

# PRECISION WIRE WOUND & THICK-FILM-POTENTIOMETER

## ROTARY /HIGH VOLTAGE/NON-INDUCTIVE

### Applications:

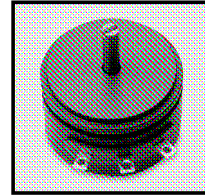
- Automobile, D.C. /A.C. drives. Control engineering, avionics, instrumentation, heavy industrial applications
- Power Switchgear/protection, Slip ring motor starting, nuclear, solid state physical application, X-ray,
- Power supplies Nuclear/power plant/heavy electrical and mechanical engineering, packaging,
- Special performance sensor actuators for linear/rotary motion control, generation//transmission/distribution.

### Introduction:

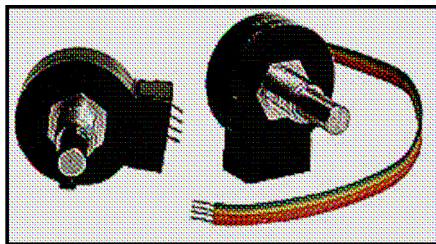
MTFSTP series of silicon coated/vitreous wire wound & thick film potentiometers are heavy-duty power resistance using improved version of manganese/eureka/other precision alloy materials ensuring better thermal stability over wide power range. These resistances are coated with special siloxane coating/ceramic coating to ensure high dielectric strength of wiring. In some cases these resistance may be offered coating withstanding higher temperature range. End terminal are either tin coated brass or copper metal. Tailor-made resistances are always encouraged.

### Benefits:

- High flash temperature / Better temperature operating range.
- Easy installation, Non abrasive/ chemically compatible.
- Stable power dissipation over specified working ranging.
- High-energy density/thermal stability/dielectric strength coating.
- Moisture resistance, better-tri-logical properties



Single-turn



Single-turn



single-turn



multi-turn

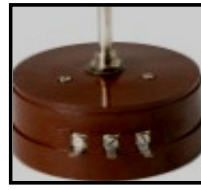
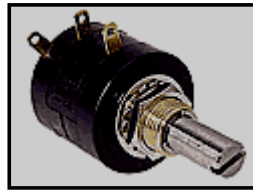
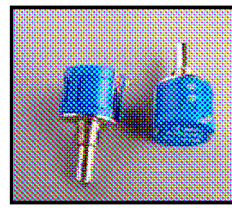
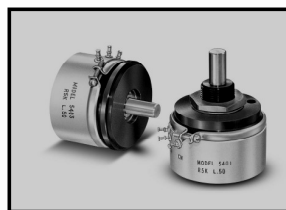
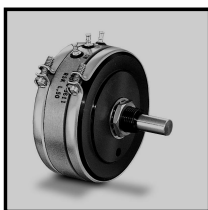


multiturn

### Electrical/Mechanical specifications of Thick Film Potentiometer:

Model	Power watt	Ohm ohm	Housing Dia \ length m.m.	Shadft Dial \ legth m.m.	Ltotal m.m.	Shaft \ Shaft m.m. \ material	Threading shaft	no. of turn \ travel angle-degree	Initial-Resistive-blacklash & T <sub>setting</sub> (mill. N.m.)	Linearity \ tum-life
MWWP-000010	02-10	000010	option	16   option	option	06 \ 16 \ alloy	Thread: 3/8-32 NEF-2A	Single \ 350	+ \ -5° & 0.1	+/- 1.0%
MWWP-000100	02-10	000100	option	16   option	option	06 \ 16 \ alloy	Thread: 3/8-32 NEF-2A	Single \ 350	+ \ -5° & 0.1	+/- 1.0%
MWWP-000500	02-10	000500	option	16   option	option	06 \ 16 \ alloy	Thread: 3/8-32 NEF-2A	Single \ 350	+ \ -5° & 0.1	+/- 1.0%
MWWP-001000	02-10	001000	option	16   option	option	06 \ 16 \ alloy	Thread: 3/8-32 NEF-2A	Single \ 350	+ \ -5° & 0.1	+/- 1.0%
MWWP-002000	02-10	002000	option	16   option	option	06 \ 16 \ alloy	Thread: 3/8-32 NEF-2A	Single \ 350	+ \ -5° & 0.1	+/- 1.0%
MWWP-005000	02-10	005000	option	16   option	option	06 \ 16 \ alloy	Thread: 3/8-32 NEF-2A	Single \ 350	+ \ -5° & 0.1	+/- 1.0%
MWWP-010000	02-10	010000	option	16   option	option	06 \ 16 \ alloy	Thread: 3/8-32 NEF-2A	Single \ 350	+ \ -5° & 0.1	+/- 1.0%
MWWP-050000	02-10	050000	option	16   option	option	06 \ 16 \ alloy	Thread: 3/8-32 NEF-2A	Single \ 350	+ \ -5° & 0.1	+/- 1.0%
MWWP-100000	02-10	100000	option	16   option	option	06 \ 16 \ alloy	Thread: 3/8-32 NEF-2A	Single \ 350	+ \ -5° & 0.1	+/- 1.0%
MWWP-500000	02-10	500000	option	16   option	option	06 \ 16 \ alloy	Thread: 3/8-32 NEF-2A	Single \ 350	+ \ -5° & 0.1	+/- 1.0%
MWWP-800000	02-10	800000	option	16   option	option	06 \ 16 \ alloy	Thread: 3/8-32 NEF-2A	Single \ 350	+ \ -5° & 0.1	+/- 1.0%

