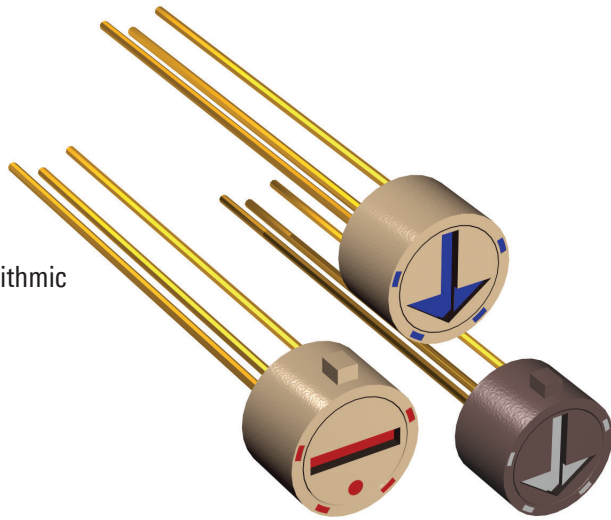


### Features

- ⊕ PJ 17 with rotor slot
- ⊕ PJ 18 with rotor arrow slot
- ⊕ Both models with optional fixation key
- ⊕ Optional color dot coding
- ⊕ Different plastic colors available
- ⊕ Accurate tapers. Linear, logarithmic, double logarithmic and custom-made
- ⊕ Customer specified electrical resistance values and tolerances



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

### History Revision

| Revision Number/Date | Change from last revision   |
|----------------------|---|
| 05 / Apr. 08         | History Revision added. Storage humidity added. Operational temperature and humidity removed. New data sheet design. New lay-out. |
| MT1030.A (07/08)     | Minimum resistance value on linear tapers increased to 200 $\Omega$ .   |
| 007/JUL-14-2009      | No technical updates  |

### Mechanical Specifications

|                                   |                                |
|-----------------------------------|--------------------------------|
| Rotational angle, mechanical..... | 220° ±3°                       |
| Resistance curve angle.....       | 190°                           |
| End stop torque .....             | Min. 100 cNcm                  |
| Rotational torque.....            | Max. 10 cNcm, typical 4-8 cNcm |
| Lifetime .....                    | Min. 5,000 cycles              |

### 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         |
| Potentiometer max. load .....    | 1 mW                                  |

### Material Specifications

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



|                           |                          |
|---------------------------|--------------------------|
| Terminals.....            | AgCu3, gold flash plated |
| Other metal parts .....   | CuBe, silver plated      |
| Housing .....             | PA 6.6, glass reinforced |
| Carbon track base .....   | Glass epoxy composite    |
| Resistance material ..... | Carbon/silver composite  |

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

### Environmental Conditions

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

### Recommended Process Parameters

#### Gluing:

Types of glue ..... Cyanoacrylates (non-blooming) , i.e. Loctite 401, 408, 460 and Sicomet 50, 63, 77

***Non-blooming types must be used to ensure that residuals from the curing process do not degrade the component.***

#### Soldering:

Soldering temperature and time ..... 300°C [572°F] for 3 s or 350°C [662°F] for 1 s

Soldering distance ..... Min. 0.5 mm [0.02"] from housing

***To prevent damage to the carbon taper as a result of the soldering process, the knob must be turned either fully CW or CCW.***

***Exceeding temperature, time and distance recommendations may damage the component.***

***Mechanical stress on soldering terminals must be avoided during soldering.***

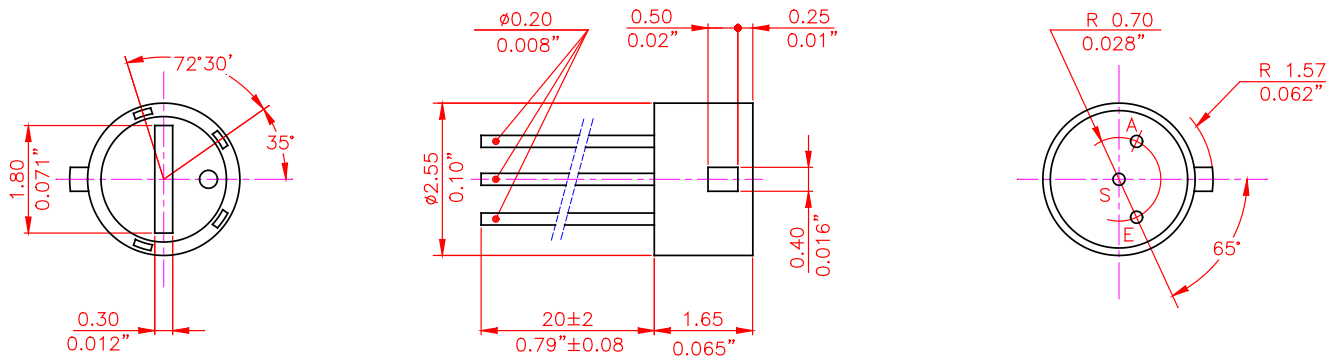
#### Cleaning:

