

Multi-Turn Hybrid Potentiometer

Series MT20H



Standard Model Nos.

MT20H-5 (5-turn)
MT20H-10 (10-turn)

General Specifications (Note 1)

Standard Resistance

Range: 1k, 2k, 5k, 10k, 20k Ω

Max. Practical

Resistance Value: 100k Ω (10-turn)

Total Resistance

Tolerance: Standard Class $\pm 10\%$
Precision Class $\pm 5\%$

Independent Linearity

Tolerance:

	5-turn	10-turn
Standard Class	$\pm 0.35\%$	$\pm 0.25\%$
Precision Class	$\pm 0.2\%$	$\pm 0.1\%$

Power Rating:

1.0W (5-turn)
2.0W (10-turn)

Output Smoothness:

Within 0.05% against input voltage (5-turn)
Within 0.015% against input voltage (10-turn)

Contact Resistance

Variation: Within 5% C.R.V. (5-turn)
Within 3% C.R.V. (10-turn)

Electrical Travel:

$360^\circ \times n \pm 5^\circ$ (n: No. of turns)

Mechanical Travel:

$360^\circ \times n \begin{matrix} +10^\circ \\ -0^\circ \end{matrix}$ (n: No. of turns)

Rotational Life:

5,000,000 (5-turn)

(shaft revolutions)

Protection Grade:

IP40 (IP54 optional)

Operating Temp.:

$-55^\circ\text{C} \dots +105^\circ\text{C}$

Insulation Resistance:

Over 100 M Ω at 1000V.D.C.

Dielectric Strength:

1 minute at 1000V.A.C.

Starting Torque:

Within 5mN \cdot m (50gf \cdot cm)

Stopper Strength:

Approx. 0.9N \cdot m (9kgf \cdot cm)

Resist. Temperature

$\pm 100\text{p.p.m./}^\circ\text{C}$

Coefficient of Wire:

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

Vibration:

50G / 11ms 18 times

Shock:

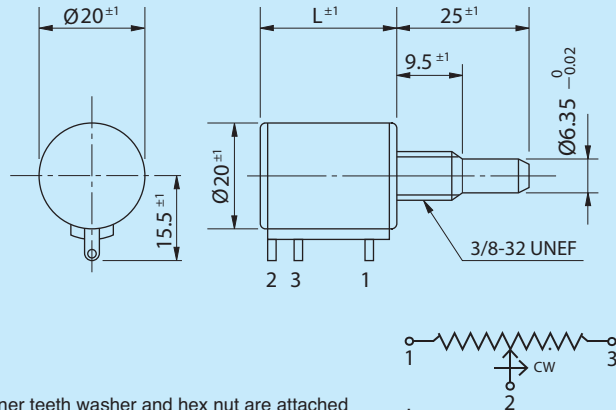
Approx. 20g (5-turn)

Mass:

Approx. 25g (10-turn)



Dimensions (mm)



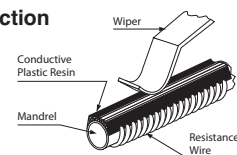
Note: 1 pc. each inner teeth washer and hex nut are attached

Features of Hybrid resistive element

Main Features

- Good stability of resistance value
- Good resistance temperature coefficient
- Essentially infinite resolution
- Less resistance variation
- Long life expectancy

Construction



Special Specifications Available

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.), sealed housing and o-ring shaft seal for IP54 protection grade (torque increases), slipping clutch (20mN \cdot m~60mN \cdot m), limit switch adaptor

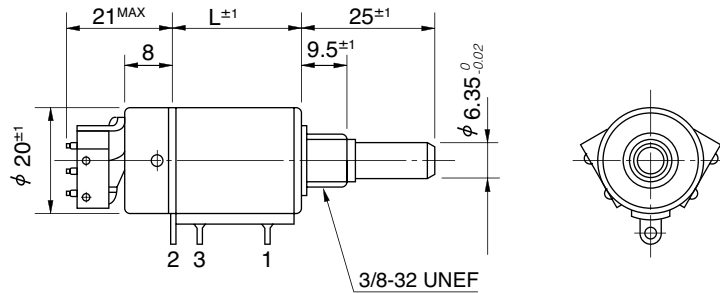
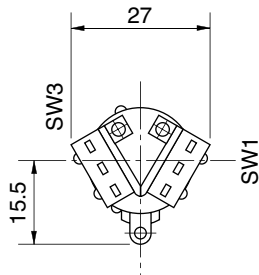
Note 1: Customers should test and verify device performance in any given application. General specifications are measured at temperatures of $+15^\circ\text{C} \sim +35^\circ\text{C}$. Specifications subject to change without notice.

Limit Switch Adaptor Option



Limit-Switch Characteristics

Rating of limit-switch 3A, 125V.A.C. (resistance load)
Life expectancy of limit-switch: 50,000 operations
Operating temperature range: -55 °C ~ +105 °C



Model No.	L
MT20-3 (3-turn)	18
MT20-5 (5-turn)	18
MT20-10 (10-turn)	25.5

Limit-Switch Function

Unless otherwise specified, the limit-switch is of inscription type on both ends as shown.

