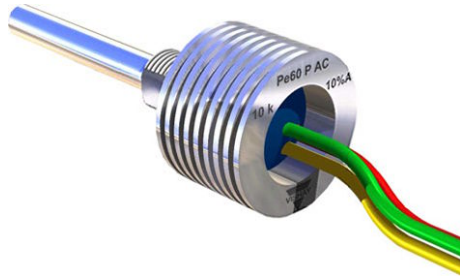


Power Panel 6 W Potentiometer



FEATURES

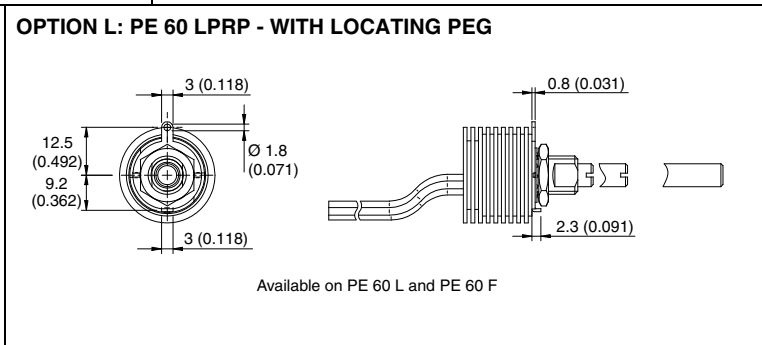
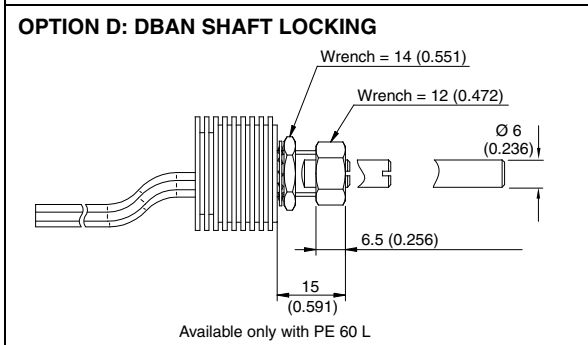
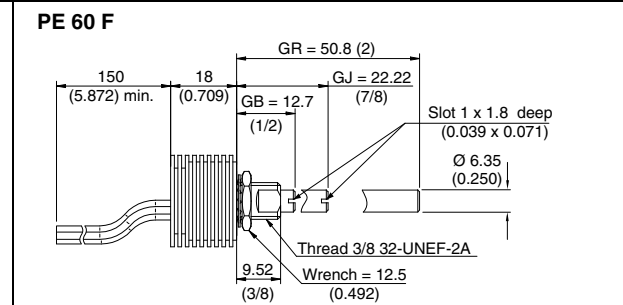
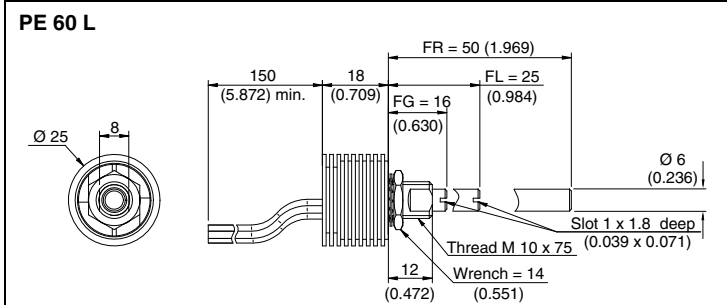
- High power rating 6 W at 50 °C
- Cermet element
- Full sealing
- Mechanical strength
- Industrial and professional grade
- Tests according to CECC 41000 or IEC 60393-1
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912



RoHS
COMPLIANT

| QUICK REFERENCE DATA | |
|-------------------------|---|
| Multiple module | No |
| Switch module | n/a |
| Detent module | n/a |
| Special electrical laws | A: linear, L: logarithmic, F: reverse logarithmic |
| Sealing level | IP 67 |
| Lifespan | 25K cycles |