Cleaning solvents ..... Aqua wash (Alpha 2110), Benzine

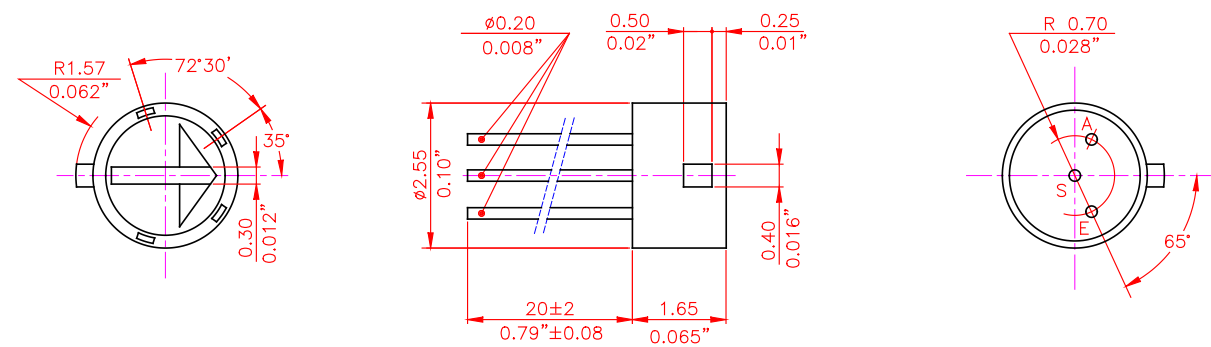
***Ultrasonic cleaning must be avoided as it may remove the lubricant inside the component.***

## Mechanical Dimensions

### PJ 17



### PJ 18

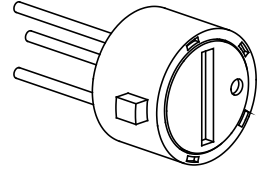
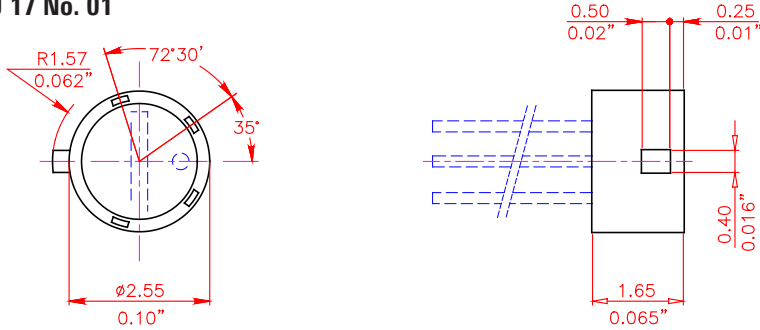


### Note:

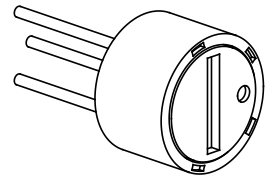
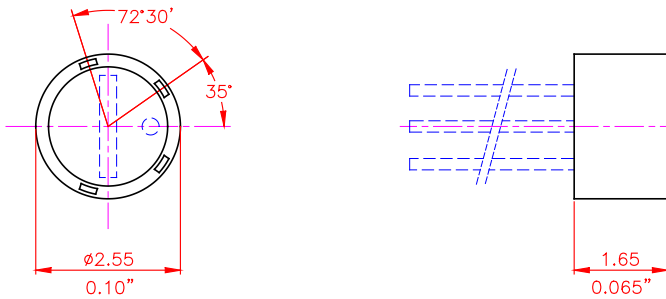
The standard measurement tolerance on the drawings is  $\pm 0.05$  mm/[0.002"]. Tolerances which differ from this value will be indicated on the drawings.

