

TS22 MINIATURE REACTION TORQUE TRANSDUCER (U.S. & 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
Nonrepeatability – %RO		±0.02
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

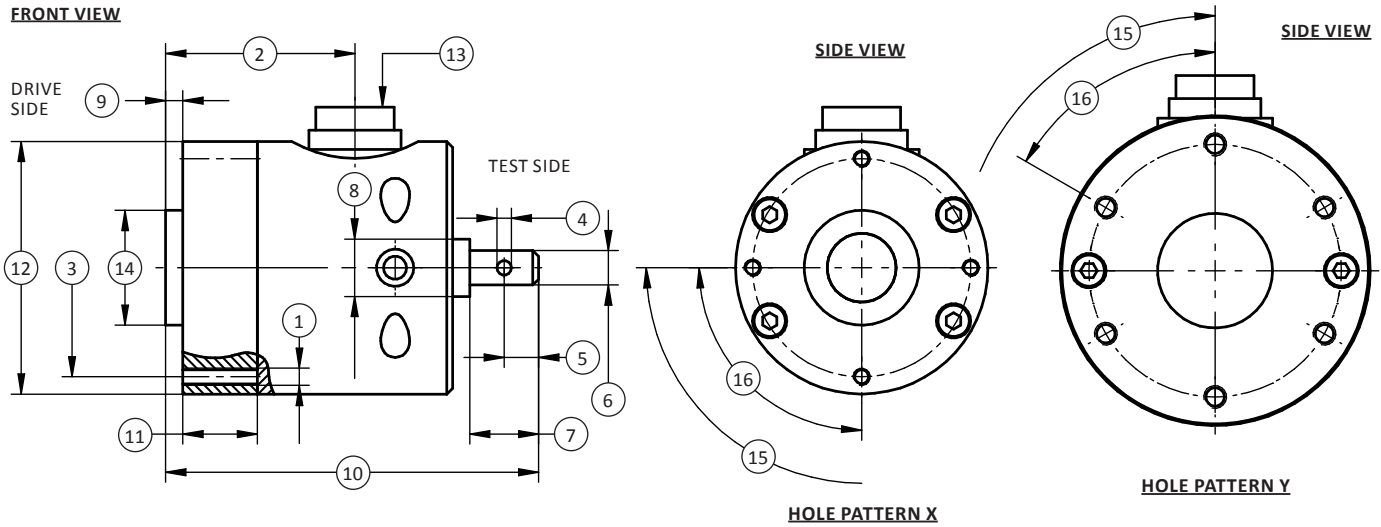
* US dimensions and capacities are provided for conversion only. Standard product will be sold in kN and Metric dimensions. US capacities available upon special request and at an additional cost.

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	6.7x10 ⁻⁵	6.2x10 ⁻⁷	36	8.09	0.6	0.13
0.01	0.09	0.5	0.5	6.7x10 ⁻⁵	6.2x10 ⁻⁷	36	8.09	0.6	0.13
0.02	0.18	0.5	3.7	6.7x10 ⁻⁵	6.2x10 ⁻⁷	36	8.09	0.6	0.13
0.05	0.44	0.5	3.7	6.7x10 ⁻⁵	6.2x10 ⁻⁷	39	8.09	0.6	0.13
0.1	0.89	0.5	18	6.7x10 ⁻⁵	7.6x10 ⁻⁷	39	8.09	0.7	0.16
0.2	1.77	0.5	18	6.7x10 ⁻⁵	7.6x10 ⁻⁷	57	12.8	1.2	0.27
0.5	4.43	0.5	182	6.7x10 ⁻⁵	8.0x10 ⁻⁷	185	41.6	2	0.45
1	8.85	1	182	6.7x10 ⁻⁵	8.0x10 ⁻⁷	260	58.5	3.2	0.72
2	17.7	1	276	6.7x10 ⁻⁵	8.0x10 ⁻⁷	400	89.9	6.5	1.46
5	44.3	1	757	1.4x10 ⁻⁴	5.7x10 ⁻⁷	710	160	16	3.6
10	88.5	1	2379	1.4x10 ⁻⁴	6.1x10 ⁻⁷	450	101	35	7.87
20	177	1	3913	1.4x10 ⁻⁴	6.6x10 ⁻⁷	1.05K	236	68	15.3

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DIMENSIONS

See Drawing	CAPACITY					
	Hole Pattern X		Hole Pattern X		Hole Pattern Y	
	Metric (Nm)	U.S. (lbf-in)	Metric (Nm)	U.S. (lbf-in)	Metric (Nm)	U.S. (lbf-in)
	0.005, 0.01	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, 20	44.3, 88.5, 177
mm	in	mm	in	mm	in	
(1)	M3		M3		M4	
(2)	33	1.3	33	1.3	31	1.2
(3)	$\varnothing 38^{+0.1}$	$1.5^{+0.004}$	$38^{+0.1}$	$1.5^{+0.004}$	$44^{+0.1}$	$1.7^{+0.004}$
(4)	-	-	2.5	0.10	4	0.2
(5)	-	-	6	-	8	-
(6)	$\varnothing 3g6$	$\varnothing(0.1185/0.1181)$	$\varnothing 6g6$	$\varnothing(0.2367/0.2362)$	$\varnothing 12g6$	$\varnothing(0.4731/0.4724)$
(7)	5	0.2	12	0.2	18	0.7
(8)	10	0.4	10	0.4	14	0.6
(9)	3	0.1	3	0.1	3	0.1
(10)	58	2.3	65	2.6	65	2.6
(11)	13	0.5	13	0.5	14	0.6
(12)	44	1.7	44	1.7	54	2.1
(13)	Connector 6-Pin		Connector 6-Pin		Connector 6-Pin	
(14)	$\varnothing 20g6$	$\varnothing 0.7882/0.7874$	$\varnothing 20g6$	$\varnothing 0.7882/0.7874$	$\varnothing 20g6$	$\varnothing 0.7882/0.7874$
(15)	$4 \times 90^\circ = (360^\circ)$		$4 \times 90^\circ = (360^\circ)$		$6 \times 60^\circ = (360^\circ)$	
(16)	90°		90°		60°	

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