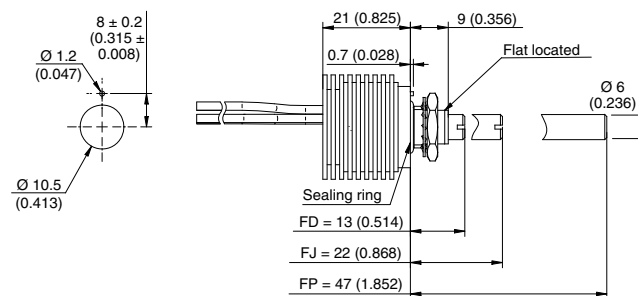
DIMENSIONS in millimeters (inches) ± 0.5 mm (± 0.02")



Panel sealed version

PE 60 M

OPTION E: Including locating peg (available)



Available only with bushing M10 x 0.75 and shafts Ø 6 mm

| ELECTRICAL SPECIFICATIONS | | |
|--|-----------------------|--------------------------------------|
| Resistive element | | Cermet |
| Electrical travel | | 270° ± 10° |
| Resistance range | linear taper | 1 Ω to 1 MΩ |
| | logarithmic taper | 100 Ω to 2.2 MΩ |
| Standard series e3 | | 1 - 2 - 2.5 - 5 |
| Tolerance | standard | ± 20 % |
| | on request | ± 10 % |
| Taper | | |
| Circuit diagram | | |
| Power rating | linear logarithmic | 6 W at 50 °C 3 W at 50 °C |
| | | |
| Temperature coefficient | | See Standard Resistance Element Data |
| Limiting element voltage (linear taper) | | 350 V |
| Contact resistance variation (linear taper) | | 3 % Rn or 1 % |
| End resistance (typical) | | 0.5 Ω or 1 % |
| Dielectric strength (RMS) | | 2500 V |
| Insulation resistance (500 V _{DC}) | | 10 ⁵ MΩ |

| MECHANICAL SPECIFICATIONS | |
|-----------------------------------|-------------------|
| Mechanical travel | 300° ± 5° |
| Operating torque (typical) | 3 Ncm max. |
| End stop torque | 70 Ncm max. |
| Tightening torque of mounting nut | 250 Ncm |
| Unit weight | 25 g to 35 g max. |

| ENVIRONMENTAL SPECIFICATIONS | |
|------------------------------|-------------------------------|
| Temperature range | -55 °C to +125 °C |
| Climatic category | 55/125/56 |
| Sealing | Fully sealed - container IP67 |



| OPTIONS | |
|----------------------|--|
| Command shaft | Length is measured from the mounting surface to the free end of the shaft. The screwdriver slot is aligned with the wiper within $\pm 10^\circ$. Special shafts are available, in accordance to drawings supplied by customers. We recommend that customers should not machine shafts, in order to avoid damage. |
| Panel sealing: PE60M | The panel sealing device consists of a ring located in a groove on the potentiometer face. Sealing is obtained by tightening the ring against the panel when mounting the potentiometer. |
| Shaft locking: DBAN | The shaft locking device consists of a tapered nut tightening a slotted notched washer against both bushing and shaft. DBAN tightening torque is 200 Ncm, shaft locking torque being 30 Ncm. DBAN is also available with all special types. This device is normally supplied in a separate bag. Can be pre-mounted on request. |
| Locating peg: LPRP | Location is obtained by fitting a special washer on the potentiometer face. The peg can therefore be positioned at 90° , 180° , 270° and 360° . |

| PERFORMANCE | | | | |
|-------------------------|---|------------------------------|------------------------------|--|
| TESTS | CONDITIONS | TYPICAL VALUES AND DRIFTS | | |
| | | $\Delta R_T/R_T$ (%) | $\Delta R_{1-2}/R_{1-2}$ (%) | OTHER |
| Electrical endurance | 1000 h at rated power 90°/30° - ambient temp. 25 °C | $\pm 3\%$ | - | Contact res. variation: $< 3\%$ Rn |
| Climatic sequence | Phase A dry heat 125 °C Phase B damp heat Phase C cold -55 °C Phase D damp heat 5 cycles | $\pm 0.5\%$ | $\pm 1\%$ | - |
| Damp heat, steady state | 56 days | $\pm 0.5\%$ | $\pm 1\%$ | Insulation resistance: $> 10^4$ M Ω |
| Change of temperature | 5 cycles, -55 °C at +125 °C | $\pm (0.5\% \pm 0.1 \Omega)$ | - | - |
| Mechanical endurance | 25 000 cycles | $\pm 3\%$ | - | Contact res. variation: $< 5\%$ Rn |
| Shock | 50 g's at 11 ms, 3 successive shocks in 3 directions | $\pm 0.1\%$ | $\pm 0.2\%$ | - |
| Vibration | 10 Hz to 55 Hz, 0.75 mm or 10 g's during 6 h | $\pm 0.1\%$ | $\pm 0.2\%$ | - |

