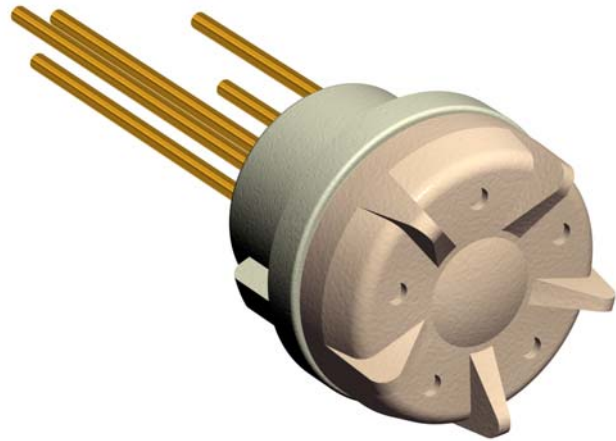


### Features

- Ø 2.54 mm [0.1"] housing
- Flanged housing with key to ensure secure fit in faceplate
- Built-in on/off switch
- Clockwise (CW) or Counter-Clockwise (CCW) switch position for L/R applications
- Mechanical dimensions equivalent to PJ 85 / PJ 85 "Click Fit" / DCU 254
- Snap-on type knob as PJ 85 "Click Fit" / DCU 254



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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.

## Mechanical Data

Rotational angle (mechanical) .....	250° ±5°
Resistance curve angle.....	210°
Switch angle.....	10° ±3°
End stop torque .....	Min. 150 cNcm
Rotational torque .....	Min. 2-6 cNcm
Switch operating torque ON to OFF .....	5-15 cNcm, initial
Switch operating torque OFF to ON.....	5-15 cNcm, initial

## Electrical Data

Resistance taper and tolerance .....	See information in the Tapers Data Sheet
Resistance Values:	
- Linear taper .....	100 Ω to 1 MΩ
- Logarithmic taper .....	500 Ω to 600 kΩ
- Double logarithmic taper .....	2 kΩ to 500 kΩ
Resistance value tolerance .....	±20% (-20% to +30% for values ≤ 1 kΩ)
Wiper contact resistance .....	Typ. better than 20 dB rel. R
Switch contact resistance .....	Max. 150 mΩ
Switch contact insulation .....	Min. 1 MΩ

## Materials Data

Potentiometer terminals (A, S, E) .....	AgCu3, gold flash plated
Switch Terminals .....	AgCu3, gold flash plated
Other metal parts .....	PdAg and stainless steel
Plastic parts .....	PA 6.6, glass reinforced
Base .....	PEEK
Carbon circuit base .....	Reinforced glass epoxy
Resistance material .....	Carbon / Silver composite

## Recommended Process Parameters

### Mounting and glueing:

Recommended types of glue .....	Non-blooming cyanoacrylates, i.e. Loctite 401, 408, 460 and Sicomet 50, 63, 77 <b><i>Non-blooming types must be used to ensure that residuals from the curing process do not degrade the component</i></b>
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**Soldering:**

Temperature and time . . . . . 260°C [500°F] for 3 s or 315°C [600°F] for 1 s  
*To prevent damage to the carbon taper as a result of the soldering process, the knob must be turned either fully CW or CCW, opposite to the switch position*  
*Mechanical stress on soldering terminals must be avoided during soldering*

Distance from bottom . . . . . Min. 0.5 mm [0.02"] from housing

**Cleaning:**

Recommended cleaning solvents . . . . . Aqua wash (Alpha 2110), Benzine  
*Ultrasonic cleaning must be avoided as it may remove the lubricant inside the component or change carbon track properties*

**Operational Conditions**

**Mechanical Loads:**

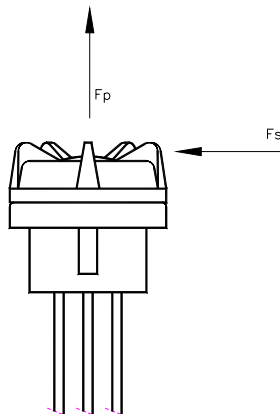
Solder terminals:  
 Pull strength . . . . . Min. 8 N  
 Bending . . . . . Min. 0.5 mm [0.02"] from housing  
 Min. 4 bendings 90°, with 25 gr. load

Base retention force . . . . . Min. 5 N for switch terminal pull  
 Min. 8 N for potentiometer terminal pull

Knob:  
 Allowed static axial force to be applied continuously (-Fp) . . . . . Max. 8 N  
 Allowed static force during rotation (-Fp) . . . . . Max. 3 N  
 Pull strength, Fp . . . . . Min. 12 N after humidity exposure IEC 60068-2-38  
 Shear strength, Fs . . . . . Min. 8 N

**Definition of knob shear and knob pull strength forces:**

From top of knob to shear force attack point: 0.75 mm



**Electrical load:**

Maximum switching current . . . . . 10 mA  
Maximum continuous current . . . . . 100 mA  
Potentiometer max. load . . . . . 1 mW

