



## FEATURES

- Conceived and designed for customisation
- SMD or Through-hole Mount
- Endless Rotation (360°)
- Wide Electrical Angle (340° ± 10°)
- Extended Mechanical Life (100k cycles)
- Working Temperature Range (-40°C to +120°C)
- Low Profile (4.4 mm)
- Linearity ± 3% (standard), ± 2% (max)
- Embossed Tape or Bulk packaging
- Reflow Soldering capability
- Shaft insertable from both sides
- Polarised "T" rotor (European Home Appliance standard)

## STANDARD SPECIFICATIONS

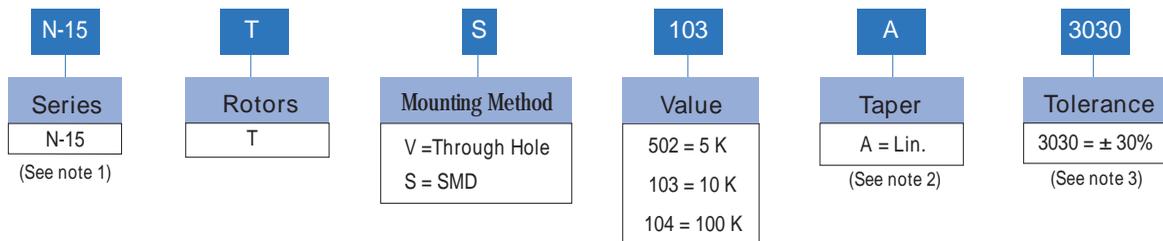
Resistance values:	5k, 10k, 100k
Tolerance:	± 30%
Nominal Power:	0.15 W @ 50°C
Linearity (absolute):	± 3%
Taper:	Linear
Mechanical Life:	100,000 cycles
Temperature Range:	-40°C to +120°C
Mechanical Angle:	360°
Electrical Angle:	340° ± 10°
Rotational Torque:	≤ 20 mN.m
Max. Voltage:	250 VDC

Others upon request

## TYPICAL APPLICATIONS

- The N15 series offers an SMD and Through Hole mount solution for the majority of **Position/Rotary Sensor** and **multi-purpose Control** applications such as:
- Automotive HVAC, Seat, Rear-view mirror actuator feedback sensors and HVAC Controls
  - Temperature Control for Boilers, Wall Heaters, Showers, Radiators, Conventional and Microwave Ovens, Freezers...
  - Timer & Function/Programme Select for Washing Machines, Dishwashers and all White Goods in general.
  - Size and Position detectors

## HOW TO ORDER



### NOTES:

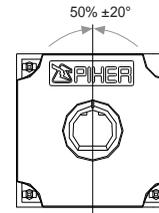
- (1) A wide variety of custom substrates available
  - (2) Availability of a wide range of customised tapers and step curves
  - (3) Optional precision laser-trimmed voltage divider calibration
- Shafts are not available mounted to the potentiometer and should be ordered separately

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

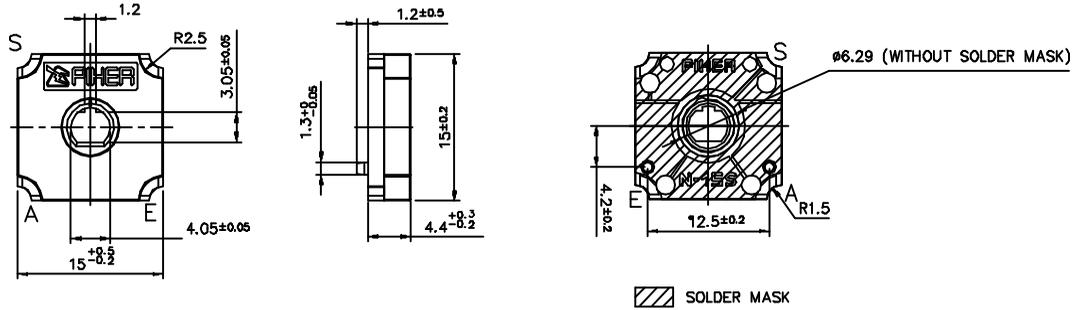
Wiper positioned at 50 % of the electrical angle.

