POL20 Single-turn Precision Conductive Plastic Potentiometer

Electrical Characteristics

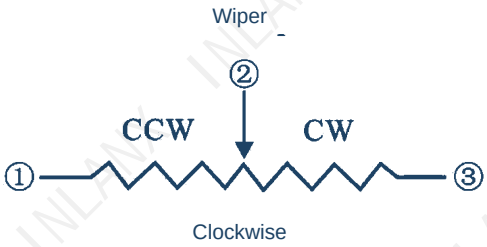
Parameter	Specification
Nominal resistance	4.7 kΩ to 10 kΩ
Resistance tolerance	±10%
Limiting voltage	300 V
Dielectric withstand	450 VAC at normal atmospheric pressure
Electrical travel	270°±5°
Mechanical travel	275°±5°
Terminal resistance	≤2%R or 10 Ω, whichever is greater
Contact resistance variation	CRV≤3%R



Physical Characteristics

Parameter	Specification
Starting torque	3 to 15 mN·m
Marking	Trademark, model, nominal resistance, date code
End-stop torque	≤300 mN·m
Mass	≤19 g
Mounting	Bushing mounting; bushing thread M10×0.75

Circuit Diagram



Nominal Resistance • Ω

Ω	Ω	Ω
4.7k	5k	10k

Environmental Characteristics

Parameter	Specification
Rated power	2 W @ 70℃; 0 W @ 125℃
Temperature range	-40℃ to +125℃
Temperature coefficient	≤±500 × 10^-6/K

Applicable Standards

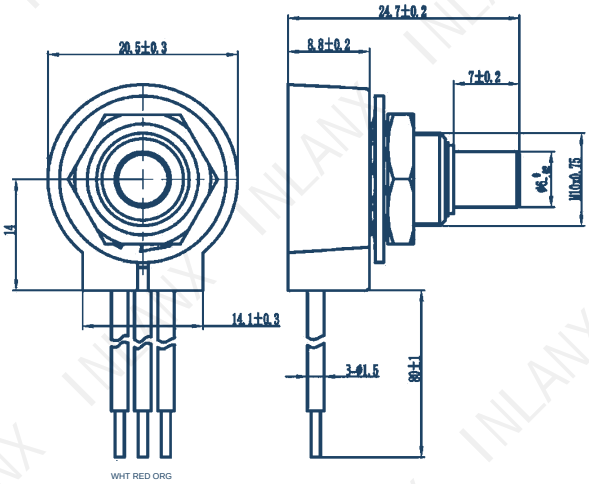
Quality mark	Detail specification	Generic specification
J	Q/RU 404-2010	GB/T 15298-1994

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Main Inspection Items

Item	Test Conditions and Requirements
Resistance to soldering heat	350℃±5℃, 3.5 s±0.5 s; ΔR≤±(2%R+0.1 Ω).
Shock	GB/T 15298-1994, 4.37; 100 g, 6 ms; no visible damage; ΔR≤±(0.5%R+0.05 Ω).
Vibration	10 Hz to 1000 Hz; 10 g or 0.75 mm amplitude, 6 h; ΔR≤±(0.5%R+0.05 Ω); Δ(Uab/Uac)≤±1%.
Climatic sequence	GB/T 15298-1994, 4.38; ΔR≤±(2%R+0.1 Ω); CRV≤5%R; insulation resistance ≥100 MΩ.
Electrical endurance	GB/T 15298-1994, 4.43; 2 W, 70℃, 1000 h; ΔR≤±(2%R+0.1 Ω).
Mechanical endurance	GB/T 15298-1994, 4.40; 50000 revolutions; ΔR≤±(2%R+0.1 Ω).
Damp heat, steady state	GB/T 15298-1994, 4.39; no visible damage, flashover or breakdown; ΔR≤±(2%R+0.1 Ω); insulation resistance ≥100 MΩ.

Outline Dimensions • mm



Ordering Information

POL20ML - 4K7 - K

Model / Terminal style ML (cable) / Nominal resistance / Tolerance K (±10%)