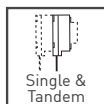
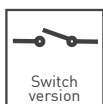


PC-16

16-mm carbon panel mount potentiometer

The PC-16 is a single-turn panel control potentiometer using a carbon resistive element with plastic housing and incorporated shaft. A wide variety of configurable options, such as single or tandem models, different shaft types and tapers, make the PC-16 suitable for numerous applications in the home appliance and industrial markets.



KEY FEATURES

- ▶ IP54 protection according to IEC 60529
- ▶ Single and tandem models
- ▶ Housing and bushing made of self extinguishable material UL 94-V0
- ▶ Selection of plastic and metal shafts
- ▶ Linear, log (audio) and antilog (reverse) tapers
- ▶ Solder lugs or PC pins

On request

- ▶ Stereo matching
- ▶ Rotary switch
- ▶ Nut & washer
- ▶ Bushless & shaftless models
- ▶ Assemblies with wires and connectors
- ▶ Metallic support (mounting brackets)

ELECTRICAL SPECIFICATIONS

Taper	Lin, Log, Alog
Range of values* (Decad. 1.0 - 2.0 - 2.2 - 2.5 - 4.7 - 5.0)	
Lin	$100\Omega \leq R_n \leq 5M\Omega$
Log, Alog	$1K\Omega \leq R_n \leq 5M\Omega$
Tolerance*	
$100\Omega \leq R_n \leq 1M\Omega$	$\pm 20\%$
$1M\Omega < R_n \leq 5M\Omega$	$\pm 30\%$
Max. Voltage	
Lin	250 VDC
Log, Alog	125 VDC
Nominal power 50°C (122°F)	
Lin	0.2 W
Log, Alog	0.1 W
Residual resistance	$\leq 5\% R_n$ (5Ω min.)
Equivalent noise resistance	$\leq 3\% R_n$ (3Ω min.)
Operating temperature**	-25°C to +70°C (-13°F to + 158°F)

* Others: check availability ** Up to 85°C depending on application

APPLICATIONS

- ▶ Appliance program selection
- ▶ Thermostat adjustment
- ▶ HVACR control
- ▶ Consumer electronics
- ▶ Industrial controls
- ▶ Healthcare / laboratory devices
- ▶ Home and building automation

PC-16

16-mm carbon panel mount potentiometer

MECHANICAL SPECIFICATIONS

Mechanical rotation angle	300° ±5°
Electrical rotation angle	
Only Potentiometer	280° ±20°
Potentiometer with rotary switch	240° ±20°
Rotational torque ¹	0.5 to 1.5 Ncm (0.7 to 2.1 in-oz)
Stop torque	> 40 Ncm (>56 in-oz)
Max. torque nut (binding out)	< 80 Ncm (<112 in-oz)
Push and pull in the shaft	> 25 N
Life	
Potentiometer	25.000 cycles ²
Switch	10.000 cycles

¹ For single models. Tandem versions have a higher torque.

² One cycle covers forth and back the mechanical angle travel.

ENVIRONMENTAL TESTING

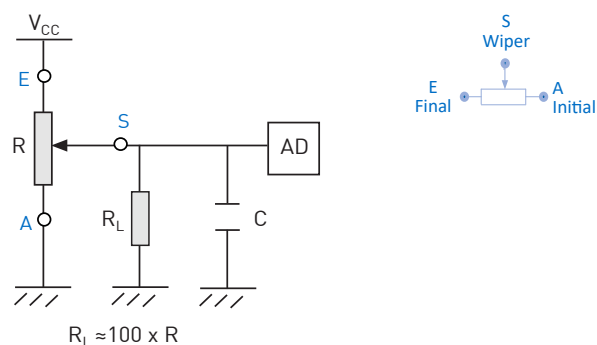
	Test method (CEI 393-1)	ΔR[%]- Piher typical test results
Electrical life	1.000h at 50°C; 0.15W	±5%
Mechanical life		
Potentiometer*	25.000 cycles at 10 to 15 cpm	±3% (R _n < 1MΩ)
Switch	10.000 cycles at 1A and 50 VAC	
Temperature coefficient	-25°C; +70°C	±300 ppm/°C (R _n < 100KΩ)
Thermal cycling	16h at 85°C and 2h at -25°C	±2.5%
Damp heat	500h at 40°C and 95% relative humidity (RH)	±5%
Vibration	2h each plane at 10Hz - 55Hz	±2%
Storage	6 month at 23°C ±2°C and 50% RH	±2.5%

* Only applicable to values > 1KΩ. For lower values please contact us.

