⚠Caution · Notice

■ Notice (Storage and Operating Conditions)

1. Store in temperatures of -10 to +40°C and relative humidity of 30 to 85%.
2. Do not store in or near corrosive gases.
3. Use within six months after delivery.
4. Open the package just before using.
5. Do not store under direct sunlight.
6. Do not use the rotary position sensor under the following environmental conditions. If you use the rotary position sensor in an environment other than listed below, please consult a Murata factory representative prior to using.
   (1) Corrosive gasses atmosphere
   (Ex. Chlorine gas, Hydrogen sulfide gas, Ammonia gas, Sulfuric acid gas, Nitric oxide gas, etc.)
   (2) In liquid
   (Ex. Water, Oil, Medical liquid, Organic solvent, etc.)
   (3) Dusty/dirty atmosphere
   (4) Direct sunlight
   (5) Static voltage nor electric/magnetic fields
   (6) Direct sea breeze
   (7) Other variations of the above

■ Notice (Others)

1. Please make sure the connecting impedance is not less than 1M ohm. The rotary position sensor is designed to connect the output terminal and A/D port of the microprocessor directly. Therefore, connecting impedance presupposes certain M ohm and the contact resistance is set high.
2. To minimize processing errors and rare cases of noise influence when data is installed, please consider the following when programming your software.
   (1) Data install should be done plural times and applied the mean value.
   (2) Data considered as error should be invalid.
   (3) If suspicious data is found, the data should be re-installed.
3. Before using rotary position sensor, please test after assembly in your particular mass production system.
4. MURATA cannot guarantee rotary position sensor integrity when used under conditions other than those specified in this document.

■ Notice (Handling)

Uncontrolled mechanical force (except usual rotation on the hollow rotor of product) may cause a change of electrical characteristics, an increase of rotational torque or mechanical damage of the product.
Therefore, please consider the following points for your design.

1. The product must be soldered by the terminals.
   Do not affix by screw clamping to support board as this could cause mechanical deformation.
2. The connecting shaft must be sustained by the bearing.
   No uncontrolled force should be applied to the hollow rotor.

■ Notice (Soldering and Mounting)

1. Soldering
   (1) SV series can be soldered by reflow soldering method and soldering iron. Do not use flow soldering method (dipping).
   (2) The dimension of land pattern used should be Murata's standard land pattern at reflow soldering. Excessive land area may cause displacement due to the effect of the surface tension of the solder. Insufficient land area may cause insufficient soldering strength on PCB (SMD Type).
   (3) Soldering Conditions
   Refer to the temperature profile. If the soldering conditions are not suitable, e.g., excessive time and/or excessive temperature, the rotary position sensor may deviate from the specified characteristics.
   (4) The amount of solder is critical. Insufficient amounts of solder can lead to insufficient soldering strength on PCB. Excessive amounts of solder may cause bridging between the terminals.
   (5) The soldering iron should not come in contact with the cover of the rotary position sensor. If such contact does occur, the rotary position sensor may be damaged.
2. Mounting
   (1) Use PCB hole to meet the pin of the rotary position sensor. If the rotary position sensor is inserted into insufficient PCB hole, the rotary position sensor may be damaged by mechanical stress (Lead type).
   (2) Do not apply excessive force, preferable 9.8N max. (Ref. 1kgf) when the rotary position sensor is mounted to the PCB.
   (3) Do not warp and/or bend PCB to prevent the rotary position sensor from breakage.
3. Cleaning
   Cannot be cleaned because of open construction.