Note

- Nothing stated herein shall be construed as a guarantee of quality or durability

| STANDARD RESISTANCE ELEMENT DATA | | | | |
|----------------------------------|---------------------|----------------------|-------------------------|----------------------------------|
| STANDARD RESISTANCE VALUES | LINEAR TAPER | | | TYPICAL TCR -55 °C +125 °C |
| | MAX. POWER at 50 °C | MAX. WORKING VOLTAGE | MAX. CUR. THROUGH WIPER | |
| Ω | W | V | mA | ppm/°C |
| 1 | 6 | 2.4 | 2449 | ± 500 |
| 2 | 6 | 3.5 | 1732 | |
| 5 | 6 | 5.5 | 1095 | |
| 10 | 6 | 7.7 | 775 | |
| 20 | 6 | 11.0 | 548 | |
| 25 | 6 | 12.2 | 490 | |
| 50 | 6 | 17.3 | 346 | ± 250 |
| 100 | 6 | 24.5 | 245 | |
| 200 | 6 | 34.6 | 173.2 | |
| 250 | 6 | 38.7 | 154.9 | |
| 500 | 6 | 54.8 | 109.5 | |
| 1K | 6 | 77.5 | 77.5 | |
| 2K | 6 | 110 | 54.8 | |
| 2.5K | 6 | 122 | 49.0 | |
| 5K | 6 | 173 | 34.64 | |
| 10K | 6 | 245 | 24.49 | |
| 20K | 6 | 346 | 17.32 | |
| 25K | 4.90 | 350 | 14.00 | |
| 50K | 2.45 | 350 | 7.00 | |
| 100K | 1.23 | 350 | 3.50 | |
| 200K | 0.61 | 350 | 1.75 | |
| 250K | 0.49 | 350 | 1.40 | |
| 500K | 0.25 | 350 | 0.70 | |
| 1M | 0.12 | 350 | 0.35 | |

MARKING

Printed:
 - Vishay trademark
 - Part number
 - Manufacturing date

PACKAGING

- In box of 5 pieces



| ORDERING INFORMATION (part number) | | | | | | | | | | | | | | | | | |
|------------------------------------|---|---|---|-------|---|----------|--------------|--|--|---|--|---|----------------|--|--|--|--|
| P | E | 6 | 0 | L | 0 | F | G | W | 2 | 0 | 4 | M | A | | | | |
| MODEL | BUSHING | OPTION | | SHAFT | | | LEADS | OHMIC VALUE | TOLERANCE | | TAPER | | SPECIAL NUMBER | | | | |
| PE60 | M = panel sealed L = STD F = 3/8" | 0 = none For L bushing D = DBAN L = LPRP B = DBAN and LPRP For F bushing L = LPRP For M bushing E = peg | For L bushing FG 16 mm, slotted FL 25 mm, slotted FR 50 mm, plain For F bushing GB 1/2", slotted GJ 7/8", slotted GR 2", slotted For M bushing FD = 13 mm, slotted FJ = 22 mm, slotted FP = 47 mm, plain | | | W = wire | 204 = 200 kΩ | ± 20 % On request: ± 10 % ± 5 % | A = linear L = clockwise logarithmic F = clockwise inverse logarithmic | | (if applicable) Given by Vishay for custom design | | | | | | |

| PART NUMBER DESCRIPTION (for information only) | | | | | | | | | | | |
|--|---------|--------|-------|-------|-------------|------|-------|-----------|---------|---------|----------------|
| PE60 | L | 0 | FG | W | 200 kΩ | 20 % | A | BO5 | | | e4 |
| MODEL | BUSHING | OPTION | SHAFT | LEADS | OHMIC VALUE | TOL. | TAPER | PACKAGING | SPECIAL | SPECIAL | LEAD (Pb)-FREE |

| RELATED DOCUMENTS | |
|---|--|
| APPLICATION NOTES | |
| Potentiometers and Trimmers | www.vishay.com/doc?51001 |
| Guidelines for Vishay Sfernice Resistive and Inductive Components | www.vishay.com/doc?52029 |



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