

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

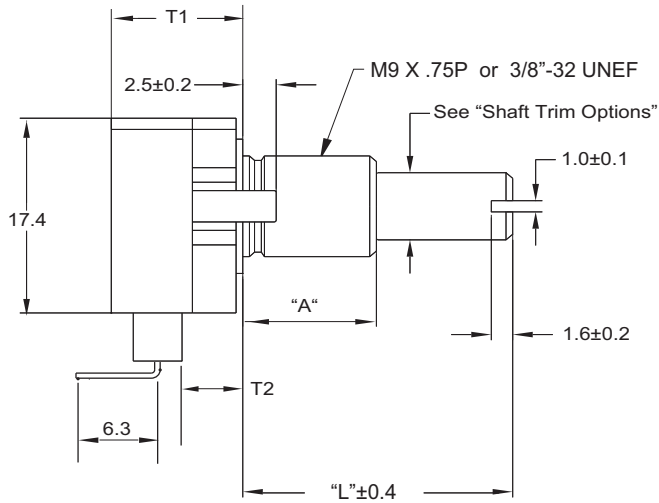
Ingress Protection Rating

IP54, IP67

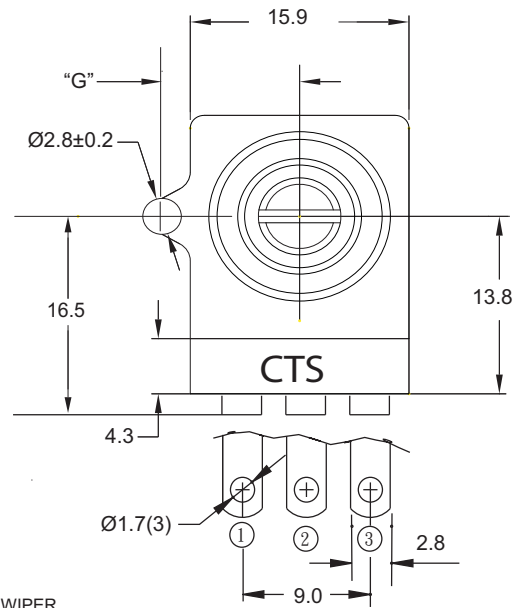
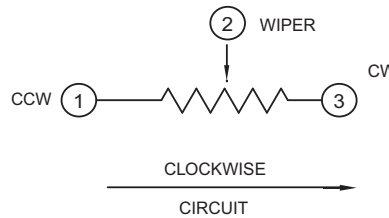
Vibration

15G, 10 to 2000 Hz

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

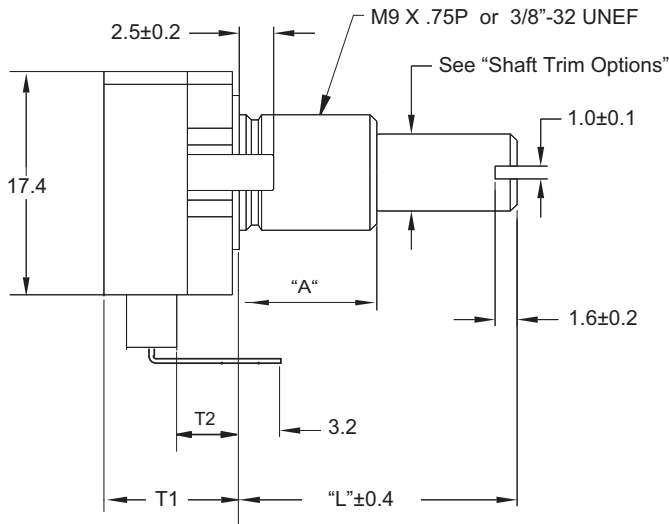


Locating Lug "G"	Thickness "T1"	Thickness "T2"
8 mm	9.4 mm	4.1 mm
10 mm	9.8 mm	4.5 mm



