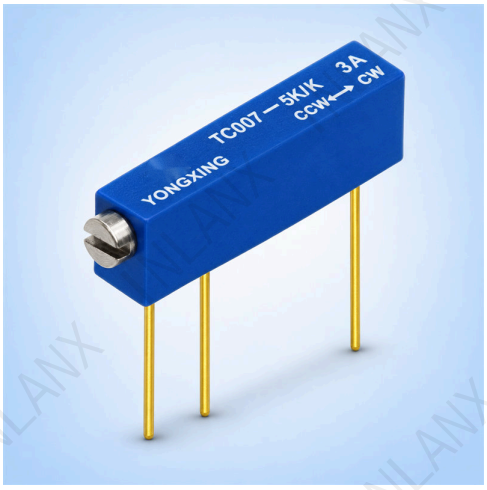
TC007

Rectangular Lead-screw Actuated Cermet Trimmer Potentiometer

Electrical Characteristics

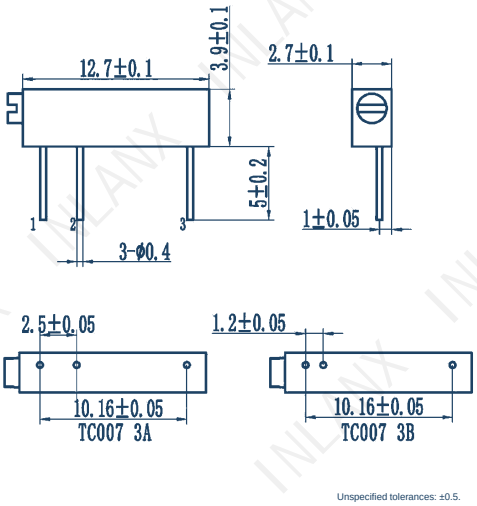
Parameter	Specification
Nominal resistance	10 Ω to 2 MΩ
Resistance tolerance	±10%
Insulation resistance	≥1 GΩ (500 V)
Dielectric withstand	900 VAC at normal atmospheric pressure
Effective electrical travel	(12±1) turns
Terminal resistance	≤2%R or 2 Ω, whichever is greater
Contact resistance variation	CRV≤3%R or 10 Ω, whichever is greater



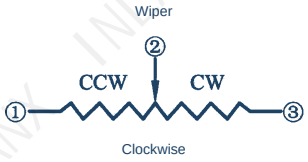
Physical Characteristics

Parameter	Specification
Starting torque	≤50 mN·m
Marking	Trademark, model, nominal resistance, resistance tolerance, date code
Mass	≤0.3 g
Clutch torque	25 idle turns at the end stop; electrical continuity upon reverse adjustment

Outline Dimensions • mm



Circuit Diagram



Nominal Resistance • Ω

Ω	Ω	Ω
10	1k	100k
20	2k	200k
50	5k	500k
100	10k	1M
200	20k	2M
500	50k	

Environmental Characteristics

Parameter	Specification
Rated power	0.33 W @ 55℃; 0 W @ 150℃
Temperature range	-55℃ to +150℃
Temperature coefficient	≤±150 × 10^-6/K

TC007

Rectangular Lead-screw Actuated Cermet Trimmer Potentiometer

Main Inspection Items

Item	Test Conditions and Requirements
Moisture resistance	GJB 360A-1996, Method 106; ΔR≤±5%R; insulation resistance ≥100 MΩ.
Shock	GJB 360A-1996, Method 213; ΔR≤±3%R; Δ(Uab/Uac)≤±5%.
High-frequency vibration	GJB 360A-1996, Method 204; ΔR≤±3%R; Δ(Uab/Uac)≤±5%.
High-temperature life	GJB 360A-1996, Method 108; no mechanical damage; ΔR≤±5%R; Δ(Uab/Uac)≤±3%.
Low-temperature operation	GJB 918-1990, 4.6.16; -55℃; ΔR≤±3%R; Δ(Uab/Uac)≤±3%.
High-temperature storage	GJB 918-1990, 4.6.17; 125℃, 250 h; ΔR≤±5%R; Δ(Uab/Uac)≤±3%.
Immersion	85℃ to 90℃, (60±5) s; no continuous air bubbles from the potentiometer.
Rotational life	(2±0.5) min per revolution, 200 revolutions; no mechanical damage; ΔR≤±5%R.

