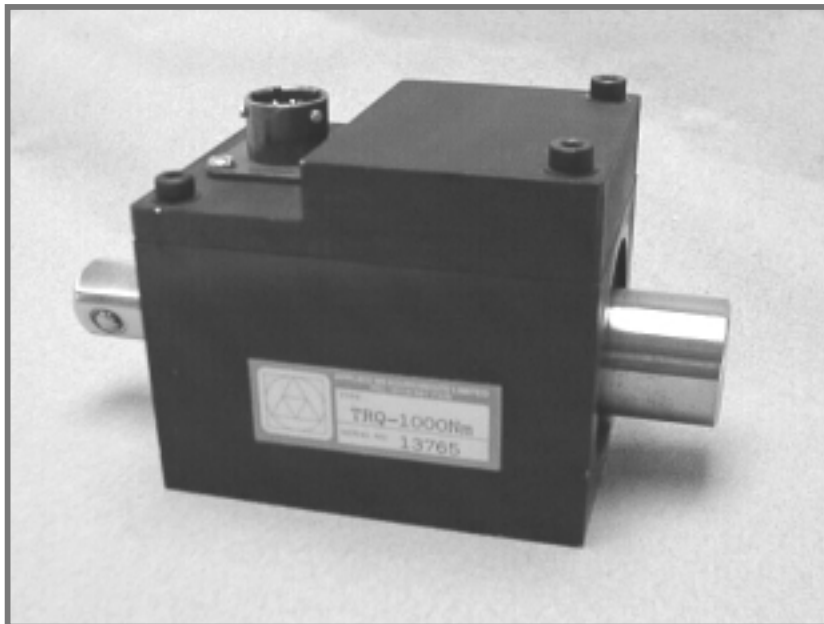


**Rotary Parallel Shaft &
Square Drive**

TORQUE SENSOR

**TRQ/TRR
Series**



- Torque Ranges 10Nm to 1000Nm
- High Accuracy
- Suitable for continuously rotating applications
- High Quality Slip Rings used
- 3 YEAR WARRANTY

Options Available

Speed and Angle measurement option

Special couplings can be manufactured to order

Supplied With Any Instrumentation and Calibrated as a Complete System with Traceable Certificate

DESCRIPTION

The TRQ/TRR series torque transducers provide “in-line” and cost effective torque measurement, utilising strain gauge technology.

The signal from the strain gauge bridge is transferred to a high quality bayonet lock MIL specification connector via high quality slip rings. The slip rings are constructed from silver, with silver graphite brushgear, which together, give high integrity, low noise transmission of the torque signal.

Options available, to further compliment this product include; torsionally stiff flexible couplings, parallel bored and keyed as necessary. Also available, as an option, are outputs of rotational speed and angle of rotation.

The TRQ/TRR series can be further complimented by any of our range of instrumentation to offer a complete system, supplied and calibrated from a single supplier.

Transducer Specialists...

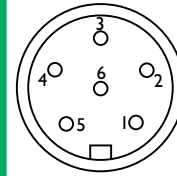
APPLIED MEASUREMENTS LIMITED

3 MERCURY HOUSE - CALLEVA PARK - ALDERMASTON - BERKSHIRE - RG7 8PN - UK

Tel: (+44) 0118 981 7339 Fax: (+44) 0118 981 9121 email: info@appmeas.co.uk Internet: www.appmeas.co.uk



