

Bushless version



# PC-16

## 16 mm Carbon Potentiometer

### FEATURES

- Carbon resistive element
- Dust proof enclosure
- Polyester substrate
- Modular gang type (up to 4)
- Self extinguishable material UL 94-V0
- Upon request:
  - Metallic support
  - Stereo matching
  - Switch
  - Nut & washer
  - Bushless option available

### MECHANICAL SPECIFICATIONS

Mechanical rotation angle:	$300^\circ \pm 5^\circ$
Electrical rotation angle:	$280^\circ \pm 20^\circ$
Torque:	0.5 to 1.5 Ncm. (0.7 to 2.1 in-oz)
Stop torque:	> 40 Ncm. (> 56 in-oz)
Max. torque nut (binding out):	< 80 Ncm. (112 in-oz)
Thrust and pull in the shaft:	> 25 N

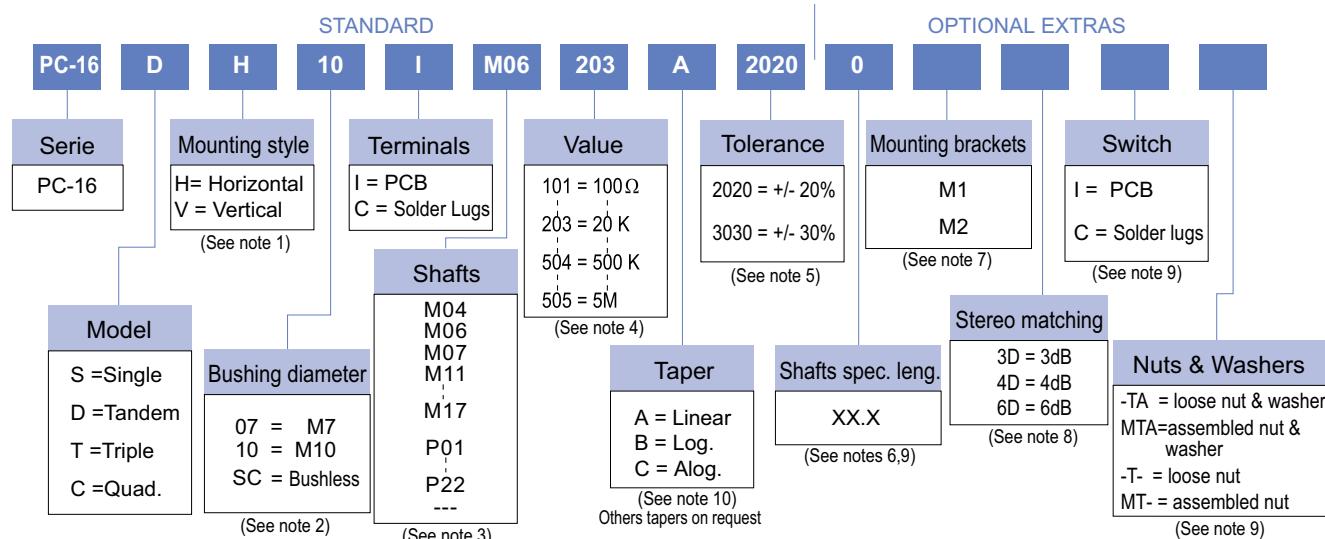
### ELECTRICAL SPECIFICATIONS

- Range of values (\*)
  - 100Ω ≤ Rn ≤ 5 M (Decad. 1.0 - 2.0 - 2.2 - 2.5 - 4.7 - 5.0)
- Tolerance (\*):
  - 100Ω ≤ Rn ≤ 1M Ω ..... ± 20%
  - 1MΩ < Rn ≤ 5M Ω ..... ± 30%
- Max. Voltage: 250 VDC (lin) 125 VDC (no lin)
- Nominal Power 50°C (122°F) (see power rating curve)  
0.2 W (lin) 0.1 W (no lin)
- Taper (\*) (Log. & Alog. only Rn > 1K) Lin ; Log; Alog.
- Residual resistance: ≤ 0.1% Rn (2 Ω min.)
- Equivalent Noise Resistance: ≤ 3% Rn (3 Ω min.)
- Operating temperature\*\*: -25°C + 70°C (-13°F + 158°F)

