



360° Electrical Angle
NO DEAD BAND

- Fully Customisable**
- 360° Electrical Angle**
- Reflow Soldering**

FEATURES

- Electrical angle: 360°**
- Designed for direct input to microprocessor.
- SMD, Horizontal or Through-hole Mount
- Endless Rotation
- Extended Mechanical Life
- Working Temperature Range (-40°C to +120°C)
- Low Profile (4.4 mm)
- Linearity (independent): ±2%
- Embossed Tape or Bulk packaging
- Reflow Soldering capability
- Plug-in shafts
- Shaft insertable from both sides
- Polarised "T" rotor (European Home Appliance standard)
- Ideal for Consumer Control and position sensing applications

STANDARD SPECIFICATIONS

Resistance values*:	3.3k
Tolerance:	± 40%
Nominal Power:	0.15 W @ 50°C
Linearity (independent):	± 2%
Mechanical Life**:	100,000 cycles
Temperature Range:	-40°C to +120°C
Mechanical Angle:	360°
Rotational Torque:	≤ 20 mN.m
Max. Voltage:	22 VDC

(*) Others upon request
(**) 200,000 cycles version available upon request

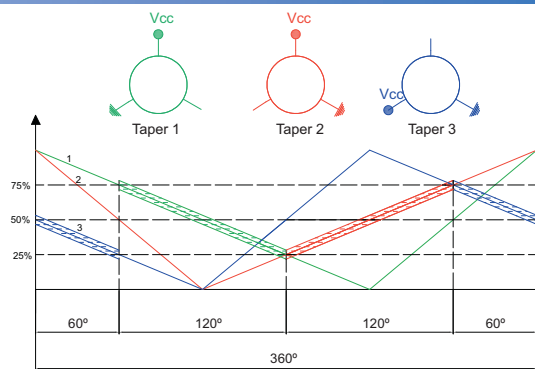
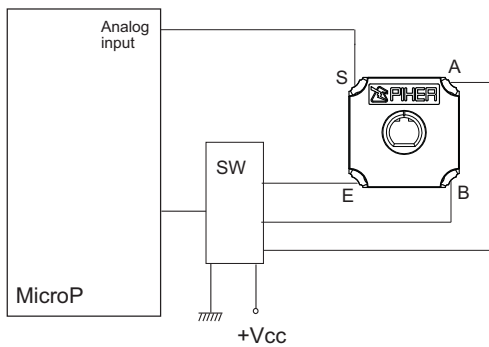
APPLICATIONS

This device is aimed to applications that need on-field arbitrary initial and final travel reference points calibration.

Once these have been set, the A15-3P provides accurate position feedback output to the controller.

Designed to be a cost-effective replacement for absolute encoders, the A15-3P series offers an SMD, Vertical and Through Hole mount solution for the majority of **Position/Angle Rotary Sensor** and **multi-purpose Control applications** such as garage door openers, gauges, rotary actuators and robotics.

SCHEMATIC AND FUNCTIONALITY



HOW TO ORDER

A15-3P	T	S	332	DDB	4040
Series	Rotor	Mounting Method	Value	Curve code	Tolerance
A15-3P	T	V = Through Hole S = SMD	332 = 3.3 K	DDB	4040 = ± 40%
			Others upon request		

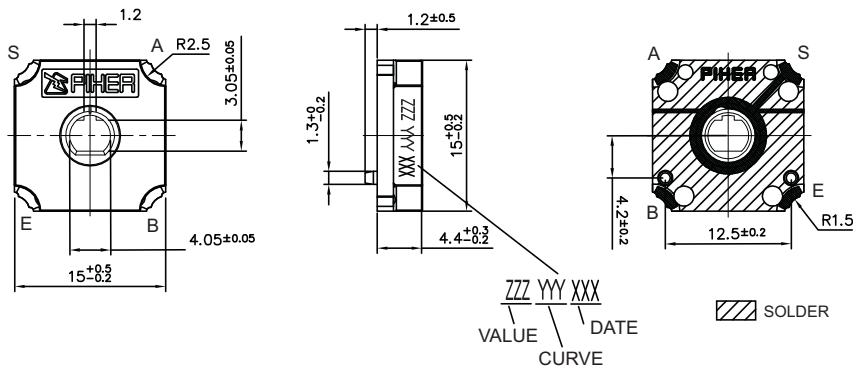
NOTES:

Shafts are not available mounted to the potentiometer and should be ordered separately
Through hole versions will be studied case by case