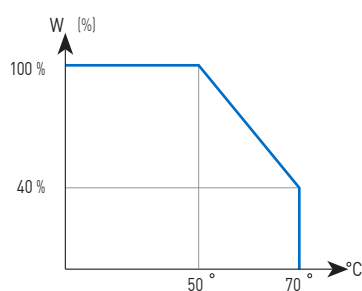
Out of range values may not comply with these results. Standard test conditions: temperature: 23°C ±2°C and 45% to 70% RH

RECOMMENDED CONNECTIONS

Recommended connection circuit for a position sensor or control application (voltage divider circuit electronic design).



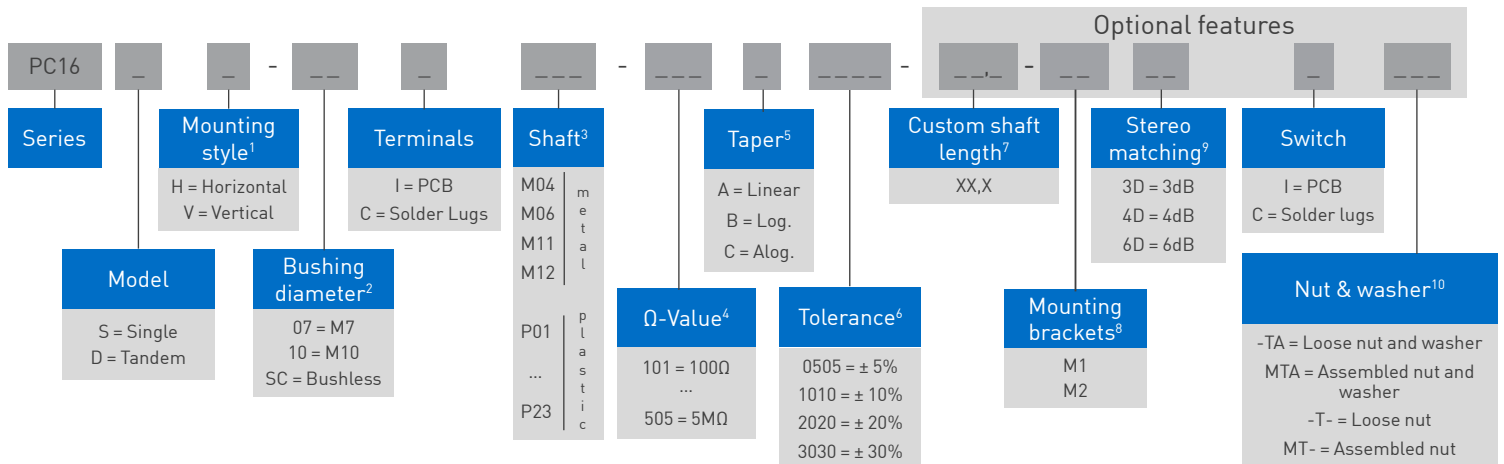
POWER RATING CURVE



PC-16

16-mm carbon panel mount potentiometer

HOW TO ORDER



1. Mounting style: Type "V" is only available in model "S" potentiometer and with printed circuit terminals.
2. Bushings: Type "10" has two parallel flat surfaces to avoid rotation. Bushless option only available for single model
3. --- = no shaft. The material for plastic shafts has "HB" rating UL94 classification.
4. Ω- Value: XXX - First two digits of Ω-value
XXX - Number of zeros
If you need tandem "D" models with several resistive values in each module, please contact Piher before ordering
5. Taper: switch option not available with Alog (reverse) taper. Log and Alog tapers available for Rn 1KΩ
6. Tolerance: ±5% tolerance available for values 1KΩ Rn 1MΩ. Custom tolerances available. Please contact Piher for more information
7. Custom shaft length (in mm): maximum recommended: 45mm.
8. Mounting brackets: only applicable for horizontal single models without switch
9. Stereo matching: not applicable to single models. Maximum spec.: 3dB
10. Not available for bushless type

 [check inventory](#)

ORDER CODE EXAMPLES

PC16SV-10IP16-105A2020-I-TA

Single body vertical adjust potentiometer with M10 bushing, PCB pin leads, "P16" shaft, 1MΩ resistive value, 20% resistive tolerance, switch with PCB pin leads and loose nut and washer.