N-15 T S + DRAWING NUMBER (Max. 16 digits)

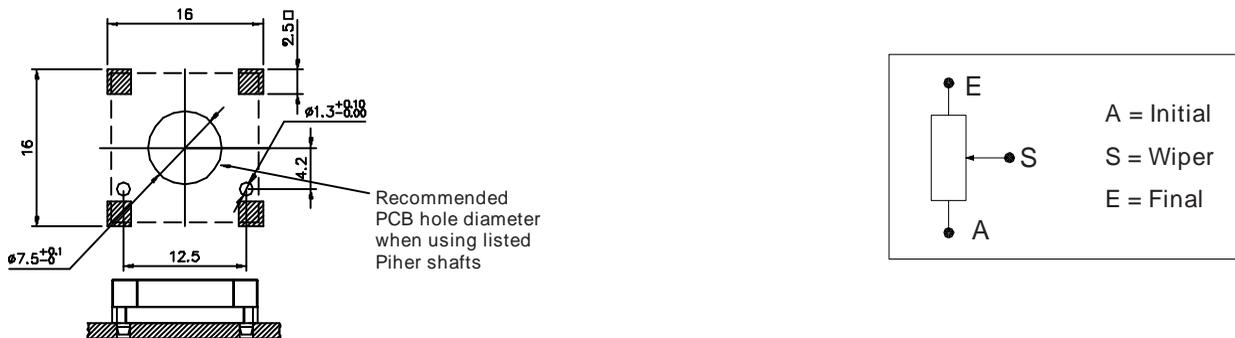
This way of ordering should be used for options which are not included in the "How to order" standard and optional extras.