Dimensions are indicative and may exceed tolerance. These are available in 1%/3% and 5% tolerance range. Company offers electronic loading modules.



Company makes no warranty expressed or implied. Concerning the use of this product and users shall assume all risk of use or handling whether or not in accordance with directions suggestion, or used singly or in combination with other product.

## MOTORON SEMICONDUCTORS CORPORATION

11, Shri Nagar Colony, Shakti Nagar Extension, Delhi-110052 Tel: 91-011-23648181/23655454

[motoronenergy@hotmail.com](mailto:motoronenergy@hotmail.com)

# PRECISION WIRE WOUND & THICK-FILM-POTENTIOMETER

## ROTARY /HIGH VOLTAGE/NON-INDUCTIVE

### Electrical/Mechanical specifications of Thick film - Potentiometer (single-turn):

Model	Power watt	Ohm ohm	Housing Dia \ length m.m.	Shaft Dia & length m.m.	Ltotal m.m.	Shaft \ Shaft m.m.	Threading shaft	no. of turn \ travel angle-degree	Initial \ resistive-blacklash	linearity
MWWP-000010	02-05	000010	option	16   option	option	06 \ 16	option	Single \ 350	+ \ -5° & 0.1	+/- 1.0%
MWWP-000100	02-05	000100	option	16   option	option	06 \ 16	option	Single \ 350	+ \ -5° & 0.1	+/- 1.0%
MWWP-000500	02-05	000500	option	16   option	option	06 \ 16	option	Single \ 350	+ \ -5° & 0.1	+/- 1.0%
MWWP-001000	02-05	001000	option	16   option	option	06 \ 16	option	Single \ 350	+ \ -5° & 0.1	+/- 1.0%
MWWP-002000	02-05	002000	option	16   option	option	06 \ 16	option	Single \ 350	+ \ -5° & 0.1	+/- 1.0%
MWWP-005000	02-05	005000	option	16   option	option	06 \ 16	option	Single \ 350	+ \ -5° & 0.1	+/- 1.0%
MWWP-010000	02-05	010000	option	16   option	option	06 \ 16	option	Single \ 350	+ \ -5° & 0.1	+/- 1.0%
MWWP-050000	02-05	050000	option	16   option	option	06 \ 16	option	Single \ 350	+ \ -5° & 0.1	+/- 1.0%
MWWP-100000	02-05	100000	option	16   option	option	06 \ 16	option	Single \ 350	+ \ -5° & 0.1	+/- 1.0%
MWWP-500000	02-05	500000	option	16   option	option	06 \ 16	option	Single \ 350	+ \ -5° & 0.1	+/- 1.0%
MWWP-800000	02-05	800000	option	16   option	option	06 \ 16	option	Single \ 350	+ \ -5° & 0.1	+/- 1.0%