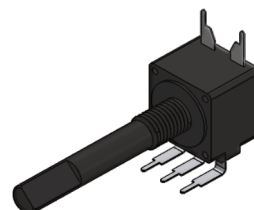
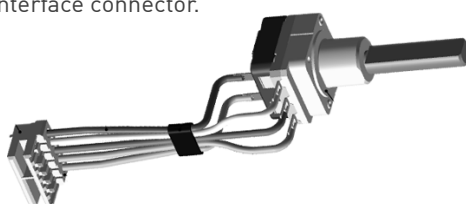
PC16DH-07CP06-103A1010-15,0-MTA

Double body horizontal adjust potentiometer with M07 bushing, solder lug leads, "P06" shaft type, 10KΩ resistive value, 10% resistive tolerance, shaft cut to L=15mm and factory-assembled nut and washer.

CUSTOMIZATION POSSIBILITIES

Potentiometer + wires + connector

- ✓ Piher can deliver bespoke product design and adaptations to meet any form, fit and function, including leads, wire harness and interface connector.



16-mm carbon panel mount potentiometer

STANDARD CONFIGURATION

Shaft length	Standard length according to shaft's drawing
Mounting brackets	None
Stereo matching	Only on request
Switch	None
Nut and washer	None

MODELS

PC-16 S/D ...H...	PC-16 SV
<p>Technical drawings of the PC-16 S/D ...H... connector. The side view shows a threaded cable entry with dimensions 6.5, 7.5, 9, 8, 15.5, and a tolerance of ± 0.5. The top view shows a square body with dimensions 16, 8.8, 12.5, 4, 1.1, and a tolerance of ± 0.1. A detail view shows the mounting surface with a 3x3 hole pattern, a central hole of diameter 1.3, and a 5x5 mm square area. Labels E, S, and A are present.</p>	<p>Technical drawings of the PC-16 SV connector. The side view shows a threaded cable entry with dimensions 18, 9, 8, 5, 4.6, 15, and a tolerance of ± 0.1. The top view shows a square body with dimensions 16, 8.8, 12.5, 4, 1.1, and a tolerance of ± 0.1. A detail view shows the mounting surface with a 3x3 hole pattern, a central hole of diameter 1.3, and a 5x5 mm square area. Labels E, S, and A are present.</p>



Download STEP files here: www.piher.net

METALLIC SUPPORT (MOUNTING BRACKETS)

Technical drawings of the PC-16 SH connector, showing two versions: PC-16 SH.....M1 and PC-16 SH.....M2.

PC-16 SH.....M1 Dimensions:

- Side view: 6.5, 2.5, 7.5, 4, 8, 12.5, 20, 16, 8.8, 1, -0.1 , 9, 8.
- Top view: 20, 16, 8.8, 1, -0.1 , 9, 8.
- Mounting surface: 20x20mm grid, 1.3mm hole diameter ($\phi 1.3^{+0.1}$).

PC-16 SH.....M2 Dimensions:

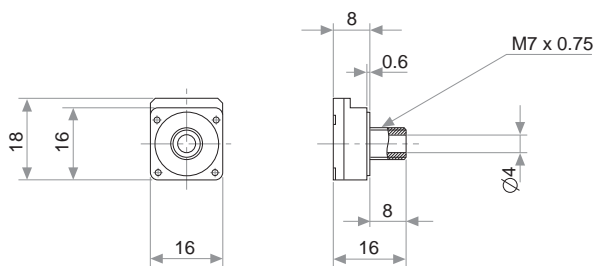
- Side view: 6.5, 10, 4, 8, 12.5, 20, 16, 8.8, 1, -0.1 , 9, 8.
- Top view: 20, 16, 8.8, 1, -0.1 , 9, 8.
- Mounting surface: 20x20mm grid, 1.3mm hole diameter ($\phi 1.3^{+0.1}$).

