Optical Trasmission Torque Transducer

TMRS Series

Features

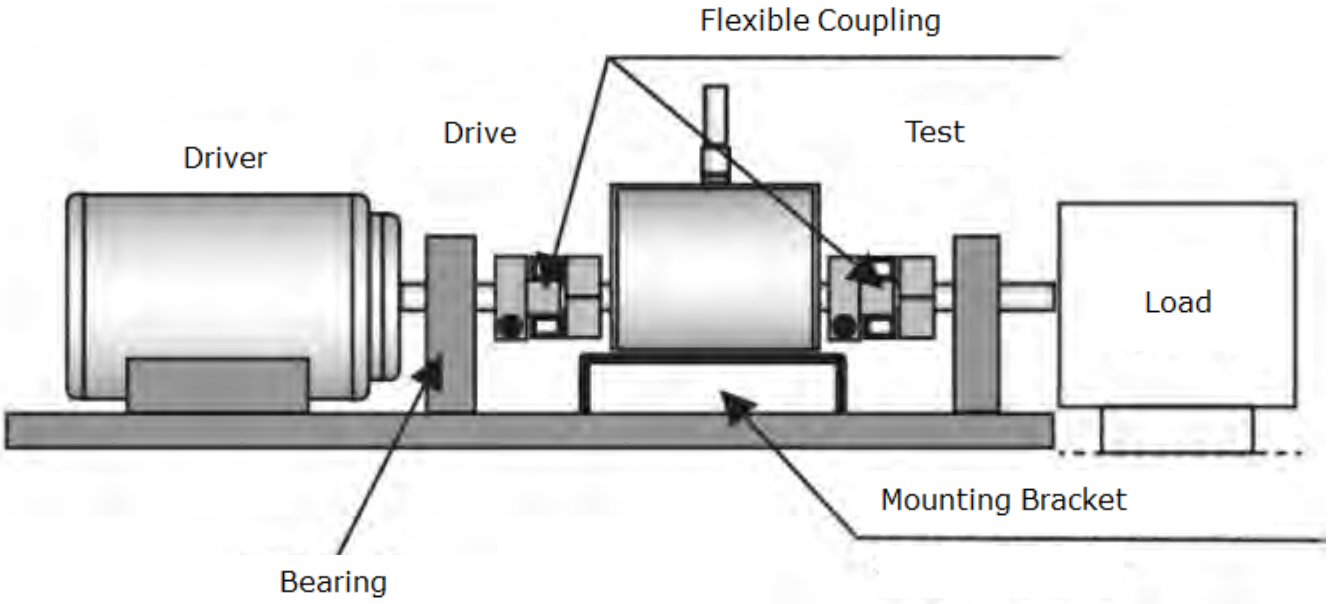
High zero stability and reduced rotational zero movement
Net zero travel at 25,000rpm is 0.56% R.O.
Compact and lightweight design
Ultimate overload 500%F.S.
Fast response 6kHz (sampling period 60ksp)
A/Z function performs zero point correction

Outline

Characteristic	Value
Rated Capacity	0.5Nm,1Nm,2Nm
Accuracy	0.03% R.O.
Max. Rotation	25,000 rpm
High Response	6kHz
Size	Case: 54 x 50 x 40mm
	Shaft Length: 84mm

Mounting Method

- This product can be used in either vertical or horizontal directions
- Standard usage is to connect both shaft ends of TMRS with a flexible coupling as shown below
- Torque and rotational pulse signals from TMRS can be used to measure torque and dynamics with respect to rotational speed