\* Others upon request

\*\* Up to 85°C depending on application

### HOW TO ORDER



#### NOTES:

- (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 for avoiding rotation. Bushless option only available for single model.
- (3) M07 shaft is only available with M10 bushing. --- = no shaft
- (4) Value:
  - Code: 10 1 100 Ω
  - Number of zeros
  - 2 first digits of the value.
  - In models "D", "T", "C", with different values, they will be asked by drawings.
- (5) Tolerance (non standard), upon request. Example: +7% Code: 07 05 -5% → negative tolerance → positive tolerance
- (6) Shaft special length:
  - Only for special length and plain shafts (not knurled). Example: Shaft Ø6.35 L = 24.5 M07 ..... 24.5
  - NOTE: Maximum length recommended: L = 45
- (7) Mounting brackets: Only applicable for model "S", mounting "H" and without switch.
- (8) Stereo matching: not available for single models. Maximum will be:
  - 3dB for model "D"
  - 4dB for model "T"
  - 6dB for model "C"
- (9) Not available for Bushless version.
- (10) Switch option not available with analog taper.

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

## HOW TO ORDER CUSTOM DRAWING

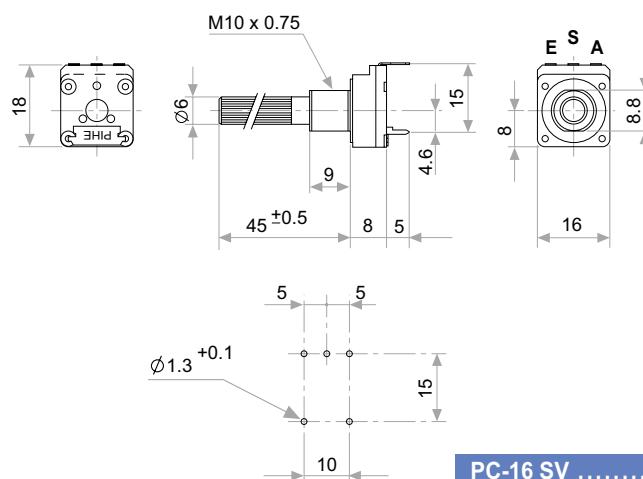
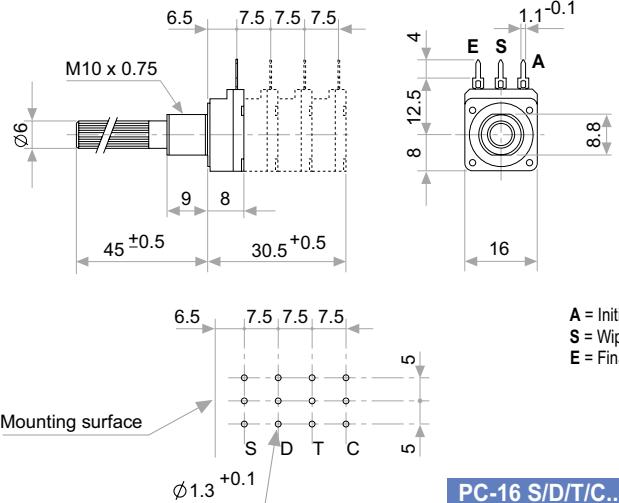
PC-16 S V + DRAWING NUMBER (Max. 16 digits)

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

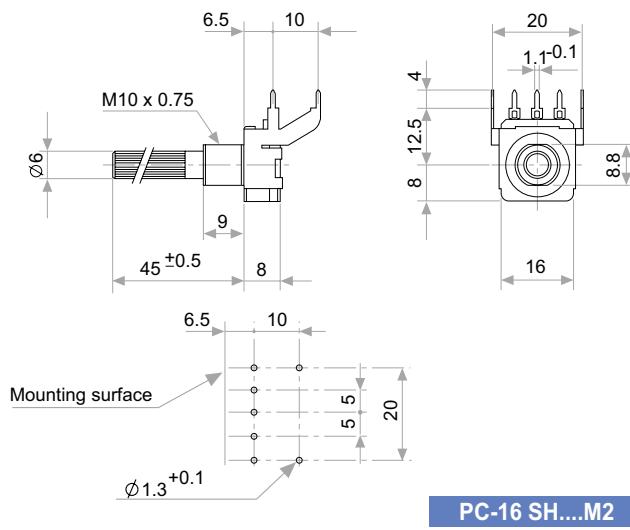
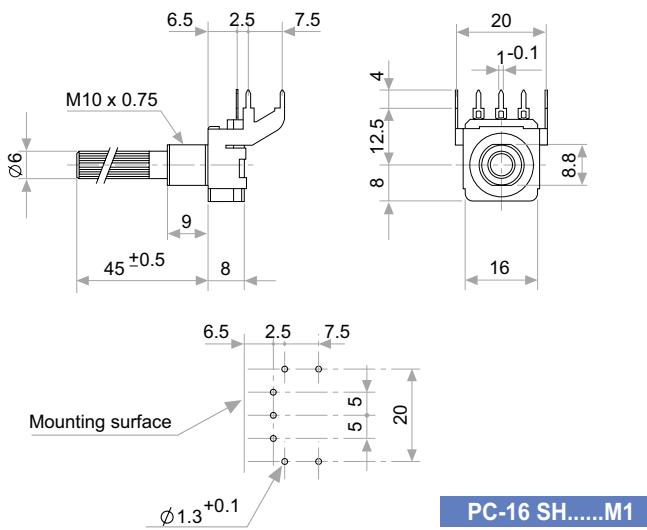
## STANDARD OPTIONS

