

# 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

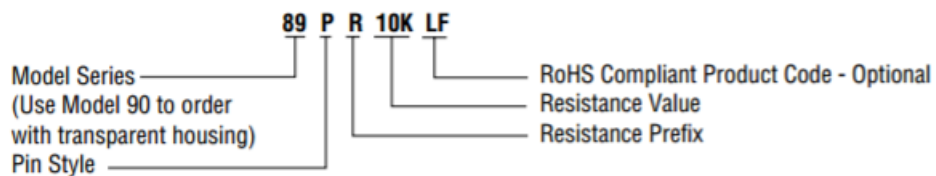
Capacity = 100 Units (89P)  
50 Units (All other styles)

**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	

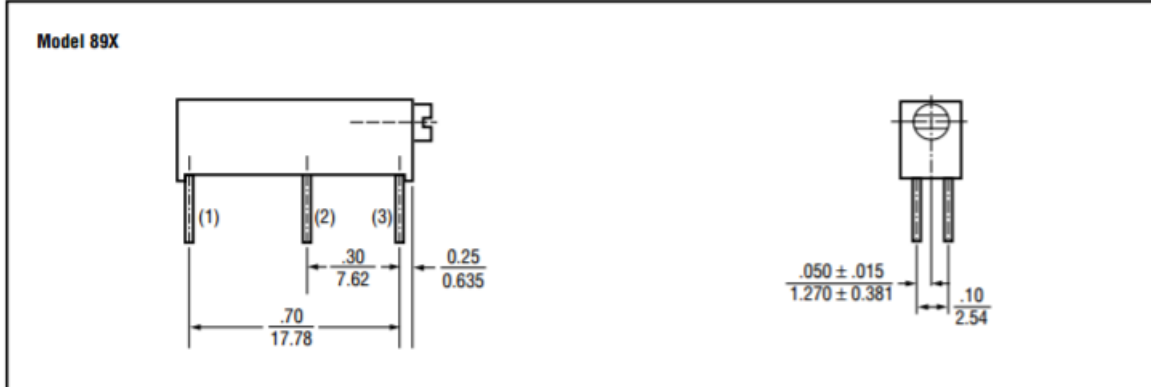
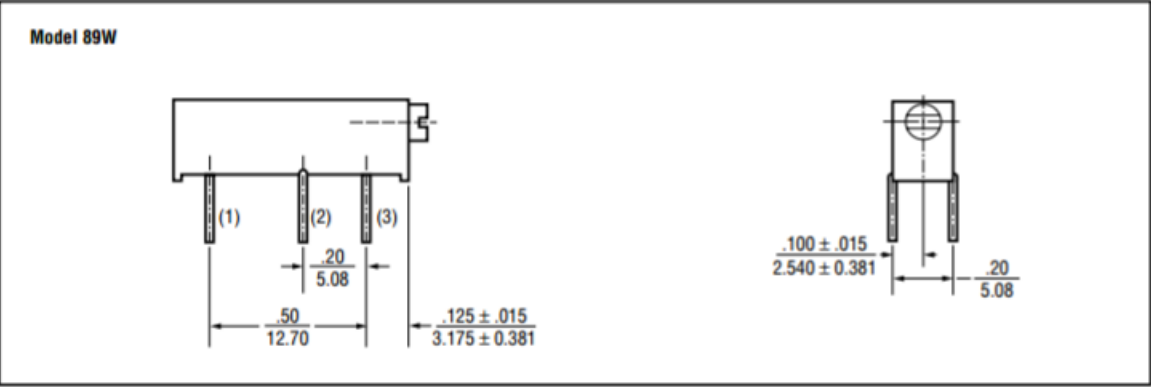
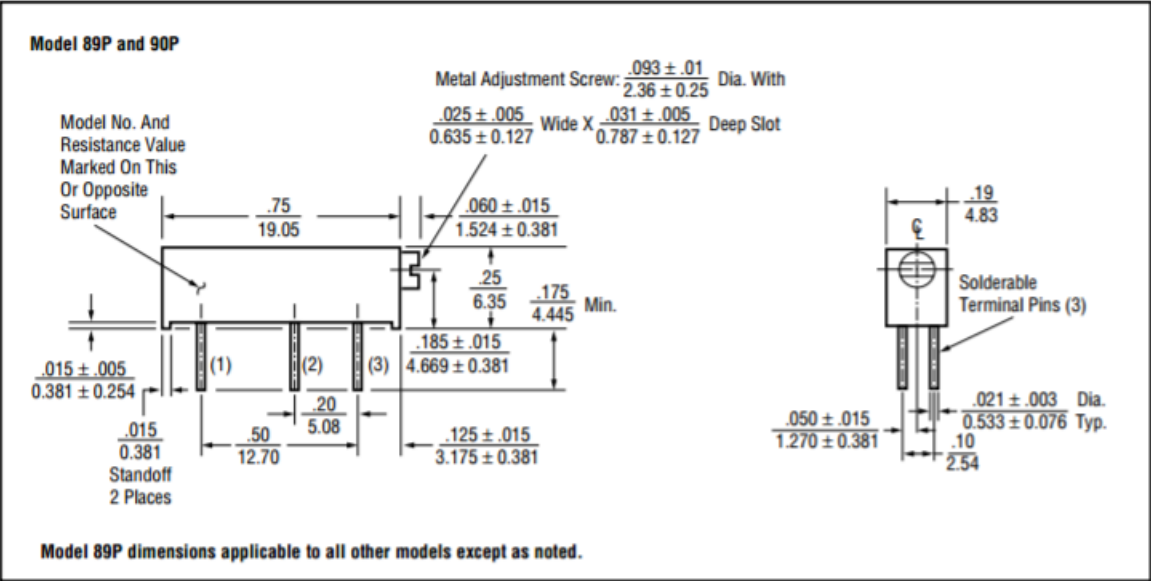
**General Note**

