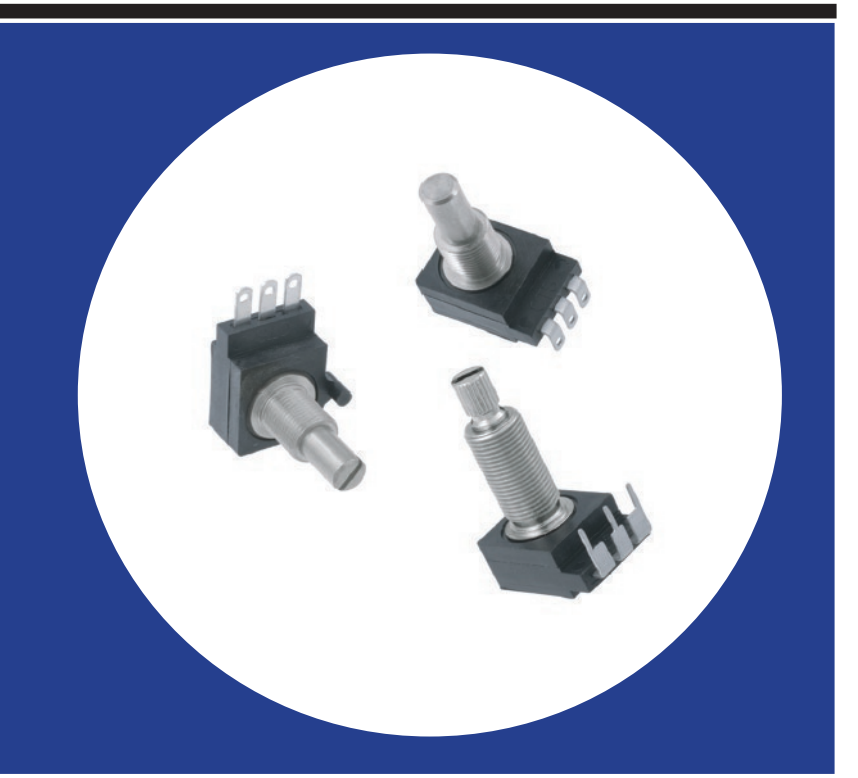
CTS Electrocomponents

Series 282 Data Sheet
Precision Potentiometer

Industrial
16mm Size
Conductive Plastic
Precision Rotary Sensor



Features

- Robust Construction
- 2 Million Cycle Life
- 2% Precision Linearity
- Water Resistant (IP54, IP67)
- Wide Temperature Range
- Solder Lug, Faston, PC Terminal
- Continuous Rotation Available
- RoHS Compliant

Electrical and Mechanical Specifications

Resistance Range
1 K through 500 K ohms, linear
Consult CTS for audio taper

Resistance Tolerance
± 10%, ± 20%

Power Rating
0.5 watts @ 70°C

Dielectric Strength
750 VDC for 1 minute

Maximum Operating Voltage
500 VDC

Insulation Resistance
1000 Megohms minimum @ 500 VDC

Angle of Rotation
250°, 300°, 360°
(Refer to Resistance Tapers for detail)

Rotational Torque
20 – 180 gf-cm

Stop Strength
9 kgf-cm minimum

Push-Pull Strength of Shaft
13.6 kg for 10 seconds

Mounting Information
Bushing Mount

Rotational Life
2 M cycles

Linearity
± 2%

Temperature
Operating: -40°C to 125°C
Storage: -55°C to 150°C

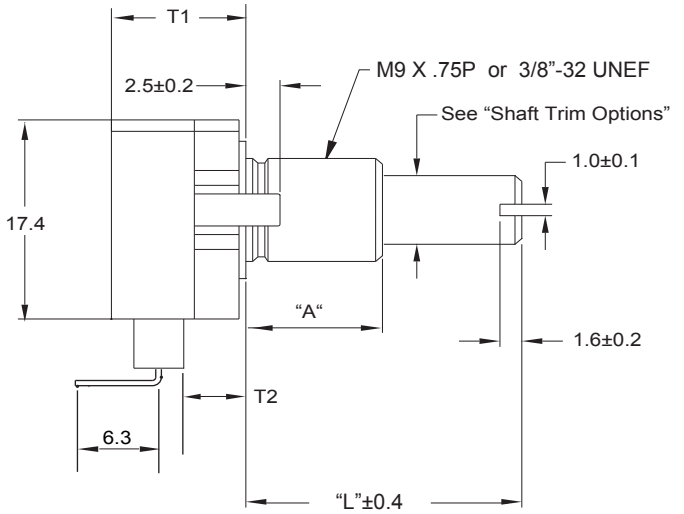
Solder Heat Resistance
350°C for 5 seconds

