

## Type 17P Series

### Key Features

- Polymer thick film element
- Switch versions available
- Dual gang version available
- High reliability
- Small versatile size
- All plastic body
- Plastic spindle
- Flame retardant

### Applications

- Audio
- Industrial controls
- Lighting
- Appliances



Specify the type 17P for applications where high insulation resistance and voltage proof are key requirements. The materials used in the all plastic body and spindle construction are UL approved making it a suitable component for domestic appliances and control systems where safety is of prime importance. This popular low cost potentiometer is suitable for industrial and professional applications. A range of approved switches can be added to the rear of the potentiometer, to produce rotary or push-push action mains switches.

### Characteristics - Electrical

|                            |                                              |
|----------------------------|----------------------------------------------|
| Resistance Range:          | 1K to 1M (linear), 4K7 to 470K (non linear)  |
| Resistance Value:          | 1, 2.2 and 4.7 in each decade                |
| Resistance Tolerance:      | ± 20% (10% by selection)                     |
| Rated Dissipation at 20°C: | 0.25W (linear), 0.125W (non linear)          |
| Limiting Element Voltage:  | 350V DC or AC (rms)                          |
| Electrical Rotation:       | 267° without switch, 232° with switch        |
| Terminal Resistance:       | 5Ω, maximum                                  |
| Noise (ENR):               | 2% maximum (linear), 3% maximum (non linear) |
| Insulation Resistance:     | 4GΩ, minimum                                 |
| Voltage Proof:             | 1kV AC peak                                  |

### Characteristics - Environmental

|                                            |                                           |
|--------------------------------------------|-------------------------------------------|
| Limits of Resistance Change:               | 15% (after 1000hrs. endurance)            |
| Temperature Characteristics of Resistance: | 5% (20°C to 70°C)                         |
| Bump Severity:                             | 390m/s <sup>2</sup> , 4000 bumps          |
| Vibration Severity:                        | 10 - 500Hz, 0.75 mm or 98M/s <sup>2</sup> |
| Climatic Category:                         | 25/70/04                                  |
| Mechanical Endurance:                      | 20000 operations (minimum)                |

### Characteristics - Mechanical

|                      |                |
|----------------------|----------------|
| Operating Torque:    | 15mNm maximum  |
| Mechanical Rotation: | 300° nominal   |
| End Stop Torque:     | 350mNm maximum |

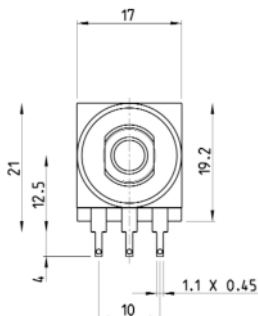
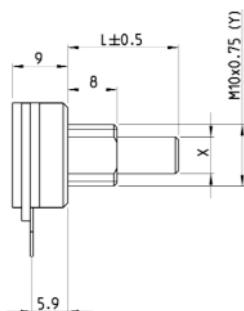
### Characteristics - Switch

|                             | B & D                           | A & E                        | P                            |
|-----------------------------|---------------------------------|------------------------------|------------------------------|
| Switch Type:                | 1A                              | 4A                           | 10A                          |
| Current/Voltage Rating:     | 1.0A - 24V DC<br>0.3A - 250V AC | 10A - 12V DC<br>4A - 250V AC | 10A - 250V AC                |
| On/Off Torque:              | 40mNm maximum                   | 40mNm maximum                | Life - 25,000 cycles minimum |
| Initial Contact Resistance: | 20mΩ                            | 20mΩ                         | Proof Voltage - 3kV minimum  |
| Contact Gap:                | 3mm                             | 3mm                          |                              |

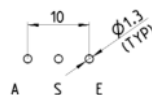
## Type 17P Series

### Dimensions

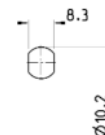
#### Single Potentiometer



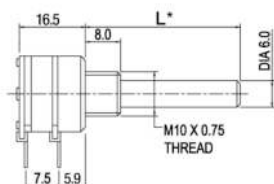
#### PCB Layout



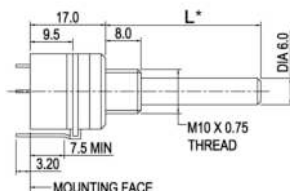
#### Bush Mounting Panel Cutout



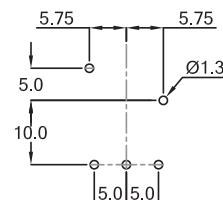
#### Dual Potentiometer



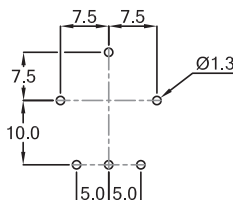
#### Single Switched Potentiometer



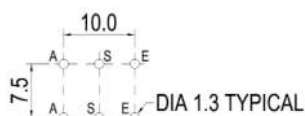
#### Rotary Switch PCB Layout



#### Push-Push Switch PCB Layout



#### Dual Potentiometer PCB Layout



L\* - Standard shaft length 35mm  
All dimensions given from component side

### How to Order

| 17PE                         | S                                     | A                  | 102                                                                                  | M                 | B                                                                | 25                                                                                                                                                                                  | N                                                                                                                                     | C                                                                                                                                                               |
|------------------------------|---------------------------------------|--------------------|--------------------------------------------------------------------------------------|-------------------|------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Common Part                  | Resistor Law                          | Tolerance          | Shaft Length                                                                         | Detent            | Product Identification                                           | Resistance Value                                                                                                                                                                    | Shaft Style                                                                                                                           | Switch Details                                                                                                                                                  |
| 17PC - P.C.<br>17PE - Eyelet | A - Linear<br>B - Log<br>C - Inv. Log | M - 20%<br>K - 10% | FMF in mm<br>25mm standard<br>minimum shaft length<br>with P style switch is<br>19mm | C - Centre detent | S - Standard single<br>X - Customer special<br>D - Standard dual | The first two digits are<br>significant figures of the<br>resistance value and the<br>third one denotes the<br>number of zeros following.<br>e.g. 4K7: 472<br>47K: 473<br>470K: 474 | A - Plain 6mm<br>B - Slotted 6mm<br>C - Flatted (5mm A/F)<br>D - Flatted (4mm A/F)<br>E - Plain 4mm<br>F - Flatted 6mm<br>(4.6mm A/F) | A - DPST 4A/250V AC<br>B - SPST 1A<br>D - DPST 1A<br>E - SPST 4A<br>N - No Switch<br>P - Push push SPDT 10A<br>P switch only available<br>on single gang styles |

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