2WD1607-ZK

Axial Push-switch Potentiometer

Electrical Characteristics



Parameter	Specification
Nominal resistance	10 kΩ (special resistance values available)
Resistance tolerance	±3.5%
Effective electrical travel	240°±4°
Independent linearity	≤±1%
Output smoothness	≤0.5%
Insulation resistance	Potentiometer: ≥1000 MΩ (500 VDC); switch: ≥1000 MΩ (100 VDC)
Dielectric withstand	Potentiometer: 750 VAC, 1 min; switch: 1000 VAC, 1 min
Switch contact resistance	≤300 mΩ

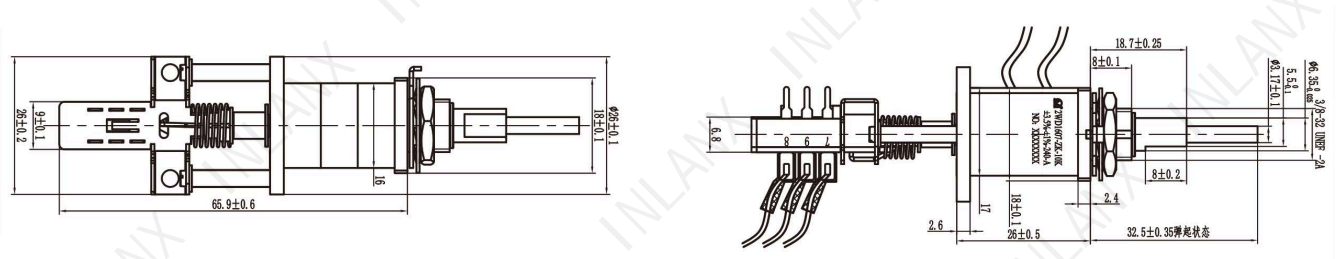
Physical Characteristics

Parameter	Specification
Mechanical travel	270°±10°
Starting torque	Outer shaft: 25 to 50 mN·m
Switch push force	Inner shaft: 400±100 gf
Axial end play	≤0.13 mm
Backlash	<0.5°
Switch travel	Travel between released and self-locked states: (3.2±0.5) mm

Environmental Characteristics

Parameter	Specification
Temperature range	-55℃ to +125℃
Rated power	0.2 W @ 70℃; 0 W @ 125℃

Outline Dimensions • mm



The shaft dimension is specified in the released state.

2WD1607-ZK

Axial Push-switch Potentiometer

Main Inspection Items

Item	Test Conditions and Requirements
Thermal shock	-65℃ to +125℃, 5 cycles; ΔR≤±10%R.
Resistance-temperature characteristic	ΔR≤±5%R
Shock	100 g, terminal-peak sawtooth, 6 ms, 2.96 m/s; no potentiometer-section discontinuity longer than 0.1 ms or switch-section discontinuity longer than 0.01 ms.
Salt spray	96 h; visible corrosion area after the test ≤10% of the switch-potentiometer body area.
Moisture resistance	10 cycles; ΔR≤±10%R.
High-frequency vibration	Displacement amplitude/acceleration: 0.75 mm/150 m/s²; 10 Hz to 2000 Hz, crossover 70.7 Hz; 20 min per sweep; 12×3 sweeps (X, Y, Z axes)=36; total 4×3=12 h; no potentiometer-section discontinuity longer than 0.1 ms or switch-section discontinuity longer than 0.01 ms.

Applicable Standards

Quality mark	Detail specification	Generic specification
— (QB available)	Q/RU 26178-2025	MIL-PRF-39023D; MIL-DTL-3786H

Ordering Information

2WD1607-ZK - 10K±3.5% - ±1% - 240 - A

Model / Nominal resistance and tolerance / Independent linearity / Effective electrical travel / Mounting A (bushing mounting)

2WD2403-2JK

Potentiometer with Switch

Electrical Characteristics

Parameter	Specification
Nominal resistance	5 kΩ (special resistance values available)
Resistance tolerance	±5%
Effective electrical travel	240°±4°
Independent linearity	≤±1%
Output smoothness	≤0.5%
Insulation resistance	≥1000 MΩ (500 VDC)
Dielectric withstand	Potentiometer: 750 VAC, 1 min; switch: 1000 VAC, 1 min
Switch contact resistance	≤300 mΩ