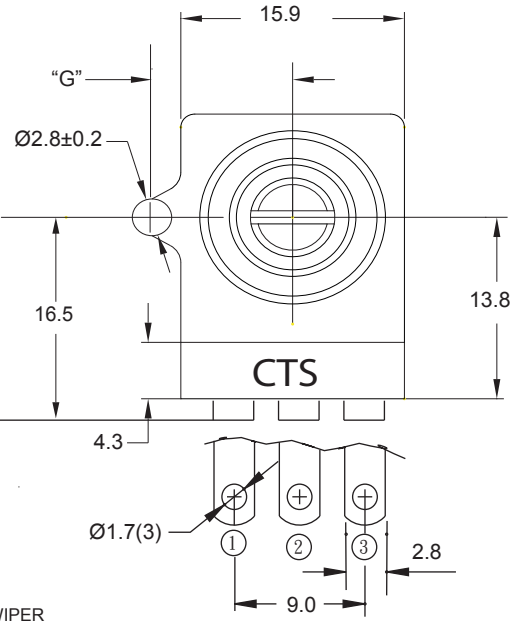
Ingress Protection Rating
IP54, IP67

Vibration
15G, 10 to 2000 Hz

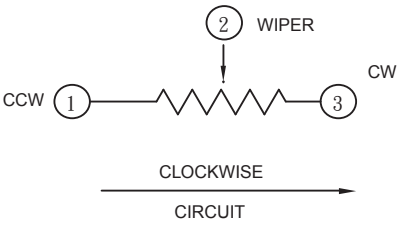
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282S Metal Shaft, Bushing Mount, Solder Lug (Faston) Terminal Formed to Rear



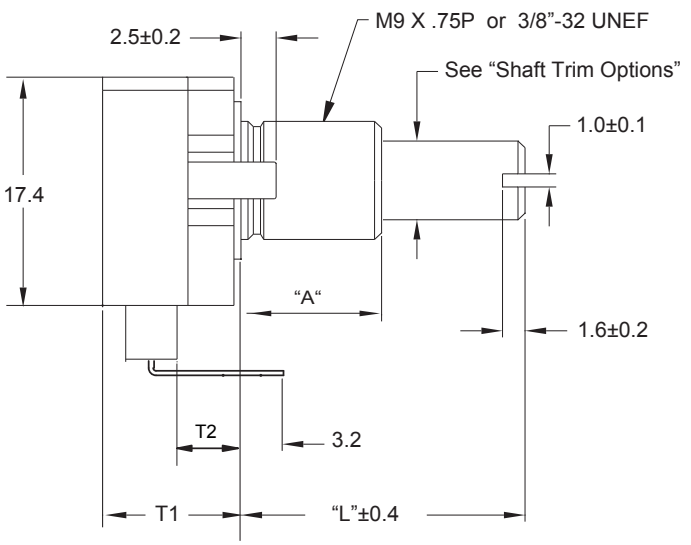


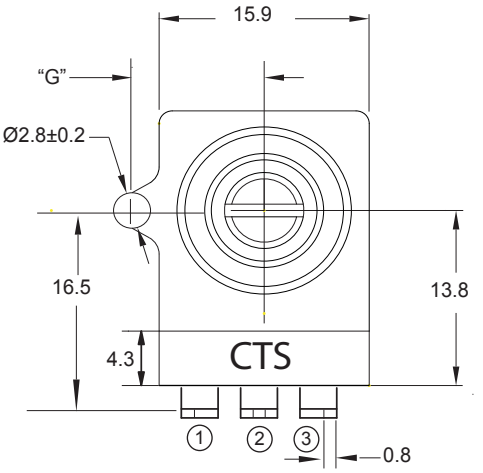
Locating Lug "G"	Thickness "T1"	Thickness "T2"
8 mm	9.4 mm	4.1 mm
10 mm	9.8 mm	4.5 mm

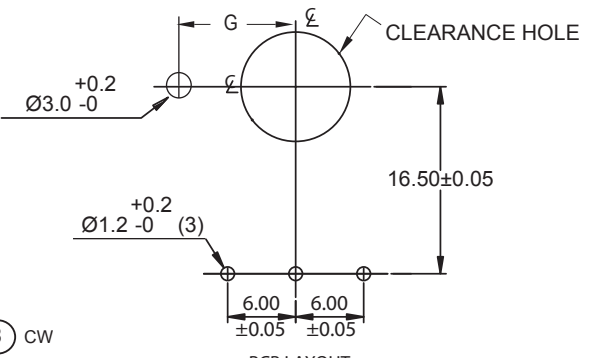


DIMENSION : mm
STANDARD TOLERANCE :
.X (1 PLACE) : ±0.3 .XX(2 PLACE): ±0.13

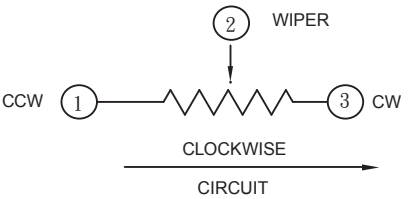
282U Metal Shaft, Bushing Mount, PC Terminal Formed to Front







