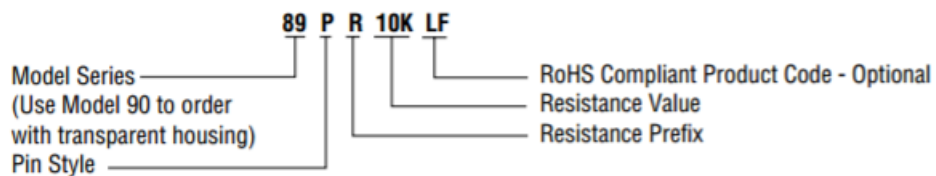
Capacity = 100 Units (89P)  
50 Units (All other styles)

**Option:** Tubes (Models 89P, 89PH, 89X, 89XH and 90P only.)  
All units oriented with #1 pin to same side.

|          |          |   |          |
|----------|----------|---|----------|
| Magazine | Width    | = | 0.28"    |
|          | Height   | = | 0.65"    |
|          | Length   | = | 21.5"    |
|          | Capacity | = | 25 Units |

### Ordering Information

**Standard:**



**Option:**



**Option:**



### Standard Resistance Values

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

**General Note**

TT Electronics reserves the right to make changes in product specification without notice or liability. All information is subject to TT Electronics' own data and is considered accurate at time of going to print.

TT Electronics | BI Technologies  
4200 Bonita Place, Fullerton, CA USA 92835-1053 | Ph: +1 714-447-2300  
www.ttelectronics.com | sensors@ttelectronics.com

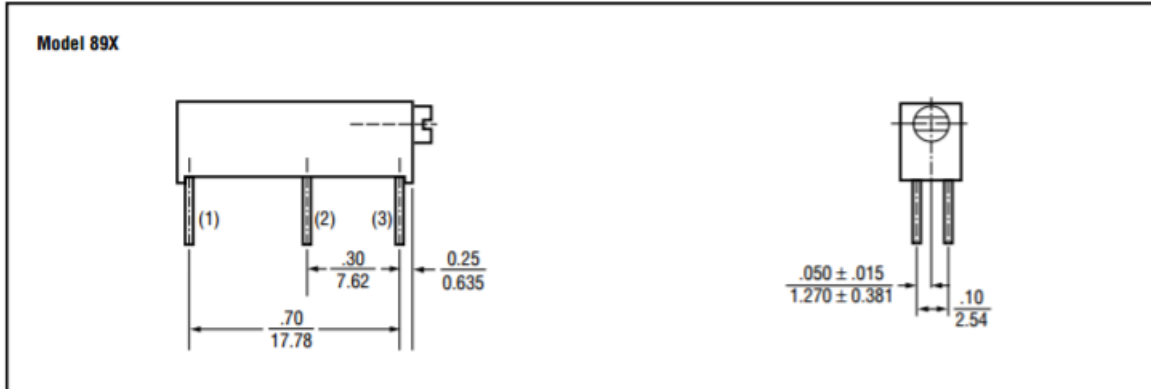
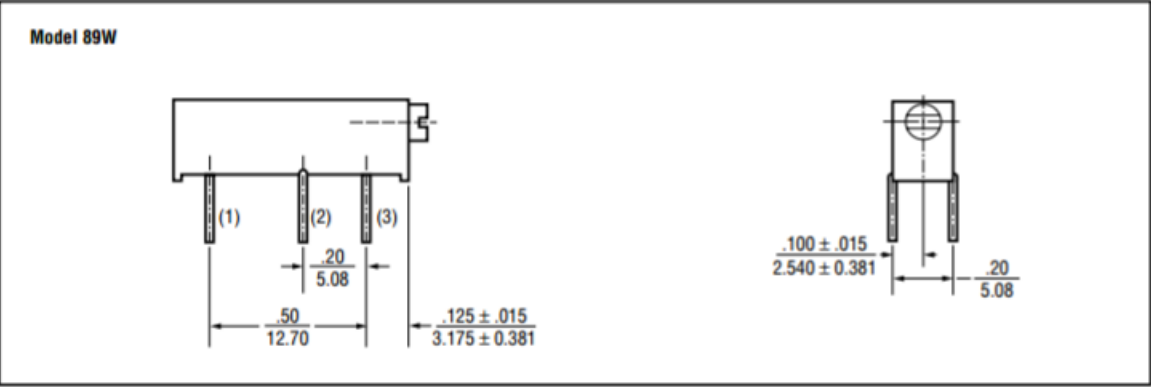
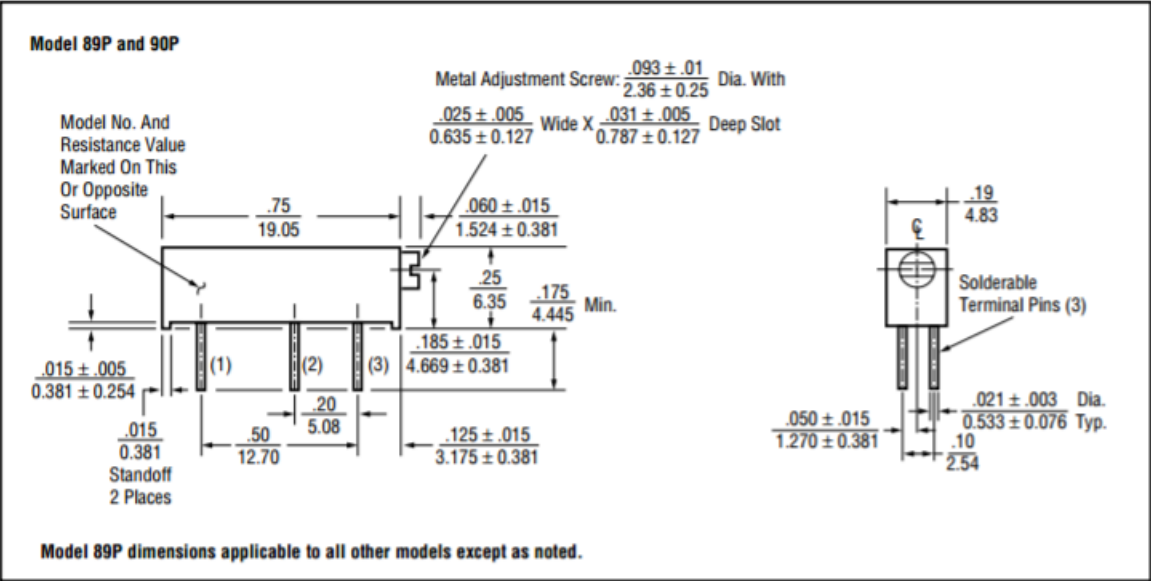
# Multi-Turn Trimmer