Shaft length	0 Standard Length
Mounting brackets	Without mounting brackets
Stereo matching	Only on request (see note 8)
Switch	No switch
Nut & washer	Without nut and washer

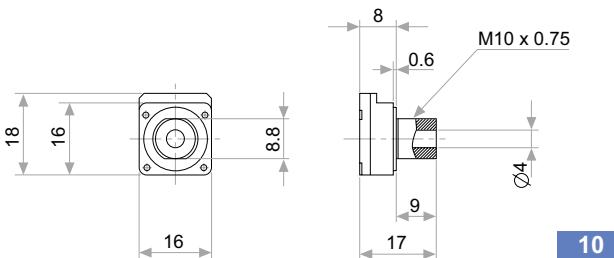
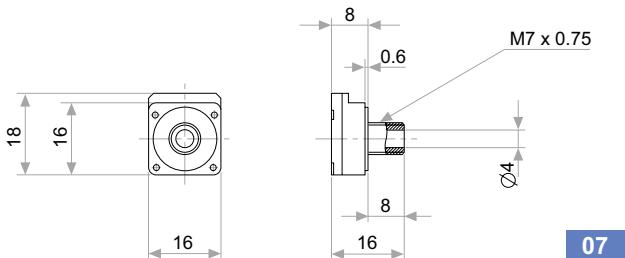
## MODELS



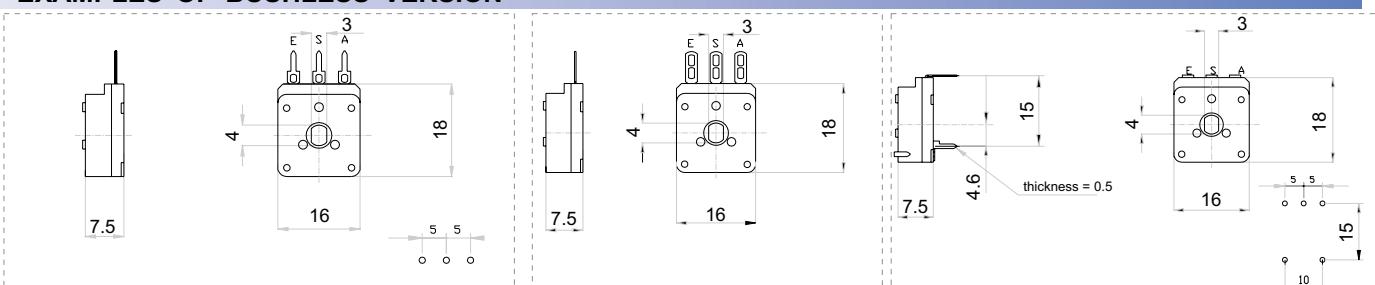
## METALLIC SUPPORT



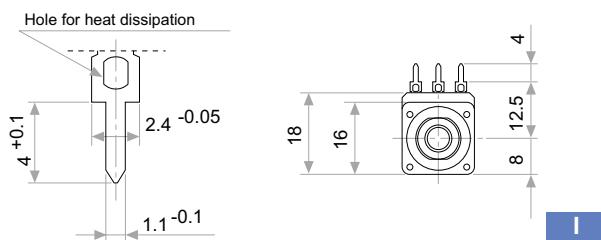
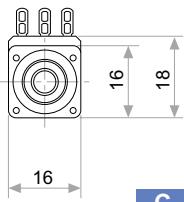
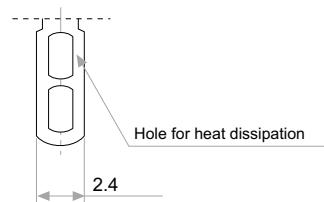
## BUSHINGS