PC-16

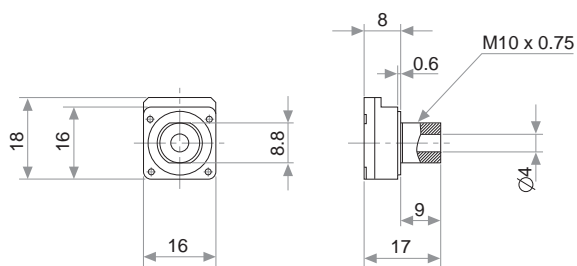
16-mm carbon panel mount potentiometer

BUSHINGS

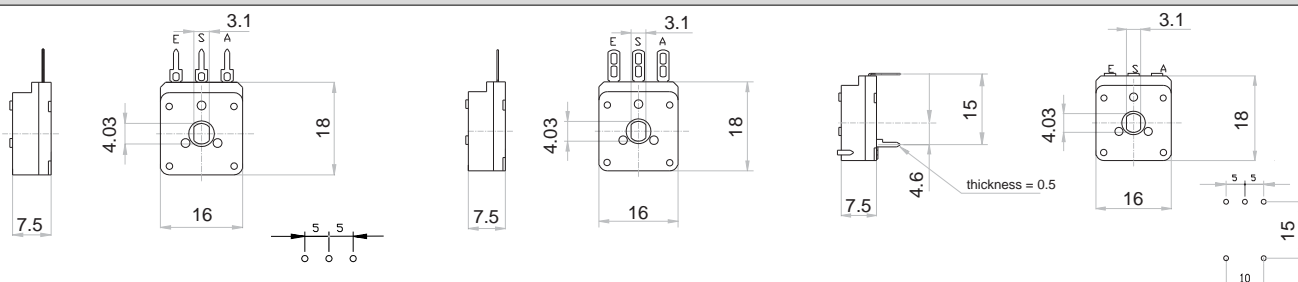
07



10

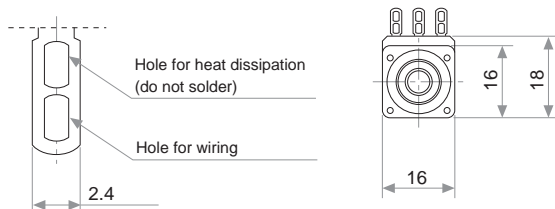


SC (BUSHLESS)

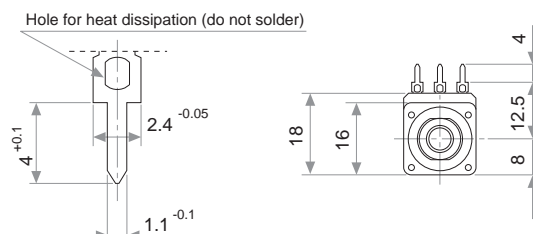


TERMINALS

C - Solder Lugs

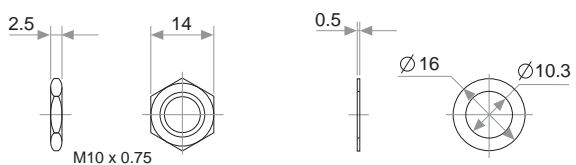


I = PCB

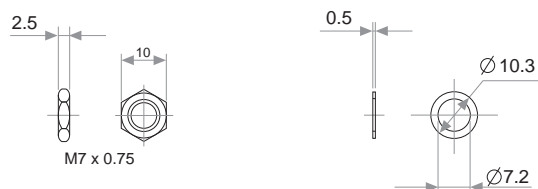


NUTS & WASHERS

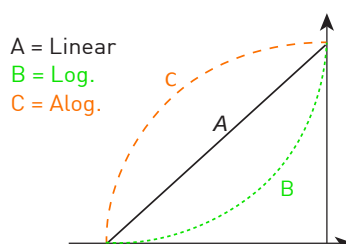
BUSHING 10



BUSHING 07



TAPERS

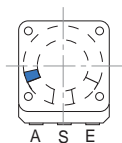


For more information on custom tapers contact Piher Sensing Systems.

PC-16

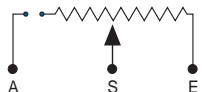
16-mm carbon panel mount potentiometer

OPEN CIRCUIT FEATURE

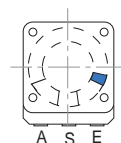
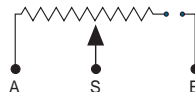


CCW on-off (A)

PCI
Cut track at the beginning
of the travel.