## Model 89 and 90



### Outline Drawings

#### LOW PROFILE (Inch/mm)



General Note  
 TT Electronics reserves the right to make changes in product specification without notice or liability. All information is subject to TT Electronics' own data and is considered accurate at time of going to print.

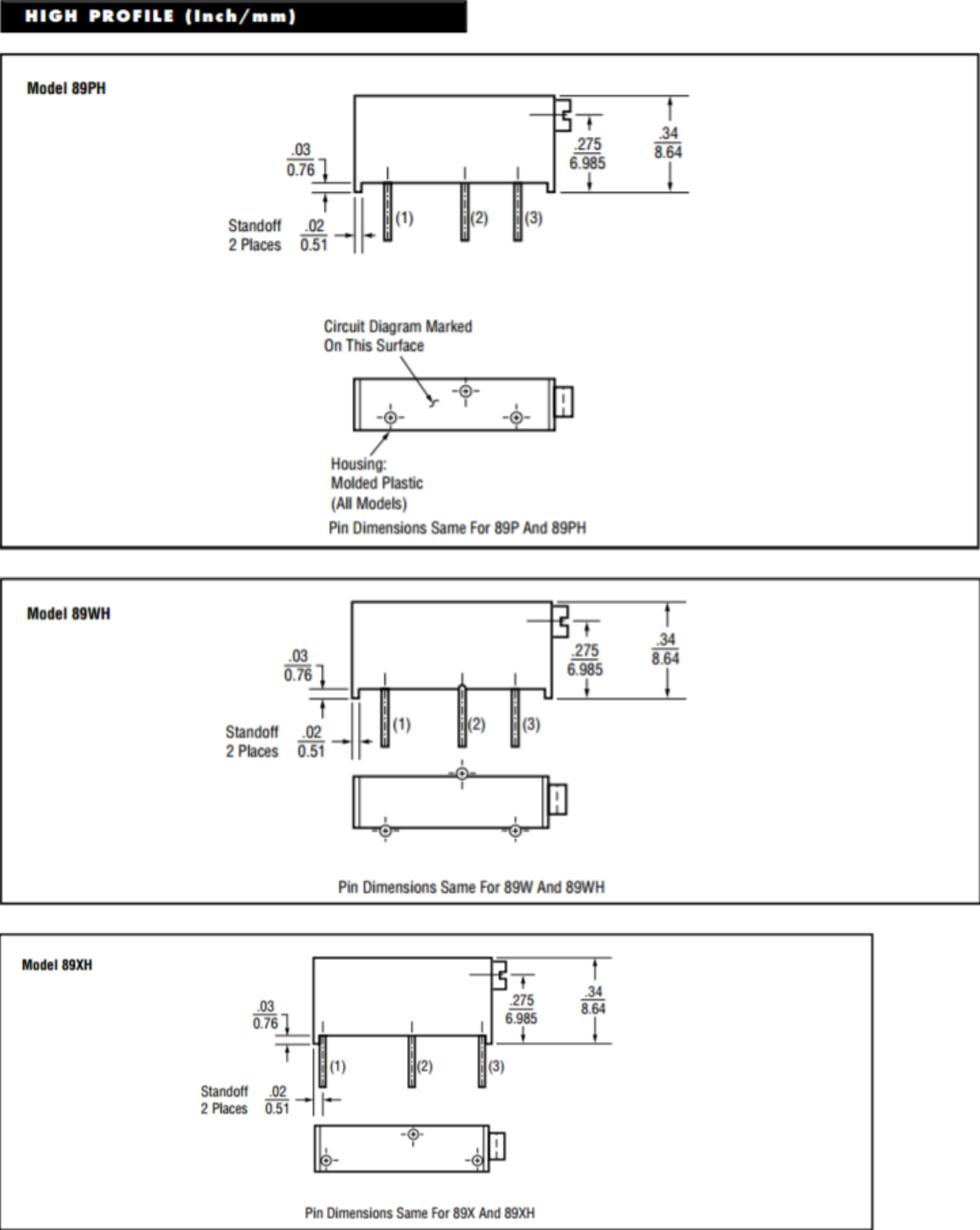
TT Electronics | BI Technologies  
 4200 Bonita Place, Fullerton, CA USA 92835-1053 | Ph: +1 714-447-2300  
 www.ttelectronics.com | sensors@ttelectronics.com

