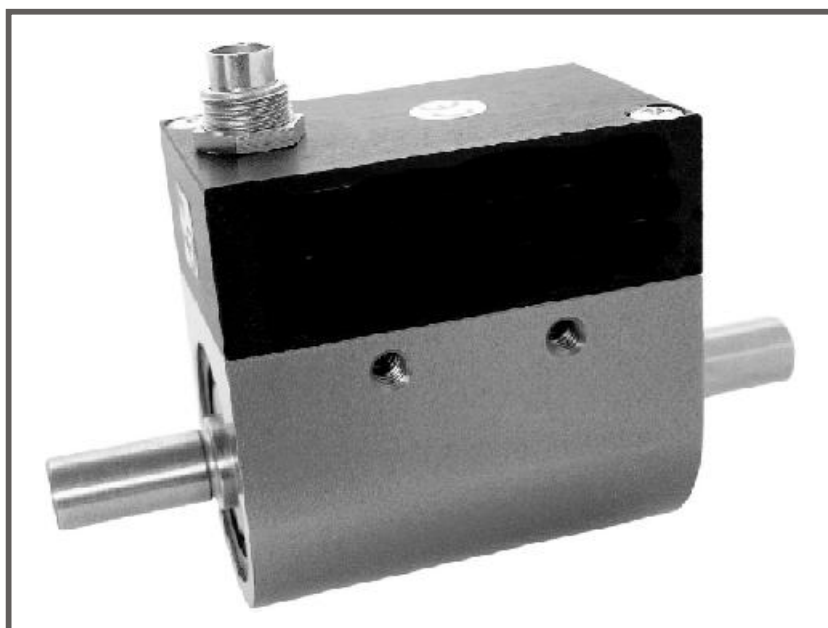


Rotary Shaft

TORQUE SENSOR

with Non-Contacting Data Transmission System

TLS/TLSM
Series



- **Torque Ranges: 0-0.1Nm up to 0-20,000Nm**
- **0.2% Accuracy**
- **Suitable for continuously rotating applications**
- **Inductive non-contact data transmission system gives operating speeds up to 15,000rpm**
- **Optional pulsed speed output**
- **3 YEAR WARRANTY**

Options Available

Special couplings can be manufactured to order

RS485 output

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

DESCRIPTION

The TLS/TLSM series of torque transducers provides high-speed, high accuracy “in-line” torque measurement by utilising strain gauged shaft and ‘non-contact’ inductive technology.

The signal from the strain gauge bridge is converted into a modulated frequency that is proportional to the measured torque. This signal is transferred from a rotating coil to a static coil for processing by the on-board amplifier. Excitation voltage is also transferred using this system.

A $\pm 5\text{Vdc}$ output is provided as standard with RS485 serial as an option. A 360 pulses/revolution output for speed measurement is also available as an option.

Other options available to further compliment this product include; torsionally stiff flexible couplings, parallel bored and keyed as necessary. The TLSM model is identical to the TLS except it includes a mounting foot.

The TLS/TLSM series can be additionally be accompanied 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

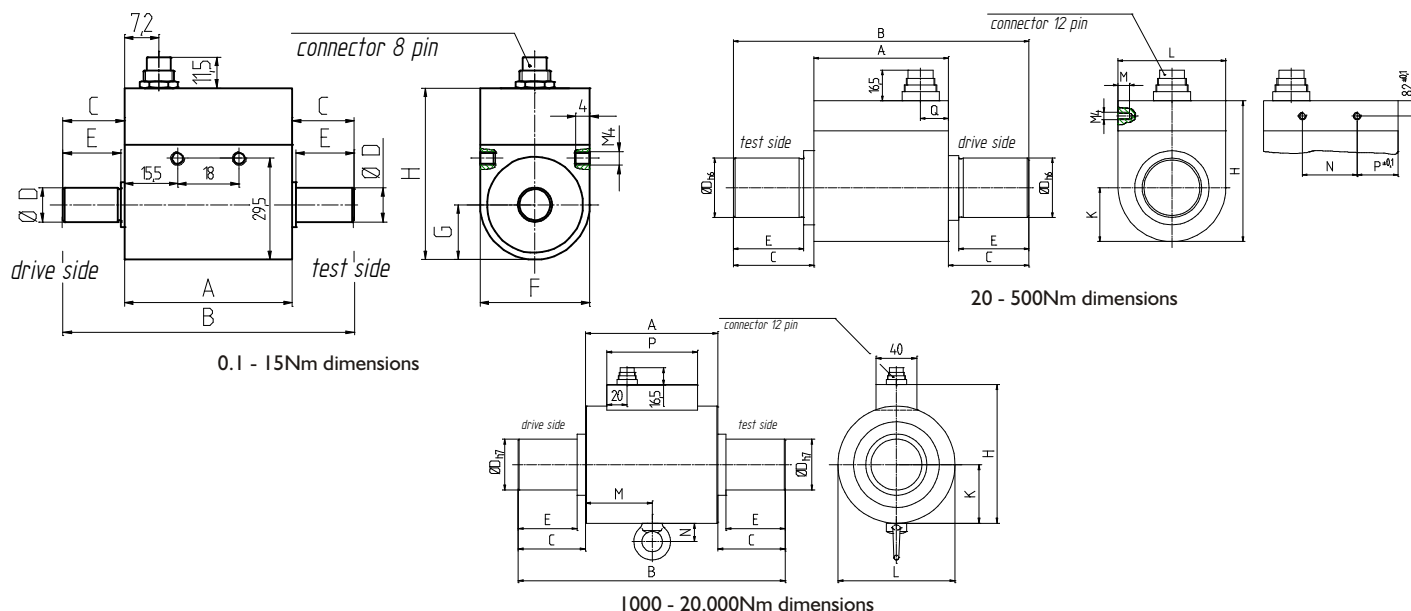
Tel: (+44) 0118 981 7339 Fax: (+44) 0118 981 9121 email: info@appmeas.co.uk Internet: www.appmeas.co.uk



