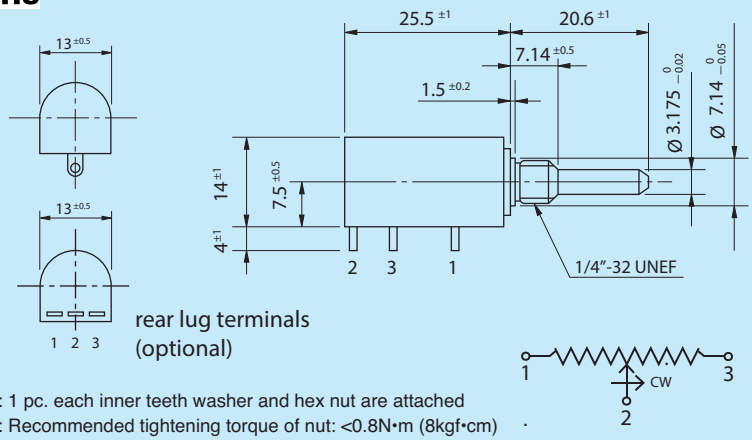
MT12C Series

Multi-Turn Potentiometer
(Wirewound)

P3 AMERICA
PRECISION SENSORS & JOYSTICKS

RoHS

Dimensions (mm)



Note: 1 pc. each inner teeth washer and hex nut are attached
Note: Recommended tightening torque of nut: <0.8N•m (8kgf•cm)

Standard Model Nos.

MT12C-5 (5-turn)
MT12C-10 (10-turn)

General Specifications (Note 1)

Standard Resistance Range: 100, 200, 500, 1k, 2k, 5k, 10k, 20k Ω

Max. Practical Resistance Value: 50k Ω (10-turn)

Total Resistance Tolerance:
Standard Class ±3%
Precision Class ±1%

Independent Linearity Tolerance:

	5-turn	10-turn
Standard Class	±0.35%	±0.25%
Precision Class	±0.2%	±0.1%
(< 5k Ω)	(±0.25%)	(±0.15%)

Power Rating: 0.75W (5-turn)
1.5W (10-turn)

Noise: Within 100 Ω E.N.R.

Electrical Travel: 360° × n ±5° (n: No. of turns)

Mechanical Travel: 360° × n $^{+15^\circ}_{-0^\circ}$ (n: No. of turns)

Rotational Life: (shaft revolutions) 500,000 (5-turn)
1,000,000 (10-turn)

Protection Grade: IP40 (IP54 optional)

Operating Temp.: -55°C...+105°C

Insulation Resistance: Over 1000 MΩ at 500V.D.C.

Dielectric Strength: 1 minute at 1000V.A.C.

Starting Torque: Within 3mN • m (30gf • cm)

Stopper Strength: Approx. 0.15N • m (1.5kgf • cm)

Resist. Temperature Coefficient of Wire: ±20p.p.m./°C

Vibration: 15G / 10Hz to 2,000Hz 12 hours

Shock: 50G / 11ms 18 times

Mass: Approx. 10g (5 & 10-turn)

Resolution Chart (%)

Resist. Value (Ω)	100	200	500	1k	2k	5k	10k	20k	50k	
MT12C-5	0.11	0.08	0.08	0.07	0.056	0.042	0.032	0.026	0.018	
MT12C-10	0.06	0.05	0.04	0.04	0.033	0.024	0.021	0.016	0.012	
Resist. Wire Used	Cu-Ni System			Ni-Cr System						

Special Specifications Available

3-turn type (MT12C-3, [rotational life of 300,000]), Shaft with front and rear extension (Rear shaft with 0.8mm dia. and 10mm length), Special machining on shaft, Rear terminals, Sealed housing with o-ring shaft seal for IP54 rating (torque increases).

Note 1: Customers should test and verify device performance in any given application. Specifications subject to change without notice.

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