Locating Lug "G"	Thickness "T1"	Thickness "T2"
8 mm	9.4 mm	4.1 mm
10 mm	9.8 mm	4.5 mm

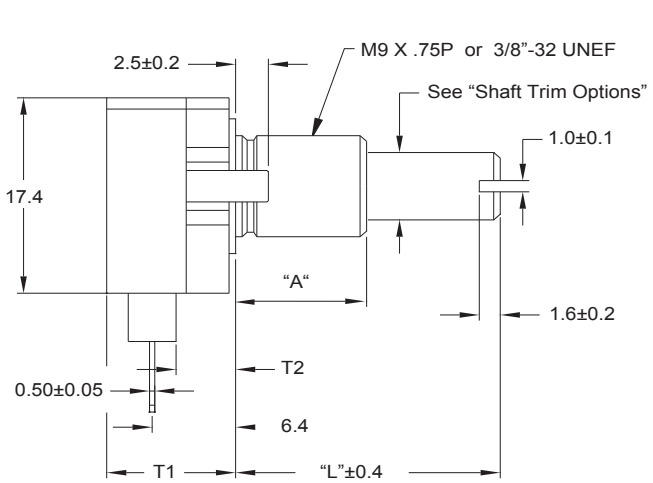


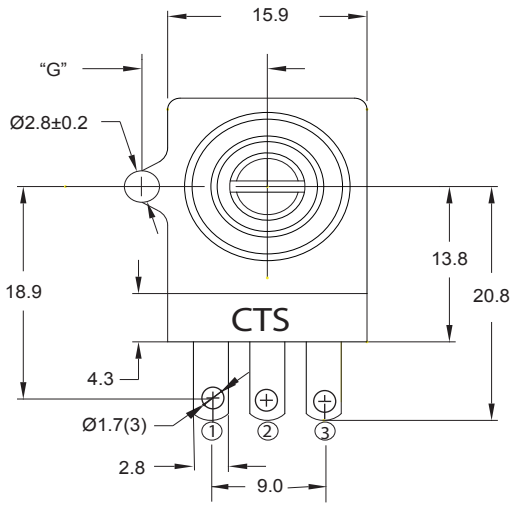
DIMENSION : mm
STANDARD TOLERANCE :
.X (1 PLACE) : ±0.3 .XX(2 PLACE): ±0.13

PCB LAYOUT
OPPOSITE
COMPONENT SIDE

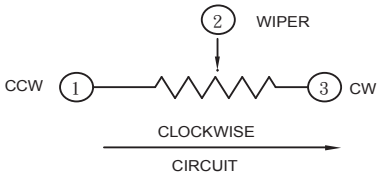
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282T Metal Shaft, Bushing Mount, Solder Lug (Faston) Terminal





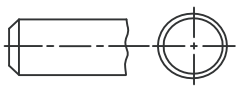
Locating Lug "G"	Thickness "T1"	Thickness "T2"
8 mm	9.4 mm	4.1 mm
10 mm	9.8 mm	4.5 mm



DIMENSION : mm
STANDARD TOLERANCE :
.X (1 PLACE) : ±0.3 .XX(2 PLACE): ±0.13

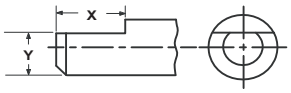
Shaft Trim Options

ROUND



Shaft Trim	Diameter
R	.236" (6.00 mm)
O	.250" (6.35 mm)

FLATTED



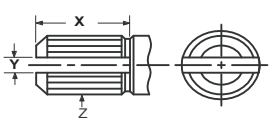
Shaft Trim	Diameter	X	Y
F	.236" (6.00 mm)	.375" (9.52 mm)	.156" (3.96 mm)
L	.250" (6.35 mm)	.440" (11.18 mm)	.217" (5.50 mm)

SD SLOT



Shaft Trim	Diameter	X	Y
S	.236" (6.00 mm)	.063" (1.6mm)	.039" (1.0mm)
D	.250" (6.35 mm)	.063" (1.6mm)	.039" (1.0mm)