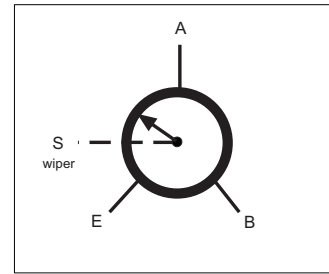
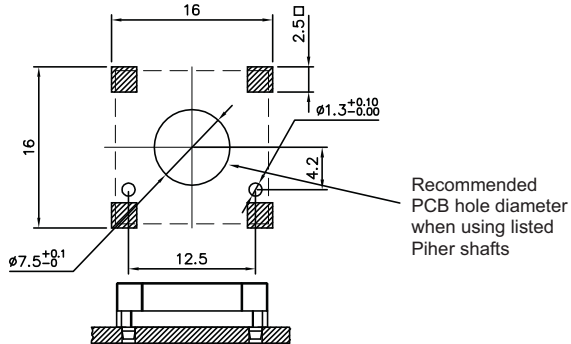
The information contained here should be used for reference purposes only.



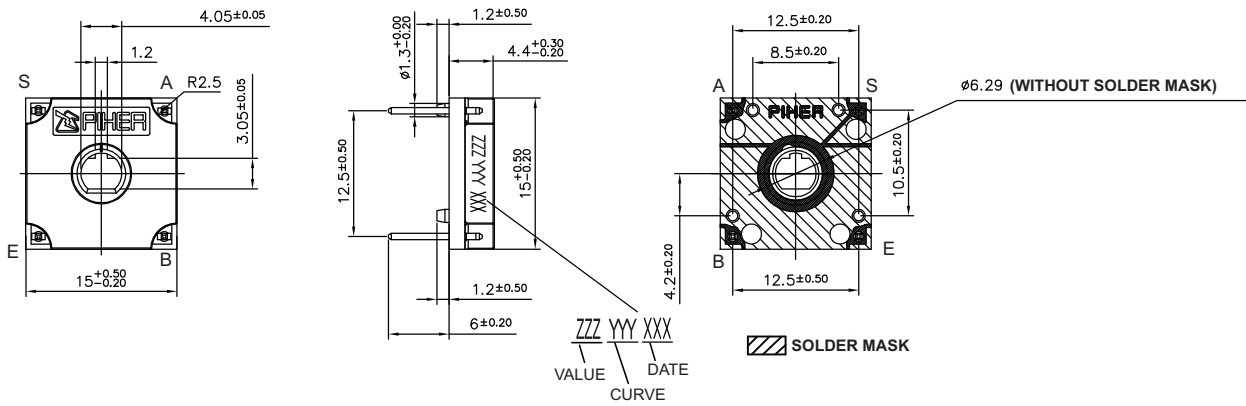
SMD MOUNT



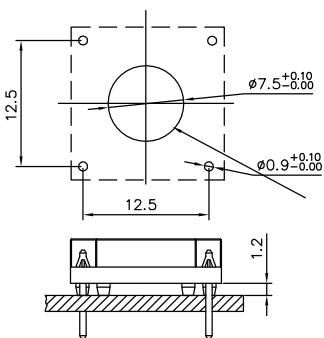
FOOT - PRINT



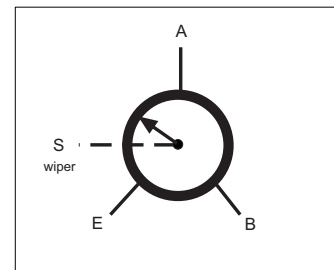
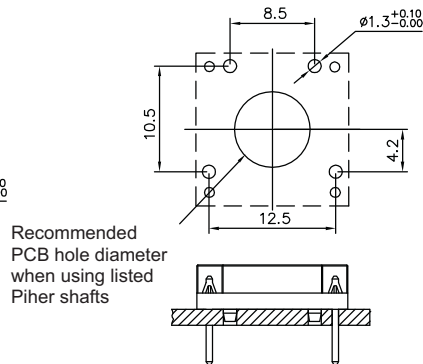
THROUGH HOLE MOUNT



