

A15-3P

Position Sensor /
Control

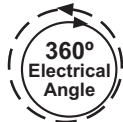


360°
Electrical
Angle

NO
DEAD
BAND



Fully
Customisable



Reflow
Soldering

STANDARD SPECIFICATIONS

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

(*) Others upon request

(**) 200K cycles version available upon request

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

IP54 protection according to IEC 60529

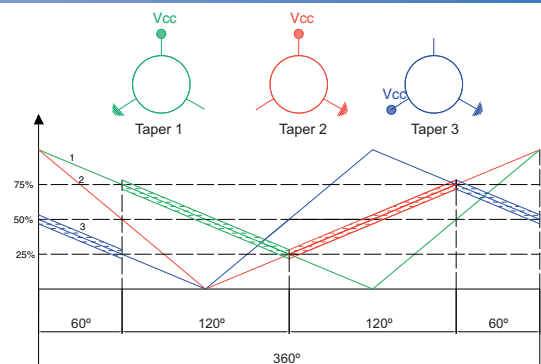
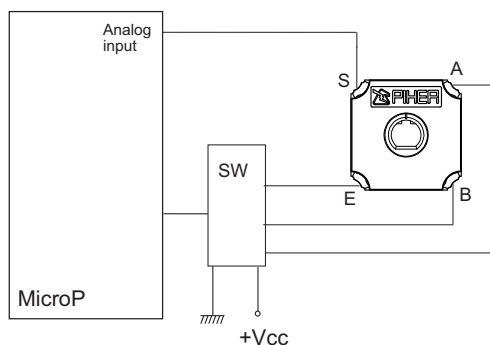
APPLICATIONS

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

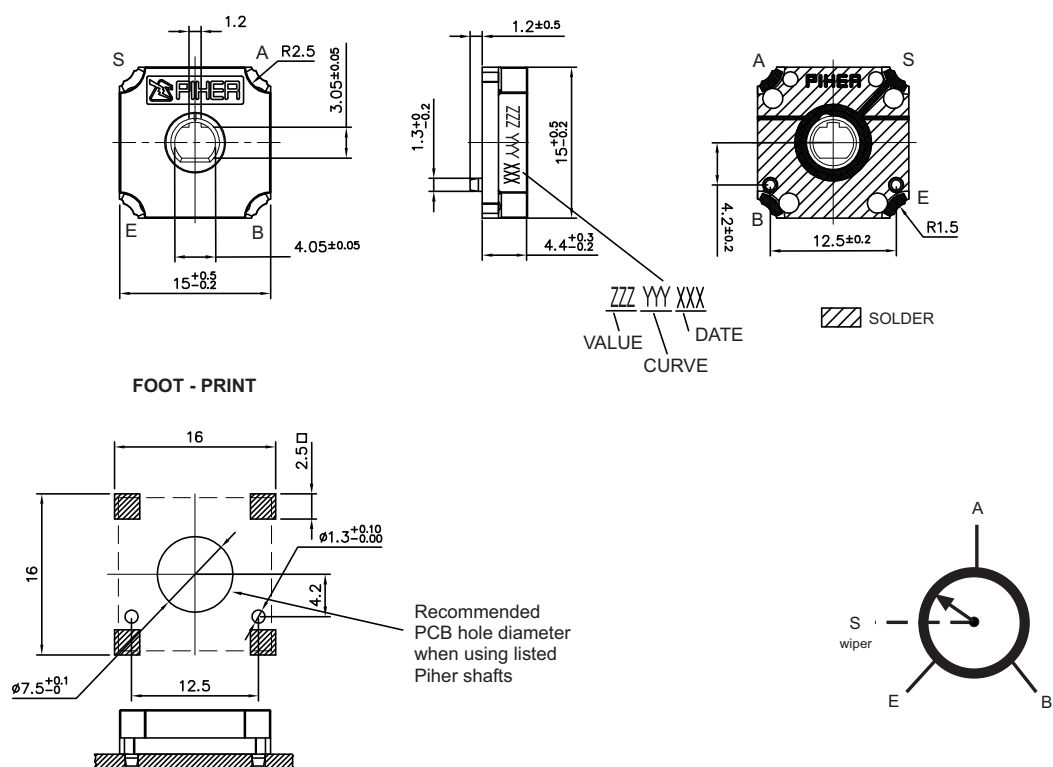
A15 3P	T	S	-	332	DDB	4040
Series	Rotor	Mounting Method		Value	Curve code	Tolerance
A15 3P	T	V = Through Hole S = SMD		332 = 3.3 K Others upon request	DDB	4040 = ± 40%

NOTES:

