

TS22 MINIATURE REACTION TORQUE TRANSDUCER (US & METRIC)

FEATURES & BENEFITS

- Capacities from 0.005 to 20 Nm (0.04 to 177 lbf-in)
- 5X safe overload on capacities up to 2 Nm (17.7 lbf-in)
- Very small measuring ranges

SPECIFICATIONS

ACCURACY – (MAX ERROR)		
Nonlinearity – %FS		±0.2
Hysteresis – %FS		±0.2
Non-repeatability – %RO		±0.1
TEMPERATURE		
Effect on Zero – %RO / °C		±0.02
Effect on Output – % / °C		±0.01
Compensated Range	°C	-5 to +45
	°F	+23 to +113
Operating Range	°C	-15 to +55
	°F	+5 to +131
ELECTRICAL		
Output – mV/V	0.005 to 2 Nm	0.5
	0.04 to 17.7 lbf-in	
	1 to 20 Nm	1.0
	8.85 to 177 lbf-in	
Excitation Voltage – VDC		2 - 12
Bridge Resistance – Ohm		350
Electrical Connection		6-pin binder
MECHANICAL		
Safe Overload – %RO	0.005 to 2 Nm	500
	0.04 to 17.7 lbf-in	
	1 to 20 Nm	200
	8.85 to 177 lbf-in	
Angular Deflection at Rated Torque		< 0.2
IP Rating		IP50
Material		Alloy steel

STANDARD CONFIGURATION



MODEL TS22 (Shown)

OPTIONS

- Enhanced Accuracy – 0.05% FS
- 100% control signal (internal shunt cal)
- Special temperature range

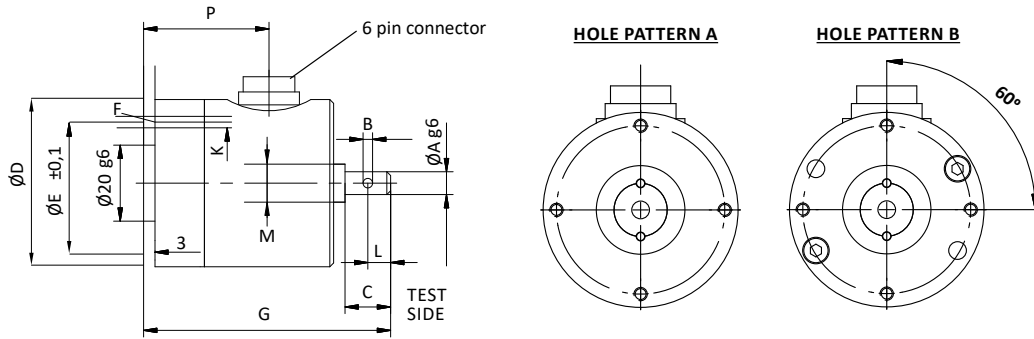
ACCESSORIES

- Mating cable
- Instrumentation

PERFORMANCE PARAMETERS

CAPACITY		Nominal Output ±0.1 mV/V	SPRING RATE NM/rad	MASS MOMENT OF INERTIA – (Kg·m ²)		MAX THRUST LOAD		MAX SHEAR LOAD	
Nm	lbf-in			Drive Side	Test Side	N	lbf	N	lbf
0.005	0.04	0.3	0.5	6.7E-05	6.2E-07	36	319	0.6	5.31
0.01	0.09	0.5	0.5	6.7E-05	6.2E-07	36	319	0.6	5.31
0.02	0.18	0.5	3.7	6.7E-05	6.2E-07	36	319	0.6	5.31
0.05	0.44	0.5	3.7	6.7E-05	2.8E-07	39	345	0.6	5.31
0.1	0.89	0.5	18	6.7E-05	8.0E-07	39	345	0.7	6.20
0.2	1.77	0.5	18	6.7E-05	8.0E-07	57	504	1.2	10.6
0.5	4.43	0.5	182	6.7E-05	8.0E-07	185	1.64	2	17.7
1	8.85	1	182	6.7E-05	8.0E-07	260	2.30	3.2	28.3
2	17.7	1	276	6.7E-05	8.0E-07	400	3.54	6.5	57.5
5	44.3	1	757	1.4E-04	5.7E-07	710	6.28	16	142
10	88.5	1	2379	1.4E-04	6.1E-07	450	3.98	35	310
20	177	1	3913	1.4E-04	6.6E-07	1050	9.29	68	602

TS22 MINIATURE REACTION TORQUE TRANSDUCER (US & METRIC)



DIMENSIONS

See Drawing	CAPACITY					
	Metric (Nm)	U.S. (lbf-in)	Metric (Nm)	U.S. (lbf-in)	Metric (Nm)	U.S. (lbf-in)
	0.005, 0.001	0.04, 0.009	0.02, 0.05 0.1, 0.2, 0.5, 1, 2	0.18, 0.44, 0.89, 1.77, 4.43, 8.85, 17.7	5, 10, 12, 15, 20	44.3, 88.5, 106, 133, 177
	mm	in	mm	in	mm	in
(1)	3	0.1	6	0.2	12	0.5
(2)	–	–	2.5	0.10	4	0.2
(3)	5	0.2	12	0.5	18	0.7
(4)	44	1.7	44	1.7	54	2.1
(5)	38	1.5	38	1.5	44	1.7
(6)	4x90°		4x90°		6x60°	
(7)	58	2.3	65	2.6	65	2.6
(8)	M3		M3		M4	
(9)	–		–		8	0.3
(10)	10	0.4	10	0.4	14	0.6
(11)	30	1.2	30	1.2	28	1.1
(12)	A		A		B	