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

### Outline Drawings

#### LOW PROFILE (Inch/mm)



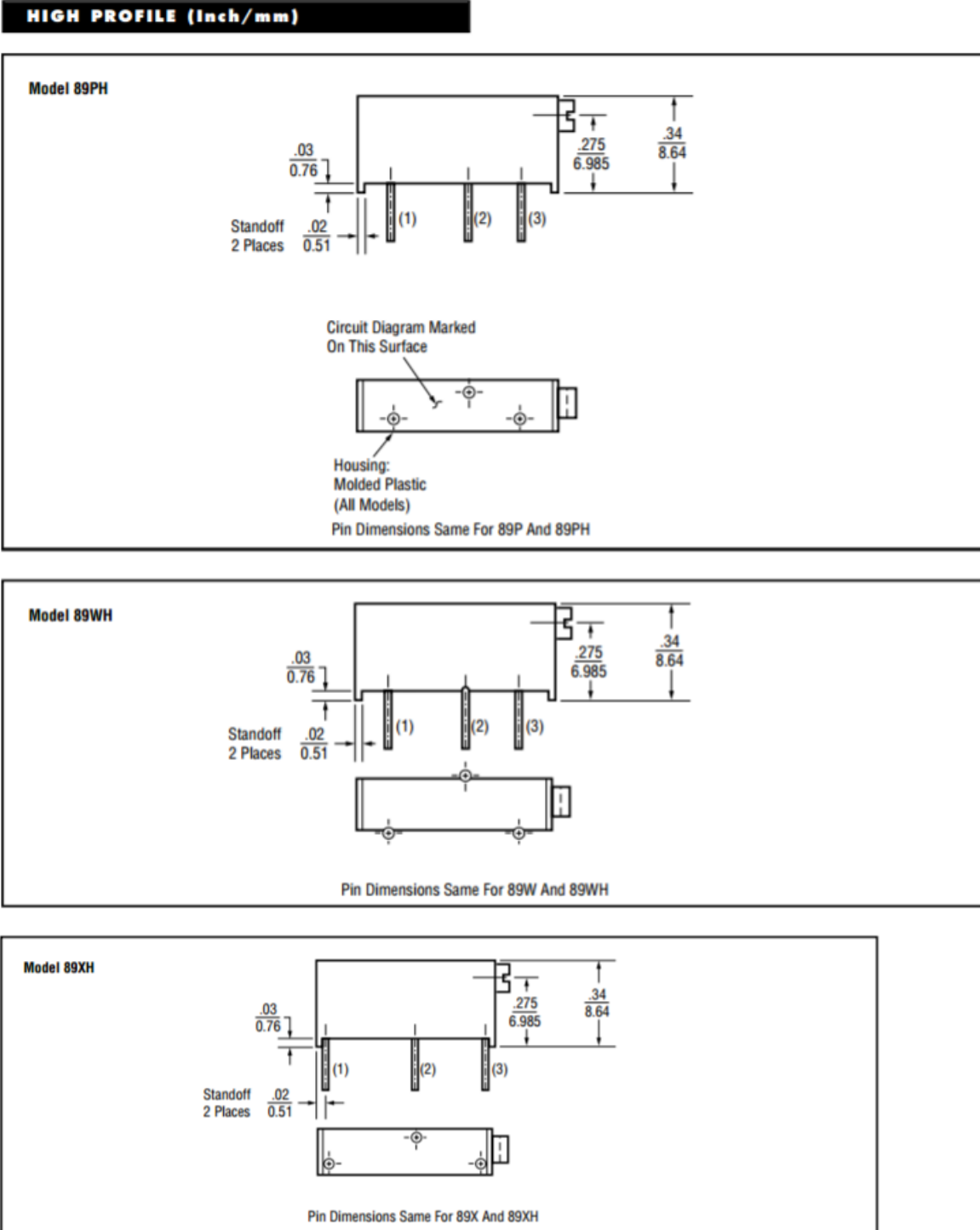
General Note  
 TT Electronics reserves the right to make changes in product specification without notice or liability. All information is subject to TT Electronics' own data and is considered accurate at time of going to print.