## EXAMPLES OF BUSHLESS VERSION



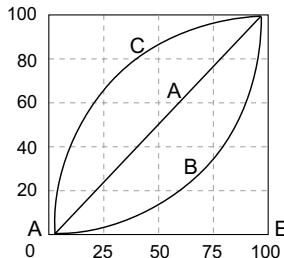
## TERMINALS



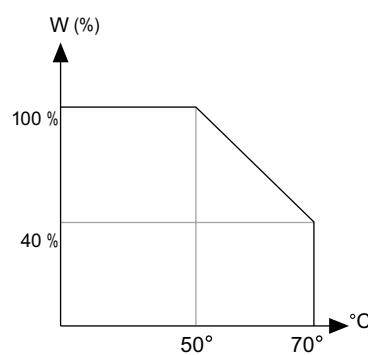
## TAPERS

Standard

A = Linear  
B = Log.  
C = Alog.

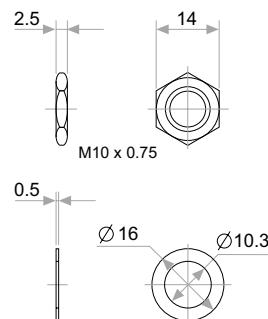


## POWER RATING CURVE

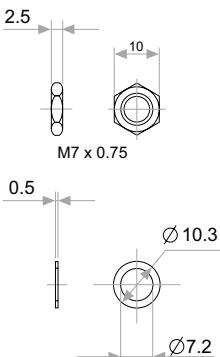


## NUTS & WASHERS

Bushing 10



Bushing 07



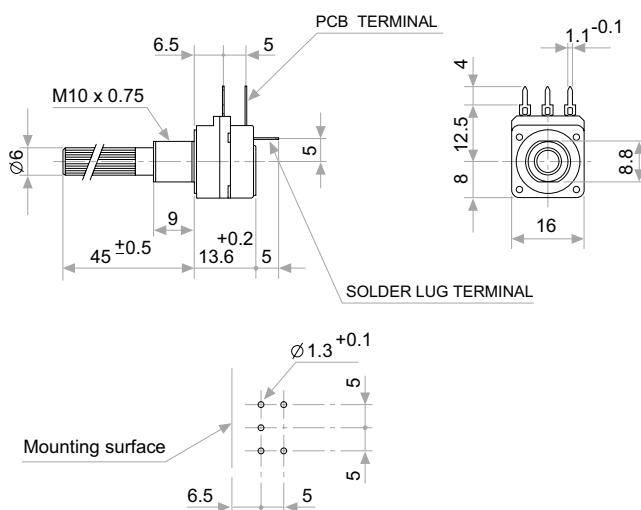
NOTE = Please note relative terminal positions when ordering non linear tapers.

## TESTS

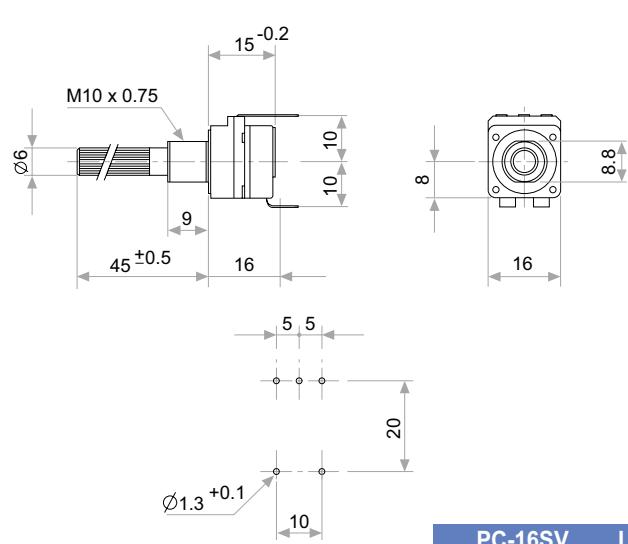
## TYPICAL VARIATIONS

ELECTRICAL LIFE	1.000 h. @ 50°C; 0.2 W	±5 %
MECHANICAL LIFE : POT. SWITCH	25.000 (10-15 CPM) 10.000 (1 A, 50 VAC)	±3 % (Rn < 1 MΩ)
TEMPERATURE COEFFICIENT	-25°C; +70°C	±300 ppm/°C (Rn < 100 KΩ)
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 %

