

FEATURES

- Carbon resistive element.
- Dust proof enclosure.
- With or without actuating knob
- Optional SPST switch

MECHANICAL SPECIFICATIONS

- Mechanical rotation angle: $255^\circ \pm 5^\circ$
- Electrical rotation angle: $220^\circ \pm 20^\circ$
- Torque: 0.5 to 1.5 Ncm.
(0.7 to 2.1 in-oz)
- Stop torque: > 40 Ncm. (> 56 in-oz)

ELECTRICAL SPECIFICATIONS

- Range of values*
 $100\Omega \leq R_n \leq 5\text{ M}$ (Decad. 1.0 - 2.0 - 2.2 - 2.5 - 4.7 - 5.0)
- Tolerance*: $100\Omega \leq R_n \leq 1\text{M}\Omega$ $\pm 20\%$
 $1\text{M}\Omega < R_n \leq 5\text{M}\Omega$ $\pm 30\%$
- Max. Voltage: 200 VDC (lin) 100 VDC (no lin)
- Nominal Power 50°C (122°F) (see power rating curve)
0.25 W (lin) 0.12 W (no lin)
- Taper* (Log. & Alog. only $R_n > 1\text{K}$) Lin ; Log; Alog.
- Residual resistance*: $\leq 0.5\% R_n$ (5 Ω min.)
- Equivalent Noise Resistance: $\leq 3\% R_n$ (3 Ω min.)
- Operating temperature**: $-25^\circ\text{C} + 70^\circ\text{C}$ ($-13^\circ\text{F} + 158^\circ\text{F}$)

* Others upon request.

** Up to 85°C depending on application.

HOW TO ORDER

STANDARD

T-18	A	I	1	473	B	2020
Series	Terminals	Switch	Thumbwheel	Value	Taper	Tolerance
T-18	A = PCB B = Solder Lugs	I = with S = without	S = sb/st T = sb/ct 1 = Fig. 1 2 = Fig. 2 3 = Fig. 3 4 = Fig. 4 (See note 1)	101 = 100 Ω 203 = 20 K 504 = 500 K 505 = 5 M (See note 2)	A = Linear B = Log. C = Alog. (See note 4) Others tapers on request	2020 = +/-20% 3030 = +/-30% (See note 3)

NOTES:

- (1) Thumbwheel: S = without knob, without screw
T = without knob, with screw
Fig. 1, 2 y 3: countersunk knob
Fig. 4: knob with screw
knob colour: Black

If you wish to use your own custom plastic shaft/knob/actuator please contact Piher for advice about compatible materials.

- (2) Value: • Code: $\overbrace{10}^{\text{Number of zeros}} \overbrace{1}^{\text{2 first digits of the value.}} 100\Omega$
Others values upon request.

- (3) Tolerance (non standard), upon request.
Rotary switch with Alog. curve is not available.

Example code: +7 = 07 05
-5 = negative tolerance
positive tolerance

- (4) Switch option not available with antilog taper.

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

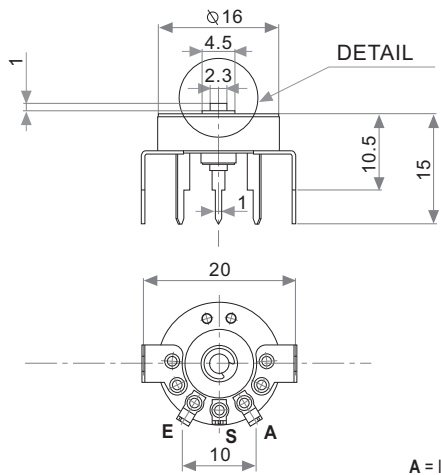
HOW TO ORDER CUSTOM DRAWING

T-18 A I + DRAWING NUMBER (Max. 16 digits)

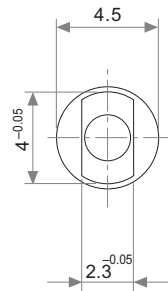
This way of ordering should be used for options which are not included in the "How to order" standard and optional extras.