Applicable Standards

Quality mark	Detail specification	Generic specification
J	Q/RU 802-2006	GJB 918-1990

Unspecified dimensional tolerances: ±0.5 mm.

Ordering Information

TC007 - 3A - 10K - K

Model / Terminal style (see drawing) / Nominal resistance / Tolerance K (±10%)

TC163

Lead-screw Actuated Cermet Trimmer Potentiometer

Electrical Characteristics

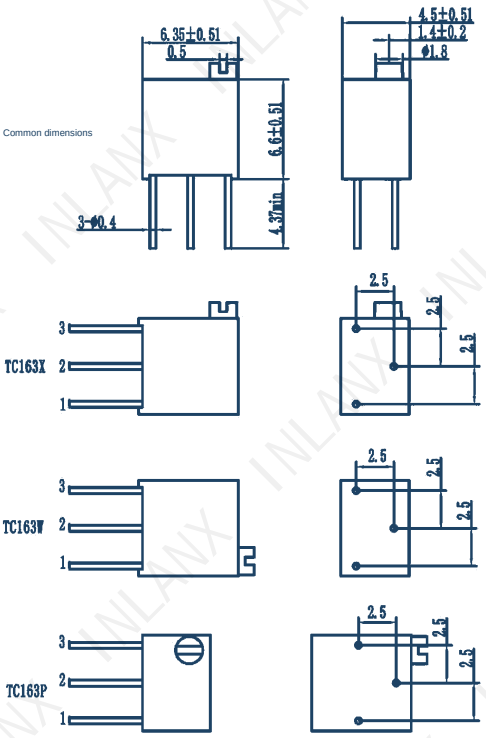
Parameter	Specification
Nominal resistance	10 Ω to 1 MΩ
Resistance tolerance	±10%
Insulation resistance	≥1 GΩ (500 V)
Dielectric withstand	600 VAC at normal atmospheric pressure
Effective electrical travel	(11±1) turns
Terminal resistance	≤2%R or 2 Ω, whichever is greater
Contact resistance variation	CRV≤3%R or 3 Ω, whichever is greater



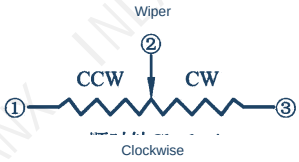
Physical Characteristics

Parameter	Specification
Starting torque	≤21 mN·m
Marking	Trademark, model, nominal resistance, date code
Mass	≤0.6 g
Clutch torque	25 idle turns at the end stop; electrical continuity upon reverse adjustment

Outline Dimensions • mm



Circuit Diagram



Nominal Resistance • Ω

Ω	Ω	Ω
10	1k	100k
20	2k	200k
50	5k	500k
100	10k	1M
200	20k	
500	50k	

Environmental Characteristics

Parameter	Specification
Rated power	0.25 W @ 70℃; 0 W @ 125℃
Temperature range	-55℃ to +125℃
Temperature coefficient	≤±150 × 10^-6/K

