

TS11 FLANGE STYLE REACTION TORQUE TRANSDUCER (U.S. & METRIC)

FEATURES & BENEFITS

- Capacities from 10 to 20K Nm (88.5 to 177K lbf-in)
- Compact
- Thru-hole design
- Threaded mounting holes

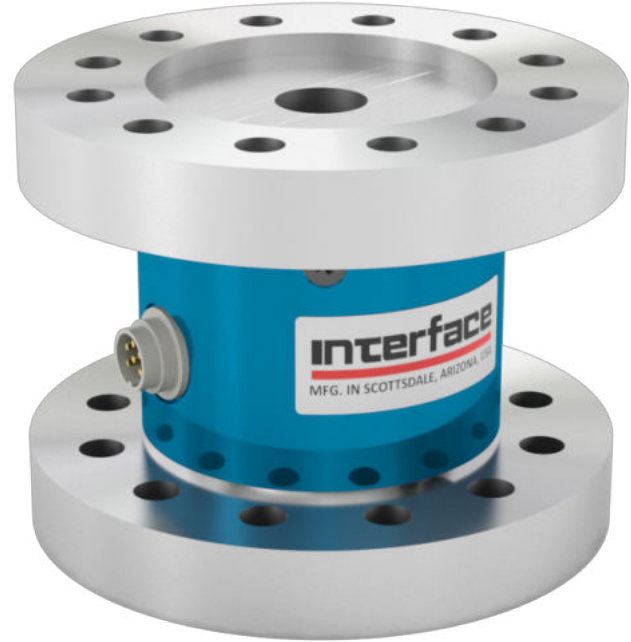
SPECIFICATIONS

ACCURACY – (MAX ERROR)		
Combined Error – %FS		± 0.1
Nonrepeatability – %		± 0.02
TEMPERATURE		
Effect on Zero – %RO / deg	°C	±0.02
Effect on Output – % / deg	°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	10 Nm	0.5
	88.5 lbf-in	
	10 - 20K Nm	1.0
	221 - 177K lbf-in	
Excitation Voltage – VDC MAX		12
Bridge Resistance – Ohm		350
Electrical Connection – pin		6
MECHANICAL		
Safe Overload – %RO		150
Safe Overhung Moment – %FS		50
Deflection at Capacity – rod		0.003
Material		Alloy Steel

OPTIONS

- 100 % control signal (internal shunt cal)
- High accuracy to 0.05% FS
- A2LA accredited calibration
- Mating cable (straight or right angle)
- Extended temperature range

STANDARD CONFIGURATION



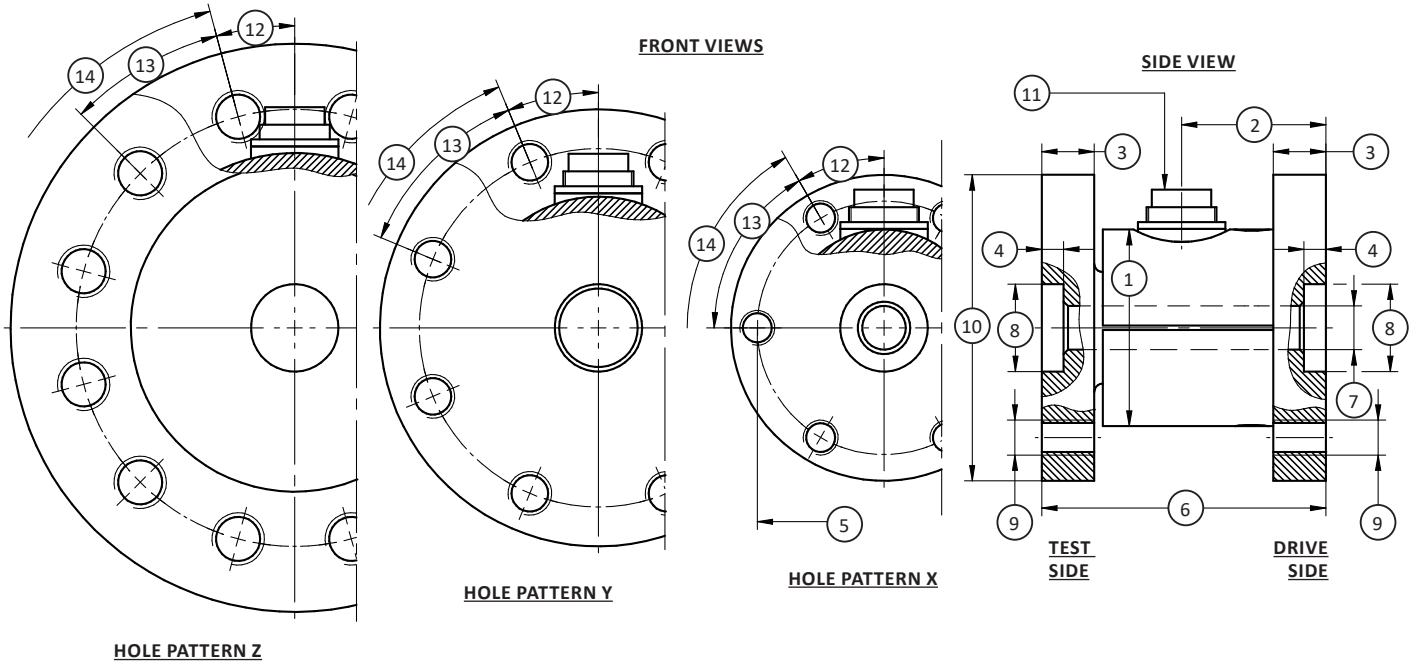
Model TS11 (Shown)

