

TS14 SQUARE DRIVE REACTION TORQUE TRANSDUCER (U.S. & METRIC)

FEATURES & BENEFITS

- Capacities from 1 to 5K Nm (8.85 to 44.2K lbf-in)
- Simple operation - no moving parts
- Useful for auditing fastener torques
- Fits standard socket wrenches

OPTIONS

- 100% Control Signal (Internal Shunt Cal)
- High accuracy +0.1%FS
- A2LA Accredited Calibration
- Mating Cable (straight or right angle)
- Extended Temperature Range

SPECIFICATIONS

ACCURACY – (MAX ERROR)		
Combined error – %FS	± 0.2	
Nonrepeatability – %	± 0.02	
TEMPERATURE		
Effect on zero – %RO / °C	±0.02	
Effect on output – % / °C	±0.01	
Rated range	°C	-5 to +45
	°F	+23 to +113
Operating range	°C	-15 to +55
	°F	+5 to +131
ELECTRICAL		
Output–mV/V Nm		10.5
		≥ 21.0
Excitation voltage – VDC MAX		12
Bridge resistance – Ohm		350
Cable length – m		3
MECHANICAL		
Safe overload – %RO		150
Material		Alloy steel
Protection class		IP50

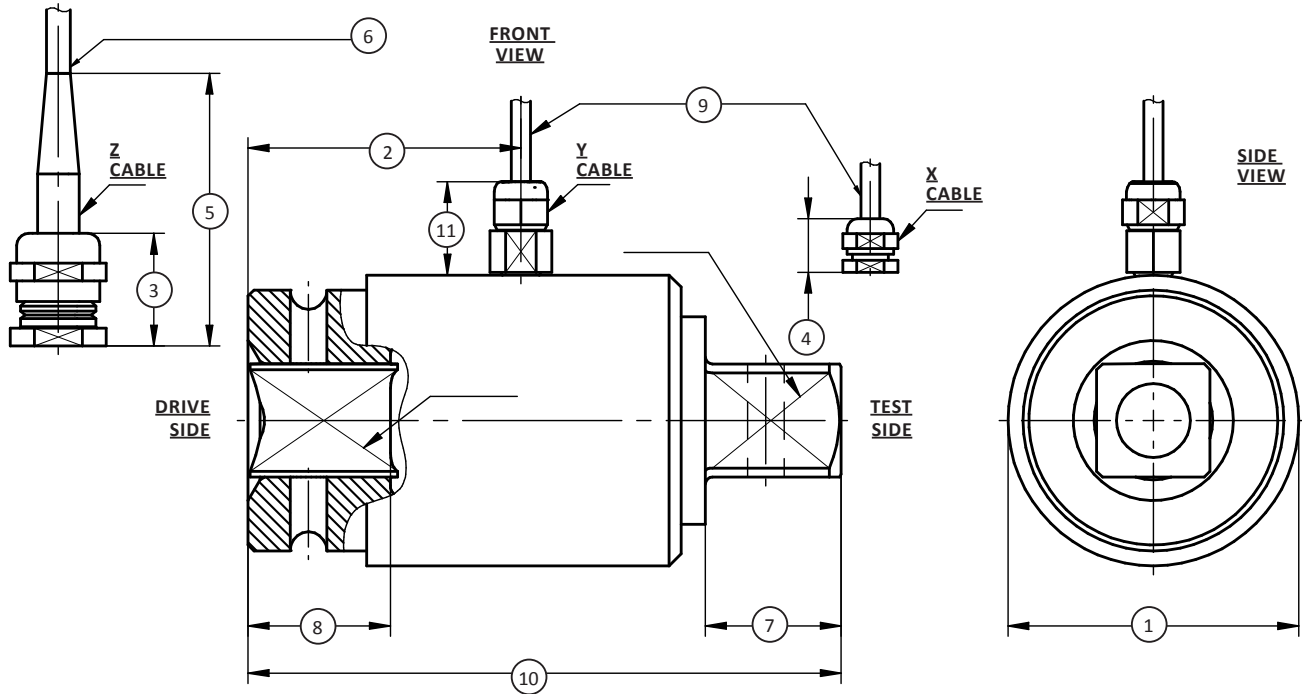


MODEL TS14 (Shown)

ELECTRICAL CONNECTION

Wire	Function
green	Excitation (-)
brown	Excitation (+)
yellow	Signal (+)
white	Signal (-)
grey	Control signal (option)
Shield	Shield