# Multi-Turn Trimmer

## Model 89 and 90



### Outline Drawings



General Note  
TT Electronics reserves the right to make changes in product specification without notice or liability. All information is subject to TT Electronics' own data and is considered accurate at time of going to print.

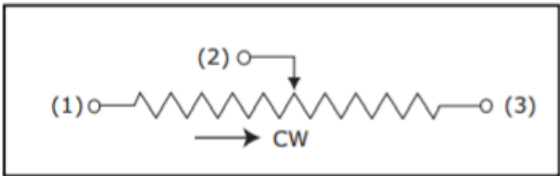
TT Electronics | BI Technologies  
4200 Bonita Place, Fullerton, CA USA 92835-1053 | Ph: +1 714-447-2300  
www.ttelectronics.com | sensors@ttelectronics.com

# Multi-Turn Trimmer

## Model 89 and 90



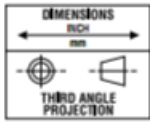
### CIRCUIT DIAGRAM



### 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 =  $\pm .01$  inches (.25mm)  
Angular =  $\pm 2$  degrees



General Note  
TT Electronics reserves the right to make changes in product specification without notice or liability. All information is subject to TT Electronics' own data and is considered accurate at time of going to print.

TT Electronics | BI Technologies  
4200 Bonita Place, Fullerton, CA USA 92835-1053 | Ph: +1 714-447-2300  
www.ttelectronics.com | sensors@ttelectronics.com

Компания «Life Electronics» занимается поставками электронных компонентов импортного и отечественного производства от производителей и со складов крупных дистрибьюторов Европы, Америки и Азии.

С конца 2013 года компания активно расширяет линейку поставок компонентов по направлению коаксиальный кабель, кварцевые генераторы и конденсаторы (керамические, пленочные, электролитические), за счёт заключения дистрибьюторских договоров

Мы предлагаем:

- Конкурентоспособные цены и скидки постоянным клиентам.
- Специальные условия для постоянных клиентов.
- Подбор аналогов.
- Поставку компонентов в любых объемах, удовлетворяющих вашим потребностям.
- Приемлемые сроки поставки, возможна ускоренная поставка.
- Доставку товара в любую точку России и стран СНГ.
- Комплексную поставку.
- Работу по проектам и поставку образцов.
- Формирование склада под заказчика.
- Сертификаты соответствия на поставляемую продукцию (по желанию клиента).
- Тестирование поставляемой продукции.
- Поставку компонентов, требующих военную и космическую приемку.
- Входной контроль качества.
- Наличие сертификата ISO.

В составе нашей компании организован Конструкторский отдел, призванный помогать разработчикам, и инженерам.

Конструкторский отдел помогает осуществить:

- Регистрацию проекта у производителя компонентов.
- Техническую поддержку проекта.
- Защиту от снятия компонента с производства.
- Оценку стоимости проекта по компонентам.
- Изготовление тестовой платы монтаж и пусконаладочные работы.



Тел: +7 (812) 336 43 04 (многоканальный)

Email: [org@lifeelectronics.ru](mailto:org@lifeelectronics.ru)