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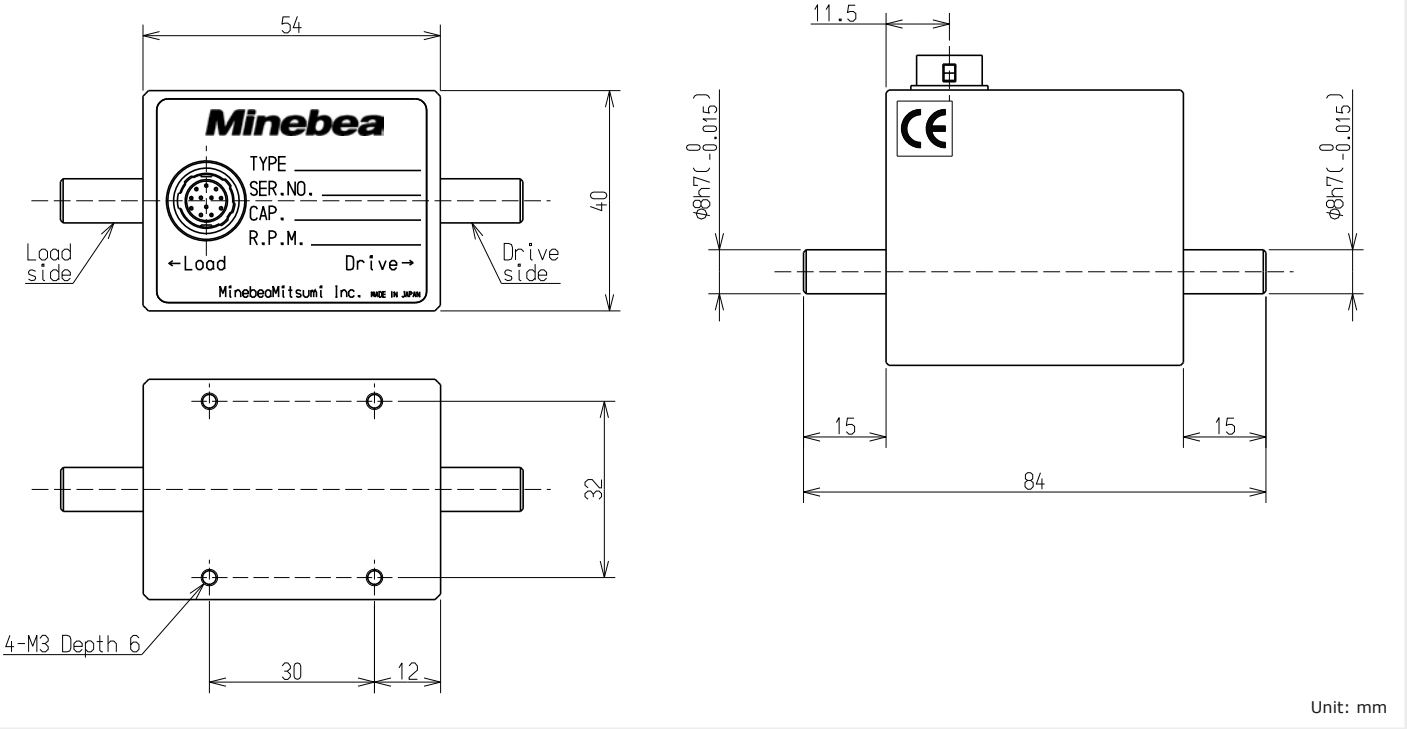
Mounting Method

Rated Capacity	±0.5Nm	±1Nm	±2Nm
Safe Overload	500 %R.C.		
Measurement Accuracy	±0.03 %R.O. (including linearity, hysteresis and repeatability)		
Power Supply	DC24V±15%		
Power Consumption	0.2 A (max.)		
Output Range	±10V, built-in amplifier, voltage output		
Pulse Output	4-pulse output per revolution/rotation Open collector output Rated DC30V 10mA		
Temp. Range (safe)	-20 °C to 60 °C		
Temp. Effect on Zero	0.1 %R.O./10 °C		
Temp. Effect on Output	0.1 %LOAD/10 °C		
Maximum Rotation	25,000 rpm		
Inertia Moment	1.46 kg·mm²	1.48 kg·mm²	1.52 kg·mm²
Torsional Rigidity	236 N·m/rad	318 N·m/rad	531 N·m/rad
Torsional Peculiar Pitch	5.01 kHz	5.67 kHz	6.61 kHz
Safe Bending Load Accuracy	50N	60N	70N
Safe Thrust Load Accuracy	5N	10N	20N
Casing size (W x H x D)	54 x 50 x 40mm (excluding protruding parts)		
Weight	Approx. 240g		

Dimensions



Unit: mm