### Electrical/Mechanical specifications of Thick-film-Potentiometer (single-turn):

Model	Power watt	Ohm ohm	Housing Dia \ length m.m.	Shaft Dia & length m.m.	Ltotal m.m.	Shaft \ Shaft m.m.	Threading shaft	no. of turn \ travel angle-degree	Initial \ resistive-blacklash	linearity
MWWP-000010	05-10	000010	option	16   option	option	06 \ 16	option	Single \ 350	+ \ -5° & 0.1	+/- 1.0%
MWWP-000100	05-10	000100	option	16   option	option	06 \ 16	option	Single \ 350	+ \ -5° & 0.1	+/- 1.0%
MWWP-000500	05-10	000500	option	16   option	option	06 \ 16	option	Single \ 350	+ \ -5° & 0.1	+/- 1.0%
MWWP-001000	05-10	001000	option	16   option	option	06 \ 16	option	Single \ 350	+ \ -5° & 0.1	+/- 1.0%
MWWP-002000	05-10	002000	option	16   option	option	06 \ 16	option	Single \ 350	+ \ -5° & 0.1	+/- 1.0%
MWWP-005000	05-10	005000	option	16   option	option	06 \ 16	option	Single \ 350	+ \ -5° & 0.1	+/- 1.0%
MWWP-010000	05-10	010000	option	16   option	option	06 \ 16	option	Single \ 350	+ \ -5° & 0.1	+/- 1.0%
MWWP-050000	05-10	050000	option	16   option	option	06 \ 16	option	Single \ 350	+ \ -5° & 0.1	+/- 1.0%
MWWP-100000	05-10	100000	option	16   option	option	06 \ 16	option	Single \ 350	+ \ -5° & 0.1	+/- 1.0%
MWWP-500000	05-10	500000	option	16   option	option	06 \ 16	option	Single \ 350	+ \ -5° & 0.1	+/- 1.0%
MWWP-800000	05-10	800000	option	16   option	option	06 \ 16	option	Single \ 350	+ \ -5° & 0.1	+/- 1.0%

### Electrical/Mechanical specifications of Thick-film-Potentiometer (multi-turn):

Model	Power watt	Ohm ohm	Housing Dia \ length m.m.	Shaft Dia & length m.m.	Ltotal m.m.	Shaft \ Shaft m.m.	Threading shaft	no. of turn \ travel angle-degree	Initial \ resistive-blacklash	linearity
MWWP-000010	02-05	000010	option	16   option	option	06 \ 16	option	Single \ 350	+ \ -5° & 0.1	+/- 1.0%
MWWP-000100	02-05	000100	option	16   option	option	06 \ 16	option	Single \ 350	+ \ -5° & 0.1	+/- 1.0%
MWWP-000500	02-05	000500	option	16   option	option	06 \ 16	option	Single \ 350	+ \ -5° & 0.1	+/- 1.0%
MWWP-001000	02-05	001000	option	16   option	option	06 \ 16	option	Single \ 350	+ \ -5° & 0.1	+/- 1.0%
MWWP-002000	02-05	002000	option	16   option	option	06 \ 16	option	Single \ 350	+ \ -5° & 0.1	+/- 1.0%
MWWP-005000	02-05	005000	option	16   option	option	06 \ 16	option	Single \ 350	+ \ -5° & 0.1	+/- 1.0%
MWWP-010000	02-05	010000	option	16   option	option	06 \ 16	option	Single \ 350	+ \ -5° & 0.1	+/- 1.0%
MWWP-050000	02-05	050000	option	16   option	option	06 \ 16	option	Single \ 350	+ \ -5° & 0.1	+/- 1.0%
MWWP-100000	02-05	100000	option	16   option	option	06 \ 16	option	Single \ 350	+ \ -5° & 0.1	+/- 1.0%
MWWP-500000	02-05	500000	option	16   option	option	06 \ 16	option	Single \ 350	+ \ -5° & 0.1	+/- 1.0%
MWWP-800000	02-05	800000	option	16   option	option	06 \ 16	option	Single \ 350	+ \ -5° & 0.1	+/- 1.0%