PCF
Cut track at the end
of the travel



CW on-off (E)

A = Initial S = Wiper E = Final.
PCI, PCF and other configurations available upon request. Check the ordering code with Piher.

PACKAGING

Bulk

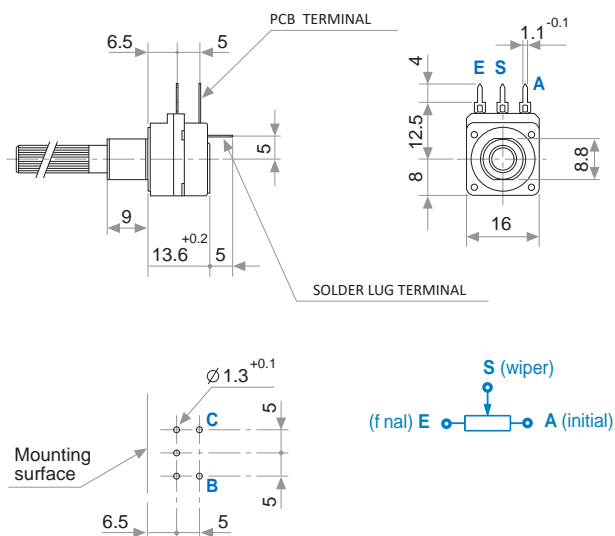


Box dimensions (mm): 250x160x95

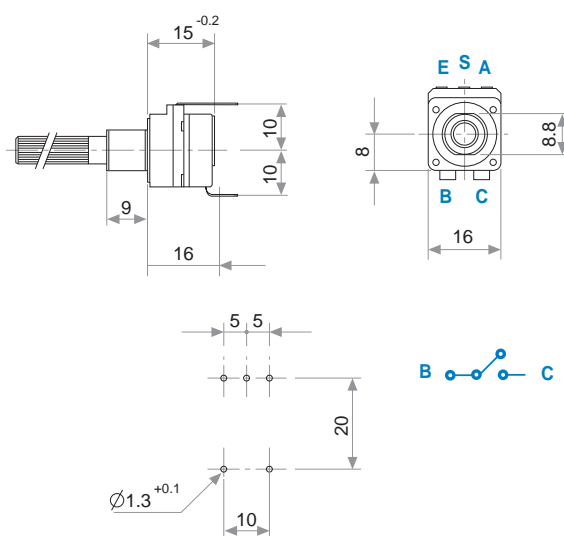
Units per box: 100 pcs

SWITCH

PC-16S ... H I / C



PC-16SV ... I



SWITCH SPECIFICATIONS

Nominal current	1A, 250 VAC
Contact resistance (initial)	10 mΩ
Operating torque	1 to 3 Ncm [1.4 to 4.2 in-oz]
Operating angle	30°±5°
Test voltage	500 V

360° CONTINUOUS ROTATION

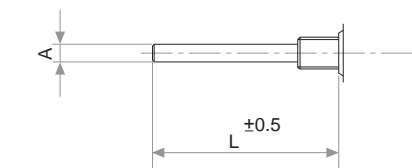
STM-15



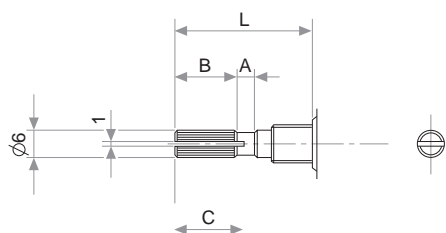
PC-16

16-mm carbon panel mount potentiometer

METALIC SHAFTS



Code	A	L
M04	4	45
M06	6	45



Code	A	B	C	L
M11	2	5	7	15
M12	2	10	11	20

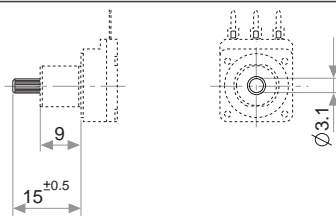
Special models (check availability)



