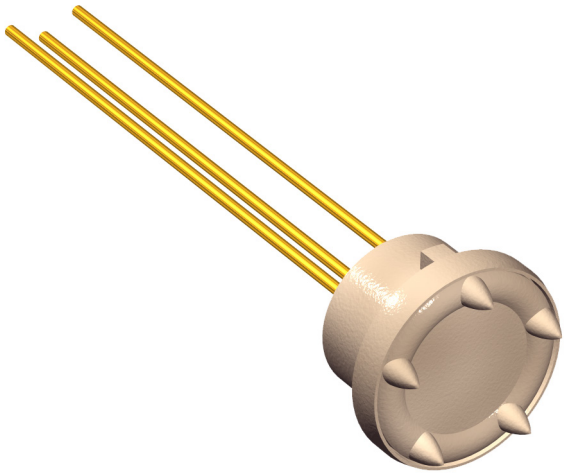
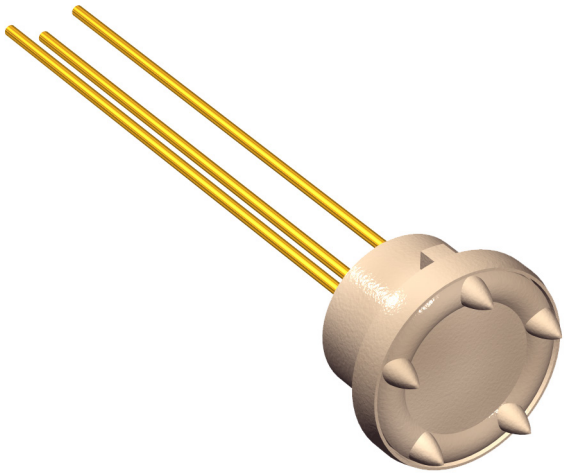


Volume Controls
Model PJ 85

DK: +45 4630 6666
USA: +1 952 543 8300
PRC: +86 512 6832 3401
NL: +31 20 6068 100

ROHS 2011/65/EU



Features

- Small dimensions, low mounting depth
- Customized knobs available
- Different plastic colors available
- Accurate tapers. Linear, logarithmic, double logarithmic and custom-made
- Customized electrical resistance values and tolerances

Contents

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

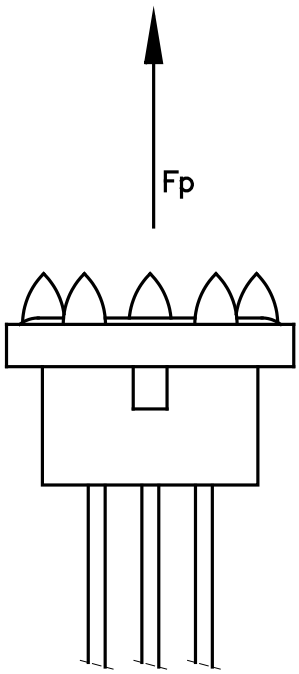
Revision Number/Date	Change from last revision
06 / Nov 03	History Revision added. PJ 85 Click-Fit version added. End stop torque increased. Knob and base retention forces added. Shear force added.
07 / May 04	Force specification drawing included. Knob drawings changed to show knob height including flange thickness. Knob extension no. 201 added.
08 / Oct 05	PJ 85 Click-Fit version removed. New lay-out.
09 / Jul 07	Knob selection possibility added in 'Product Specification Form'. Storage humidity added. Operational temperature and humidity removed.
MT1041.A (07/08)	Minimum resistance value on liniear tapers increased to 200 Ω.
010/JUL-09-2009	No technical updates
011/2014-01-10	Updated design and new RoHS logo directive (2011/65/EU)
012/2019-09-03	Change of storage temperature and humidity (CR3860)

2. Mechanical Specifications

Rotational angle, mechanical	220° ±3°
Resistance curve angle	190°
End stop torque	Min. 150 cNcm
Rotational torque	Min. 2 cNcm, max. 10 cNcm
Base retention force	Min. 8 N

Lifetime	
Resistance element	Min. 25,000 cycles
Bending of terminals	Min. 0.5 mm [0.02"] from bottom Min. 2 bendings cycles 90°
Knob pull strength, Fp	Min. 9.5 N (Ave. > 11 N)

Definition of knob pull strength forces:



3. Electrical Specifications

Resistance value	
Linear	200 Ω to 1MΩ
Logarithmic	500 Ω to 1MΩ
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

4. Material Specifications

All materials comply with RoHS directive (2011/65/EU)

Terminals	Ag, gold flash plated
Other metal parts	CuBe, silver plated
Housing	PA 6.6, glass reinforced
Knob	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.

