

PRECISION MOTOR- POTENTIOMETER

SAKAE Motor-Potentiometer Series are a kind of servo units consisting of a precision potentiometer combined with a reduction gear mechanism and a coreless D.C. motor. Their housing is compact and strong based on our own design and there are versatile items in this series among which you can choose ones to be suitably convenient for the design of your own applications.

Precise mechanism, high reliability, extreme stability, high power for input as well as output and long life expectancy can satisfy your various requirements.

THE NOMENCLATURE OF SAKAE MOTOR-POTENTIOMETER SERIES

S MPH 22 B 7 25HP-10 5 kΩ 0.25

● **Special Specifications**

S means the potentiometer with special mechanical specifications.

● **Model No.**

MPH means motor-potentiometer.

● **Diameter**

22 means approximate outer diameter of the housing in metric system.

The 4 standard diameters are available: 22mm, 30mm, 35mm and 46mm.

● **Code of Coupled Motor**

B means the code of a coupled motor. There are 3 codes for coupled motor: **A, B & C**.

● **Accuracy of Coupled Potentiometer**

0.25 means independent linearity tolerance $\pm 0.25\%$ of the coupled potentiometer.

● **Coupled Potentiometer's Model No.**

25HP-10 5kΩ means a coupled potentiometer's model number and total resistance value, namely, our model 25HP-10, 5kΩ.

● **Code of Coupled Reduction Gear**

7 means the code of the reduction gear incorporated in the housing. There are many kinds of reduction gear, of which details please refer to the specific tables of each models.

SELECTION GUIDE

● **Motor Potentiometer**

Model No.	Coupled Motor	Reduction Gear	Features
MPH22	A, B	5 ~ 11	Small sized unit for general and universal use. Panel mounting type for 1-turn and 10-turn.
MPH30	A, B	5 ~ 11	Chassis mounting type for 1-turn and 10-turn.
MPH35	C	25 ~ 32	Panel mounting type for 1-turn use.
MPH46	C	25 ~ 32	Panel mounting type for 10-turn use.

Suggestions and cautions on the use of motor-potentiometers

- 1) Our standard input voltage for the motor is 6 V.D.C. and other input voltages such as 12 V.D.C., 24 V.D.C., and etc. are also available on request.
As the rated voltage of motor is usually lower than that of potentiometer, when checking the insulation resistance and dielectric strength of the motor-potentiometer, please do not load over 100 V on the unit.
- 2) The rotating direction of the shaft is depending on a reduction gear ratio.
Please confirm the rotating direction to avoid any inconveniences.
- 3) We can supply our motor-potentiometers with slipping torque with up to approx. 0.1N · m (1kgf · cm). Our standard slipping torque is 50mN · m (500gf · cm), unless otherwise specified. But the load to the shaft is to be adjusted within 1/3 against slipping torque.
- 4) When rotating the motor through the amplifier, the motor-speed does not always become a linear function. The life-expectancy of motor itself which is used for our motor-potentiometers is 1,000 hours under unloaded condition. However, the life-expectancy can be affected by the electric load during the operation.