TC163

Lead-screw Actuated Cermet Trimmer Potentiometer

Main Inspection Items

Item	Test Conditions and Requirements
Moisture resistance	GJB 360A-1996, Method 106; ΔR≤±5%R; insulation resistance ≥100 MΩ.
Shock	GJB 360A-1996, Method 213; ΔR≤±3%R; Δ(Uab/Uac)≤±5%.
High-frequency vibration	GJB 360A-1996, Method 204; ΔR≤±3%R; Δ(Uab/Uac)≤±5%.
High-temperature life	GJB 360A-1996, Method 108; no mechanical damage; ΔR≤±5%R; Δ(Uab/Uac)≤±3%.
Low-temperature operation	GJB 918-1990, 4.6.16; -55℃; ΔR≤±3%R; Δ(Uab/Uac)≤±3%.
High-temperature storage	GJB 918-1990, 4.6.17; 125℃, 250 h; ΔR≤±5%R; Δ(Uab/Uac)≤±3%.
Immersion	85℃ to 90℃, (60±5) s; no continuous air bubbles from the potentiometer.
Rotational life	(2±0.5) min per revolution, 200 revolutions; no mechanical damage; ΔR≤±5%R.
Thermal shock	-55℃ to +125℃, 30 min, 5 cycles; ΔR≤±3%R; Δ(Uab/Uac)≤±3%.

Applicable Standards

Quality mark	Detail specification	Generic specification
Inverted triangle G mark	Q/RU 800-2004; QZJ 84061	GJB 918-1990
J	Q/RU 800-2004	GJB 918-1990

Ordering Information

TC163 - W - 10K - K

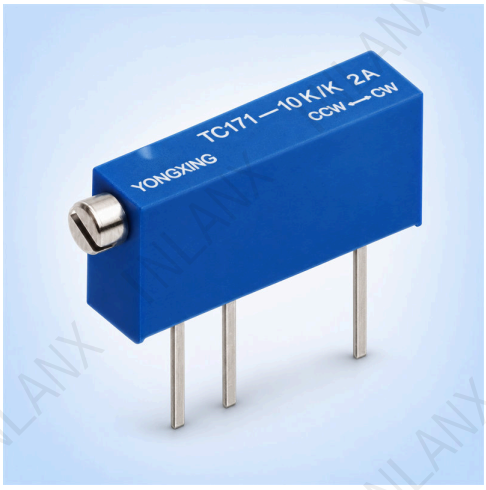
Model / Terminal style (see drawing) / Nominal resistance / Tolerance K (±10%)

TC171 / TC175

Rectangular Lead-screw Actuated Cermet Trimmer Potentiometer

Electrical Characteristics

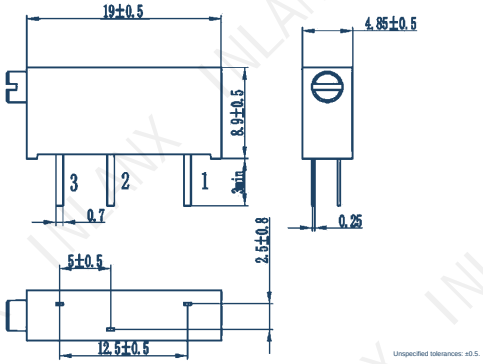
Parameter	Specification
Nominal resistance	10 Ω to 2 MΩ
Resistance tolerance	±10%
Insulation resistance	≥1 GΩ
Dielectric withstand	900 VAC at normal atmospheric pressure
Effective electrical travel	(18±1) turns
Terminal resistance	≤2%R or 2 Ω, whichever is greater
Contact resistance variation	CRV≤3%R or 10 Ω, whichever is greater



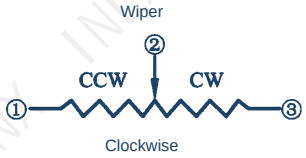
Physical Characteristics

Parameter	Specification
Starting torque	≤50 mN·m
Marking	Trademark, model, nominal resistance, date code
Mass	≤1.9 g
Clutch torque	25 idle turns at the end stop; electrical continuity upon reverse adjustment

Outline Dimensions • mm



Circuit Diagram



Nominal Resistance • Ω

Ω	Ω	Ω
10	1k	100k
20	2k	200k
50	5k	500k
100	10k	1M
200	20k	2M
500	50k	

Environmental Characteristics

Parameter	Specification
Rated power	0.75 W @ 40℃; 0 W @ 125℃
Temperature range	-55℃ to +125℃
Temperature coefficient	≤±150 × 10^-6/K

