

# PEC POTENTIOMETERS LTD.

POTENTIOMETERS, TRIMMERS AND PRESETS  
DATA SHEET

## 16P SERIES

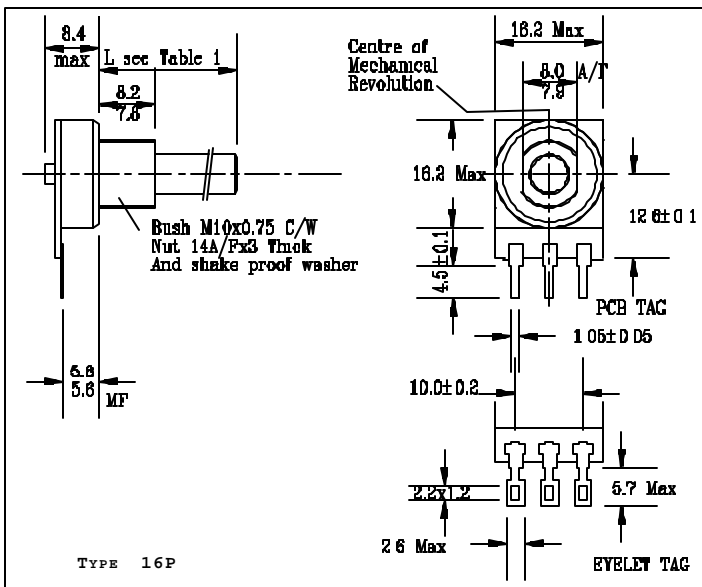


COMMITTED TO QUALITY

- 16.2MM SQUARE. ELASTIC CASE. PHENOLIC SUBSTRATE.
- POLYMER THICK FILM [CARBON BASED] TRACK.
- EYELET AND PCB TAGS. LINEAR / NON-LINEAR LAWS.
- ELASTIC SPINDLE. VARIETY OF SPINDLE OPTIONS.
- 16P PANEL MOUNT.
- 16PV PCB MOUNT - VERTICAL.
- 16PH PCB MOUNT - HORIZONTAL.
- 16PS WITH DPST SWITCH - PANEL MOUNT

- \*FLAME RETARDANT
- \*OPTIMUM SIZE
- \*HIGH RELIABILITY
- \*ASSURED QUALITY

This Type has been developed to satisfy a wide range of applications where high insulation resistance and voltage proof are specific requirements. With an all-plastic body and spindle construction, it is ideally suited to the requirements of domestic appliances [TV and Audio equipment] and Control Systems equipment where safety is of prime importance. Alternate spindle options and termination styles are available.



TYPE 16P

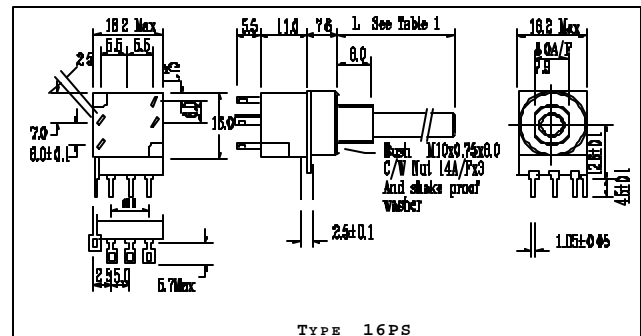
### SWITCH OPTION [TYPE 16PS]

THIS TYPE HAS BEEN DEVELOPED TO COMPLEMENT THE TYPE 16P, FOR APPLICATIONS REQUIRING A COMBINED POTENTIOMETER AND ROTARY ON/OFF SWITCH. THE SWITCH PROVIDED IS A DPST SWITCH WITH A 2A/64A RATING.

|                       |                         |
|-----------------------|-------------------------|
| SWITCH TYPE           | ROTARY, 2 POLE, ON-OFF  |
| RATING                | 2A 12V DC OR 250V 50 Hz |
|                       | [CONTINUOUS]            |
| SURGE RATING          | 64A                     |
| MECHANICAL ENDURANCE  | 10,000 OPERATIONS       |
|                       | AT FULL RATING          |
| CONTACT RESISTANCE    | 20 MILLI OHMS [MAX.]    |
| INSULATION RESISTANCE | 5 GIGA OHMS [MAX.]      |
| OPERATING ANGLE       | 30°                     |
| OPERATING TORQUE      | 50 mNm, [MAX.]          |