### Electrical/Mechanical specifications of thick-film-Potentiometer (multi-turn):

Model	Power watt	Ohm ohm	Housing Dia \ length m.m.	Shaft Dia & length m.m.	Ltotal m.m.	Shaft \ Shaft m.m.	Threading shaft	no. of turn \ travel angle-degree	Initial \ resistive-blacklash	linearity
MWWP-000010	05-10	000010	option	16   option	option	06 \ 16	option	Single \ 350	+ \ -5° & 0.1	+/- 1.0%
MWWP-000100	05-10	000100	option	16   option	option	06 \ 16	option	Single \ 350	+ \ -5° & 0.1	+/- 1.0%
MWWP-000500	05-10	000500	option	16   option	option	06 \ 16	option	Single \ 350	+ \ -5° & 0.1	+/- 1.0%
MWWP-001000	05-10	001000	option	16   option	option	06 \ 16	option	Single \ 350	+ \ -5° & 0.1	+/- 1.0%
MWWP-002000	05-10	002000	option	16   option	option	06 \ 16	option	Single \ 350	+ \ -5° & 0.1	+/- 1.0%
MWWP-005000	05-10	005000	option	16   option	option	06 \ 16	option	Single \ 350	+ \ -5° & 0.1	+/- 1.0%
MWWP-010000	05-10	010000	option	16   option	option	06 \ 16	option	Single \ 350	+ \ -5° & 0.1	+/- 1.0%
MWWP-050000	05-10	050000	option	16   option	option	06 \ 16	option	Single \ 350	+ \ -5° & 0.1	+/- 1.0%
MWWP-100000	05-10	100000	option	16   option	option	06 \ 16	option	Single \ 350	+ \ -5° & 0.1	+/- 1.0%
MWWP-500000	05-10	500000	option	16   option	option	06 \ 16	option	Single \ 350	+ \ -5° & 0.1	+/- 1.0%
MWWP-800000	05-10	800000	option	16   option	option	06 \ 16	option	Single \ 350	+ \ -5° & 0.1	+/- 1.0%

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# PRECISION WIRE WOUND & THICK-FILM-POTENTIOMETER

ROTARY /HIGH VOLTAGE/NON-INDUCTIVE

## General-electrical-mechanical-environmental-specification:

### **Electrical-Specification:**

Resistance Range: Ohms 1K to 300K  
Standard Resistance Tolerance:  $\pm 10\%$   
Minimum Practical Resistance Tolerance  $\pm 5\%$   
Independent Linearity:  $\pm 0.5\%$   
Minimum Practical Independent Linearity:  $\pm 0.25\%$   
Input Voltage, Maximum 400Vdc not to exceed power rating  
Power Rating, Watts 2.0 at 70°C derating to 0 at 105°C  
Dielectric Strength: 1,000V rms  
Insulation Resistance, Minimum 1,000 Megohms  
Output Smoothness: Maximum 0.1%  
Actual Electrical Travel, Nominal 348°  
Electrical Continuity Travel, Minimum: 350°  
End Voltage, Maximum: 0.5% of Input Voltage  
Tap Tolerance: 0.5% of Input Voltage  
Resolution Essentially infinite  
Temperature Coefficient:  $-800 \text{ ppm}/^\circ\text{C}$   
\* Linearity is measured between 1% and 99% of input voltage.  
\*\* Special tempco available to  $\pm 100 \text{ ppm}/^\circ\text{C}$ .

### **Environmental-Specification :**

Operating Temperature Range Static:  $-65^\circ\text{C}$  to  $+125^\circ\text{C}$   
Dynamic:  $-40^\circ\text{C}$  to  $+125^\circ\text{C}$   
Temperature Cycling 5 cycles,  $-65^\circ\text{C}$  to  $+125^\circ\text{C}$  (10%  $\Delta R$ )  
Shock, 6ms Sawtooth 100G's (0.1ms discontinuity max.)  
Vibration 10G's, 10 to 500 Hz (2%  $\Delta R$ , 0.1ms discontinuity max.)  
Moisture Resistance Five 24-hour cycles (25%  $\Delta R$ )  
High Temperature Exposure Mechanical operation at  $125^\circ\text{C}$  (0.5%  $\Delta R$ )  
Rotational Life 10 mil. Shaft rev.  
Rotational Load Life 10 mil. Shaft rev. (10%  $\Delta R$ )  
Model 3381  
Center Tap CT  
Linearity Tape LT  
Flatted Shaft FS  
Slotted Shaft SS  
Stop ST  
Shaft Lock SL

1K 2K 5K 10K 20K 50K 100K

### **Mechanical-specification:**

Total Mechanical Travel 360° continuous (350°  $\pm 2^\circ$  with stop feature)  
Number of Gangs, Maximum 1  
Weight, Nominal 1.5 oz.  
Shaft Runout, T.I.R., Maximum .0025"  
Pilot Diameter Runout, T.I.R., Maximum .0025"  
Lateral Runout, T.I.R., Maximum .003"  
Shaft Radial Play, Maximum .004"  
Start/Run Torque, Maximum 1.0 oz.-in.  
1 in. 25.4mm  
1 oz. 28.4 gm  
1 oz.-in. 0.007 N-m  
1 lb.-in. 0.113 N-m  
Model 3381  
3381 R 10K T5 L .5 XX  
Model Series  
Resistance Prefix  
Resistance Value  
Optional Special  
Feature Code  
Linearity