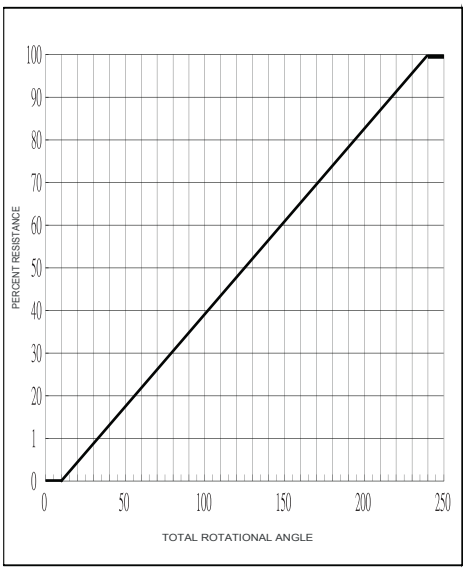
KNURLED & SLOTTED



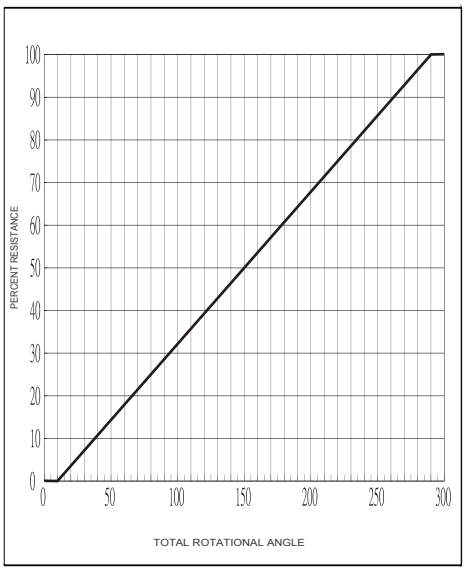
Shaft Trim	Diameter	X	Y	Z
K	.236" (6.00 mm)	.344" (8.74 mm)	.063" (1.60 mm)	24 Teeth

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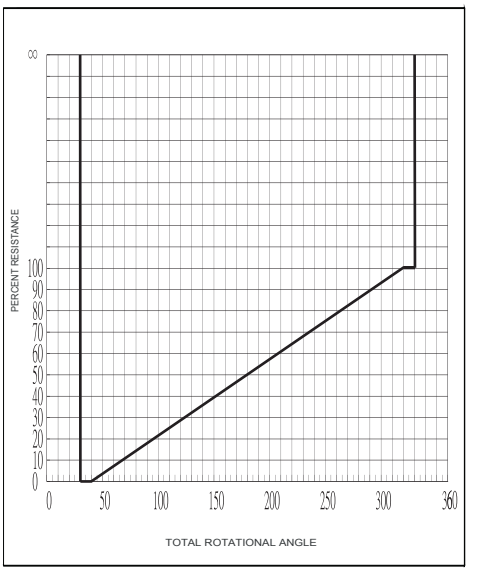
Resistance Tapers



TOTAL ROTATIONAL ANGLE: 250°



TOTAL ROTATIONAL ANGLE: 300°



TOTAL ROTATIONAL ANGLE: 360°

Ordering Information

282 T A A R 103 A 2 5 B 1

TERMINAL STYLE
- **T**- Solder Lug(Faston)
- **S**- Solder Lug Formed to Rear
- **U**- PC Terminals Formed to Front

BUSHING MOUNT "A"

Bushing Length

mm	inch
A - 5.0 mm	**2** - .250"
B - 7.5 mm	**3** - .375"
C - 10.0 mm	**4** - .500"

Notes:
Incremental Length : 2.5mm or .125"
Bushing Dia. & Thread:
M9 X .75P (metric)
3/8" - 32 UNEF (imperial)

SHAFT LENGTH "L"

Examples:

mm	inch
A - 10 mm	**1** - .625"
B - 15 mm	**2** - .750"
C - 20 mm	**3** - .875"
D - 25 mm	**4** - 1.000"
E - 30 mm	**5** - 1.125"

Note:
Incremental length : 5mm or .125"

SHAFT TRIM OPTIONS

Shaft Diameter 6mm (.236")
- **R -** Round
- **F -** Flatted .375" X .156"
- **K -** Knurled 24 Teeth
- **S -** SD Slot .039"W X .063" D

Shaft Diameter 6.35mm (.250")
- **O -** Round
- **L -** Flatted .440" X .217"
- **D -** SD Slot .039" W X .063" D

RESISTANCE CODE EXAMPLES

CODE	RESISTANCE
102	1K
103	10K
503	50K
104	100K
504	500K

RESIST TOL
- **A** - ± 10%
- **B** - ± 20%

LINEARITY
- **2** - ± 2%

IP Rating
- **5** - IP54
- **6** - IP67

ROTATION ANGLE

	Total	Effective
A -	250°	240°
B -	300°	280°
C -	360°	340

LOCATING LUG "G"
- **1** - Left, 10mm
- **2** - Left, 8mm

Please consult factory for other mounting options or custom features not listed.

Standard Part - 282T33L502A25A2, 282T33L502A25C2, 282TCBS103A25B1
282T33L502A26A2, 282T33L502A26C2, 282TCBS103A26B1

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