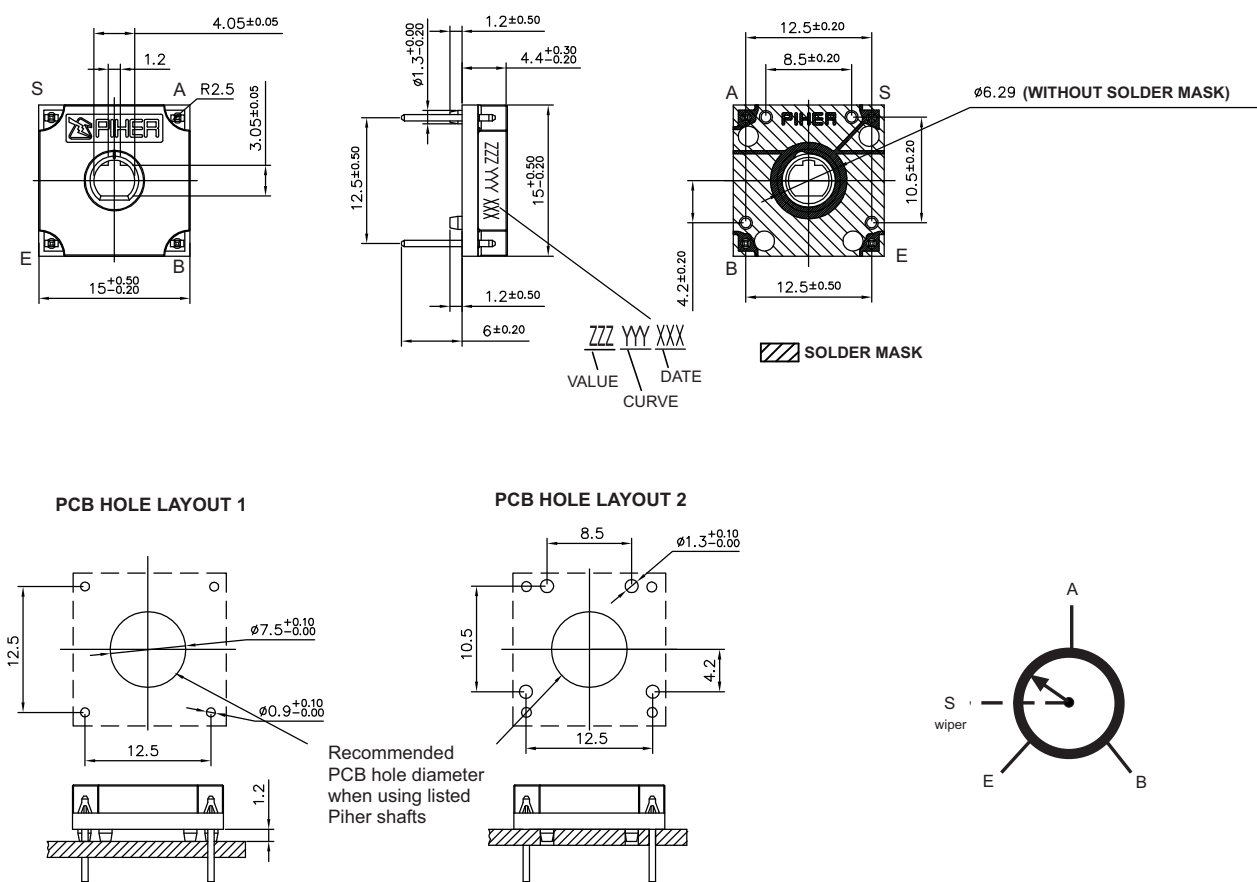
Shafts are not available mounted to the potentiometer and should be ordered separately
Through hole versions will be studied case by case

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

SMD MOUNT



THROUGH HOLE MOUNT



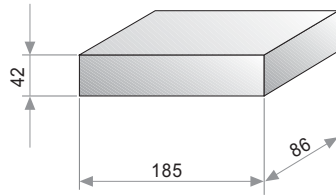
TESTS

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 %

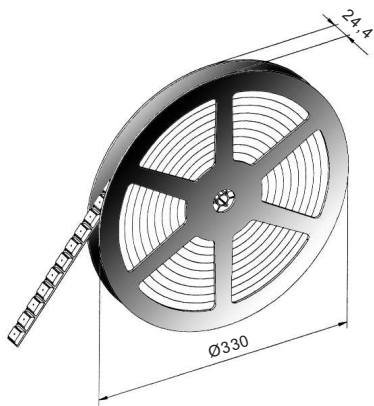
NOTE : Out of range values may not comply these results.