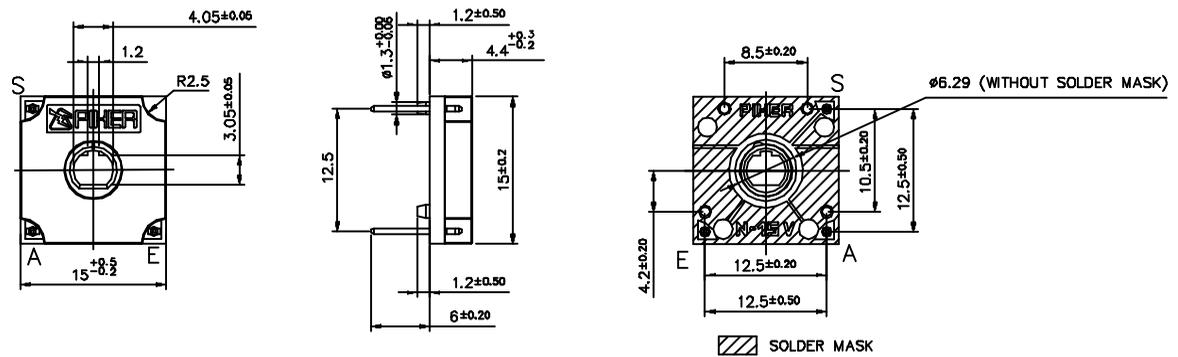
SMD MOUNT



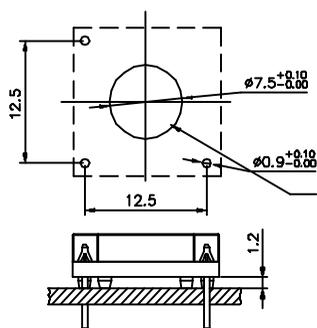
FOOT - PRINT



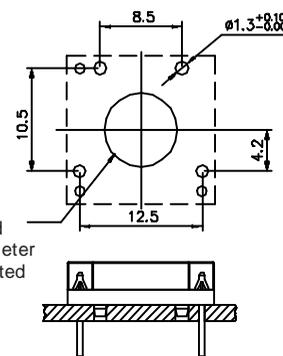
THROUGH HOLE MOUNT



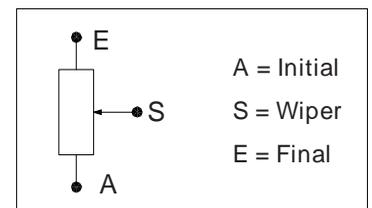
PCB HOLE LAYOUT 1



PCB HOLE LAYOUT 2



Recommended PCB hole diameter when using listed Piher shafts



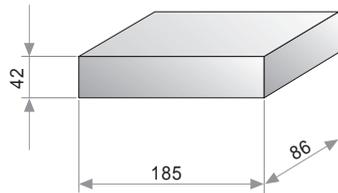
**TESTS** **TYPICAL VARIATIONS**

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 %

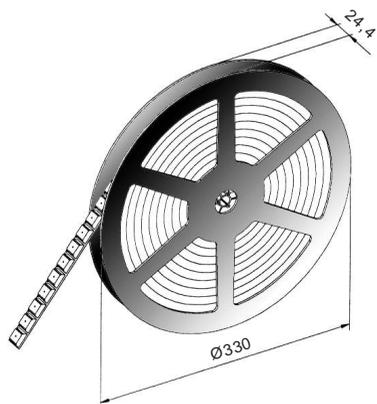
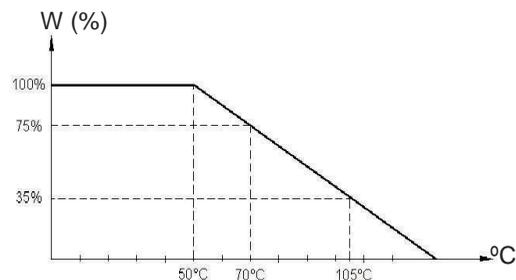
NOTE : Out of range values may not comply these results.

