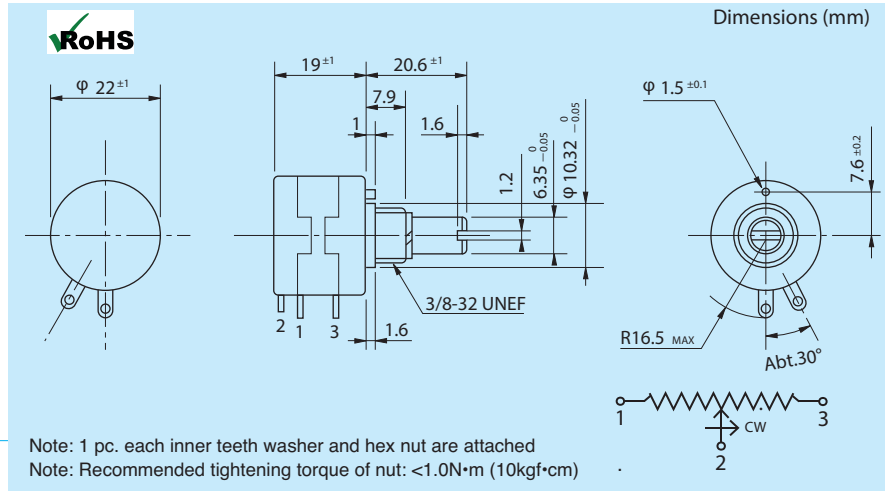


## Multi-Turn Hybrid Potentiometer

## Series MT22H



### Standard Model Nos.

MT22H-5 (5-turn)  
MT22H-10 (10-turn)

### General Specifications (Note 1)

#### Standard Resistance

**Range:** 1k, 2k, 5k, 10k, 20k, 50k  $\Omega$

#### Max. Practical

**Resistance Value:** 100k  $\Omega$  (10-turn)

#### Total Resistance

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

#### Independent Linearity

	5-turn	10-turn
<b>Tolerance:</b>	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:** 2,500,000 (5-turn)  
5,000,000 (10-turn)  
(shaft revolutions)

**Protection Grade:** IP40 (IP54 optional)

**Operating Temp.:**  $-55^\circ\text{C} \dots +105^\circ\text{C}$

**Insulation Resistance:** Over 100M  $\Omega$  at 500V.D.C.

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

**Starting Torque:** Within 5mN·m (50gf·cm)

**Stopper Strength:** Approx. 0.9N·m (9kgf·cm)

#### Resist. Temperature

**Coefficient of Wire:**  $\pm 100\text{p.p.m./}^\circ\text{C}$

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

**Shock:** 50G / 11ms 18 times

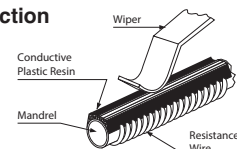
**Mass:** Approx. 20g

### 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

3-turn type (MT22H-3), extra tap (1 tap, 10 turn only), multi-ganged (up to 10 gangs, housing length extended by 19mm per gang), high torque, shaft with front and rear extension (rear shaft with 6mm dia. and 15mm 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·m~60mN·m)

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.