TC171 / TC175

Rectangular Lead-screw Actuated Cermet Trimmer Potentiometer

Main Inspection Items

Item	Test Conditions and Requirements
Moisture resistance	GJB 360A-1996, Method 106; ΔR≤±5%R; insulation resistance ≥100 MΩ.
Shock	GJB 360A-1996, Method 213; ΔR≤±3%R; Δ(Uab/Uac)≤±5%.
High-frequency vibration	GJB 360A-1996, Method 204; ΔR≤±3%R; Δ(Uab/Uac)≤±5%.
High-temperature life	GJB 360A-1996, Method 108; no mechanical damage; ΔR≤±5%R; Δ(Uab/Uac)≤±3%.
Low-temperature operation	GJB 918-1990, 4.6.16; -55℃; ΔR≤±3%R; Δ(Uab/Uac)≤±3%.
High-temperature storage	GJB 918-1990, 4.6.17; 125℃, 250 h; ΔR≤±5%R; Δ(Uab/Uac)≤±3%.
Immersion	85℃ to 90℃, (60±5) s; no continuous air bubbles from the potentiometer.
Rotational life	(2±0.5) min per revolution, 200 revolutions; no mechanical damage; ΔR≤±5%R.
Thermal shock	GJB 360A-1996, Method 107, Condition B; no electrical discontinuity or mechanical damage; ΔR≤±3%R; Δ(Uab/Uac)≤±3%.

Applicable Standards

Quality mark	Detail specification	Generic specification
J	Q/RU 802-2006	GJB 918-1990

Unspecified dimensional tolerances: ±0.5 mm.

Ordering Information

TC171 - 2A - 10K - K

Model / Terminal style (see drawing) / Nominal resistance / Tolerance K (±10%)

Models in this group: TC171 and TC175.

TC183

Lead-screw Actuated Cermet Trimmer Potentiometer

Electrical Characteristics

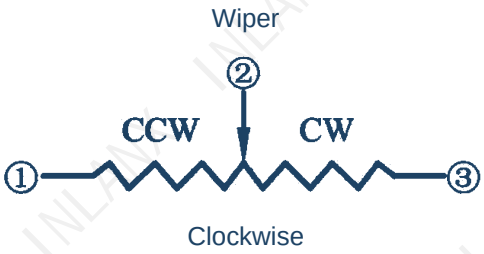
Parameter	Specification
Nominal resistance	10 Ω to 1 MΩ
Resistance tolerance	±10%
Insulation resistance	≥1 GΩ (500 V)
Dielectric withstand	900 VAC at normal atmospheric pressure
Effective electrical travel	(21±1) turns
Terminal resistance	≤2%R or 2 Ω, whichever is greater
Contact resistance variation	CRV≤3%R or 3 Ω, whichever is greater



Physical Characteristics

Parameter	Specification
Starting torque	≤35 mN·m
Marking	Trademark, model, nominal resistance, date code
Mass	≤1.3 g
Clutch torque	25 idle turns at the end stop; electrical continuity upon reverse adjustment

Circuit Diagram



Nominal Resistance • Ω

Ω	Ω	Ω
10	1k	100k
20	2k	200k
50	5k	500k
100	10k	1M
200	20k	
500	50k	

Environmental Characteristics

Parameter	Specification
Rated power	0.5 W @ 70℃; 0 W @ 125℃
Temperature range	-55℃ to +125℃
Temperature coefficient	≤±150 × 10^-6/K

Applicable Standards

Quality mark	Detail specification	Generic specification
Inverted triangle G mark	Q/RU 801-2005; QZJ 84061	GJB 918-1990
J	Q/RU 801-2005	GJB 918-1990