PCB HOLE LAYOUT 1



PCB HOLE LAYOUT 2



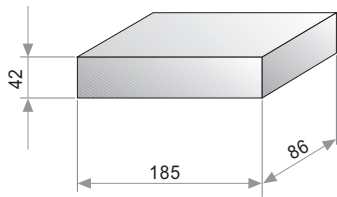
TESTS

TYPICAL VARIATIONS

ELECTRICAL LIFE	1.000 h. @ 50°C; 0.15 W	±40 %
MECHANICAL LIFE (CYCLES)	100,000 @ 20 CPM	±40 % (Rn < 100 K)
TEMPERATURE COEFFICIENT	-40°C to +120°C	±300 ppm (Rn < 100 K)
THERMAL CYCLING	10h. @ 120°C; 10h. @ -40°C	±40 %
DAMP HEAT	500 h. @ 40°C @ 95% HR	±40 %

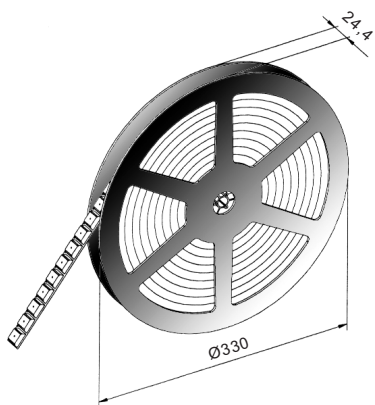
NOTE : Out of range values may not comply these results.

PACKAGING



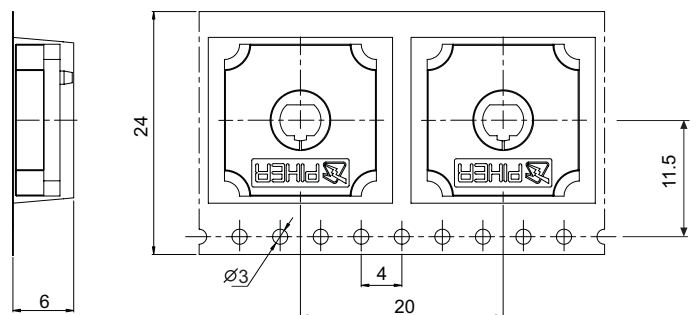
BULK

150 Units per box.
Through hole version only



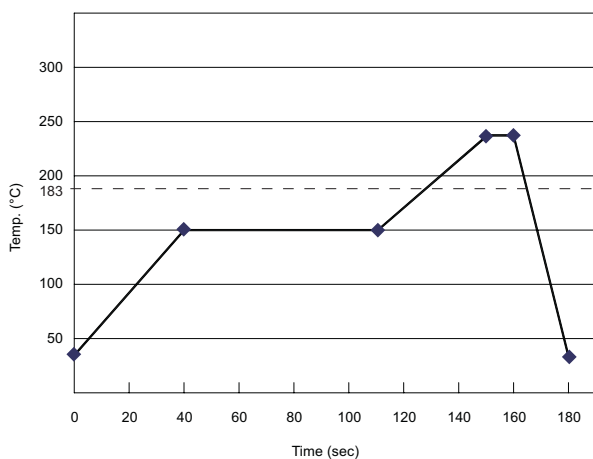
EMBOSSED TAPE

500 Units per Reel
SMD version only

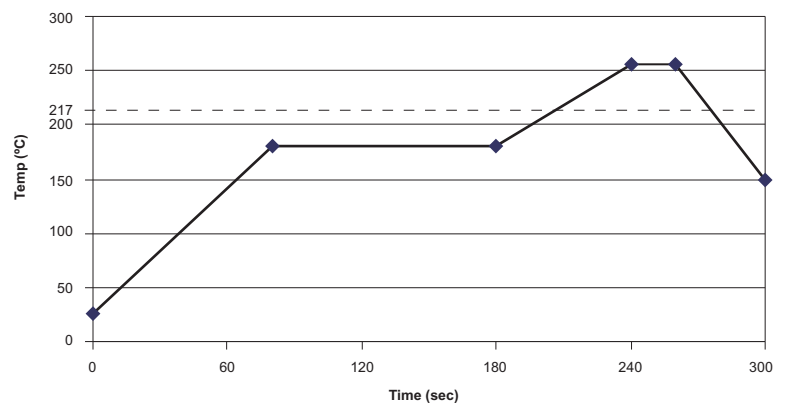


RECOMMENDED REFLOW PROFILE (SMD types)

