

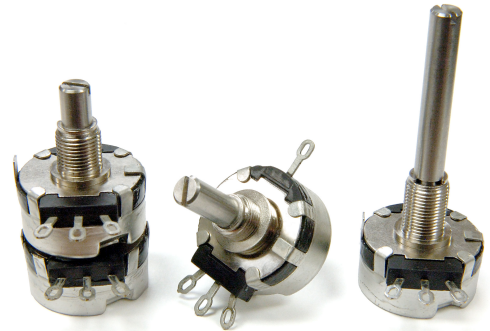
Panel Potentiometer

Model P270 / P271 / P272 / P278



Features:

- 1,000,000 Cycle Life
- Sealed unit available
- Conductive Plastic element
- Dual Gang available
- Center Tap available
- Several electrical angles available to cross to Honeywell 380, RV4, 485, 53C and 385 Series
- **Meets MIL-PRF-94 requirements.**



Description:

27,8mm Diameter Conductive Plastic Potentiometer for Heavy Duty Applications and Long Life

Applications:

- Machine Controls
- Welding equipment
- Foot pedal controls

Model Styles Available

| | |
|---|------|
| Solder Lugs, Single Gang | P270 |
| Solder Lugs, with Center Tap | P271 |
| Solder Lugs, Dual Gang | P272 |
| Solder lugs, Single Gang for heavy side load applications | P278 |

Electrical Characteristics

T_A = 25°C unless otherwise noted

| | |
|-------------------------------|---|
| Resistance Range | 200 ohms-1MEG (for "B" taper) 1K-1MEG (for other tapers) |
| Standard Resistance Tolerance | 1K to 1 MEG: ±10% <500 ohms: ±20% |
| Residual Resistance | 6 ohms max. |
| Nominal Electrical Travel, | See Page 3 for available Electrical angles |
| Input Voltage, maximum | 500 Vdc not to exceed power rating |
| Rated Power | 2.0 Watts @70°C for "B" Taper, 1.0 Watt for other tapers |
| Dielectric Strength | 1000 VAC, 1 minute |
| Rotational Noise | 100mV max. |
| Insulation Resistance | 50M ohms at 500 Vdc |
| Gang Error (Dual Unit) | ±3dB (-40dB to 0dB) |

General Note

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Mechanical Characteristics

T_A = 25°C unless otherwise noted

| | |
|--------------------------------|---|
| Mechanical Travel | 312° ± 5° |
| Rotational Torque, single gang | Dust Proof: 1.0 oz-in. max. Sealed: 1.0 to 2.5 oz-in. |
| Rotational Stop Strength | 200 oz-in |
| Nut Tightening Strength | 25 lb-in max. |
| Rotational Life | 1,000,000 Cycles (10% ΔR) |

Environmental Characteristics

T_A = 25°C unless otherwise noted

| | |
|-----------------------|--|
| Operating Temperature | -55°C to +120°C |
| IP Rating | Dust proof: IP50 Sealed: IP64 |
| Soldering Condition | Wave Soldering 260 °C maximum for 1-3 seconds Hand Soldering 300 °C maximum for 3 seconds |
| RoHS | Please refer to TT Electronics Website |
| REACH | Please refer to TT Electronics Website |

Packaging

| | |
|--------------------|------------------------------|
| Standard Packaging | Plastic Trays |
| Hardware | Lock washer and mounting nut |

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Ordering Information

| | | | | | | | | | |
|------|---|---|---|---|---|---|---|------|-----|
| P270 | - | S | F | 2 | 2 | B | R | 100K | 274 |
|------|---|---|---|---|---|---|---|------|-----|

Part Family

- P270
- P271 (Center Tap)
- P272 (Dual gang)
- P278 (Heavy Duty)

Seal Type

- D - Dust proof
- S - Sealed

Shaft Type (See page 4)

- S - Slotted
- F - Flatted
- P - Plain

Shaft Length - "L"

