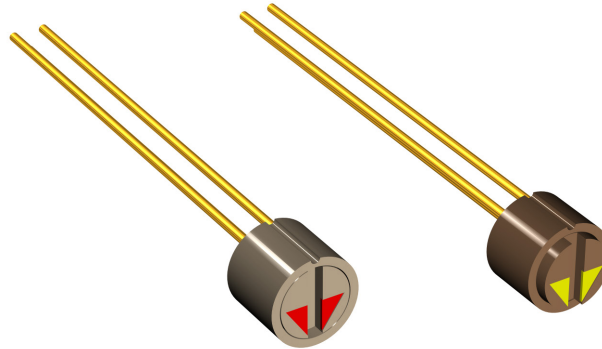


# Trimmers Model PJ 63



## Features

- Optional extended housing for increased robustness
- Very small mechanical dimensions  $\varnothing$  1.9 mm/[0.075"]
- With or without flange
- Optional color coding on rotor
- Accurate tapers. Linear, logarithmic and custommade
- Customer specified electrical resistance values and tolerances

## Contents

1. History Revision.....	3
2. Mechanical Specifications.....	4
3. Electrical Specifications.....	4
4. Material Specifications.....	4
5. Environmental Conditions.....	5
6. Recommended Process Parameters.....	5
7. Mechanical Dimensions.....	6
8. Housing Styles.....	7
9. Plastic Colors.....	8
10. Color Coding.....	8
11. Terminal Length.....	8
12. Product Specification Form.....	9

Sonion reserves the right to make changes at any time to improve reliability, function or design, in order to provide the best product possible.

## 1. History Revision

Revision Number/Date	Change from last revision
<b>05 / Sep 01</b>	History Revision added
<b>06 / Sep 01</b>	Optional extended housing for increased robustness added
<b>MT1035.A (07/08)</b>	Minimum resistance value on linear tapers increased to 200 $\Omega$ .
<b>007/JUL-20-2009</b>	Operational temperature and humidity removed. Storage humidity added. New layout.
<b>008/2014-01-17</b>	Updated design and new RoHS logo directive (2011/65/EU)
<b>009/2015-09-24</b>	Discontinue House 02, update drawing housing style 01, 03, 04

## 2. Mechanical Specifications

Rotational angle, mechanical	240° ±5°
Resistance curve angle	210°
End stop torque	Min. 60 cNcm
Rotational torque	Max. 10 cNcm

Lifetime	
Resistance element	Min. 1,000 cycles

Bending of terminals	Min. 0.5 mm [0.02"] from housing
	Min. 3 bending cycles 90°, with 0.25 N load

Forces	
Torque to be applied repeatedly to mechanical stop	Max. 50 cNcm, max. 10 times
Force to be applied axially to knob	Min. 10 N, without electrical intermittence
Base retention force	Min. 4 N

## 3. Electrical Specifications

Resistance value	
Linear	200 Ω to 1 MΩ
Logarithmic	500 Ω to 600 kΩ
Double logarithmic	2 kΩ to 500 kΩ
Resistance value tolerance	±20% (-20% to +30% for values ≤ 1 kΩ)
Resistance taper	See 'Tapers Data Sheet'
Wiper contact resistance	Typ. better than 20 dB rel. R
Max. load	1 mW
Insulation resistance between terminals	Min. 1 MΩ

## 4. Material Specifications

All materials comply with RoHS directive (2002/95/EC)

Solder terminals	Ag, gold flash plated
Metal parts	PdAg
Plastic parts	PA 6.6

Carbon circuit base	Reinforced glass epoxy
Resistance material	Carbon / Silver composite

Lubricant, glue / seal, and paint specifications are proprietary information.