## SWITCH



PC-16S ... H ..... I / C



PC-16SV ... I

## SWITCH SPECIFICATIONS

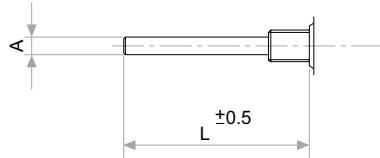
NOMINAL CURRENT	1A, 250 VAC
CONTACT RESISTANCE (initial)	10 m Ω
OPERATING TORQUE	1 to 3 Ncm (1.4 to 4.2 in oz)
OPERATING ANGLE	30° ± 5°
TEST VOLTAGE	500 V

## PACKAGING

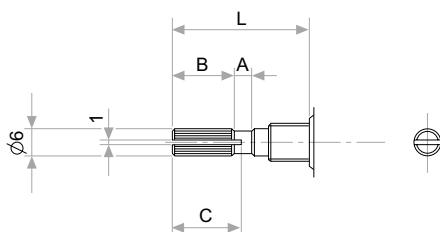
Boxes of 50 pieces (160 x 110 x 85 mm.)

## METALIC SHAFTS

### STANDARD

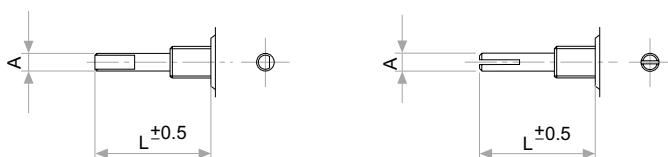


A	L	CODE
4	45	M04
6	45	M06
6.35	45	M07



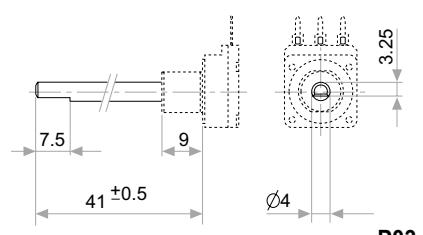
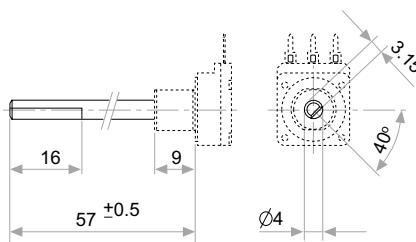
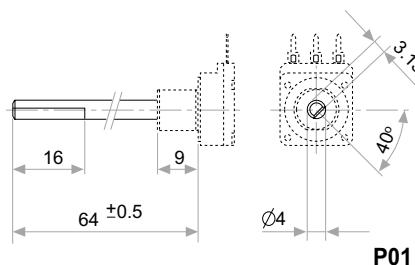
A	B	C	L	CODE
2	5	7	15	M11
2	10	11	20	M12
4	12	14	25	M13
4	12	14	30	M14
4	12	14	35	M15
4	12	14	40	M16
4	12	14	45	M17

### SPECIAL

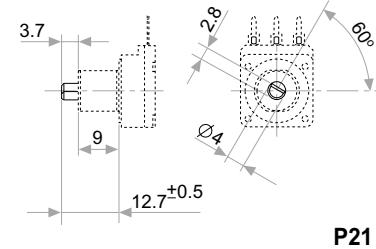
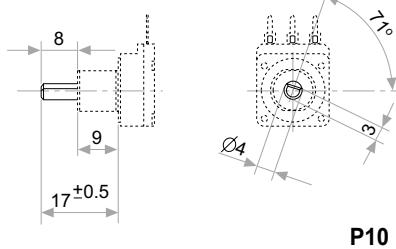
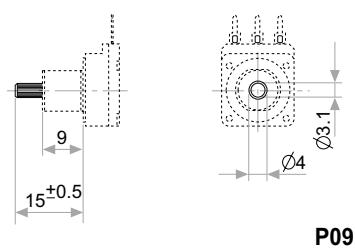
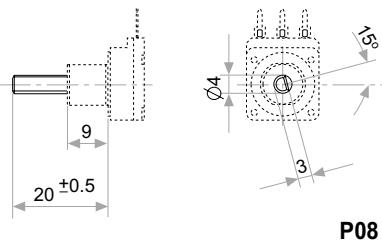
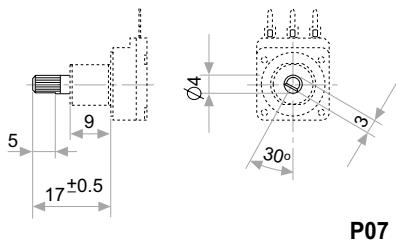
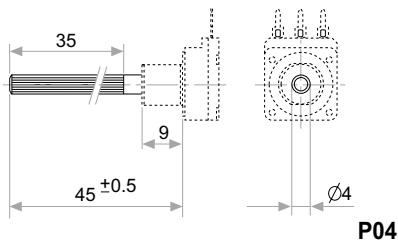