# 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.

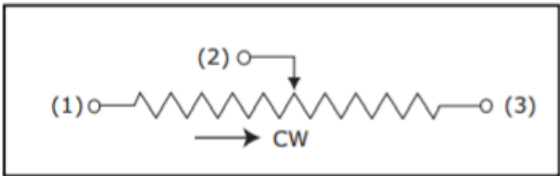
TT Electronics | BI Technologies  
4200 Bonita Place, Fullerton, CA USA 92835-1053 | Ph: +1 714-447-2300  
www.ttelectronics.com | sensors@ttelectronics.com

# Multi-Turn Trimmer

## Model 89 and 90



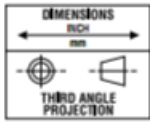
### CIRCUIT DIAGRAM



### 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

# Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

## TT Electronics:

[89PR100](#) [89PR100K](#) [89PR100KLF](#) [89PR100LF](#) [89PR10K](#) [89PR1K](#) [89PR1KLF](#) [89PR200](#) [89PR200K](#) [89PR20K](#)  
[89PR20KLF](#) [89PR25K](#) [89PR2K](#) [89PR2KLF](#) [89PR50](#) [89PR500](#) [89PR500K](#) [89PR500LF](#) [89PR50K](#) [89PR5K](#)  
[89WR1K](#) [89WR50K](#) [89PHR2K](#) [89PR10](#) [89PR20](#) [89PR250K](#) [89WR200K](#) [89WR250K](#) [89XR2K](#) [89XR5K](#)  
[89PHR10KLF](#) [89PHR1KLF](#) [89PHR200LF](#) [89PHR200KLF](#) [89PHR500KLF](#) [89PHR50KLF](#) [89PR100LFTB](#)  
[89PR1MEGLF](#) [89PR200LFTB](#) [89PR2KLFTB](#) [89PR5KLFTB](#) [89WHR1KLF](#) [89WHR500KLF](#) [89WR10KLF](#) [89WR1KLF](#)  
[89WR200LF](#) [89WR250KLF](#) [89WR25KLF](#) [89WR2KLF](#) [89WR500KLF](#) [89WR50KLF](#) [89WR5KLF](#) [89XHR1KLF](#)  
[89XHR20KLF](#) [89XR100LF](#) [89XR100KLF](#) [89XR10KLF](#) [89XR10KLFTB](#) [89XR20KLF](#) [89XR500LF](#) [89XR50KLF](#)  
[89XR5KLF](#) [2126](#) [89PR2MLF](#) [89PR20LF](#) [89PR200LF](#) [89PR50KLF](#) [89PR50LF](#) [89PR25KLF](#) [89PR500KLF](#)  
[89PR5KLF](#) [89PR10KLF](#) [89PR250KLF](#) [89PR200KLF](#) [89PR10LF](#) [89PR2M](#) [89PR1M](#) [89PR1MLF](#) [89PR75KLF](#)  
[89XR1KLFTB](#) [89XR1KLF](#) [89WR10LFTB](#) [89PHR5KLFTB](#) [89WR2MEGLFTB](#) [90PR50KLF](#) [89XR20LF](#)  
[89PHR2KLFTB](#) [89PHR500KLFTB](#) [89XR200KLFTB](#) [90PR250KLFTB](#) [89PHR50KLFTB](#) [89WHR5KLF](#) [89XR2MEGLF](#)  
[89XR1MEGLF](#) [90PR2KLF](#) [89WR20LFTB](#) [89PHR10LF](#) [90PR2KLFTB](#) [89PHR10KLFTB](#) [89XR20KLFTB](#)