## 5. Environmental Conditions

Storage temperature	-40 to + 60°C
Storage humidity	10 to 95% RH

## 6. Recommended Process Parameters

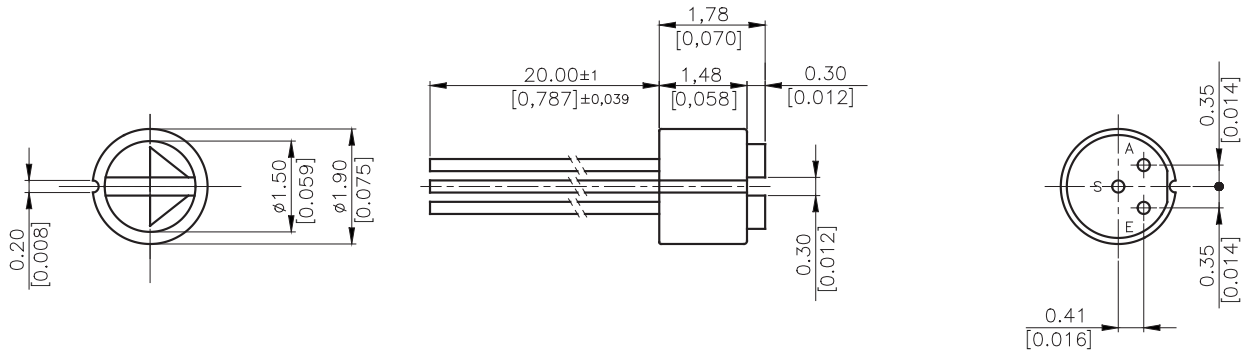
Gluing	
Types of glue	<p>Cyanoacrylates (non-blooming) , i.e. Loctite 401, 408, 460 and Sicomet 50, 63, 77</p> <p><b>Non-blooming types must be used to ensure that residuals from the curing process do not degrade the component</b></p>

Soldering	
Soldering temperature and time	<p>300°C [572°F] for 3 s or 350°C [662°F] for 1 s</p> <p><b>To prevent damage to the carbon taper as a result of the soldering process, the rotor must be turned either fully CW or CCW during soldering</b></p>
Soldering distance	<p>Min. 0.3 mm [0.012"] from housing</p> <p><b>Exceeding temperature, time and distance recommendations may damage the component. Mechanical stress on soldering terminals must be avoided during soldering.</b></p>

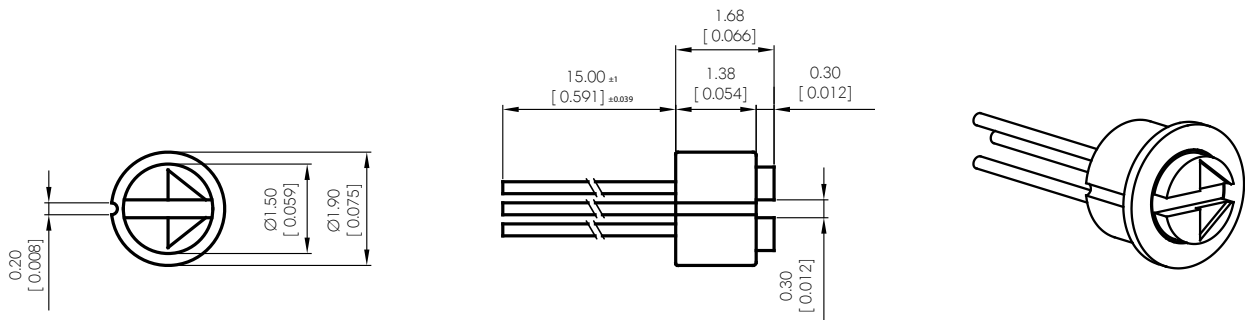
Cleaning	
Cleaning solvents	<p>Aqua wash (Alpha 2110), Benzine</p> <p><b>Ultrasonic cleaning must be avoided as it may remove the lubricant inside the component.</b></p>