SPECIFICATION

CHARACTERISTICS	TLS / TLSM	UNITS
Maximum Torque Ranges:	0.1, 0.2, 0.5, 1, 2, 5, 10, 15, 20, 30, 50, 100, 200, 500, 1000, 2000, 5000, 10000, 20000	Nm
Rated Output (FSO):	±5 (±10 optional)	Vdc
Excitation Voltage:	12-28	Vdc
Supply Current:	<60	mA
Safe Overload:	150	% FSO
Accuracy Class:	<0.2	±% FSO
Repeatability:	<0.04	±% FSO
Operating Temperature Range:	0 to +60	°C
Zero Temperature Shift:	<0.01	±%FSO/°C
Span Temperature Shift:	<0.01	±%FSO/°C
Environmental Protection:	IP50	
Speed Output:	360 pulses/revolution (60 pulses/revoultion on capacities 2000Nm>)	
Optional Digital Output:	RS485 (±11 bit)	

RATED TORQUE	STANDARD MAX	OPTION MAX	TORSIONAL STIFFNESS	RATED TORQUE	STD MAX	OPTION MAX	TORSIONAL STIFFNESS
Nm	SPEED	SPEED	Nm/rad	Nm	SPEED	SPEED	Nm/rad
0,1	10000	15000	1,0	50	6000	15000	8,5x10*3
0,2	10000	15000	1,0	100	6000	12000	8,5x10*3
0,5	10000	15000	9,9	200	6000	12000	6,7x10*4
1,0	10000	15000	9,9	500	5000	10000	7,8x10*4
2,0	10000	15000	3,6x10*2	1000	4000	7000	3,1x10*5
5,0	10000	15000	6,5x10*2	2000	3500	5500	7,2x10*5
10	10000	15000	8,5x10*2	5000	3500	5500	8.0x10*5
15	10000	15000	8,5x10*2	10000	3000	5000	1.2x10*6
20	8000	15000	4,5x10*3	20000	3000	5000	2.1x10*6
30	8000	15000	4,5x10*3				



CAPACITY (Nm)	A	B	C	D	E	F	G	H	K	L	M	N	P	Q
0,1/0,2/0,5/1/2/5	49	85	18	8 g6	17	32	16	50	-	-	-	-	-	-
10/15	49	85	18	10 g6	17	32	16	50	-	-	-	-	-	-
20/30	71.5	111.5	20	18 h6	18	-	-	59	20	40	5	41.5	15	12
50/100	71.5	147.5	38	18 h6	36	-	-	59	20	40	5	41.5	15	12
200/500	72.5	159.5	43.5	32 h6	38	-	-	76	29	58	6	29.5	22	15
1000	130	262	66	50 h7	58	-	-	136	57.5	115	65.5	18	89	-
2000/5000	135	377	121	70 h7	110	-	-	161	69.5	139	67.5	18	89	-
10000/20000	170	470	140	110 h7	120	-	-	233	104	208	95	18	89	-

Keys to BS4235 are fitted to shafts 18mm diameter and greater. Keyless shafts are an option

APPLIED MEASUREMENTS LIMITED

Issue 02/10



Continuous product development may result in minor changes to published specifications.