### SPECIFICATIONS

|                                    |   |
|------------------------------------|---|
| RESISTANCE LAWS AND VALUE RANGE    | : 470R TO 2M2 [LINEAR]  |
|                                    | : 4K7 TO 1M0 [NON - LINEAR]   |
| RESISTANCE VALUES                  | : 1, 2.2, 4.7 AND 6.8 IN EACH DECADE. INTERMEDIATE VALUES CAN BE SUPPLIED ON REQUEST. |
| SELECTION TOLERANCE                | : ±20%  |
| RATED DISSIPATION @ 40°C           | : 0.250W [LINEAR]   |
|                                    | : 0.125W [NON - LINEAR]   |
| RATED DISSIPATION @ 70°C           | : 0.125W [LINEAR]   |
|                                    | : 0.06W [NON-LINEAR]  |
| LIMITING ELEMENT VOLTAGE           | : 315V DC OR AC [RMS]   |
| ISOLATION VOLTAGE                  | : 450V DC OR AC [PEAK]  |
| ELECTRICAL ROTATION                | : 240°  |
| RESIDUAL RESISTANCE                | : 5 OHMS [MAX.]   |
| NOISE (CRV)                        | : 2% MAX. - [LINEAR]  |
|                                    | : 3% MAX. - [NON-LINEAR]  |
| INSULATION RESISTANCE              | : 1000 MEGA OHMS [MIN.]   |
| VOLTAGE PROOF                      | : 630V AC [PEAK]  |
| STARTING TORQUE                    | : 35mNm [MAX.]  |
| MECHANICAL ROTATION                | : 270° [NOMINAL]  |
| END-STOP TORQUE                    | : 350 mNm   |
| LIMITS OF RESISTANCE CHANGE:       | DR < 15%  |
|                                    | [AFTER 1000 HRS ENDURANCE]  |
| TEMP. CHARACTERISTIC OF RESISTANCE | : ±5% [20°C TO 70°C]  |
| BUMP SEVERITY                      | : 390 m/s <sup>2</sup> , 4000 BUMPS   |
| VIBRATION                          | : 10 - 500 Hz,  |
|                                    | 0.75mm OR 98 m/s <sup>2</sup>   |
| CLIMATIC CATEGORY                  | : 10/070/21   |
| MECHANICAL ENDURANCE               | : 20,000 OPERATIONS [MIN.]  |

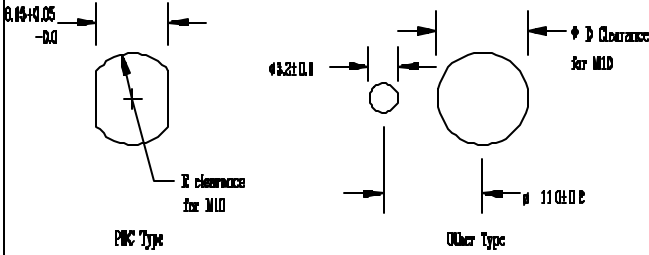


TYPE 16PS

C690/PA01/DS/1-2

**Panel Mounting [Types 16P and 16PS]**

These Potentiometers are suitable for central mounting with the washer and nut supplied. The required mounting holes in chassis or panel are shown below. For other types of mounting, an additional washer can be provided. The maximum allowable torque for tightening the nut is 350 Ncm [35 Kg.cm].

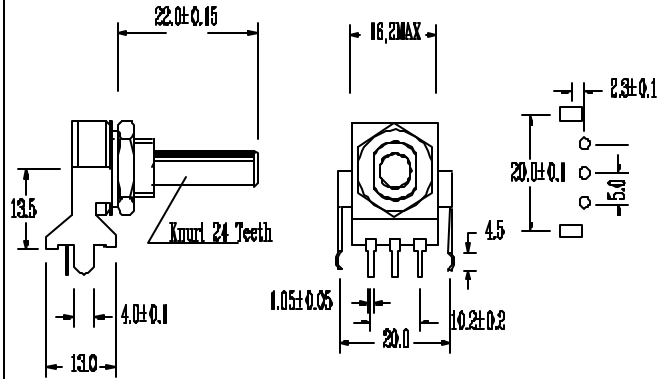


**NOTES:**

1. THE LENGTH "L" FROM THE MOUNTING SURFACE WILL GET REDUCED BY 0.6mm [EQUAL TO THE THICKNESS OF THE ADDITIONAL WASHER] WHEN AN ALTERNATE MOUNTING STYLE IS USED.
2. AN ADDITIONAL WASHER WILL BE PROVIDED TO SUIT OTHER TYPES OF MOUNTING.