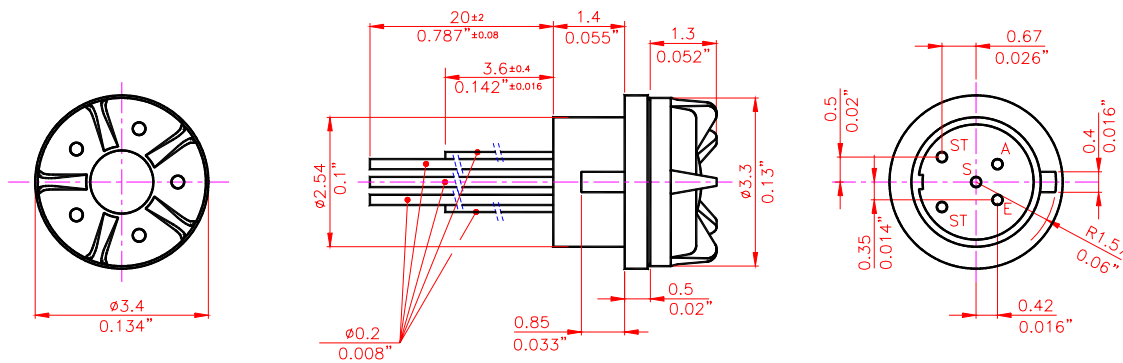
**Temperature and Humidity:**

Storage temperature . . . . . -40 to +60°C  
Operational temperature conditions . . . . . -25 to +55°C  
Operational humidity conditions . . . . . 10 to 93% RH

**Operational lifetime:**

Resistance element . . . . . Min. 20,000 cycles  
Switch contact . . . . . Min. 10,000 cycles

### Mechanical Dimensions

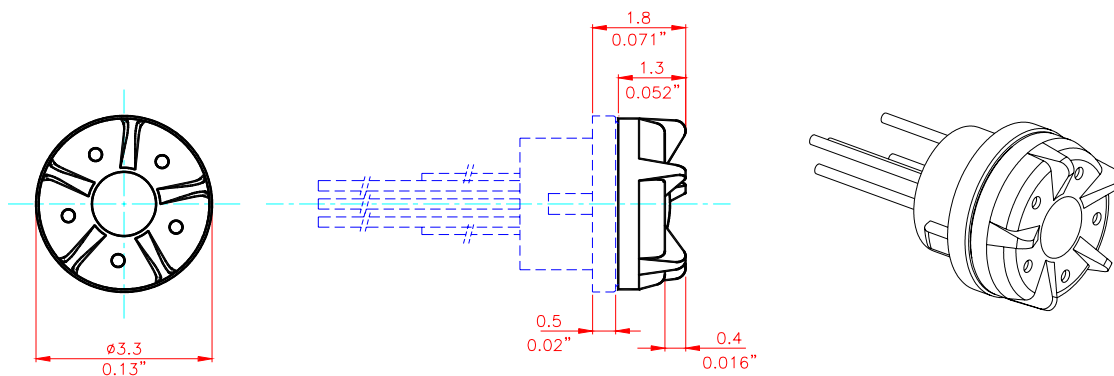


**Note:**

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.

### Knob Style

No. 101



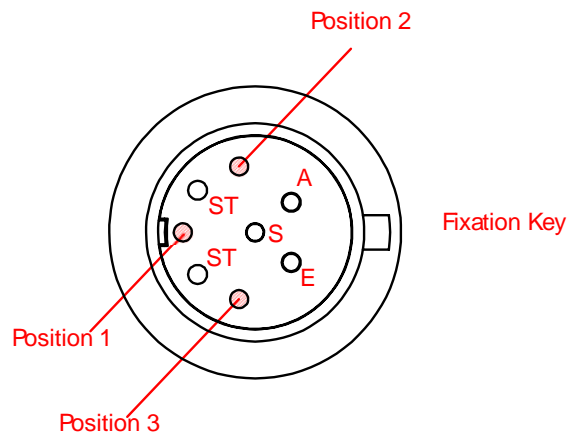
### Knob Plastic Colors

Please refer to the series 100 included in the Sonion binder for plastic colors.

## Color Coding

Please see colors for coding included in the Sonion binder for plastic colors.

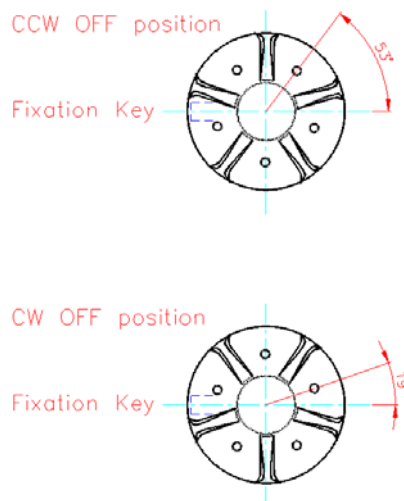
3 positions for bottom color coding.



## Knob OFF position

Knobs are shown in full Counter ClockWise (CCW) or in full ClockWise (CW) positions.

**Knob No. 101**



## Solder terminal lengths

Switch terminals are 3.6 mm

Potentiometer terminals (A, S, E) can be either 10 mm or 20 mm

## Product Specification Form

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

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

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

Parameters	Look at page	Enter your choices	Guidelines
Model	1	PJ 185 CW or PJ 185 CCW	For right ear ITE applications, switch position in CCW (counter clockwise) position For left ear ITE applications, switch position in CW (clockwise) position
Knob Style	5	No. 101	
Knob Plastic Colors	5		Please refer to the series 100 included in the Sonion binder for plastic colors
Color Coding	6	1 2 3	Bottom Please see colors for coding included in the Sonion binder for plastic colors
Lead Wires	6		Please enter 10 mm or 20 mm for potentiometer leads
Resistance Value	2		Please see "Electrical Data" and Tapers Data Sheet
Resistance Taper	2		Please see "Electrical Data" and Tapers Data Sheet