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# PRECISION WIRE WOUND & THICK-FILM-POTENTIOMETER

## LINEAR /HIGH VOLTAGE/NON-INDUCTIVE

### Applications:

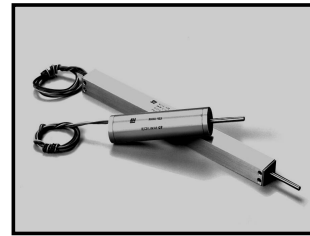
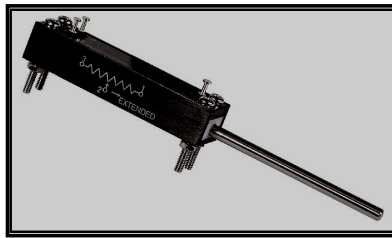
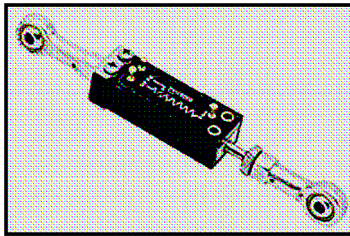
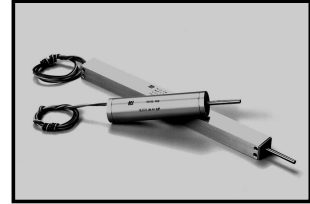
Automobile, avionics, plasma, heavy industrial applications, Power Switchgear/protection, Nuclear, solid state physical application, X-ray, power supplies, Nuclear/power plant, high voltage applications Special performance sensor actuators for linear/rotary motion control, generation//transmission/distribution.

### Introduction:

**MCPR** series of thick film resistance are heavy-duty power resistance using improved version of carbon/metal alloys ensuring better thermal stability over wide power range. These resistances are coated with special siloxane coating/ceramic coating to ensure high dielectric strength of wiring. In some cases these resistance may be offered coating withstanding higher temperature range. End terminal are either tin Coated brass or copper metal. Tailor-made resistances are always encouraged.

### Benefits:

- High flash temperature / Better temperature operating range.
- Easy installation, Non abrasive/ chemically compatible. +++++
- Stable power dissipation over specified working ranging.
- High-energy density/thermal stability/dielectric strength coating.
- Moisture resistance/voltage range upto 200 K.V.
- Better thermal conductivity/superior aging effect



PLANAR CARBON FILM RESISTANCE

HIGH POWER CARBON FILM RESISTANCE

HIGH POWER AXIAL LEAD CARBON FILM RESISTANCE

### Electrical/Mechanical specifications of Wirewound-Potentiometer (single-turn-multi-turn):

Model	Power watt	Ohm ohm	Housing Dia \length m.m.	O.D. Length & m.m.	Shaft Dial & length m.m.	Ltotal m.m.	Shaft \ Shaft m.m.	Threading shaft	Rmin	Rmax
MWWP-000010	02-10	000010	115	29	16   option	option	06 \ 16	option	R10	4R0
MWWP-000100	02-10	000100	115	29	16   option	option	06 \ 16	option	R10	4R0
MWWP-000500	02-10	000500	140	29	16   option	option	06 \ 16	option	R10	5R0
MWWP-001000	02-10	001000	140	29	16   option	option	06 \ 16	option	R10	5R0
MWWP-002000	02-10	002000	200	29	16   option	option	06 \ 16	option	R10	7R0
MWWP-005000	02-10	005000	200	29	16   option	option	06 \ 16	option	R10	7R0
MWWP-010000	02-10	010000	250	40	16   option	option	06 \ 16	option	R10	10R0
MWWP-050000	02-10	050000	250	40	16   option	option	06 \ 16	option	R10	10R0
MWWP-100000	02-10	100000	300	40	16   option	option	06 \ 16	option	R10	10R0
MWWP-500000	02-10	500000	300	40	16   option	option	06 \ 16	option	R10	10R0
MWWP-800000	02-10	800000	300	40	16   option	option	06 \ 16	option	R10	18R0