PACKAGING



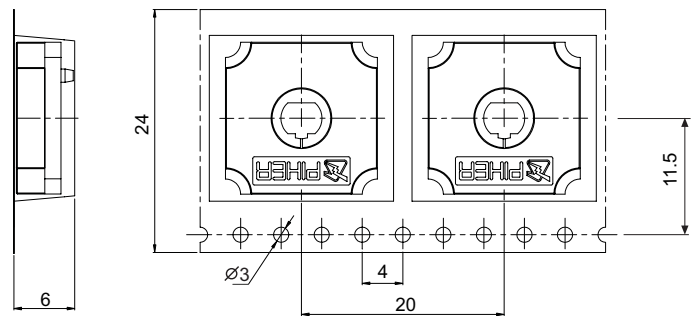
BULK

150 Units per box.
Through hole version only



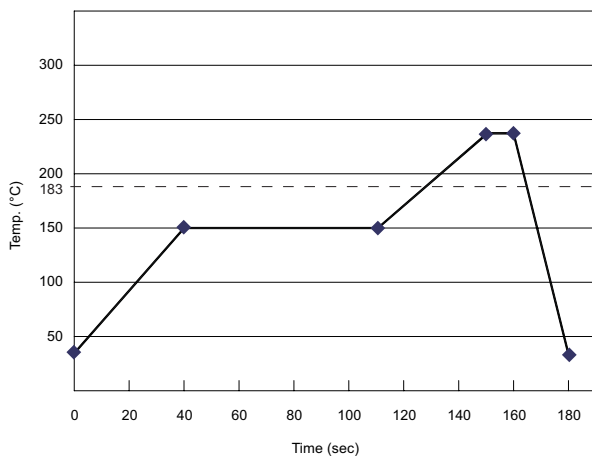
EMBOSSED TAPE

500 Units per Reel
SMD version only

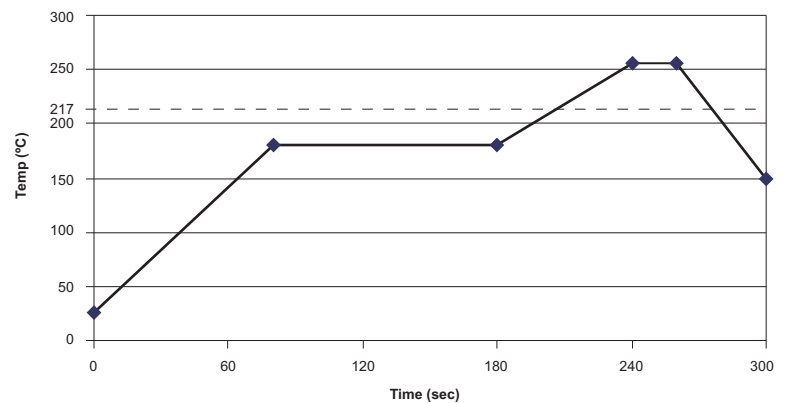


RECOMMENDED REFLOW PROFILE (SMD types)

SnPb Reflow Profile



Lead Free Reflow Profile



The recommended reflow profile is provided as a guideline. Optimal profile may differ due to oven type, assembly layout or other design or process variables. Customers should verify actual device performance in their specific application and reflow process. Please contact Piher if you require additional support.

Hollow model shafts

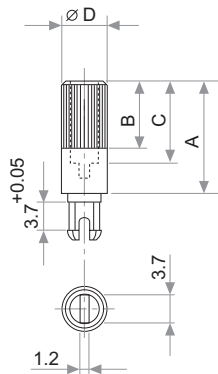


FIG.	A	B	C	D	Ref.
1	12	9	8	6	5272
2	19	9	15	6	5214
5	9.5	6.5	5.5	6	5208
9	35	9	15	6	5216
10	37.8	9	33.8	6	5218
11	35	25	15	6	5209
13	7.8	4.8	3.8	6	5265