ELECTRICAL CONNECTION

Pin	6-PIN ELECTRICAL CONNECTION	
	Function	
1	Excitation (-)	
2	Excitation (+)	
3	Shield	
4	Signal (+)	
5	Signal (-)	
6	Control signal (option)	

U.S. dimensions and capacities are provided for conversion only. Standard products have International System of Units (SI) capacities and dimensions.

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DIMENSIONS

See Drawing	CAPACITY									
	Hole Pattern X		Hole Pattern Y		Hole Pattern Z		Hole Pattern Z		Hole Pattern Y	
	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)
	10, 20, 50, 100, 200	88.5, 177, 443, 885, 1.77K	500, 1K	4.43K, 8.85K	2K	17K	5K	44.3K	10K, 20K	88.5K, 177K
	mm	in	mm	in	mm	in	mm	in	mm	in
(1)	Ø45	Ø1.77	Ø60	Ø2.36	Ø80	Ø3.15	Ø80	Ø3.15	Ø145	Ø5.71
(2)	33	1.30	39.5	1.56	45	1.77	45	1.77	67.5	2.66
(3)	12	0.47	15	0.59	20	0.79	20	0.79	32	1.26
(4)	5	0.2	5	0.2	5	0.2	5	0.2	5	0.2
(5)	Ø58	Ø2.28	Ø82	Ø3.23	Ø100	Ø3.94	Ø100	Ø3.94	Ø210	Ø8.27
(6)	65	2.56	80	3.15	100	3.94	100	3.94	124	4.88
(7)	Ø10	Ø0.39	Ø18	Ø0.71	Ø20	Ø0.79	Ø20	Ø0.79	Ø105	Ø4.13
(8)	Ø20 H7	Ø(0.7874/0.7866)	Ø20 H7	Ø(0.7874/0.7866)	Ø75 H7	Ø(2.9528/2.9516)	Ø75 H7	Ø(2.9528/2.9516)	Ø105 H7	Ø(4.1139/4.1325)
(9)	M8, 6 places		M10, 8 places		M12, 12 places		M12, 12 places		M24, 8 places	
(10)	Ø70	Ø2.76	Ø100	Ø3.94	Ø130	Ø5.12	Ø130	Ø5.12	Ø260	Ø10.24
(11)	Connector 6-pin		Connector 6-pin		Connector 6-pin		Connector 6-pin		Connector 6-pin	
(12)	30°		22.5°		15°		15°		22.5°	
(13)	60°		45°		30°		30°		45°	
(14)	6 x 60°		8 x 45° (=360°)		12 x 30 (=360°)		12 x 30 (=360°)		8 x 45° (=360°)	

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PERFORMANCE PARAMETERS

CAPACITY		SPRING RATE (NM/rad)	MOMENT OF INERTIA (kg•m ²)		MAX THRUST LOAD**		MAX SHEAR FORCE**	
(Nm)	(lbf-in)		Drive Side	Test Side	(N)	(lbf)	(N)	(lbf)
10	88.5	4.7x10 ²	2.3x10 ⁻⁴	2.0x10 ⁻⁴	920	207	85	19.1
20	177	4.9x10 ³	2.3x10 ⁻⁴	2.0x10 ⁻⁴	970	218	90	20.2
50	443	1.2x10 ⁴	2.3x10 ⁻⁴	2.0x10 ⁻⁴	2.1K	472	200	45.0
100	885	2.7x10 ⁴	2.3x10 ⁻⁴	2.0x10 ⁻⁴	4.3K	967	450	101
200	1.77K	4.7x10 ⁴	2.3x10 ⁻⁴	2.0x10 ⁻⁴	6.7K	1.51K	730	164
500	4.43K	1.6x10 ⁵	1.2x10 ⁻³	1.0x10 ⁻³	12.5K	2.81K	1.6K	360
1K	8.85K	3.1x10 ⁵	1.2x10 ⁻³	1.0x10 ⁻³	21K	4.72K	3K	674
2K	17.7K	7.8x10 ⁵	4.4x10 ⁻³	4.0x10 ⁻³	42K	9.44K	5K	1.12K
5K	44.3K	1.1x10 ⁶	4.4x10 ⁻³	4.1x10 ⁻³	60K	13.5K	8.5K	1.91K
10K	88.5K	9.9x10 ⁶	1.3x10 ⁻¹	5.3x10 ⁻²	70K	15.7K	15K	3.37K
20K	177K	1.5x10 ⁷	1.3x10 ⁻¹	5.4x10 ⁻²	96K	21.6K	30K	6.74K