- 1 - .625"
- 2 - .875"
- 3 - 1.000"
- 4 - 2.000"
- 5 - .750"

Bushing Length "M"

- 1 - .250"
- 2 - .375"
- 3 - .500"
- 4 - .312"

Resistance Taper (See page 7)

- A - Audio (15A)
- B - Linear (1B)
- C - Reverse Audio (15C)
- D - Audio (10A)

Resistance

See Resistance Table

Electrical Angle

- Blank = 300°
- 292 = 292° 263 = 263°
- 284 = 284° 112 = 112°
- 274 = 274° 045 = 45°
- 270 = 270°

| Resistance Table | | | | | | | | | | | | |
|-------------------|-----|-----|-------|-------|-------|--------|--------|--------|---------|---------|---------|-----------|
| Resistance (Ohms) | 200 | 500 | 1,000 | 2,000 | 5,000 | 10,000 | 20,000 | 50,000 | 100,000 | 200,000 | 500,000 | 1,000,000 |
| Code | 200 | 500 | 1K | 2K | 5K | 10K | 20K | 50K | 100K | 200K | 500K | 1MEG |

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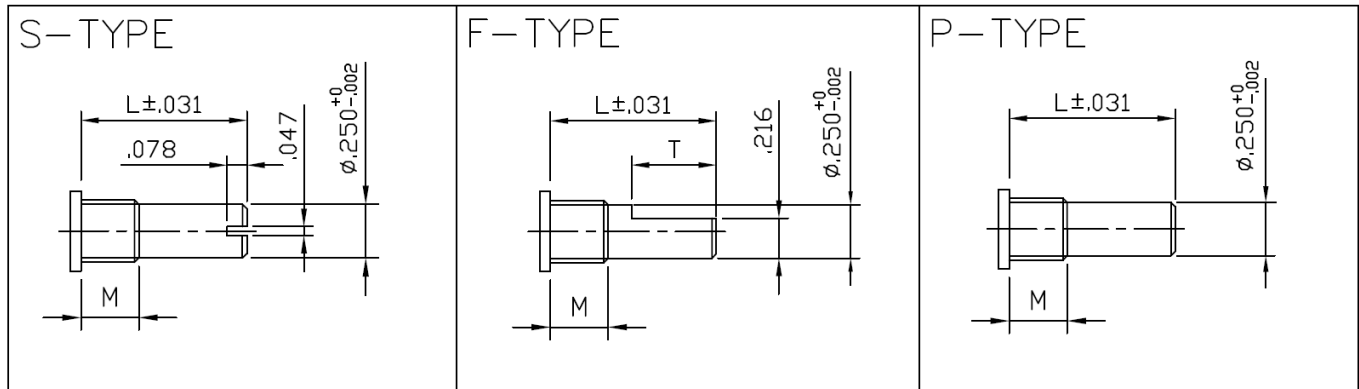
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Shaft Types

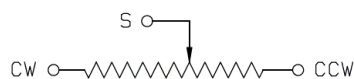


F-TYPE Shaft – Bushing Combinations

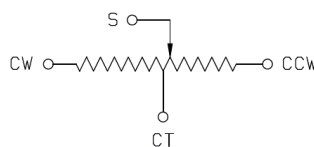
| Shaft Length (L) | Bushing Length (M) | Flat Length (T) |
|------------------|--------------------|-----------------|
| (1) = .625 | (1) = .250 | .315 |
| (1) = .625 | (4) = .312 | .250 |
| (1) = .625 | (2) = .375 | .200 |
| (1) = .625 | (3) = .500 | Not Available |
| (5) = .750 | (2) = .375 | .315 |
| (5) = .750 | (3) = .500 | .200 |
| (2) = .875 | (3) = .500 | .315 |
| All Other | Combinations | .375 |

Circuit Diagrams

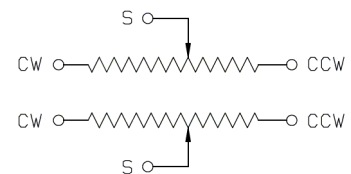
P270 (without Center Tap)



