

## {Starting Torque (Starting Force)}

Determined by measuring a torque (operating force) necessary to turn (move) the shaft (lever) for the first time after allowing the test piece to stand for a long period of time. Unless otherwise specified, measurement shall be made at an ambient temperature of 5 to 35°C, and the shaft rotational speed shall be 60° per second and the lever moving speed 20mm per second.

Remarks: To be specified only when required in particular

## {Shaft Wobble}

Determined by measuring the amount of deflection at a position of 30mm from the reference surface with a bending moment of 0.1N·m (50mN·m for insulated shaft) applied perpendicularly to the shaft from 180° different directions at a point within 3mm from the place where a smooth cylindrical surface of the shaft ceases to exist. However, if the length of the shaft is less than 30mm, proportional calculation shall be used.

## {Allowable Operating Torque for Shaft (Lever)}

With the shaft (lever) placed at the termination of terminal 1, a specified torsional moment (force) shall be applied in that direction for 10 seconds. Next, the shaft (lever) shall be placed at the termination of terminal 3 and a specified torsional moment (force) shall be applied similarly, to check the control part and other related sections for any deformation or breakage.

## {Push-pull Strength (Lever Push-pull Strength)}

A specified force shall be applied in the axial direction of the shaft (lever) for 10 seconds to check the control part and other sections for any deformation or breakage and for operating condition.

## Resistance Taper

### {Resistance Taper}

With the shaft (lever) placed in the specified position, resistance taper shall be determined by measuring the voltage between the specified terminals (between terminals 1 and 2 or between terminals 2 and 3) and calculating the percentage in reference to the voltage between terminals 1 and 3.

Reference: Standard resistance tapers in reference to rotational angles (travels) are as shown below.