## 7. Mechanical Dimensions

### Extended Housing Styles



### Housing Styles no. 01, 03, 04

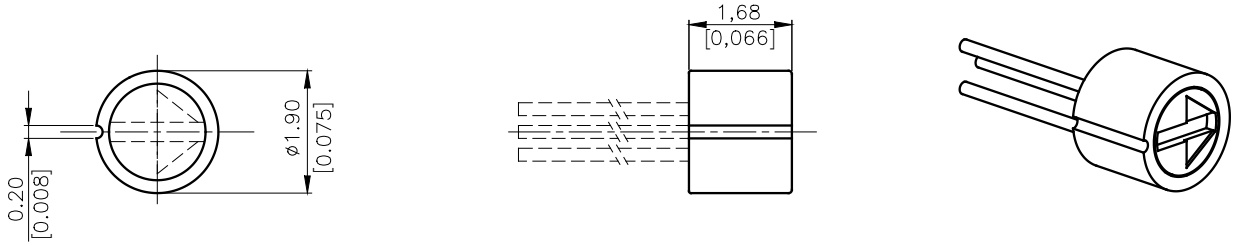


**Note:**

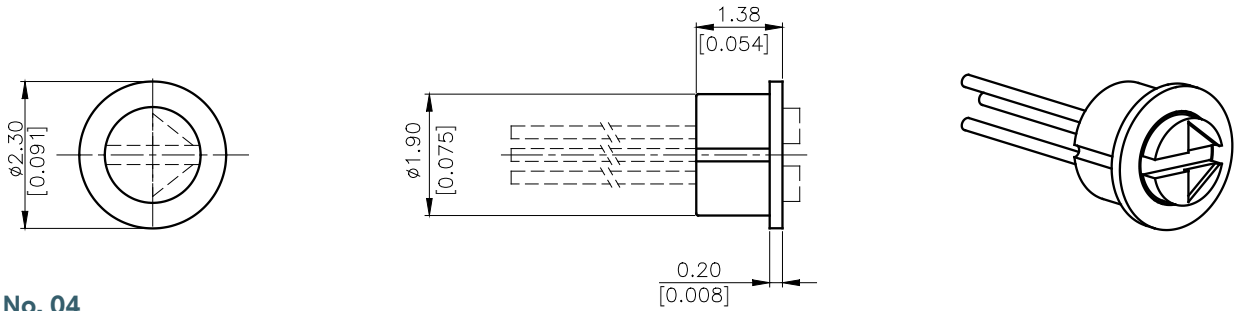
The standard measurement tolerance on the drawings is  $\pm 0.05$  mm/[0.002"]. Tolerances which differ from this value will be indicated on the drawings.