P271 (with Voltage Center Tap)



P272 (Dual Gang)



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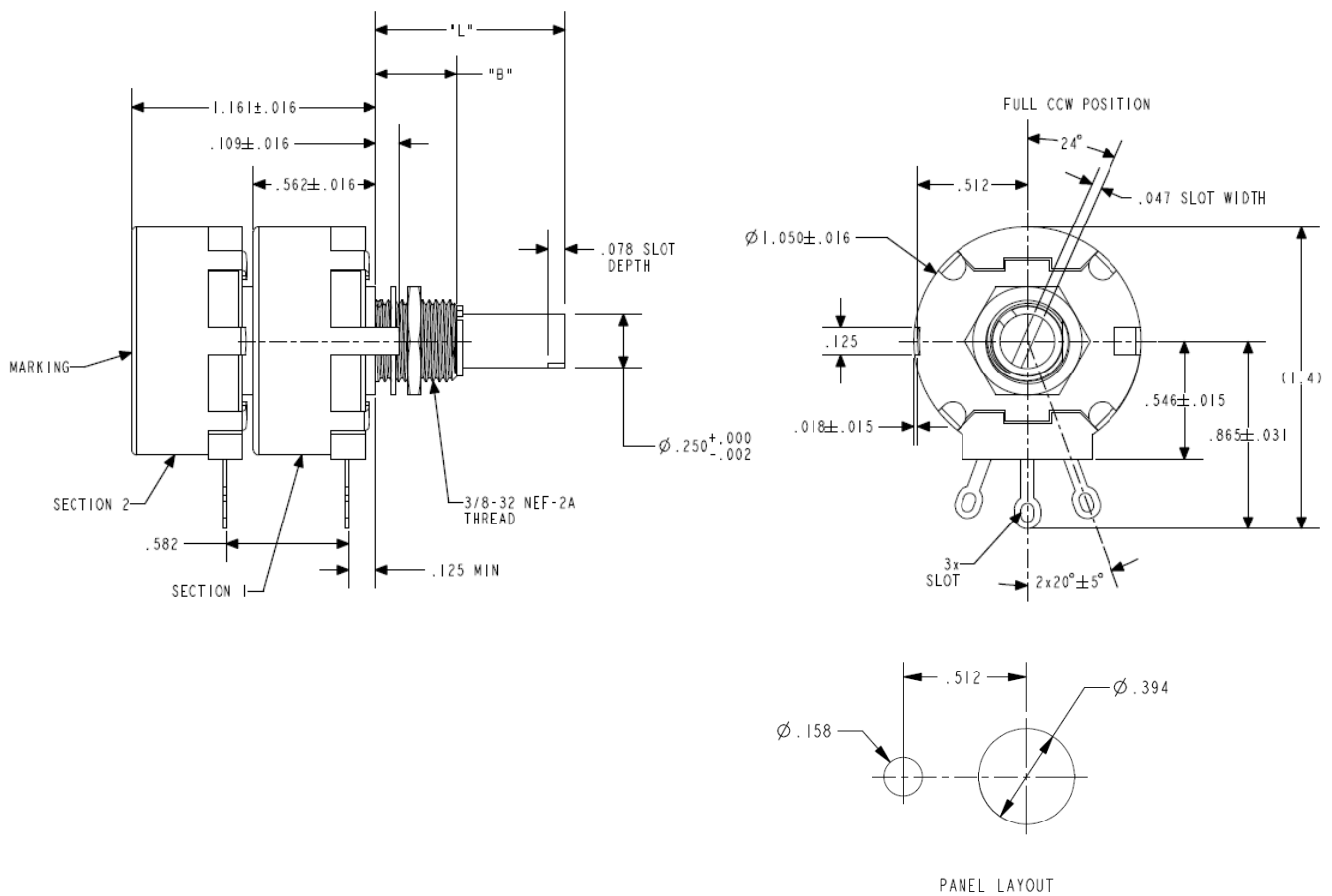
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Outline Dimensions