5. Environmental Conditions

Storage temperature	25°C
Storage humidity	60% RH
Purpose is to protect from high humidity and keep at driest condition as possible	

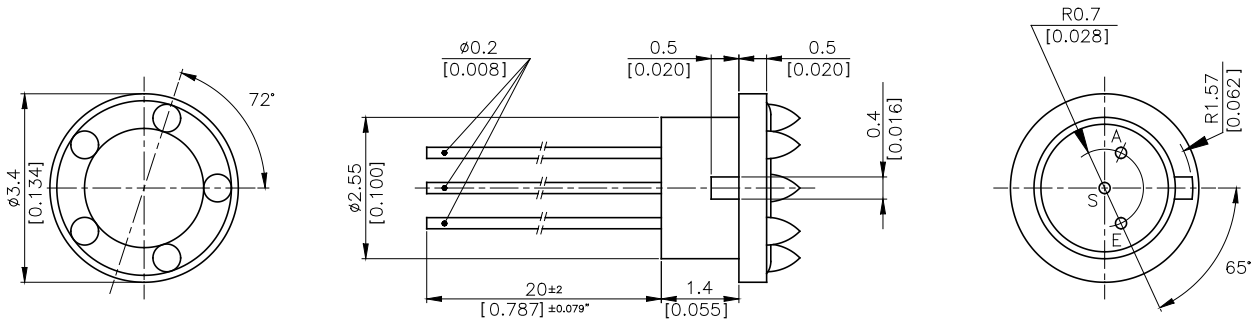
6. Recommended Process Parameters

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 [570˚F] for 3 s or 350˚C [660˚F] for 1 s
Soldering distance	Min. 0.3 mm [0.012"] from housing 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.

7. Mechanical Dimensions

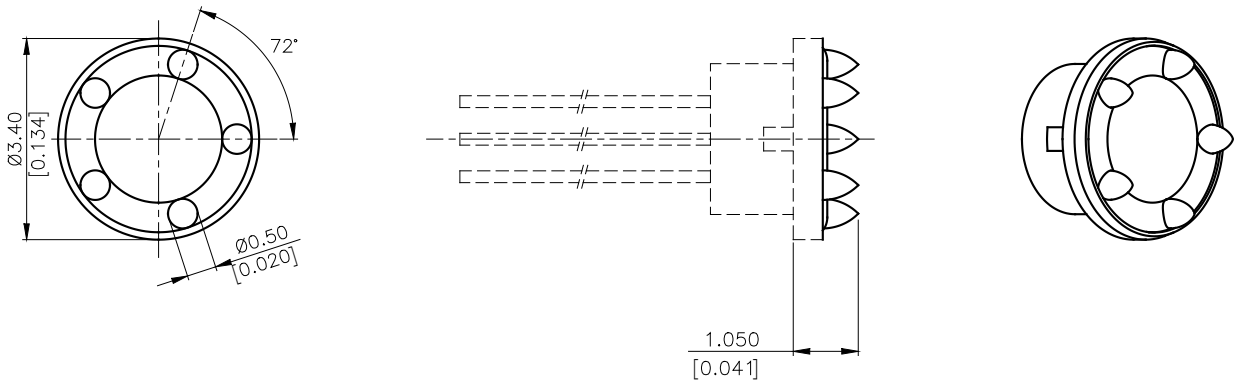


Note:
The standard measurement tolerance on the drawings is ±0.05 mm/[0.002"]. Tolerances which differ from this value will be indicated on the drawings.