SnPb Reflow Profile



Lead Free Reflow Profile



SHAFTS

Hollow model shafts

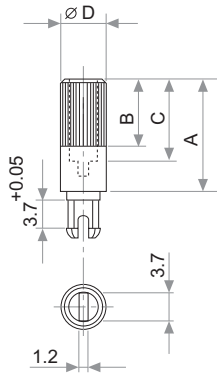


FIG.	A	B	C	D	Ref.
1	12	9	8	6	5272
2	19	9	15	6	5214
5	9.5	6.5	5.5	6	5208
9	35	9	15	6	5216
10	37.8	9	33.8	6	5218
11	35	25	15	6	5209
13	7.8	4.8	3.8	6	5265

Solid model shafts

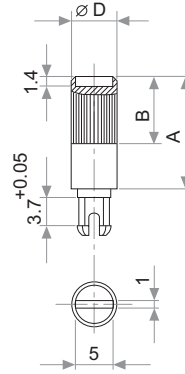


FIG.	A	B	D	Ref.
6	15	9	6	5219
7	16.8	9	6	5220
8	25.3	9	6	5207
12	46	5	6	5227

Slot (1 x 1.4) perpendicular to wiper position. Fig. 12 slot is on line with wiper position.

A = Length (FRS); B=Knurling length; C=Hollow depth; D=Shaft diameter; FRS=From rotor surface

Other shafts

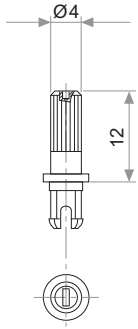


Fig. 3 / Ref. 5372

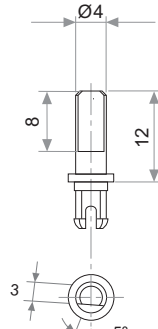


Fig. 15 / Ref. 5217

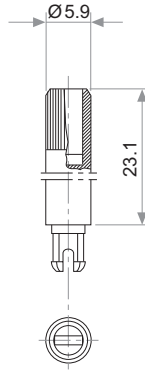


Fig. 17 / Ref. 5210

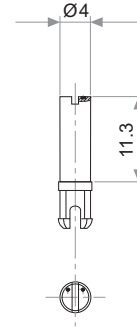


Fig. 18 / Ref. 5271

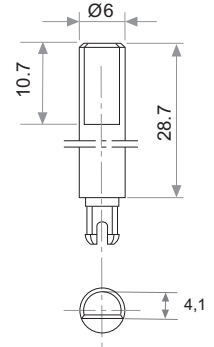


Fig. 19 / Ref. 6032*

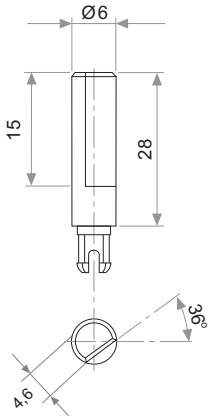


Fig. 20 / Ref. 5369*

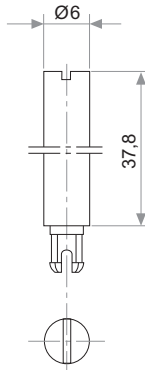


Fig. 21 / Ref. 6031*

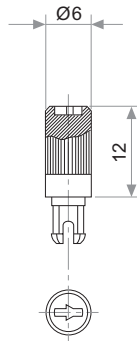


Fig. 22 / Ref. 6029

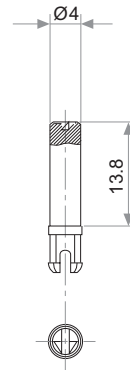


Fig. 23 / Ref. 6022

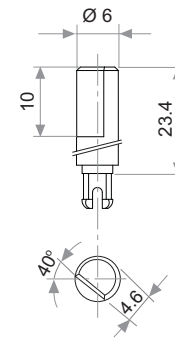


Fig. 29 / Ref. 6162

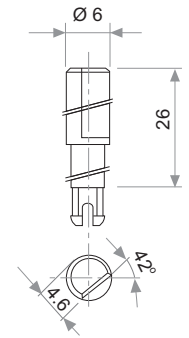


Fig. 25 / Ref. 6059

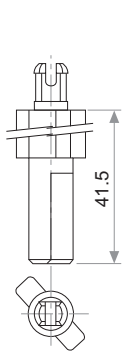


Fig. 27 / Ref. 5268*

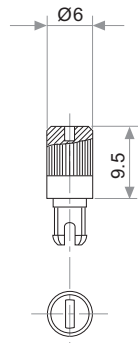


Fig. 28 / Ref. 6055

* Not available in self extinguishable plastic

POWER RATING CURVE

