

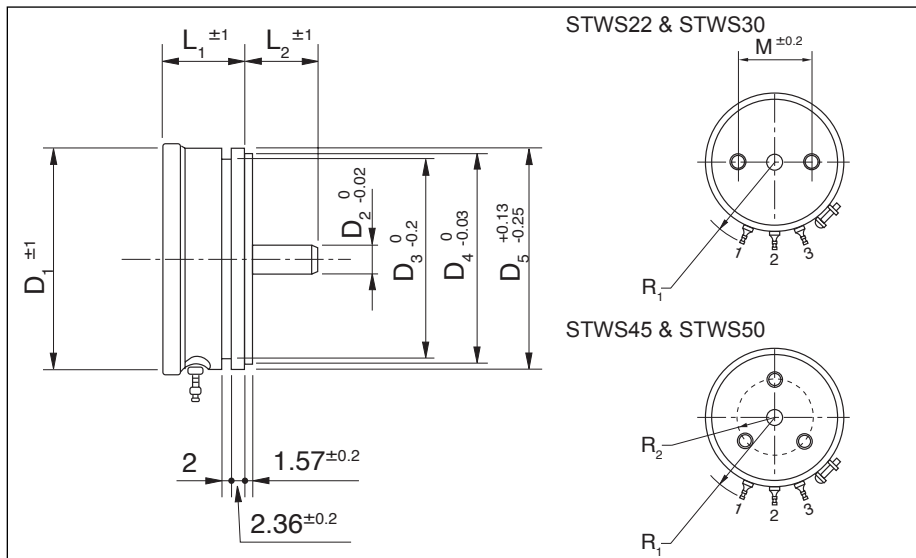
# Single Turn Wirewound Potentiometer

# Series STWS



- 4 Diameters:  
22mm, 27mm, 41mm, 50mm
- ±0.5% Linearity or Better
- 1 Million Turns Life
- Robust Construction
- Dual Ball Bearings
- Customizable

General Specifications	STWS22	STWS30	STWS45	STWS50	All Models	
Resistance Values (Ω)	50, 100, 200, 500, 1K, 2K, 5K, 10K				Rotational Life	1,000,000 shaft revolutions
Higher Resistance Values (Ω)	20K	20K, 50K			Resolution	See chart, page 2
Resistance Tolerance (Standard)	±3%				Noise	Within 100 Ω E.N.R.
Resistance Tolerance (Best)	±1%				End Resistance	Within 0.05%
Linearity Tolerance (Standard)	±0.5%				Insulation Resistance	1,000M Ω @ 1,000 VDC
Linearity Tolerance (Best)	±0.2%	±0.15%	±0.1%	±0.1%	Dielectric Strength	1 minute @ 1,000 VAC
Power Rating	0.5W	0.75W	1.0W	1.5W	Temperature Coefficient	±20ppm/°C
Mechanical Angle	360° (continuous)				Vibration	15 G / 10Hz to 2,000Hz
Electrical Angle	355° ±5°		355° ±3°		Shock	50 G / 11ms
Starting Torque (Max)	1.5mN·m	2mN·m	4mN·m	5mN·m	Operating Temperature	-55°C to +105°C
Weight	15g	30g	90g	120g	IP Rating	IP40



Model	STWS22	STWS30	STWS45	STWS50
L <sub>1</sub>	15	15	18	18
L <sub>2</sub>	11.5	11.5	31.5	16.5
D <sub>1</sub>	22.23	27	41	50.8
D <sub>2</sub>	3	3	6	6
D <sub>3</sub>	19.1	24	33.32	47
D <sub>4</sub>	19.05	24.61	36	47.63
D <sub>5</sub>	22.23	26.97	41.28	50.8
R <sub>1</sub>	18 max	20 max	30 max	34.5 max
R <sub>2</sub>	N/A	N/A	12.5 (M3 screw 4 deep)	15 (M3 screw 4 deep)
M	12 (M2 screw 4 deep)	15 (M3 screw 4 deep)	N/A	N/A

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**Resolution Chart**

Resistance Value (ohms)	No. of Wire Windings				Resolution (%)			
	STWS22	STWS30	STWS45	STWS50	STWS22	STWS30	STWS45	STWS50
50	300	310	450	500	0.3333	0.3226	0.2222	0.2000
100	370	390	570	650	0.2703	0.2564	0.1754	0.1538
200	470	500	720	800	0.2128	0.2000	0.1389	0.1250
500	450	420	950	1,100	0.2222	0.2381	0.1053	0.0909
1K	570	600	820	1,000	0.1754	0.1667	0.1220	0.1000
2K	740	770	1,040	1,250	0.1351	0.1299	0.0962	0.0800
5K	1,000	1,090	1,430	1,810	0.1000	0.0917	0.0700	0.0552
10K	1,270	1,400	1,790	2,180	0.0787	0.0714	0.0559	0.0459
20K	1,670	1,800	2,280	2,780	0.0599	0.0556	0.0439	0.0360
50K	-	2,670	3,100	3,500	-	0.0375	0.0323	0.0286

**Options**

Extra taps, multi-ganged, bushing mount version, rear shaft extension, mechanical stops, special electrical angle, special shaft machining. Other options may be available on request. Please consult us.