## Housing Styles

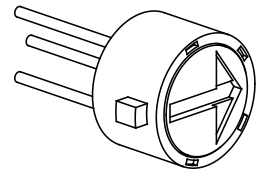
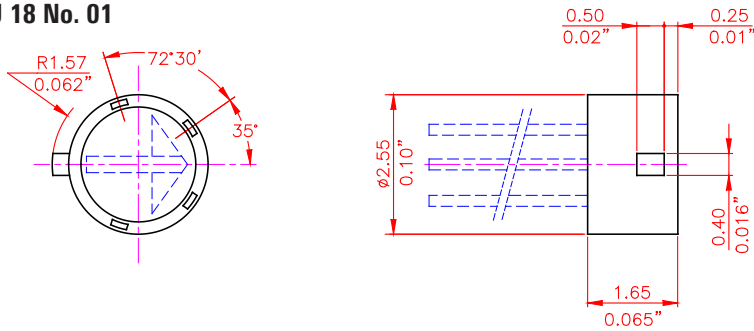
PJ 17 No. 01



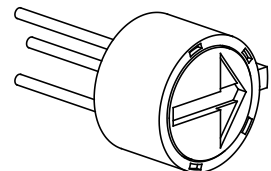
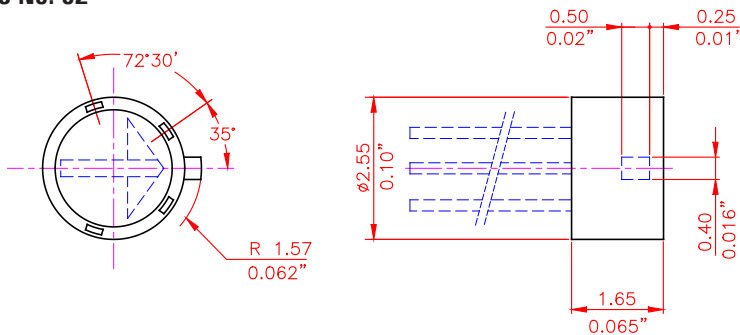
PJ 17 No. 03



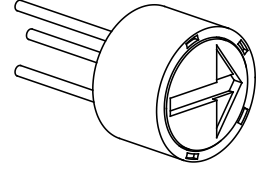
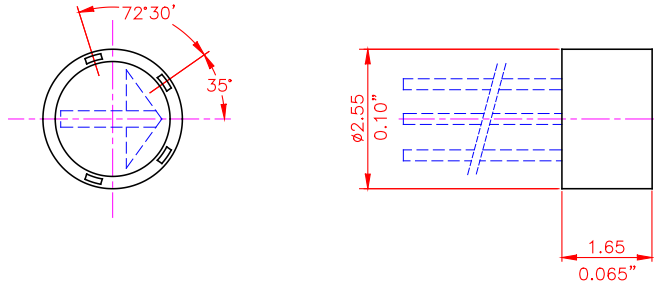
PJ 18 No. 01



PJ 18 No. 02

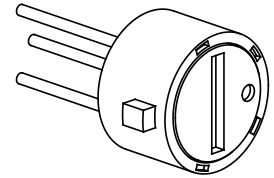
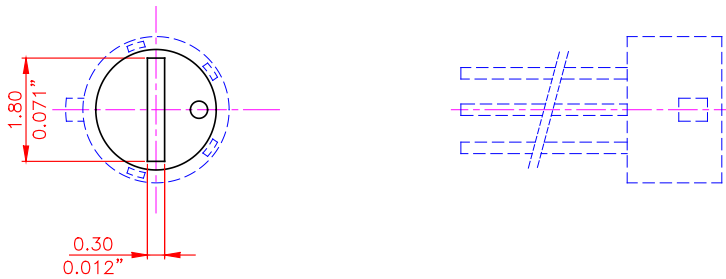


**PJ 18 No. 03**

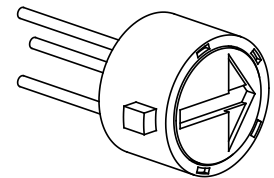
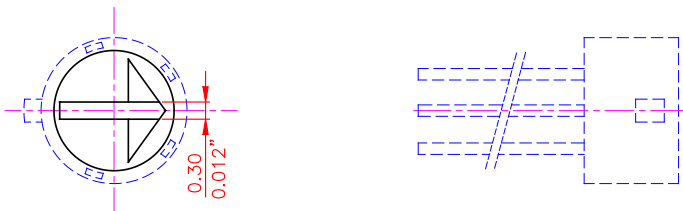