Model P272 (Dual Gang)



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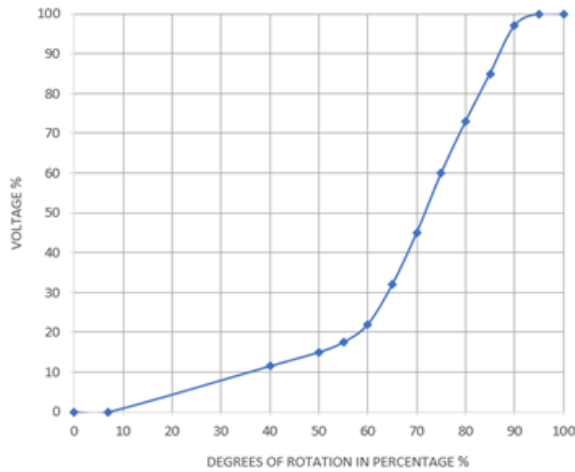
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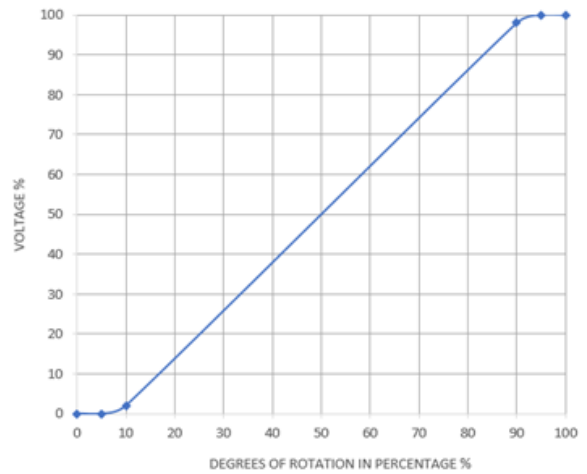


Standard Tapers

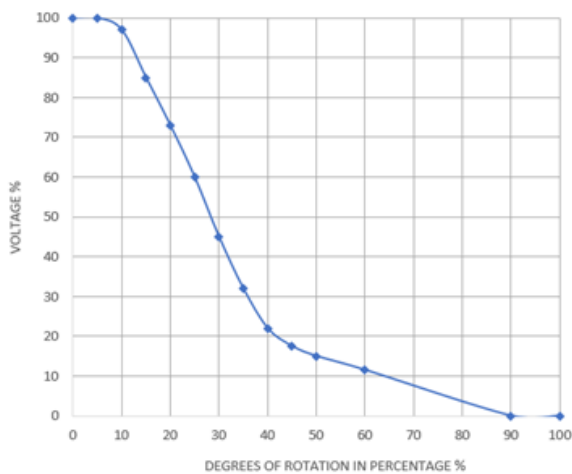
"A" AUDIO (15A)



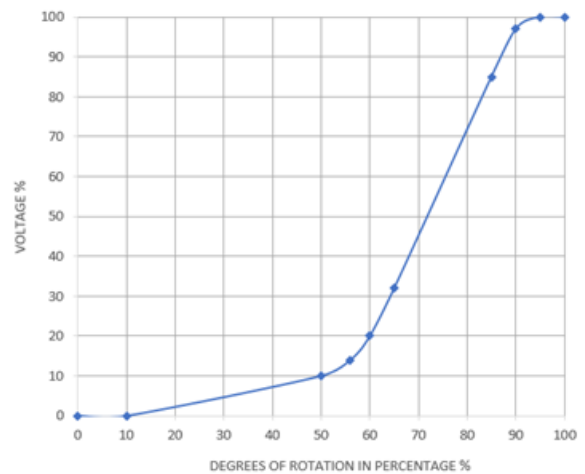
"B" LINEAR (1B)



"C" REVERSE AUDIO (15C)



"D" AUDIO (10A)



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