



Large voltage enables to measure small torque

- Two types are available: simple installation and stationary.

To obtain a large output voltage with a low torque, a unique cantilever system has been adopted for the detection mechanism. While all models are the stationary type with mounting legs, these legs will be easily removed. About measurement instruments, carrier-type strain amplifiers, DPM series, are recommended.

*For DPM series, see page 3-5 and 3-7.

Specifications

Performance

| | |
|----------------|---------------------|
| Rated Capacity | See table below. |
| Nonlinearity | Within $\pm 1\%$ RO |
| Hysteresis | Within $\pm 1\%$ RO |
| Rated Output | 0.75 to 1.5 mV/V |

Environmental Characteristics

| | |
|------------------------------|---------------------------|
| Safe Temperature | 0 to 60°C |
| Compensated Temperature | 0 to 60°C |
| Temperature Effect on Zero | Within $\pm 0.03\%$ RO/°C |
| Temperature Effect on Output | Within $\pm 0.03\%$ /°C |

Electrical Characteristics

| | |
|------------------------|--|
| Safe Excitation | 4 V AC or DC |
| Recommended Excitation | 1 to 4 V AC or DC |
| Input Resistance | 350 $\Omega \pm 0.5\%$ |
| Output Resistance | 350 $\Omega \pm 0.5\%$ |
| Rotation-induced Noise | 12 $\times 10^{-6}$ strain p-p or less |
| Cable | TT-04, 4-conductor (0.3 mm ²) chloroprene shielded cable, 7.6 mm diameter by 5 m long, terminated with connector plugs PRC03-12A10-7M at both ends (Shield wire is connected to the case.) |

Mechanical Properties

| | |
|-------------------------|--|
| Safe Overloads | 120% |
| Max. Speed | 4000 rpm |
| Torsion Angle | See table below. |
| Torsion Spring Constant | See table below. |
| Moments of Inertia | Approx. 0.081 $\times 10^{-4}$ kg·m ² |
| Weight | Approx. 560 g (TP-D), approx. 610 g (TP-E) |

Optional Accessories

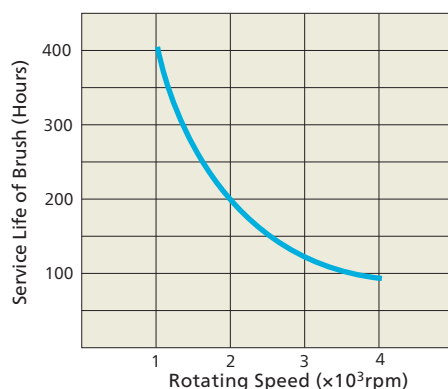
Dedicated flexible couplings FC-1B/FC-2B

| Models | Rated Capacity | Torsion Angle (Rated) (Approx.) | Torsion Spring Constant (Approx.) |
|-------------|----------------|---------------------------------|-----------------------------------|
| ●TP-2KCD,E | 0.2 N·m | 0.027 rad | 7.4 N·m/rad |
| ●TP-5KCD,E | 0.5 N·m | 0.017 rad | 29.4 N·m/rad |
| ●TP-10KCD,E | 1 N·m | 0.015 rad | 66.7 N·m/rad |
| ●TP-20KCD,E | 2 N·m | 0.013 rad | 153.8 N·m/rad |

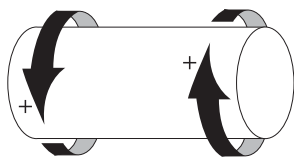
●For delivery date, please contact us.

Note: Starting torque: Approx. 0.02 N·m (Reference value)

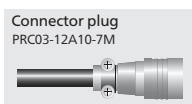
Service Life of Brush



Note: Worn brushes will be replaced for value. Contact us.

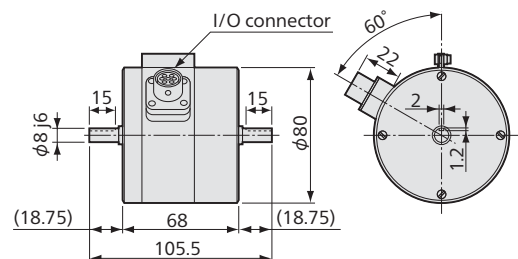


+ Output direction

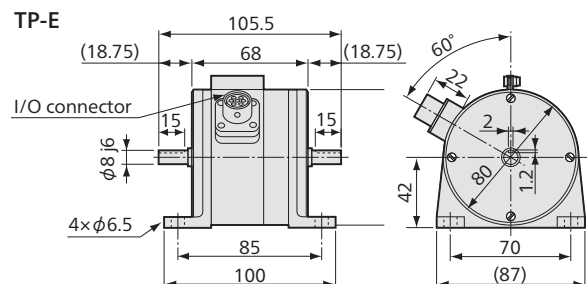


Dimensions

TP-D



TP-E



*The height tolerance until the shaft conforms to JIS B 0405 m class while the key seat dimension conforms to JIS standards. Please contact us regarding the tolerance.