### Electrical/Mechanical specifications of Wirewound-Potentiometer (single-turn-multi-turn):

Model	Power watt	Ohm ohm	Housing Dia \length m.m.	O.D. Length & m.m.	Shaft Dial & length m.m.	Ltotal m.m.	Shaft \ Shaft m.m.	Threading shaft	Rmin	Rmax
MWWP-000010	02-10	000010	115	29	16   option	option	06 \ 16	option	R10	4R0
MWWP-000100	02-10	000100	115	29	16   option	option	06 \ 16	option	R10	4R0
MWWP-000500	02-10	000500	140	29	16   option	option	06 \ 16	option	R10	5R0
MWWP-001000	02-10	001000	140	29	16   option	option	06 \ 16	option	R10	5R0
MWWP-002000	02-10	002000	200	29	16   option	option	06 \ 16	option	R10	7R0
MWWP-005000	02-10	005000	200	29	16   option	option	06 \ 16	option	R10	7R0
MWWP-010000	02-10	010000	250	40	16   option	option	06 \ 16	option	R10	10R0
MWWP-050000	02-10	050000	250	40	16   option	option	06 \ 16	option	R10	10R0
MWWP-100000	02-10	100000	300	40	16   option	option	06 \ 16	option	R10	10R0
MWWP-500000	02-10	500000	300	40	16   option	option	06 \ 16	option	R10	10R0
MWWP-800000	02-10	800000	300	40	16   option	option	06 \ 16	option	R10	18R0

Company makes no warranty expressed or implied. concerning the use of this product and users shall assume all risk of use or handling whether or not in accordance with directions suggestion, or used singly or in combination with other product.

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# PRECISION WIRE WOUND & THICK-FILM-POTENTIOMETER

## ROTARY /HIGH VOLTAGE/NON-INDUCTIVE

### Electrical/Mechanical specifications of Wirewound-Potentiometer (single-turn \multi-turn):

Model	Power watt	Ohm ohm	Housing Dia \length m.m.	Shaft Dia & length m.m.	Ltotal m.m.	Shaft \ Shaft m.m.	Threading shaft	no.ofturn \ travel angle-degree	Initial \resistive-blacklash	linearity
MWWP-00010	02-05	00010	option	16   option	option	06 \ 16	option	Single \ 350	+ \ -5° & 0.1	+ / - 1.0%
MWWP-000100	02-05	000100	option	16   option	option	06 \ 16	option	Single \ 350	+ \ -5° & 0.1	+ / - 1.0%
MWWP-000500	02-05	000500	option	16   option	option	06 \ 16	option	Single \ 350	+ \ -5° & 0.1	+ / - 1.0%
MWWP-001000	02-05	001000	option	16   option	option	06 \ 16	option	Single \ 350	+ \ -5° & 0.1	+ / - 1.0%
MWWP-002000	02-05	002000	option	16   option	option	06 \ 16	option	Single \ 350	+ \ -5° & 0.1	+ / - 1.0%
MWWP-005000	02-05	005000	option	16   option	option	06 \ 16	option	Single \ 350	+ \ -5° & 0.1	+ / - 1.0%
MWWP-010000	02-05	010000	option	16   option	option	06 \ 16	option	Single \ 350	+ \ -5° & 0.1	+ / - 1.0%
MWWP-050000	02-05	050000	option	16   option	option	06 \ 16	option	Single \ 350	+ \ -5° & 0.1	+ / - 1.0%
MWWP-100000	02-05	100000	option	16   option	option	06 \ 16	option	Single \ 350	+ \ -5° & 0.1	+ / - 1.0%
MWWP-500000	02-05	500000	option	16   option	option	06 \ 16	option	Single \ 350	+ \ -5° & 0.1	+ / - 1.0%
MWWP-800000	02-05	800000	option	16   option	option	06 \ 16	option	Single \ 350	+ \ -5° & 0.1	+ / - 1.0%