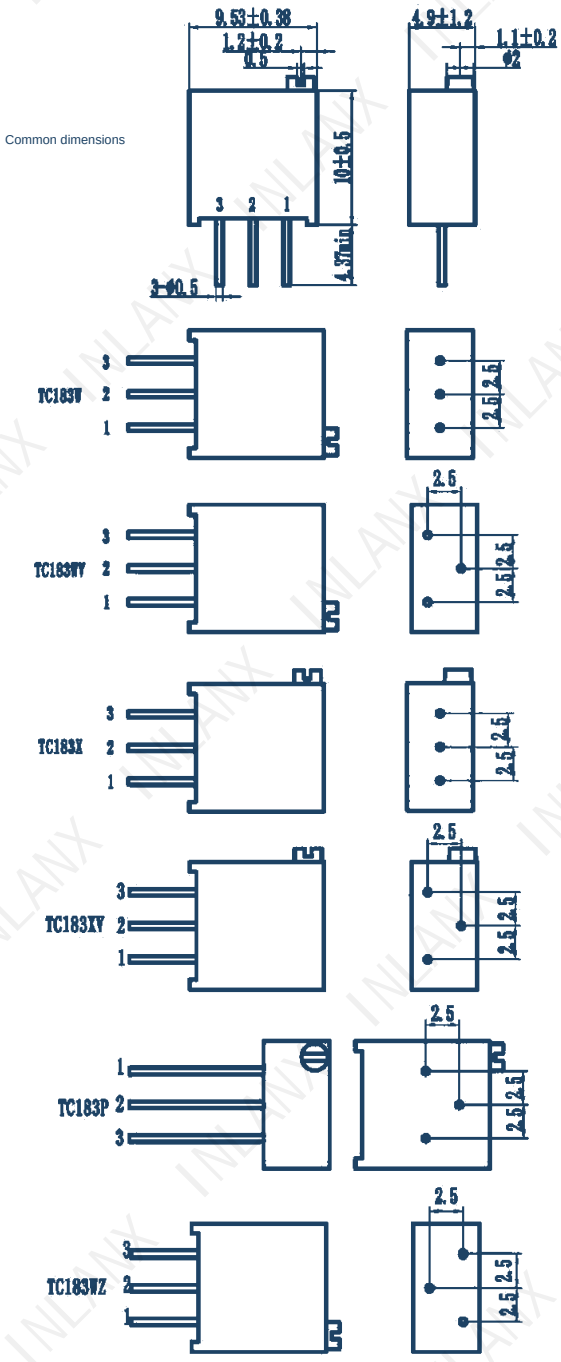
TC183

Lead-screw Actuated Cermet Trimmer Potentiometer

Main Inspection Items

Item	Test Conditions and Requirements
Moisture resistance	GJB 360A-1996, Method 106, 72 h; ΔR≤±5%R; insulation resistance ≥100 MΩ.
Shock	GJB 360A-1996, Method 213; ΔR≤±3%R; Δ(Uab/Uac)≤±5%.
High-frequency vibration	GJB 360A-1996, Method 204; ΔR≤±3%R; Δ(Uab/Uac)≤±5%.
High-temperature life	GJB 918-1990, 3.20; 70℃, 0.5 W; ΔR≤±5%R; Δ(Uab/Uac)≤±3%.
Low-temperature operation	-55℃, 0.25 W; ΔR≤±3%R; Δ(Uab/Uac)≤±3%.
High-temperature storage	125℃, 250 h; ΔR≤±5%R; Δ(Uab/Uac)≤±3%.
Rotational life	(2±0.5) min per revolution, 200 revolutions; no mechanical damage; ΔR≤±5%R.