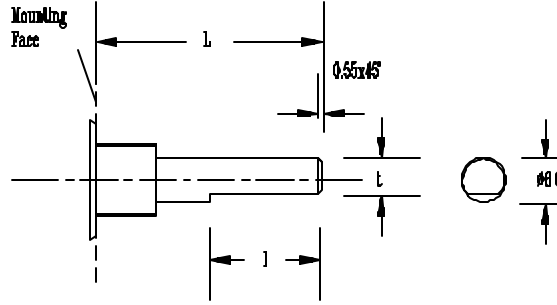
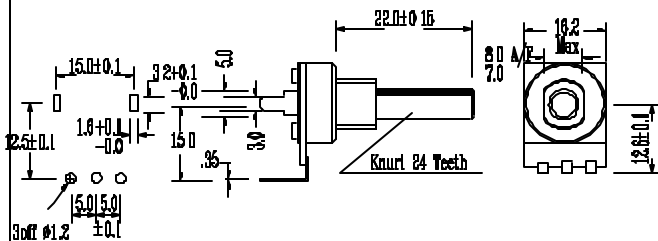
**VERTICAL MOUNTING [TYPE 16PV]**

This type is supplied with a vertical mounting bracket as per dimensions given below.



**HORIZONTAL MOUNTING [TYPE 16PH]**

This type is supplied with a horizontal mounting bracket as per dimensions given below.



**TABLE 1 : PLASTIC SPINDLE/SHAFT OPTIONS**

SPINDLE DIA.: 6.00+0.0,-0.1 [0.236+0.0,-0.004 IN.]

DIMENSIONS IN MM [IN]

| MOUNTING LENGTH | FLAT LENGTH | FLAT THICKNESS    | REMARKS          |
|-----------------|-------------|-------------------|------------------|
| L               | l           | t                 |                  |
| ±0.15           | ±0.15       | +0.00, -0.1       |                  |
| [±0.006]        | [±0.006]    | [+0.00], [-0.004] |                  |
| 26.00           | FULL LENGTH | 5.30              |                  |
| [1.024]         |             | [0.209]           |                  |
| 32.00           | FULL LENGTH | 5.00              |                  |
| [1.260]         |             | [0.197]           |                  |
| 26.00           | FULL LENGTH | 5.00              |                  |
| [1.024]         |             | [0.197]           |                  |
| 22.50           | FULL LENGTH | 5.00              |                  |
| [0.886]         |             | [0.197]           |                  |
| 18.50           | FULL LENGTH | 5.00              |                  |
| [0.728]         |             | [0.197]           |                  |
| 20.00           | FULL LENGTH | 4.40              |                  |
| [0.787]         |             | [0.173]           |                  |
| 32.00           | FULL LENGTH | 4.00              |                  |
| [1.260]         |             | [0.156]           |                  |
| 32.00           | N A         | N A               | ROUND SPINDLE    |
| [1.260]         |             |                   |                  |
| 22.00           | N A         | N A               | SERRATED SPINDLE |
| [0.866]         |             |                   |                  |
| 32.00           | 18.00       | 5.30              |                  |
| [1.260]         | [0.709]     | [0.209]           |                  |
| 32.00           | 15.00       | 5.30              |                  |
| [1.260]         | [0.591]     | [0.209]           |                  |
| 21.50           | 9.00        | 4.00              |                  |
| [0.847]         | [0.354]     | [0.156]           |                  |
| 40.50           | 13.00       | 4.50              |                  |
| [1.595]         | 0.512       | [0.177]           |                  |
| 28.50           | 15.00       | 4.50              |                  |
| [1.122]         | [0.591]     | [0.177]           |                  |
| 26.00           | 15.00       | 4.50              |                  |
| [1.024]         | [0.591]     | [0.177]           |                  |
| 26.00           | 12.00       | 4.50              |                  |
| [1.024]         | [0.472]     | [0.177]           |                  |
| 36.00           | 9.50        | 4.00              |                  |
| [1.417]         | [0.374]     | [0.156]           |                  |
| 32.00           | 12.00       | 4.00              |                  |
| [1.260]         | [0.472]     | [0.156]           |                  |

**ORDERING INFORMATION**

PLEASE PROVIDE THE FOLLOWING DETAILS WITH ORDER:

1. TYPE NUMBER
2. R RESISTANCE VALUE
3. RESISTANCE LAW
4. TERMINATION STYLE [PCB OR EYELET TAGS]
- 5 SPINDLE OPTION

[SPINDLE DIA. x FLAT THICKNESS x FLAT LENGTH x LENGTH FROM MOUNTING SURFACE]

6. SWITCH OPTION, IF REQUIRED.