### Electrical/Mechanical specifications of Wirewound-Potentiometer (single-turn \multi-turn):

Model	Power watt	Ohm ohm	Housing Dia \length m.m.	Shaft Dia & length m.m.	Ltotal m.m.	Shaft \ Shaft m.m.	Threading shaft	no.ofturn \ travel angle-degree	Initial \resistive-blacklash	linearity
MWWP-00010	05-10	00010	option	16   option	option	06 \ 16	option	Single \ 350	+ \ -5° & 0.1	+ / - 1.0%
MWWP-000100	05-10	000100	option	16   option	option	06 \ 16	option	Single \ 350	+ \ -5° & 0.1	+ / - 1.0%
MWWP-000500	05-10	000500	option	16   option	option	06 \ 16	option	Single \ 350	+ \ -5° & 0.1	+ / - 1.0%
MWWP-001000	05-10	001000	option	16   option	option	06 \ 16	option	Single \ 350	+ \ -5° & 0.1	+ / - 1.0%
MWWP-002000	05-10	002000	option	16   option	option	06 \ 16	option	Single \ 350	+ \ -5° & 0.1	+ / - 1.0%
MWWP-005000	05-10	005000	option	16   option	option	06 \ 16	option	Single \ 350	+ \ -5° & 0.1	+ / - 1.0%
MWWP-010000	05-10	010000	option	16   option	option	06 \ 16	option	Single \ 350	+ \ -5° & 0.1	+ / - 1.0%
MWWP-050000	05-10	050000	option	16   option	option	06 \ 16	option	Single \ 350	+ \ -5° & 0.1	+ / - 1.0%
MWWP-100000	05-10	100000	option	16   option	option	06 \ 16	option	Single \ 350	+ \ -5° & 0.1	+ / - 1.0%
MWWP-500000	05-10	500000	option	16   option	option	06 \ 16	option	Single \ 350	+ \ -5° & 0.1	+ / - 1.0%
MWWP-800000	05-10	800000	option	16   option	option	06 \ 16	option	Single \ 350	+ \ -5° & 0.1	+ / - 1.0%

### Electrical/Mechanical specifications of Wirewound-Potentiometer (single-turn \multi-turn):

Model	Power watt	Ohm ohm	Housing Dia \length m.m.	Shaft Dia & length m.m.	Ltotal m.m.	Shaft \ Shaft m.m.	Threading shaft	no.ofturn \ travel angle-degree	Initial \resistive-blacklash	linearity
MWWP-00010	02-10	00010	option	16   option	option	06 \ 16	option	Single \ 350	+ \ -5° & 0.1	+ / - 1.0%
MWWP-000100	02-10	000100	option	16   option	option	06 \ 16	option	Single \ 350	+ \ -5° & 0.1	+ / - 1.0%
MWWP-000500	02-10	000500	option	16   option	option	06 \ 16	option	Single \ 350	+ \ -5° & 0.1	+ / - 1.0%
MWWP-001000	02-10	001000	option	16   option	option	06 \ 16	option	Single \ 350	+ \ -5° & 0.1	+ / - 1.0%
MWWP-002000	02-10	002000	option	16   option	option	06 \ 16	option	Single \ 350	+ \ -5° & 0.1	+ / - 1.0%
MWWP-005000	02-10	005000	option	16   option	option	06 \ 16	option	Single \ 350	+ \ -5° & 0.1	+ / - 1.0%
MWWP-010000	02-10	010000	option	16   option	option	06 \ 16	option	Single \ 350	+ \ -5° & 0.1	+ / - 1.0%
MWWP-050000	02-10	050000	option	16   option	option	06 \ 16	option	Single \ 350	+ \ -5° & 0.1	+ / - 1.0%
MWWP-100000	02-10	100000	option	16   option	option	06 \ 16	option	Single \ 350	+ \ -5° & 0.1	+ / - 1.0%
MWWP-500000	02-10	500000	option	16   option	option	06 \ 16	option	Single \ 350	+ \ -5° & 0.1	+ / - 1.0%
MWWP-800000	02-10	800000	option	16   option	option	06 \ 16	option	Single \ 350	+ \ -5° & 0.1	+ / - 1.0%

### Electrical/Mechanical specifications of Wirewound-Potentiometer (single-turn \multi-turn):

Model	Power watt	Ohm ohm	Housing Dia \length m.m.	Shaft Dia & length m.m.	Ltotal m.m.	Shaft \ Shaft m.m.	Threading shaft	no.ofturn \ travel angle-degree	Initial \resistive-blacklash	linearity
MWWP-00010	05-10	00010	option	16   option	option	06 \ 16	option	Single \ 350	+ \ -5° & 0.1	+ / - 1.0%
MWWP-000100	05-10	000100	option	16   option	option	06 \ 16	option	Single \ 350	+ \ -5° & 0.1	+ / - 1.0%
MWWP-000500	05-10	000500	option	16   option	option	06 \ 16	option	Single \ 350	+ \ -5° & 0.1	+ / - 1.0%
MWWP-001000	05-10	001000	option	16   option	option	06 \ 16	option	Single \ 350	+ \ -5° & 0.1	+ / - 1.0%
MWWP-002000	05-10	002000	option	16   option	option	06 \ 16	option	Single \ 350	+ \ -5° & 0.1	+ / - 1.0%
MWWP-005000	05-10	005000	option	16   option	option	06 \ 16	option	Single \ 350	+ \ -5° & 0.1	+ / - 1.0%
MWWP-010000	05-10	010000	option	16   option	option	06 \ 16	option	Single \ 350	+ \ -5° & 0.1	+ / - 1.0%
MWWP-050000	05-10	050000	option	16   option	option	06 \ 16	option	Single \ 350	+ \ -5° & 0.1	+ / - 1.0%
MWWP-100000	05-10	100000	option	16   option	option	06 \ 16	option	Single \ 350	+ \ -5° & 0.1	+ / - 1.0%
MWWP-500000	05-10	500000	option	16   option	option	06 \ 16	option	Single \ 350	+ \ -5° & 0.1	+ / - 1.0%
MWWP-800000	05-10	800000	option	16   option	option	06 \ 16	option	Single \ 350	+ \ -5° & 0.1	+ / - 1.0%