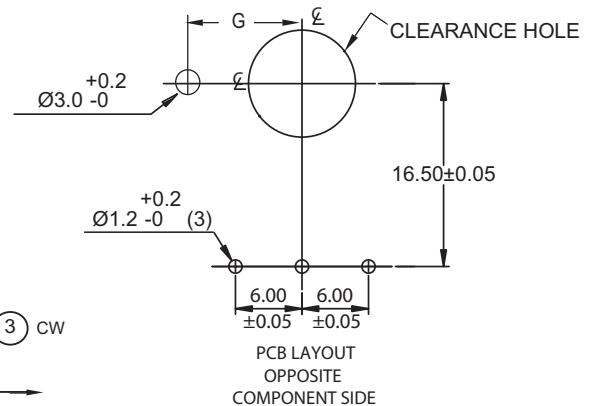
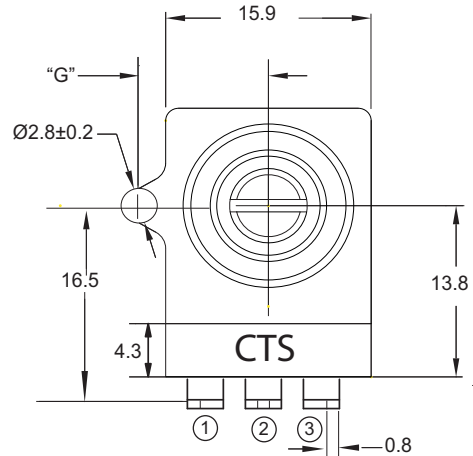
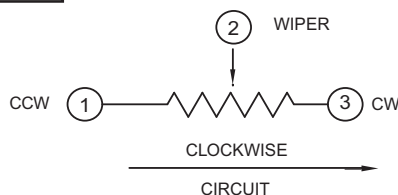
DIMENSION : mm
STANDARD TOLERANCE :
.X (1 PLACE) : ±0.3 .XX(2 PLACE) : ±0.13

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

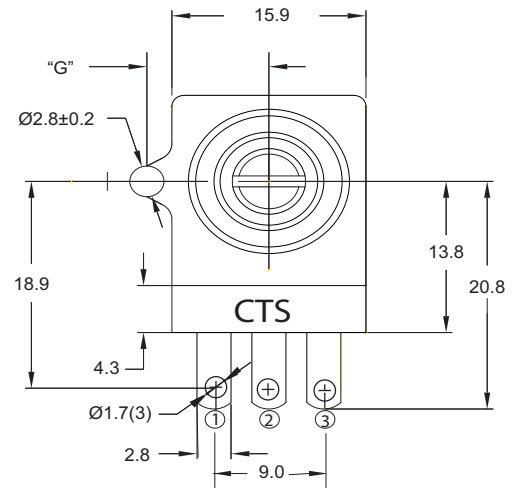
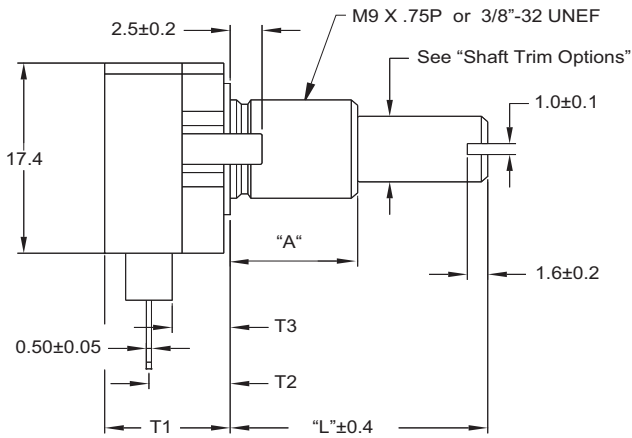


Locating Lug "G"	Thickness "T1"	Thickness "T2"
8 mm	9.4 mm	4.1 mm
10 mm	9.8 mm	4.5 mm

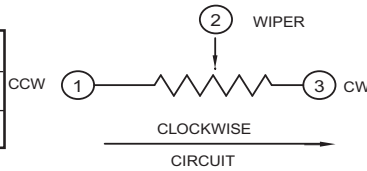
DIMENSION : mm
STANDARD TOLERANCE :
.X (1 PLACE) : ±0.3 .XX(2 PLACE) : ±0.13