Outline Dimensions • mm



Ordering Information

TC183 - W - 10K - K

Model / Terminal style (see drawing) / Nominal resistance / Tolerance K (±10%)

TC270 / 3006P

Rectangular Lead-screw Actuated Cermet Trimmer Potentiometer

Electrical Characteristics

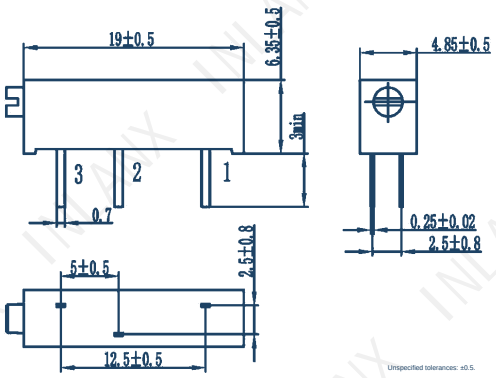
Parameter	Specification
Nominal resistance	10 Ω to 2 MΩ
Resistance tolerance	±10%
Insulation resistance	≥1 GΩ (500 V)
Dielectric withstand	900 VAC at normal atmospheric pressure
Effective electrical travel	(18±1) turns
Terminal resistance	≤2%R or 2 Ω, whichever is greater
Contact resistance variation	CRV≤3%R or 10 Ω, whichever is greater



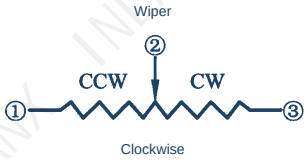
Physical Characteristics

Parameter	Specification
Starting torque	≤50 mN·m
Marking	Trademark, model, nominal resistance, date code
Mass	≤1.5 g
Clutch torque	25 idle turns at the end stop; electrical continuity upon reverse adjustment

Outline Dimensions • mm



Circuit Diagram



Nominal Resistance • Ω

Ω	Ω	Ω
10	1k	100k
20	2k	200k
50	5k	500k
100	10k	1M
200	20k	2M
500	50k	

Environmental Characteristics

Parameter	Specification
Rated power	0.75 W @ 40℃; 0 W @ 125℃
Temperature range	-55℃ to +125℃
Temperature coefficient	≤±150 × 10^-6/K

TC270 / 3006P

Rectangular Lead-screw Actuated Cermet Trimmer Potentiometer

Main Inspection Items

Item	Test Conditions and Requirements
Moisture resistance	GJB 360A-1996, Method 106; ΔR≤±5%R; insulation resistance ≥100 MΩ.
Shock	GJB 360A-1996, Method 213; ΔR≤±3%R; Δ(Uab/Uac)≤±5%.
High-frequency vibration	GJB 360A-1996, Method 204; ΔR≤±3%R; Δ(Uab/Uac)≤±5%.
High-temperature life	GJB 360A-1996, Method 108; no mechanical damage; ΔR≤±5%R; Δ(Uab/Uac)≤±3%.
Low-temperature operation	GJB 918-1990, 4.6.16; -55℃; ΔR≤±3%R; Δ(Uab/Uac)≤±3%.
High-temperature storage	GJB 918-1990, 4.6.17; 125℃, 250 h; ΔR≤±5%R; Δ(Uab/Uac)≤±3%.
Immersion	85℃ to 90℃, (60±5) s; no continuous air bubbles from the potentiometer.
Rotational life	(2±0.5) min per revolution, 200 revolutions; no mechanical damage; ΔR≤±5%R.
Thermal shock	GJB 360A-1996, Method 107, Condition B; no electrical discontinuity or mechanical damage; ΔR≤±3%R; Δ(Uab/Uac)≤±3%.

Applicable Standards

Quality mark	Detail specification	Generic specification
Inverted triangle G mark	Q/RU 802-2006; QZJ 84061	GJB 918-1990
J	Q/RU 802-2006	GJB 918-1990

Unspecified dimensional tolerances: ±0.5 mm.

Ordering Information

TC270 - 2A - 10K - K

Model / Terminal style (see drawing) / Nominal resistance / Tolerance K (±10%)

Models in this group: TC270 and 3006P.