TERMINALS

T-18 A

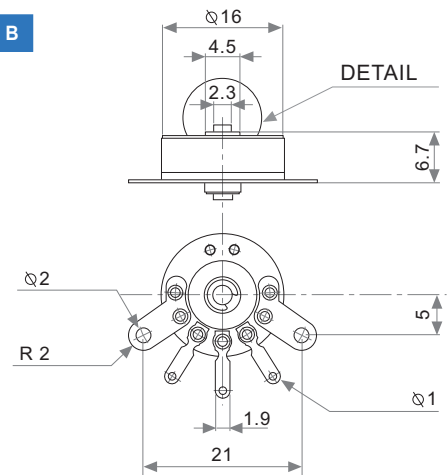


DETAIL

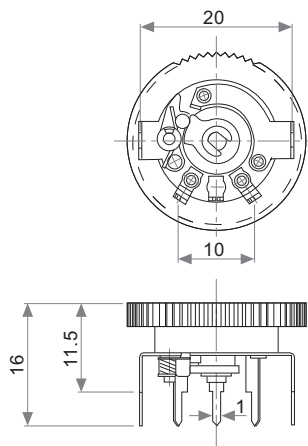


A = Initial S = Wiper E = Final

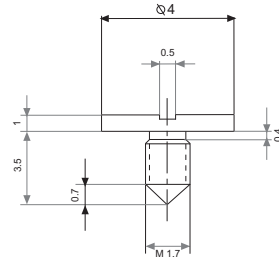
T-18 B



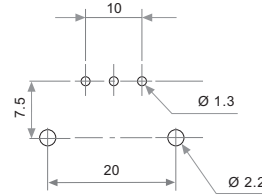
SWITCH



ELECTRICAL AND MECHANICAL	
SWITCH RATING	0.5 A; 12V DC
SWITCH OPERATING ANGLE	25°±10°
MECHANICAL LIFE (CYCLES)	10.000

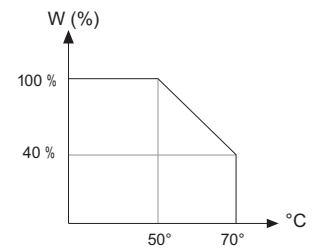


SCREW



FOOTPRINT

POWER RATING CURVE



THUMBWHEEL

Fig. 1 / Ref. 5950

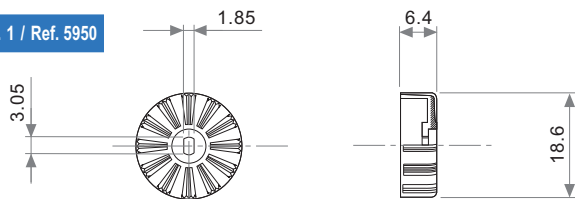


Fig. 2 / REF. 5951

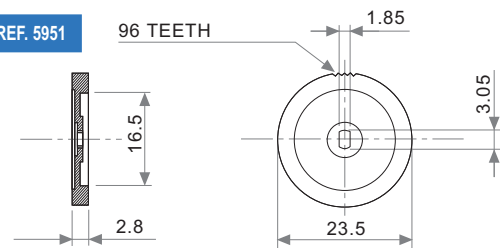


Fig. 3 / Ref. 5952

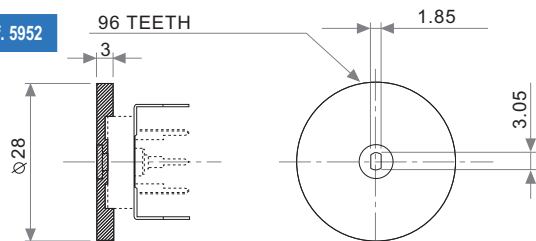
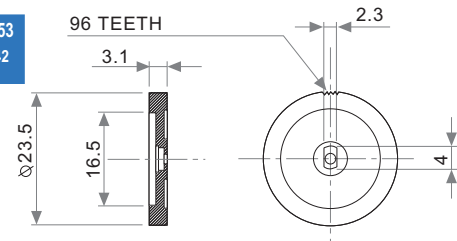


Fig. 4 / Ref. 5953
(Screw Ref. 5342 is required)



TESTS

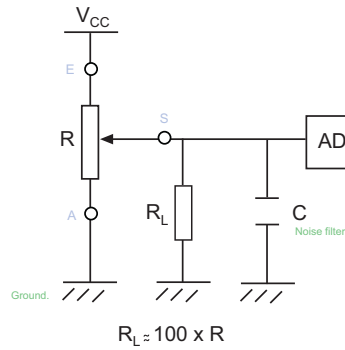
TYPICAL VARIATIONS

ELECTRICAL LIFE	1.000 h. @ 50°C; 0.25 W	±5 %
MECHANICAL LIFE : POT.	25.000 (10-15 CPM)	±3 % (Rn < 1 M)
TEMPERATURE COEFFICIENT	-25 °C; +70 °C	±300 ppm (Rn < 100 K)
THERMAL CYCLING	16 h. @ 85 °C; 2h @ -25 °C	±2.5 %
DAMP HEAT	500 h. @ 40 °C @ 95% HR	±5 %
VIBRATION (for each plane X,Y,Z)	2 h. @ 10 Hz - 55 Hz.	±2 %

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

RECOMMENDED CONNECTIONS

Piher potentiometer's recommended connection circuit for a position sensor or control application. (voltage divider circuit electronic design).



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.

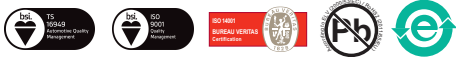
Piher disclaims any and all liability arising out of the use or application of any product described herein or of any information provided herein to the maximum extent permitted by law. The product specifications do not expand or otherwise modify Piher's terms and conditions of sale, including but not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



v080416

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.