Solid model shafts

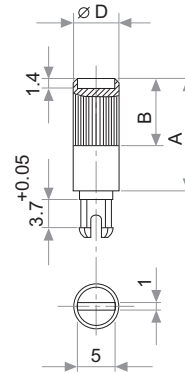


FIG.	A	B	D	Ref.
6	15	9	6	5219
7	16.8	9	6	5220
8	25.3	9	6	5207
12	46	5	6	5227

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

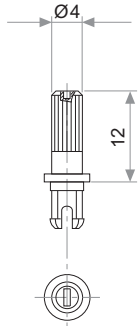


Fig. 3 / Ref. 5372

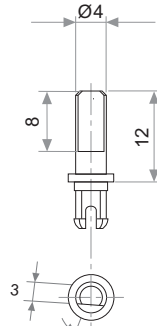


Fig. 15 / Ref. 5217

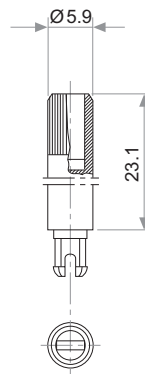


Fig. 17 / Ref. 5210

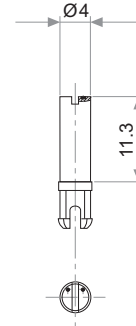


Fig. 18 / Ref. 5271

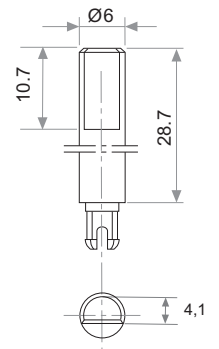


Fig. 19 / Ref. 6032*

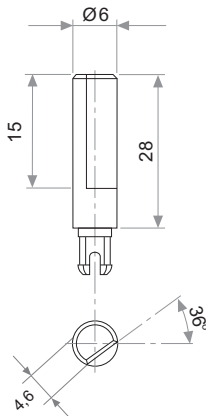


Fig. 20 / Ref. 5369*

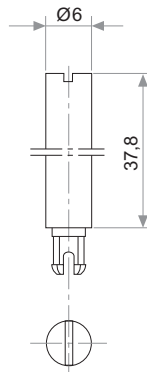


Fig. 21 / Ref. 6031*

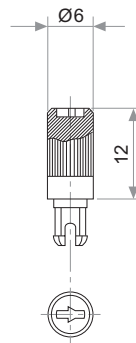


Fig. 22 / Ref. 6029

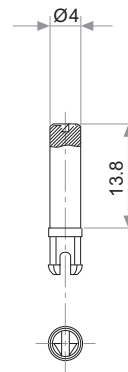


Fig. 23 / Ref. 6022

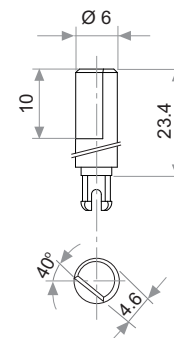


Fig. 29 / Ref. 6162

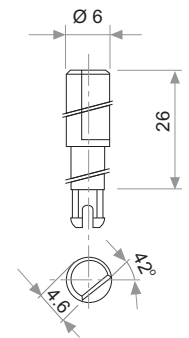


Fig. 25 / Ref. 6059

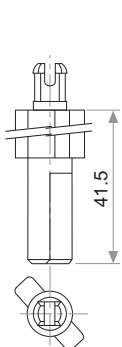


Fig. 27 / Ref. 5268*

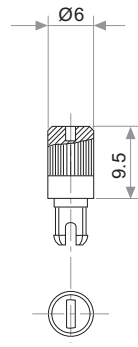
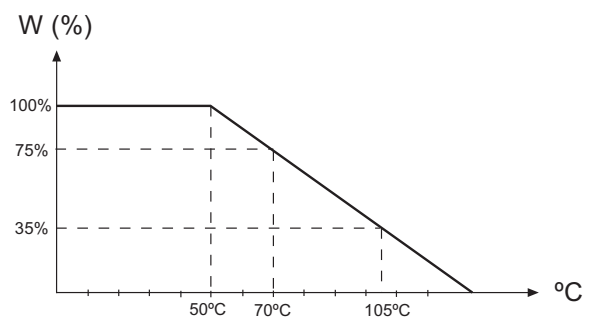


Fig. 28 / Ref. 6055

POWER RATING CURVE



* Not available in self extinguishable plastic

Disclaimer

The product information in this catalogue is for reference purposes. Please consult for the most up to date and accurate design information.

Piher Sensors & Controls S.A., its affiliates, agents, and employees, and all persons acting on its or their behalf (collectively, "Piher"), disclaim any and all liability for any errors, inaccuracies or incompleteness contained herein or in any other disclosure relating to any product described herein.

Piher disclaims any and all liability arising out of the use or application of any product described herein or of any information provided herein to the maximum extent permitted by law. The product specifications do not expand or otherwise modify Piher's terms and conditions of sale, including but not limited to the warranty expressed therein, which apply to these products.

No licence, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document or by any conduct of Piher.

The products shown herein are not designed for use in medical, life-saving, or life-sustaining applications unless otherwise expressly indicated. Customers using or selling Piher products not expressly indicated for use in such applications do so entirely at their own risk and agree to fully indemnify Piher for any damages arising or resulting from such use or sale. Please contact authorised Piher personnel to obtain written terms and conditions regarding products designed for such applications.

Product names and markings noted herein may be trademarks of their respective owners.

Information contained in and/or attached to this catalogue may be subject to export control regulations of the European Community, USA, or other countries. Each recipient of this document is responsible to ensure that usage and/or transfer of any information contained in this document complies with all relevant export control regulations. If you are in any doubt about the export control restrictions that apply to this information, please contact the sender immediately. For any Piher Exports, Note: All products / technologies are EAR99 Classified commodities. Exports from the United States are in accordance with the Export Administration Regulations. Diversion contrary to US law is prohibited.

All Piher products can be adapted to meet customer's requirements.

Please always use the latest updated datasheets published at our website www.piher.net.



v220219

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

[Amphenol:](#)

[A153PTS-332DDB4040](#)