**PACKAGING**

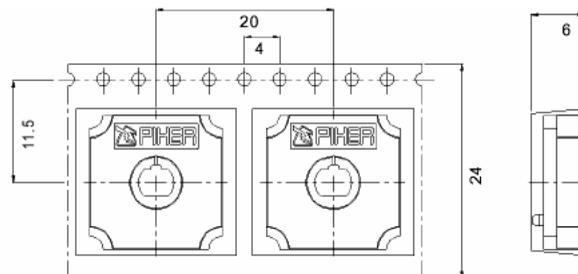
**POWER RATING CURVE**



**BULK**  
200 Units per box.  
Through hole version only

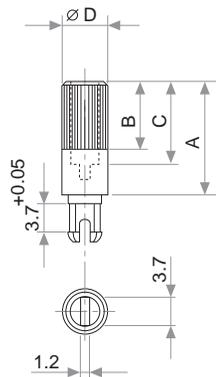


**EMBOSSSED TAPE**  
500 Units per Reel  
SMD version only



**SHAFTS**

Hollow model shafts



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

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

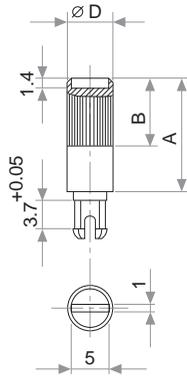


FIG.	A	B	D	Ref.
6	15	9	6	5219
7	16.8	9	6	5220
8	25.3	9	6	5207
12	46	5	6	5227

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

## Other shafts

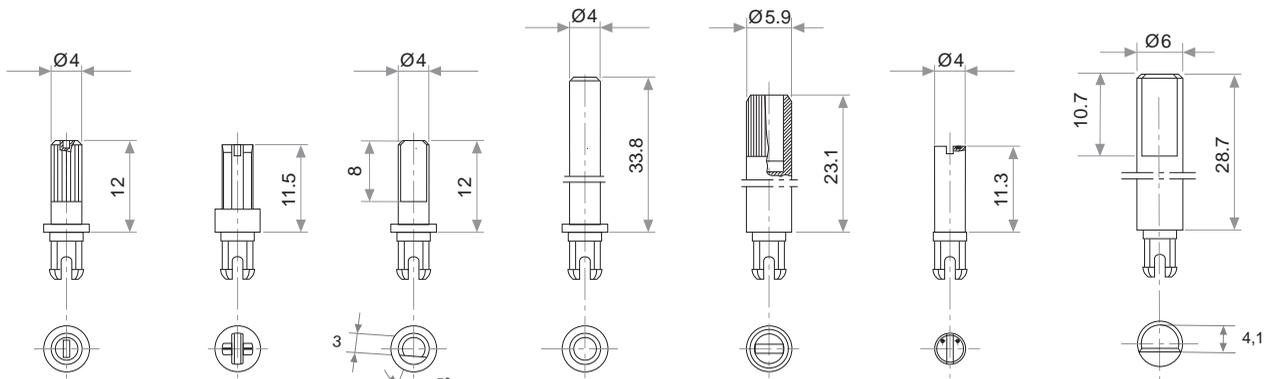


Fig. 3 / Ref. 5372   Fig. 14 / Ref. 5248   Fig. 15 / Ref. 5217   Fig. 16 / Ref. 5262   Fig. 17 / Ref. 5210   Fig. 18 / Ref. 5271   Fig. 19 / Ref. 6032

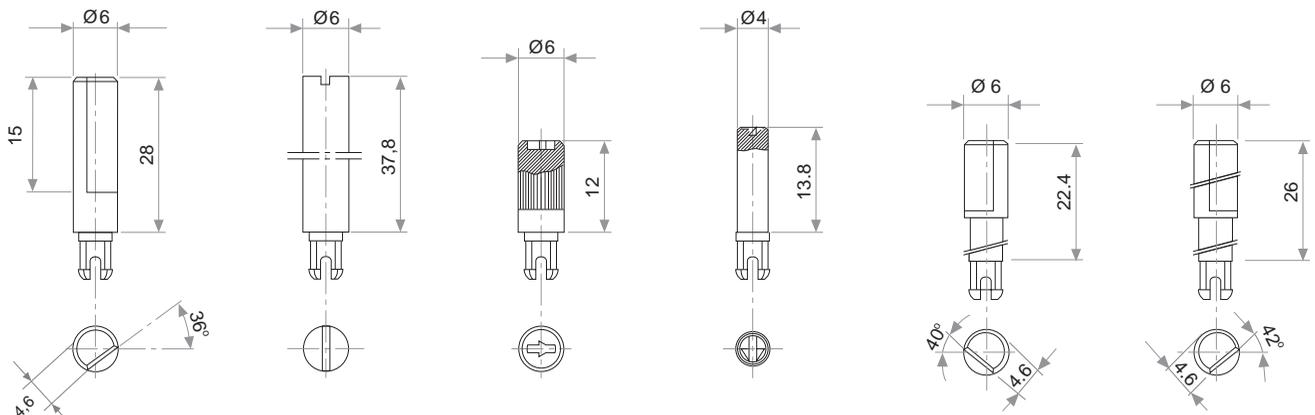


Fig. 20 / Ref. 5369   Fig. 21 / Ref. 6031   Fig. 22 / Ref. 6029   Fig. 23 / Ref. 6022   Fig. 24 / Ref. 6058   Fig. 25 / Ref. 6059

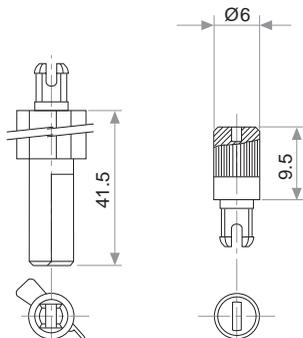


Fig. 27 / Ref. 5268   Fig. 28 / Ref. 6055