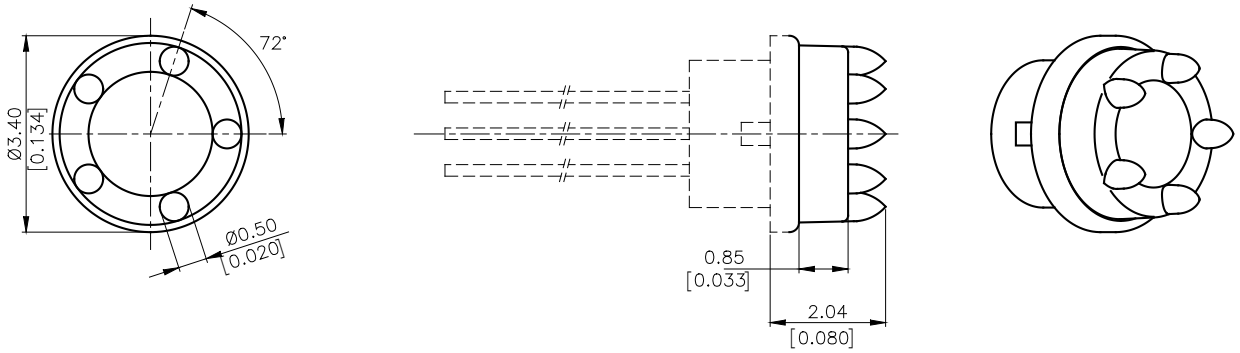
8. Knob Styles

All knobs are shown in middle position

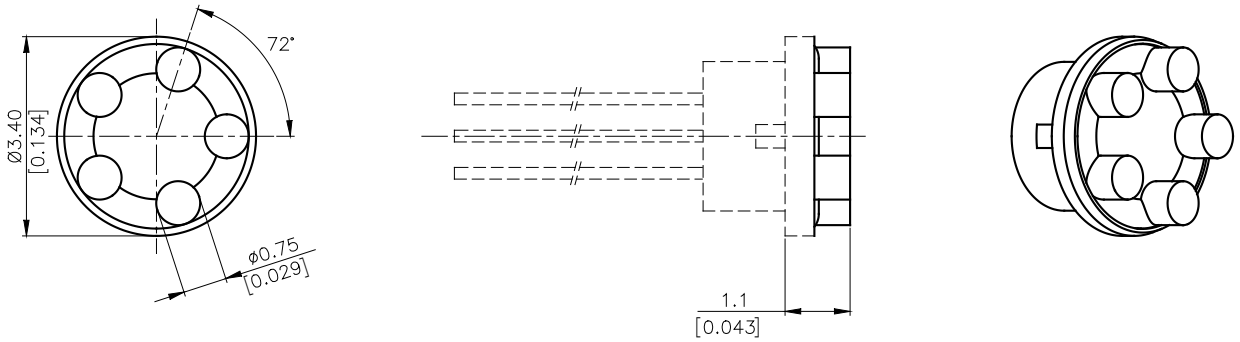
No. 01



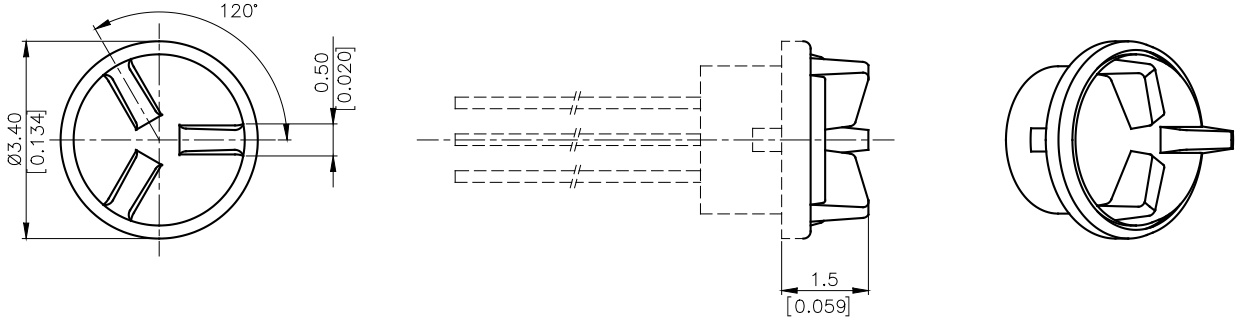
No. 03



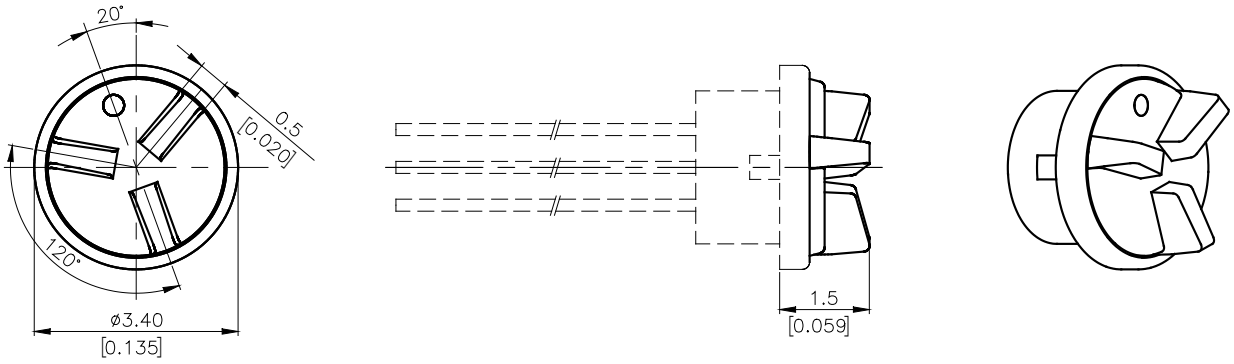
No. 09



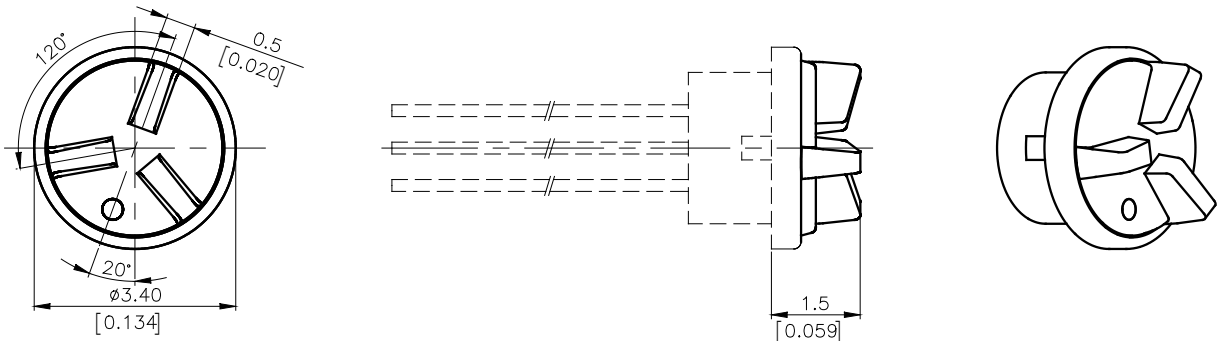
No. 15



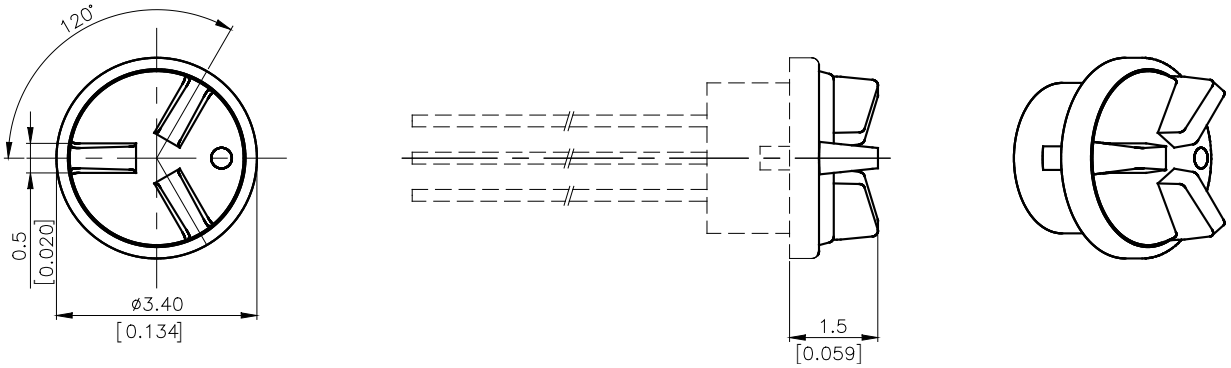
No. 16



No. 17



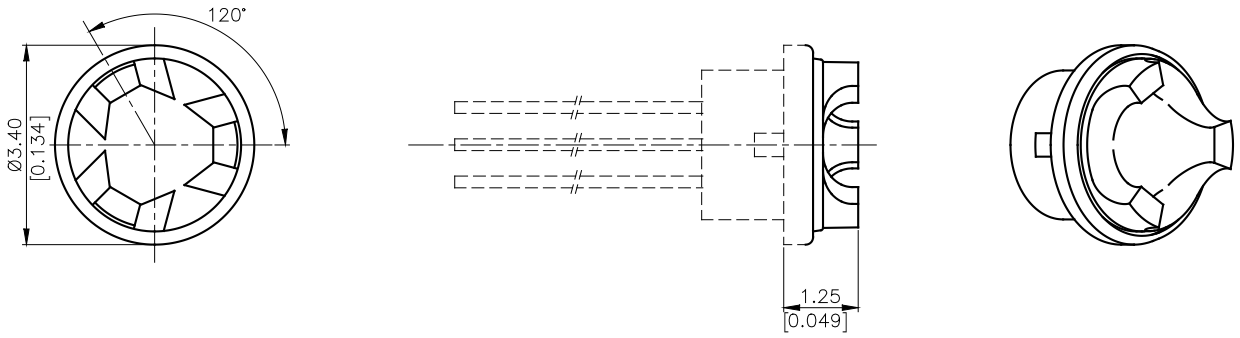
No. 18



DK: +45 4630 6666
USA: +1 952 543 8300
PRC: +86 512 6832 3401
NL: +31 20 6068 100

ROHS 2011/65/EU