A
4
6
6.35

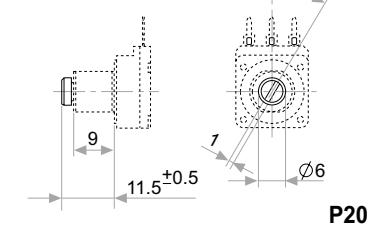
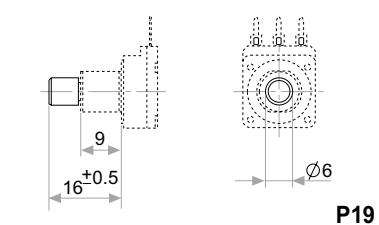
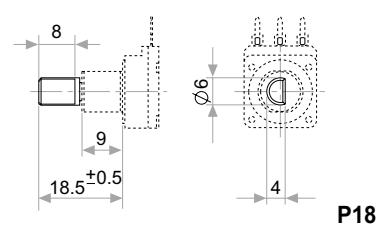
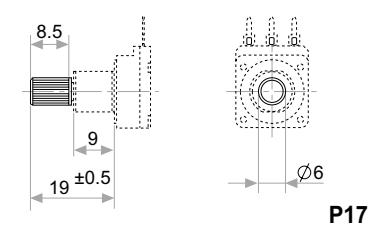
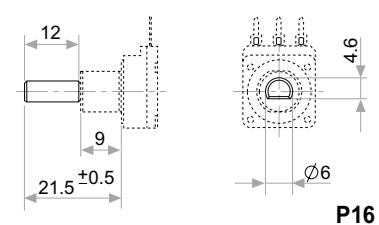
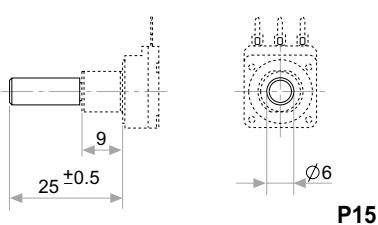
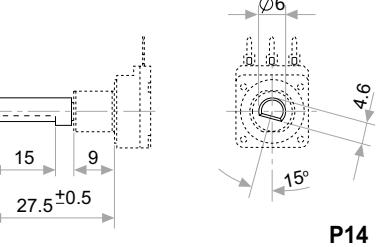
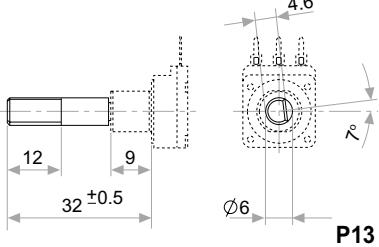
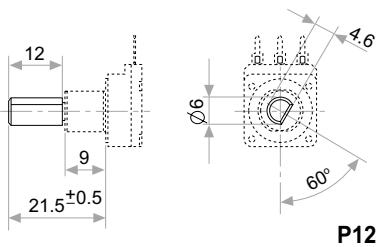
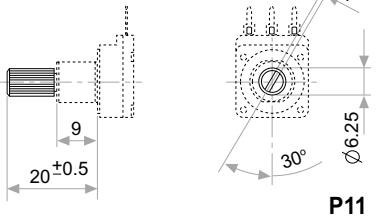
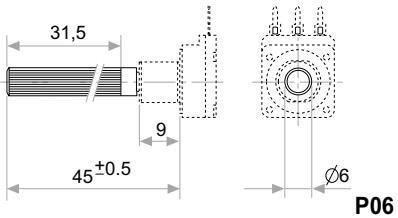
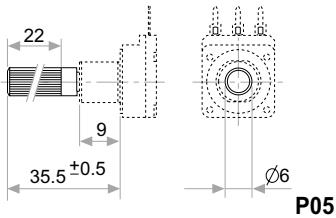
## PLASTIC SHAFTS Ø4



## PLASTIC SHAFTS Ø4



## PLASTIC SHAFTS Ø6



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