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DIMENSIONS

See Drawing	CAPACITY													
	X Cable		Y Cable								Z Cable			
	Metric (Nm)	U.S. (lbf-in)	Metric (Nm)	U.S. (lbf-in)	Metric (Nm)	U.S. (lbf-in)	Metric (Nm)	U.S. (lbf-in)	Metric (Nm)	U.S. (lbf-in)	Metric (Nm)	U.S. (lbf-in)	Metric (Nm)	U.S. (lbf-in)
	1, 2, 5, 12	8.85, 17.7, 44.3, 106	25, 63	221, 560	100, 160, 200	885, 1.41K, 1.77K	500	4.42K	1K	8.85K	2K	17.K	5K	44.2K
	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in
(1)	Ø15	Ø0.6	Ø30	Ø1.2	Ø30	Ø1.2	Ø49	Ø1.9	Ø49	Ø1.9	Ø100	Ø3.9	Ø100	Ø3.9
(2)	22.7	0.89	34.5	1.36	35	1.4	46	1.8	60	2.4	120	4.7	120	4.7
(3)	-	-	-	-	-	-	-	-	-	-	20	0.8	20	0.8
(4)	10	0.4	-	-	-	-	-	-	-	-	-	-	-	-
(5)	-	-	-	-	-	-	-	-	-	-	50	2.0	50	2.0
(6)	-	-	-	-	-	-	-	-	-	-	4.8	0.19	4.8	0.19
(7)	7.2	0.28	10.4	0.41	15.1	0.59	22.9	0.90	27.4	1.08	39	1.5	39	1.5
(8)	8	0.3	12.2	0.48	15	0.6	24	0.9	27	1.1	41.5	1.63	41	1.6
(9)	3.2	0.13	3.2	0.13	3.2	0.13	3.2	0.13	3.2	0.13	-	-	-	-
(10)	64	2.5	71	2.8	76	3.0	100	3.9	132	5.2	250	9.8	250	9.8
(11)	-	-	14	0.6	14	0.6	14	0.6	14	0.6	-	-	-	-

Datasheet TS14 Square Drive v2.1 05-23-2019

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

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PERFORMANCE PARAMETERS

CAPACITY		SPRING RATE	MOMENT OF INERTIA – J (Kg•m ²)		MAX THRUST LOAD		MAX SHEAR FORCE	
Nm	lbf-in	NM/rad	Drive Side	Test Side	N	lbf	N	lbf
1	8.85	2.1x10 ²	2.4x10 ⁻⁷	3.9x10 ⁻⁷	380	85.4	7	1.6
2	17.7	2.1x10 ²	2.4x10 ⁻⁷	3.9x10 ⁻⁷	380	85.4	7	1.6
5	44.3	5.5x10 ²	2.6x10 ⁻⁷	4.0x10 ⁻⁷	700	157	17	3.8
12	106	6.9x10 ²	2.6x10 ⁻⁷	4.1x10 ⁻⁷	840	189	21.5	4.8
25	221	4.7x10 ³	9.6x10 ⁻⁶	2.2x10 ⁻⁶	2.1K	472	83	18.7
63	558	1.1x10 ⁴	9.9x10 ⁻⁶	2.5x10 ⁻⁶	3.9K	877	210	47.2
100	885	1.8x10 ⁴	1.3x10 ⁻⁵	3.3x10 ⁻⁶	5.3K	1.19K	300	67.4
160	1.42K	1.9x10 ⁴	1.4x10 ⁻⁵	3.4x10 ⁻⁶	5.5K	1.24K	320	71.9
200	1.77K	1.9x10 ⁴	1.4x10 ⁻⁵	3.4x10 ⁻⁶	5.5K	1.24K	320	71.9
500	4.43K	1.1x10 ⁵	1.1x10 ⁻⁴	3.3x10 ⁻⁵	14K	3.15K	1.1K	247
1K	8.85K	1.2x10 ⁵	2.4x10 ⁻⁴	6.0x10 ⁻⁵	16.5K	3.71K	950	214
2K	17.7K	4.6x10 ⁵	4.6x10 ⁻³	9.8x10 ⁻⁴	37K	8.32K	1.8K	405
5K	44.3K	6.2x10 ⁵	4.7x10 ⁻³	1.1x10 ⁻³	55K	12.4K	3.4K	764

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