

FCP50A - 1-Turn Potentiometer

- Standard resistance values 1 kΩ to 10 kΩ
- Travel 350°
- Linearity tolerance: standard and precision class
- Servo-mount

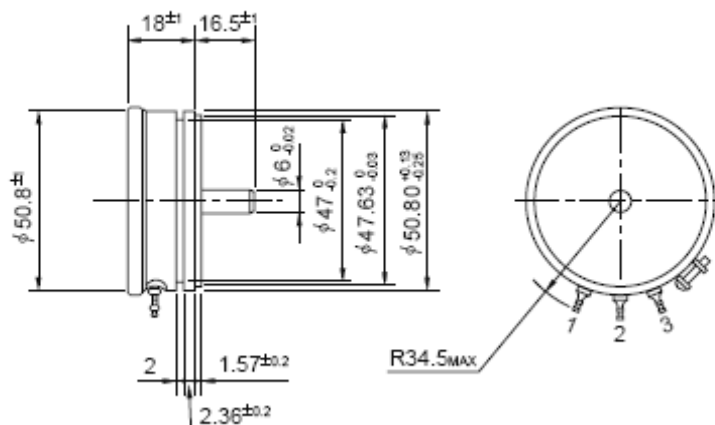


These 1-turn Potentiometers are fully continuous rotation potentiometers without stopper. They are highly reliable in offering an excellent quality as well as a prolonged rotating life. The resistive element is made of Conductive Plastic (FCP-A). It is respectively contained in an aluminium housing case processed by electrolytic corrosion-proof plating in black color with performances and dimensions according to U.S. MIL, and V.R.C.I. Standards. They are light in weight and small in size as well as of rigid construction.

■ General Specifications

Standard Resistance Values:	1 kΩ, 2 kΩ, 5 kΩ, 10 kΩ
Special Practical Resistance Values:	500 Ω, 20 kΩ, 50 kΩ, 100 kΩ, 200 kΩ, 500 kΩ
Total Resistance Tolerance:	Standard Class ±10 % (K)
Independent Linearity Tolerance:	Standard Class ±0,5 %
	Precision Class ±0,2 %
	Super Precision Class ±0,05 %
Resolution:	Essentially infinite
Output Smoothness:	Below 0,1 % against input voltage
Contact Resistance Variation:	Below 2 % C.R.V.
Power Rating:	3,0 W
Electrical Travel:	350° ±5°
Mechanical Travel:	360° (endless)
Insulation Resistance:	Over 1.000 MΩ at 1.000 VDC
Dielectric Strength:	1 minute at 1.000 VAC
Starting Torque:	Below 4 mNm (40 gf•cm)
Resistance Temperature Coefficient:	±400 ppm./°C
Mass:	Approx. 80 g
Resistive Element Type:	Conductive Plastic

■ Standard Dimensions



■ Environmental Performance

Operating Temperature Range	-55°C...+125°C
Temperature Cycle	5 cycles under -55°C...+125°C Total resistance value variation: below ±10 % :: No mechanical damage
Exposure at Low Temperature	24 hours at -55°C Total resistance value variation: below ±5 % Output voltage variation: below 0,5% :: No mechanical damage
Exposure at High Temperature	1.000 hours at 125°C Total resistance value variation: below ±10 % Output voltage variation: below 0,5% :: No mechanical damage
Vibration	10 Hz to 2.000 Hz 147 m/s ² Total resistance value variation: below ±2 % :: No mechanical and electrical damage
Shock	490 m/s ² 11 ms 18 times Total resistance value variation: below ±1 % :: No mechanical and electrical damage
Moisture Resistance	40°C 95 %RH 120 hours Total resistance value variation: below ±10 % :: Insulation resistance: over 10 MΩ
Rotational Life Expectancy (at 25°C)	No load at 400 r.p.m., inverting every 15 minutes 50.000.000 shaft revolutions Total resistance value variation: below ±10 % against initial value Independent linearity tolerance: below 150% of specified value Output smoothness: below 150% of specified value

Notes:

2. In case of potentiometers with special resistance values and special specifications, the above performances may change and therefore, please consult us in advance, separately.
3. As for operating temperature range, we can not guarantee that all values of performances can satisfy within this operating temperature range.
4. The above values of performances based on each testing were measured after each testing completed, respectively, under standard conditions. As for the values during testing and other values not mentioning in the above table, please ask us separately.

■ Options

- :: Extra taps (Available up to 3 taps)
- :: Multi-ganged (Available up to 7 gangs, Housing length is extended by 12 mm per 1 gang)
- :: Shaft with front and rear extension (Rear shaft with 6 mm dia. and 15 mm length)
- :: With stopper (Rotating angle becomes 320° and stopper strength is 0,9 Nm [9 kgfcm])
- :: Special electrical travel
- :: Shaft dia. (Ø6,35 mm) with inch dimensions
- :: Special machining on the shaft.

Our policy is to improve specification of our products continuously, so technical and production details can be changed without any notice.