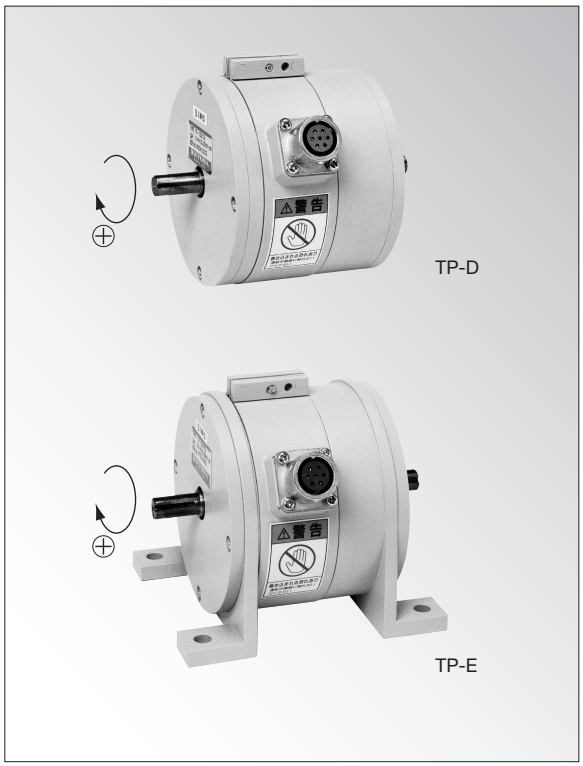
TP-D,E

Small-Sized Torque Transducers



●For Small Torque Measurement ●0.2 to 2 N·m
●Slip Ring Type

Specifications

Performance

Rated Capacity :	See table below.
Nonlinearity :	Within±1% RO
Hysteresis :	Within±1% RO
Rated Output :	0.75 to 1.5mV/V (1500 to 3000μm/m)

Environmental Characteristics

Safe Temperature Range :	0 to 60℃
Compensated Temperature Range :	0 to 60℃
Temperature Effect on Zero Balance :	Within±0.03% RO/℃
Temperature Effect on Output :	Within±0.03%/℃

Electrical Characteristics

Recommended Excitation Voltage :	1 to 4V AC or DC
Input Resistance :	350Ω±0.5%
Output Resistance :	350Ω±0.5%
Rotation-Induced Noise :	12μm/m_{p-p} or less
Cable :	4-conductor (0.3mm^2) chloroprene shielded cable,
	7.6 mm diameter by 5 m long, terminated with connector plug at
	both ends (Shield wire is connected to mainframe.)

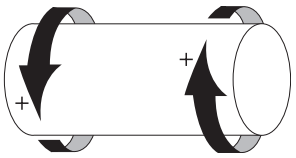
Mechanical Properties

Safe Overload Rating :	120%
Max. Speed :	4000 rpm
Angle of Torsion :	See table below.
Torsion Spring Constant :	See table below.
Moment of Inertia :	Approx. 0.081 x10^{-4} kg·m^2
Weight :	Approx. 560 g (TP-D),Approx. 610 g (TP-E)

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

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

Note : Starting torque: Approx. 0.02 N·m (reference value)
※For the optional dedicated flexible coupling, refer to page 2-124.
For connection of the torque transducer with motor and loaded equipment, refer to page 2-124.



+ Output direction

Large Voltage Enables to Measure Small Torque

●Two types are available : simple installation and stationary.

TP-M series high-speed torque transducers can measure torque at a maximum 15000 rpm, and are available with a rated capacity ranging from 0.2 to 5 N·m. An overload prevention stopper avoids large torque generated in motor startup, etc. While all models are the stationary type with mounting legs, these legs can be easily removed. About measurement instruments, carrier-type strain amplifiers, DPM series, are recommended.

※For DPM series, refer to page 3-5.