### Rotor Styles

**PJ 17 No. 01**



**PJ 18 No. 01**

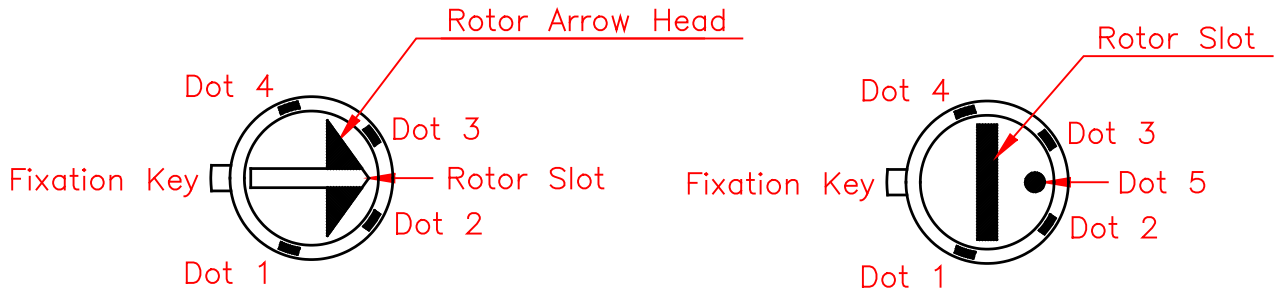


### Plastic Colors

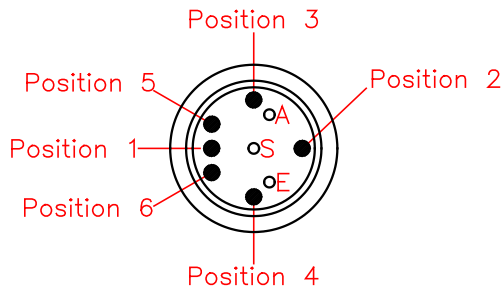
Please refer to the series 100 included in the Sonion 'Plastic Color Assortment' binder

### Color Coding

#### Housing and Rotor Color Coding



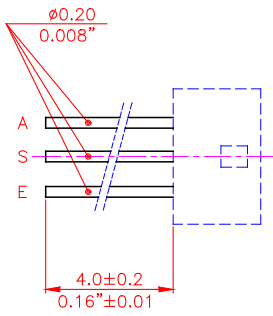
#### Bottom Color Coding



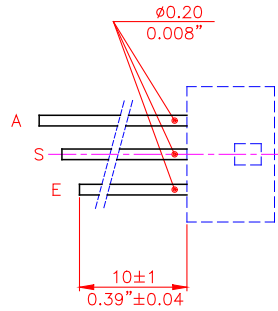
Please refer to colors for coding included in the Sonion 'Plastic Color Assortment' binder

## Terminal Length

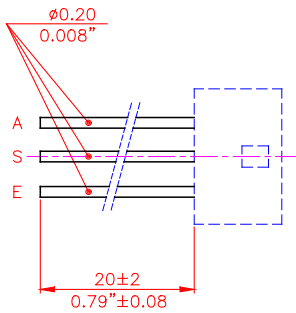
4 mm



10 mm stepped cut



20 mm



### Product Specification Form

Name: \_\_\_\_\_

Company: \_\_\_\_\_

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

| Parameters       | Look at Page | Enter your choices               | Guidelines   |
|------------------|--------------|----------------------------------|--|
| Model            | 1            |                                  | Please enter PJ 17 or PJ 18  |
| Housing Styles   | 6-7          |                                  |  |
| Rotor Styles     | 7            |                                  |  |
| Plastic Colors   | 7            |                                  | Please refer to the series 100 included in the Sonion 'Plastic Color Assortment' binder                            |
| Color Coding     | 8            |                                  | Rotor Arrow Head (PJ 18) or Dot 5 (PJ 17) color coding   |
|                  |              |                                  | Rotor Slot color coding (PJ 17)  |
|                  |              | Dot 1<br>Dot 2<br>Dot 3<br>Dot 4 | Housing color coding<br>Please refer to colors for coding included in the Sonion 'Plastic Color Assortment' binder |
|                  |              | 1<br>2<br>3<br>4<br>5<br>6       | Bottom color coding<br>Please refer to colors for coding included in the Sonion 'Plastic Color Assortment' binder  |
| Terminal Length  | 9            |                                  | Please enter terminal length   |
| Resistance Value |              |                                  | Please see 'Electrical Specifications' and Tapers Data Sheet   |
| Resistance Taper |              |                                  | Please see 'Electrical Specifications' and Tapers Data Sheet   |