SPECIFICATION

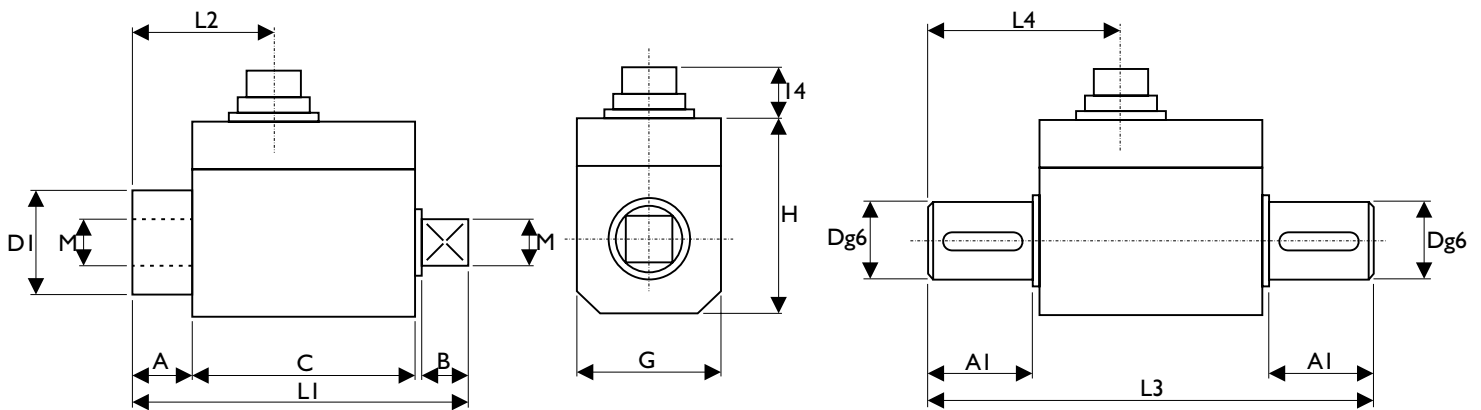


- 1 -ve excitation
- 2 +ve excitation
- 3 screen
- 4 +ve signal
- 5 -ve signal
- 6 shunt calibration

CHARACTERISTICS	TRQ	TRR	UNITS
Torque Ranges:	12, 25, 63, 160, 500, 1000	10, 20, 50, 100, 200, 500, 1000	Nm
Rated Output (FSO):	2.0		mV/V
Excitation Voltage:	10 (15V max.)		VDC
Safe Overload:	150		% FSO
Non-Linearity:	<0.20		±% FSO
Repeatability:	<0.15		±% FSO
Hysteresis:	<0.20		% FSO
Temperature Range Compensated:	+5 to +50		°C
Operating:	-10 to +90		°C
Temperature Errors:	<0.015		±%FSO/°C
Bridge Resistance:	350		ohms
Insulation Resistance:	100		Megaohms at 500VDC
Maximum Acceleration:	100G		
Environmental Protection:	IP40		

Range	Model TRQ						Model TRR						
	12Nm	25Nm	63Nm	160Nm	500Nm	1000Nm	10Nm	20Nm	50Nm	100Nm	200Nm	500Nm	1000Nm
Continuous Max. Speed (rpm)	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000
Torsional Stiffness (Nm/rad)	600	2000	5000	10,000	75,000	110,000	800	1400	3500	4500	25,000	50,000	60,000
Inertia Drive Side (kgm ²)	9.5 x 10 ⁻⁷	9.5 x 10 ⁻⁷	9.5 x 10 ⁻⁷	10 x 10 ⁻⁶	7 x 10 ⁻⁵	2.5 x 10 ⁻⁴	1.5 x 10 ⁻⁷	1.5 x 10 ⁻⁷	1.5 x 10 ⁻⁷	1.6 x 10 ⁻⁷	1.7 x 10 ⁻⁴	2 x 10 ⁻⁴	2 x 10 ⁻⁴
Inertia Test Side (kgm ²)	2.5 x 10 ⁻⁷	4 x 10 ⁻⁶	4 x 10 ⁻⁶	4.5 x 10 ⁻⁶	2.5 x 10 ⁻⁵	1 x 10 ⁻⁴	0.6 x 10 ⁻⁷	0.6 x 10 ⁻⁷	0.6 x 10 ⁻⁷	0.6 x 10 ⁻⁷	1.5 x 10 ⁻⁴	1.5 x 10 ⁻⁴	1.5 x 10 ⁻⁴
Max. Axial Load (N)	300	550	1000	1800	4000	6500	300	550	1000	1500	1800	4000	6500
Max. Radial Load (N)	5	10	25	60	170	210	5	10	25	40	70	170	210
Shaft Mass (kg)	0.14	0.31	0.31	0.33	0.80	1.40	0.50	0.50	0.50	0.50	2.0	2.0	2.0

Note Short duration speed 5000 rpm (10 minutes)



All dimensions in mm (unless otherwise stated)

TRQ Series	Range	L1	L2	DI	A	B	C	G	H	M
	12Nm	64	27.5	13	8.5	7.2	46	24	39	1/4"
	25Nm	74.5	32	25	12	10.4	50	38	53	3/8"
	63Nm	74.5	32	25	12	10.4	50	38	53	3/8"
	160Nm	79	32	25	12	15.1	50	38	53	1/2"
	500Nm	97	43	42	20	22.6	52	53	67	3/4"
	1000Nm	112	52	52	25	27.3	58	63	77	1"

M Square Drive to DIN 3126

TRR Series	Range	L3	L4	D	AI	G	H
	10Nm	108	49	19	27	38	53
	20Nm	108	49	19	27	38	53
	50Nm	108	49	19	27	38	53
	100Nm	108	49	19	27	38	53
	200Nm	182	89	38	60	63	77
	500Nm	182	89	38	60	63	77
	1000Nm	182	89	38	60	63	77

Keys to DIN 6885