No. 20

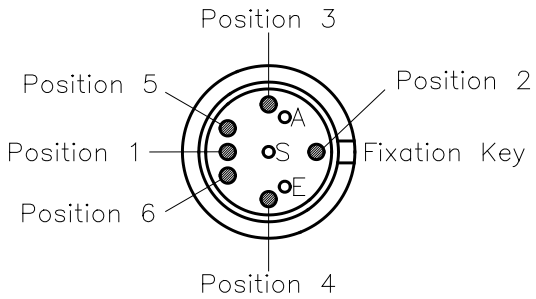


9. Knob Plastic Colors

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

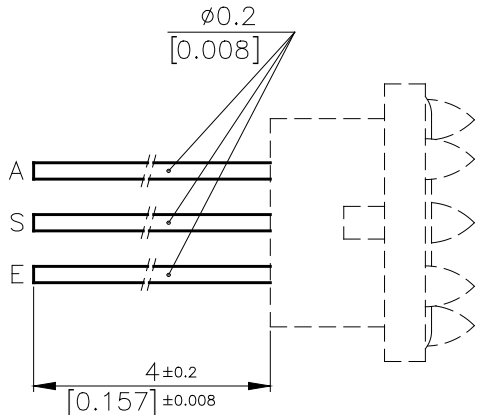
10. Color Coding

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

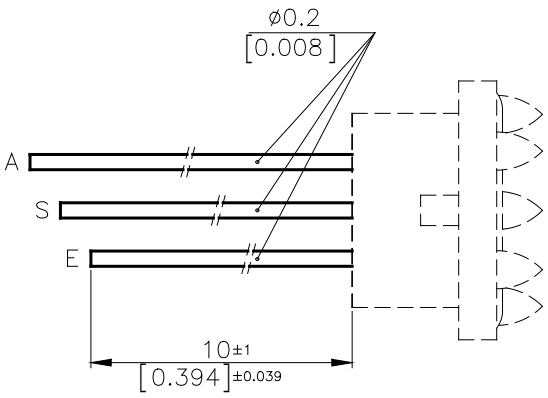


11. Terminal Length

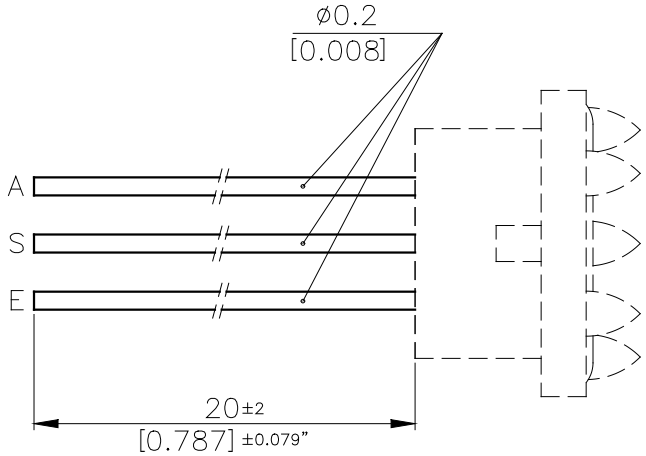
4 mm



10 mm stepped cut



20 mm



12. Product Specification Form

Name

Company

Customer Part No.

Parameters	Look at Page	Enter your choices	Guidelines
Model	2	PJ 85	
Knob Styles	76-9		
Plastic Colors	9		Please refer to the series 100 included in the Sonion 'Plastic Color Assortment' binder
Color Coding-Bottom	9	1 2 3 4 5 6	Please see colors for coding included in the Sonion 'Plastic Color Assortment' binder
Terminal Length	10		Please enter 4 mm, 10 mm or 20 mm for potentiometer terminals
Resistance Value	4		Please see 'Electrical Specifications' and Tapers Data Sheet
Resistance Taper	4		Please see 'Electrical Specifations' and Tapers Data Sheet