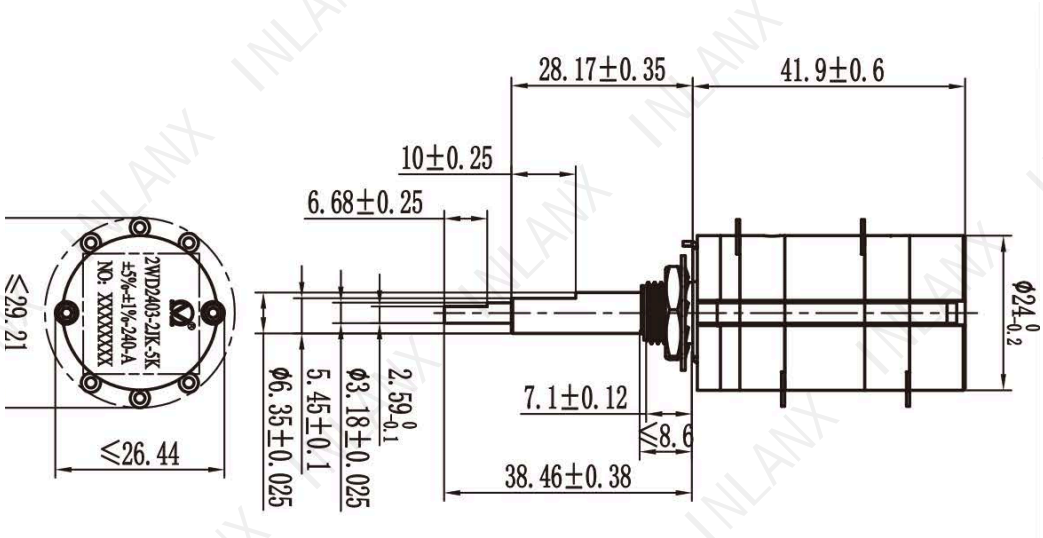
Physical Characteristics

Parameter	Specification
Mechanical travel	270°±10°
Starting torque	Outer shaft: 12 to 30 mN·m; inner shaft: ≤10 mN·m
Switch torque	30 to 65 mN·m
Axial end play	≤0.13 mm
Backlash	<0.5°

Environmental Characteristics

Parameter	Specification
Temperature range	-55℃ to +125℃
Rated power	0.2 W @ 70℃; 0 W @ 125℃

Outline Dimensions • mm



2WD2403-2JK

Potentiometer with Switch

Main Inspection Items

Item	Test Conditions and Requirements
Thermal shock	-65℃ to +125℃, 5 cycles; ΔR≤±10%R.
Resistance-temperature characteristic	ΔR≤±5%R
Shock	100 g, terminal-peak sawtooth, 6 ms, 2.96 m/s; no potentiometer-section discontinuity longer than 0.1 ms or switch-section discontinuity longer than 0.01 ms.
Salt spray	96 h; visible corrosion area after the test ≤10% of the switch-potentiometer body area.
Moisture resistance	10 cycles; ΔR≤±10%R.
High-frequency vibration	Displacement amplitude/acceleration: 0.75 mm/150 m/s²; 10 Hz to 200 Hz, crossover 70.7 Hz; 20 min per sweep; 12×3 sweeps (X, Y, Z axes)=36; total 4×3=12 h; no potentiometer-section discontinuity longer than 0.1 ms or switch-section discontinuity longer than 0.01 ms.
Life	≥25000 operations

Applicable Standards

Quality mark	Detail specification	Generic specification
— (QB available)	Q/RU 26177-2025	MIL-PRF-39023D; MIL-DTL-3786H

Ordering Information

2WD2403-2JK - 5K±5% - ±1% - 240 - A

Model / Nominal resistance and tolerance / Independent linearity / Effective electrical travel / Mounting A (bushing mounting)