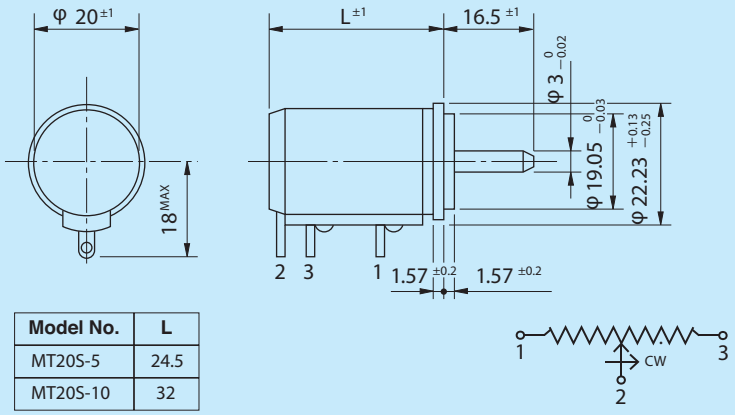
P3 America, Inc.

Motion Control and Automation Products

Multi-Turn Wirewound Potentiometer — *Series MT20S*

RoHS

Dimensions (mm)



Model No.	L
MT20S-5	24.5
MT20S-10	32

• Standard Model Nos.

MT20S-5 (5-turn)
MT20S-10 (10-turn)

• General Specifications (Note 1)

Standard Resistance Range: 100, 200, 500, 1k, 2k, 5k, 10k, 50k Ω

Max. Practical Resistance Value: 100k Ω (5-turn)
150k Ω (10-turn)

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

Independent Linearity Tolerance:

	5-turn	10-turn
Standard Class	±0.3%	±0.2%
Precision Class	±0.2%	±0.1%
(< 5k Ω)	(±0.25%)	(±0.15%)

Power Rating: 1.0W (5-turn)
2.0W (10-turn)

Noise: Within 100 Ω E.N.R.

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

Mechanical Travel: 360° × n $^{+30^\circ}_{-0^\circ}$ (n: No. of turns)

Rotational Life: (shaft revolutions) 1,000,000 (5-turn)
2,000,000 (10-turn)

Protection Grade: IP40 (IP54 optional)

Operating Temp.: -55°C...+105°C

Insulation Resistance: Over 100 MΩ at 1000V.D.C.

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

Starting Torque: Within 3mN • m (30gf • 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. 20g (5-turn)
Approx. 25g (10-turn)

• Resolution Chart (%)

Resist. Value (Ω)	100	200	500	1k	2k	5k	10k	20k	50k	100k
MT20S-5	0.09	0.07	0.05	0.04	0.042	0.031	0.026	0.021	0.018	0.015
MT20S-10	0.06	0.05	0.03	0.025	0.02	0.02	0.016	0.013	0.01	0.009
Resist. Wire Used	Cu-Ni System					Ni-Cr System				

• Special Specifications Available

3-turn type (MT20S-3), lower resistance values (10Ω, 20Ω, 50Ω), extra tap (1 tap), multi-ganged (up to 2 gangs), shaft with front and rear extension (rear shaft with 2mm dia. and 10mm length), special shaft machining (flat, pin hole, length, dia., etc.), limit switch adaptor

Note 1: Customers should test and verify device performance in any given application. General specifications are measured at temperatures of +15°C ~ +35°C. Specifications subject to change without notice.

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