A
Ø 4
Ø 6

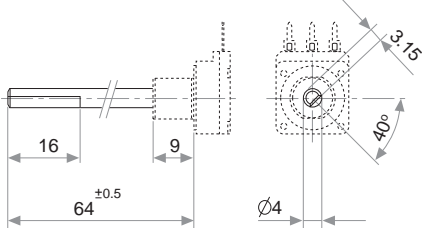
PLASTIC SHAFTS Ø3.1

P09

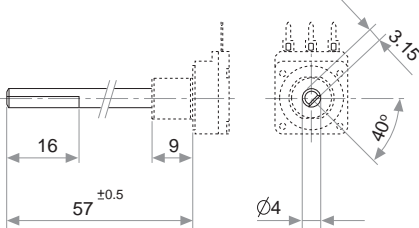


PLASTIC SHAFTS Ø4

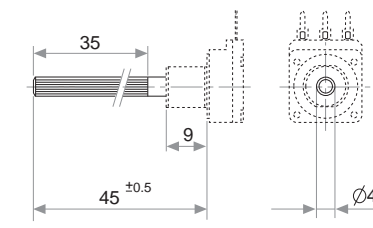
P01



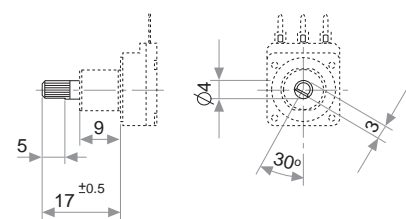
P02



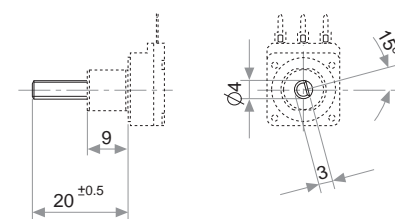
P04



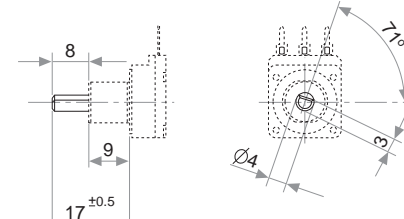
P07



P08



P10

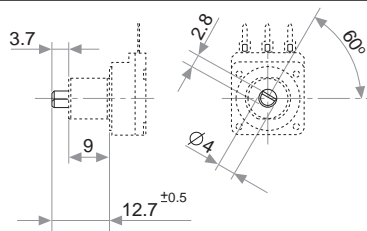


PC-16

16-mm carbon panel mount potentiometer

PLASTIC SHAFTS Ø4

P21



PLASTIC SHAFTS Ø6

<p>P05</p>	<p>P06</p>	<p>P11</p>
<p>P12</p>	<p>P13</p>	<p>P14</p>
<p>P15</p>	<p>P16</p>	<p>P17</p>
<p>P18</p>	<p>P19</p>	<p>P20</p>
<p>P22</p>	<p>P23</p> <div data-bbox="1050 1928 1342 2078"> <p>18 teeth knurl with arrow shape shaft</p> </div>	

Shaft position shown full CCW. Any other position for plastic shafts has to be shifted n times 24°. Other positions upon request..

PC-16

16-mm carbon panel mount potentiometer

One Stop Shop

Multiple Advantages



Engineering
design-in
support



Output
customization



Cable harness and
connector assembly



One-stop solution provider for
different sensing
technologies

Hall-effect

TMR

Resistive

Inductive

Printed electronics



Global
footprint



Manufacturing
capabilities for high
and low volume
programs



Diverse portfolio of standard and customized
sensors: Tilt, Position, Speed and Current.

OUR ADVANTAGE

- ▶ Leading-edge innovative position sensing solutions
 - ▷ Contactless (Hall-effect and Inductive Technology)
 - ▷ Contacting (Potentiometers, Printed Electronics)
- ▶ Engineering design-in support
- ▶ All our products can be customized to fit target application and customer requirement
- ▶ Capability to move seamlessly from development to true high-volume production
- ▶ A global footprint with global engineering and commercial support
- ▶ One-stop shop not limited to position sensors (temperature, pressure, gas,...) through group collaboration
- ▶ Flexibility and entrepreneurship of a medium-sized company with the backing of Amphenol Corporation



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[PC16SH07CP06102A2020TA](#) [PC16DH07CP06504A2020TA](#) [PC16SH10CP05-504A2020-TA](#)
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