**MOTORON SEMICONDUCTORS CORPORATION**

11, Shri Nagar Colony, Shakti Nagar Extension, Delhi-110052 Tel: 91-011-23648181/23655454

[motoronenergy@hotmail.com](mailto:motoronenergy@hotmail.com)

# PRECISION WIRE WOUND & THICK-FILM-POTENTIOMETER

## General-electrical-mechanical-environmental-specification:

### Electrical-Specification :

Resistance Range: Ohms 1K to 300K  
 Standard Resistance Tolerance:  $\pm 10\%$   
 Minimum Practical Resistance Tolerance  $\pm 5\%$   
 Independent Linearity:  $\pm 0.5\%$   
 Minimum Practical Independent Linearity:  $\pm 0.25\%$   
 Input Voltage, Maximum 400Vdc not to exceed power rating  
 Power Rating, Watts 2.0 at 70°C derating to 0 at 105°C  
 Dielectric Strength: 1,000V rms  
 Insulation Resistance, Minimum 1,000 Megohms  
 Output Smoothness: Maximum 0.1%  
 Actual Electrical Travel, Nominal 348°  
 Electrical Continuity Travel, Minimum: 350°  
 End Voltage, Maximum: 0.5% of Input Voltage  
 Tap Tolerance: 0.5% of Input Voltage  
 Resolution Essentially infinite  
 Temperature Coefficient:  $-800$  ppm/°C  
 \* Linearity is measured between 1% and 99% of input voltage.  
 \*\* Special tempco available to  $\pm 100$  ppm/°C.

### Environmental-Specification :

Operating Temperature Range Static:  $-65^{\circ}\text{C}$  to  $+125^{\circ}\text{C}$   
 Dynamic:  $-40^{\circ}\text{C}$  to  $+125^{\circ}\text{C}$   
 Temperature Cycling 5 cycles,  $-65^{\circ}\text{C}$  to  $+125^{\circ}\text{C}$  (10%  $\Delta R$ )  
 Shock, 6ms Sawtooth 100G's (0.1ms discontinuity max.)  
 Vibration 10G's, 10 to 500 Hz (2%  $\Delta R$ , 0.1ms discontinuity max.)  
 Moisture Resistance Five 24-hour cycles (25%  $\Delta R$ )  
 High Temperature Exposure Mechanical operation at  $125^{\circ}\text{C}$  (0.5%  $\Delta R$ )  
 Rotational Life 10 mil. Shaft rev.  
 Rotational Load Life 10 mil. Shaft rev. (10%  $\Delta R$ )  
 Center Tap CT  
 Linearity Tape LT  
 Flatted Shaft FS  
 Slotted Shaft SS/MS/BRASS  
 Stop ST  
 Shaft Lock SL  
 1K 2K 5K 10K 20K 50K 100K

### Mechanical-specification:

Total Mechanical Travel 360° continuous ( $350^{\circ} \pm 2^{\circ}$  with stop feature)  
 Number of Gangs: Maximum 1  
 Weight, Nominal 1.5 oz.  
 Shaft Runout, T.I.R., Maximum .0025"  
 Pilot Diameter Runout, T.I.R., Maximum .0025"  
 Lateral Runout, T.I.R., Maximum .003"  
 Shaft Radial Play, Maximum .004"  
 Start/Run Torque, Maximum 1.0 oz.-in.  
 1 in. 25.4mm  
 1 oz. 28.4 gm  
 1 oz.-in. 0,007 N-m  
 1 lb.-in. 0,113 N-m  
 Model 3381

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