## 8. Housing Styles

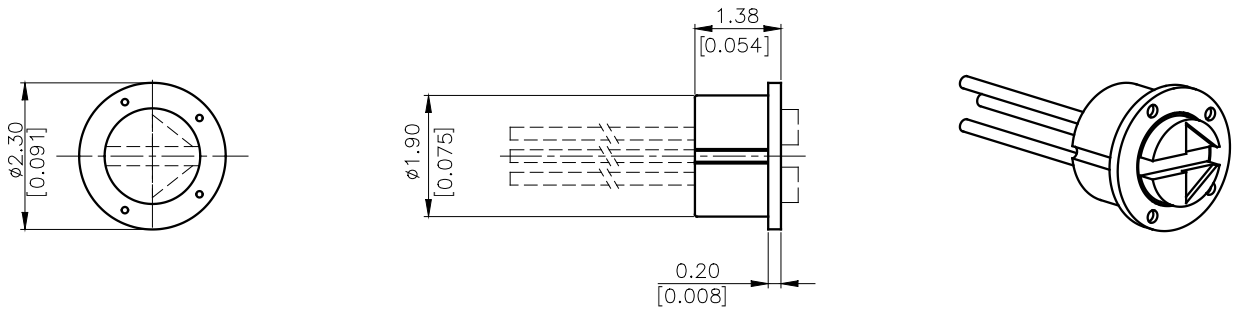
### No. 1



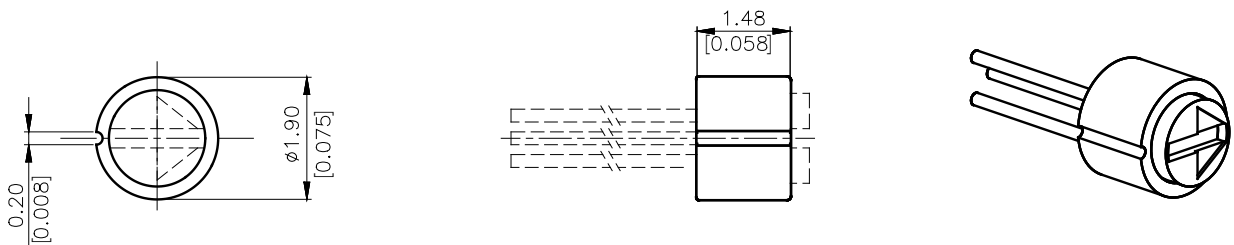
### No. 03



### No. 04



### No. 12 Extended housing with thicker resistance element for increased robustness



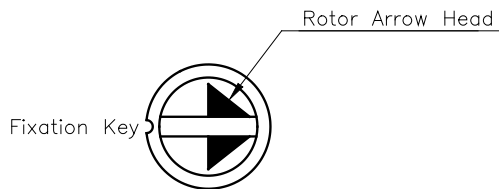
## 9. Plastic Colors

Please refer to the series 100 included in the Sonion 'Plastic Color Assortment' binder.

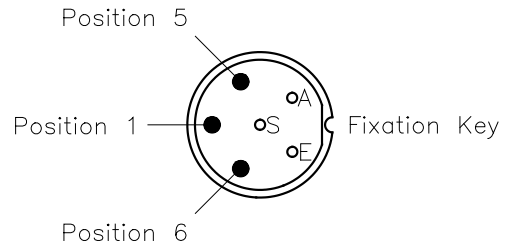
## 10. Color Coding

Please see colors for coding in the Sonion 'Plastic Color Assortment' binder or in the Product Overview.

### Rotor Color Coding

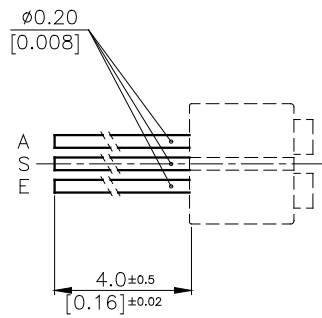


### Bottom Color Coding

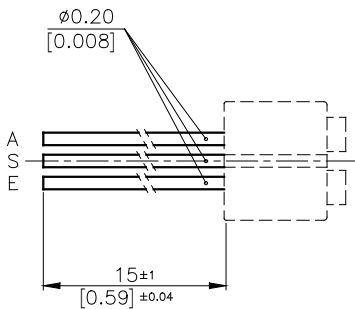


## 11. Terminal Length

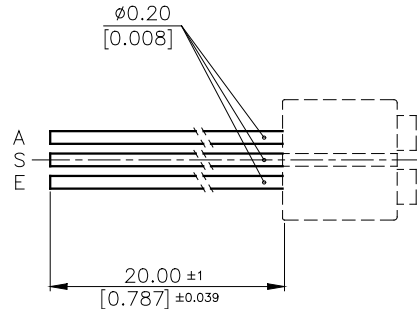
### 4 mm. All Housing Styles



### 15 mm. Housing Styles 01, 03, 04



### 20 mm. Extended Housing





## 12. Product Specification Form

Name \_\_\_\_\_

Company \_\_\_\_\_

Customer Part No. \_\_\_\_\_

Parameters	Look at Page	Enter your choices	Guidelines
<b>Model</b>	2	PJ 63	
<b>Housing Styles</b>	7		Choose Housing Style 12 for improved robustness
<b>Plastic Colors</b>	8		Please refer to the series 100 included in the Sonion 'Plastic Color Assortment' binder
<b>Color Coding</b>	8		Rotor Color Coding Please see colors for coding included in the Sonion 'Plastic Color Assortment' binder
			Bottom Color Coding Please enter position and color Please see colors for coding included in the Sonion 'Plastic Color Assortment' binder
<b>Terminal length</b>	8		Please enter 4 mm: All housing styles 15 mm: Housing styles nos. 01, 03, 04 20 mm: Housing style no. 12
<b>Resistance Value</b>	8		Please see 'Electrical Specifications' and 'Tapers Data Sheet'
<b>Resistance Taper</b>	8		Please see 'Electrical Specifications' and 'Tapers Data Sheet'