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



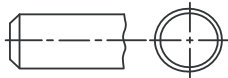
Locating Lug "G"	Thickness "T1"	Thickness "T2"	Thickness "T3"
8 mm	9.4 mm	6.0 mm	4.1 mm
10 mm	9.8 mm	6.4 mm	4.5 mm



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

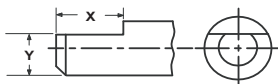
Shaft Trim Options

ROUND



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

FLATTED



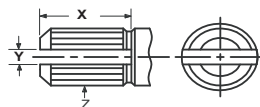
Shaft Trim	Diameter	X	Y
F	.236" (6.00 mm)	.375" (9.52 mm)	.156" (3.96 mm)
L	.250" (6.35 mm)	.440" (11.18 mm)	.217" (5.50 mm)

SD SLOT



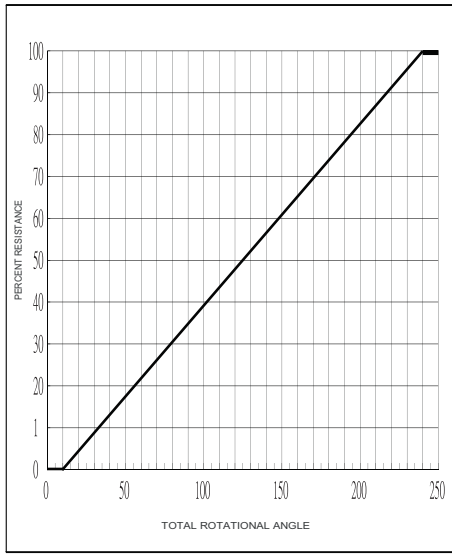
Shaft Trim	Diameter	X	Y
S	.236" (6.00 mm)	.063" (1.6mm)	.039" (1.0mm)
D	.250" (6.35 mm)	.063" (1.6mm)	.039" (1.0mm)

KNURLED & SLOTTED

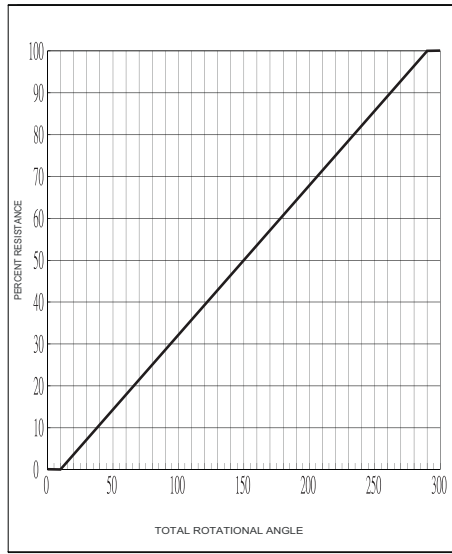


Shaft Trim	Diameter	X	Y	Z
K	.236" (6.00 mm)	.344" (8.74 mm)	.063" (1.60 mm)	24 Teeth

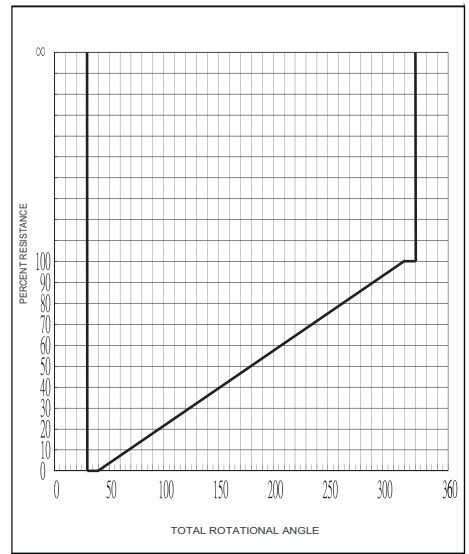
Resistance Tapers



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

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"

RESISTANCE CODE EXAMPLES

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

LINEARITY

2 - ± 2%

RESIST TOL

A - ± 10%
B - ± 20%

IP Rating

5 - IP54
6 - IP67

LOCATING LUG "G"

1 - Left, 10mm
2 - Left, 8mm

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 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

ROTATION ANGLE

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

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

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