

## TS12 SHAFT STYLE REACTION TORQUE TRANSDUCER (US & METRIC)

### FEATURES & BENEFITS

- Capacities from 0.005 to 20K Nm (0.04 to 177K lbf-in)
- Stainless steel shafts
- Compact

### SPECIFICATIONS

ACCURACY – (MAX ERROR)		
Combined Error – %FS		± 0.1
Non-repeatability – %		± 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	0.005 to 0.1 Nm	0.5
	0.04 to 0.89 lbf-in	
	0.2 to 5K Nm	0.8
	1.77 to 44.3K lbf-in	
	10K to 20K Nm	
88.5K to 17.7K lbf-in	1.5	
Excitation Voltage – VDC MAX		12
Bridge Resistance – Ohm		1,000
Electrical Connection		6 or 7 pin
MECHANICAL		
Safe Overload – %RO	0.005 to 0.1 Nm	300
	0.04 to 0.89 lbf-in	
	0.2 to 5K Nm	200
	1.77 to 44.3K lbf-in	
	10K to 20K Nm	
88.5K to 17.7K lbf-in	150	
Safe Overhung Moment – %FS		50
Material	Shaft	Alloy steel
	Housing	Aluminum

### STANDARD CONFIGURATION



MODEL TS12 (Shown)

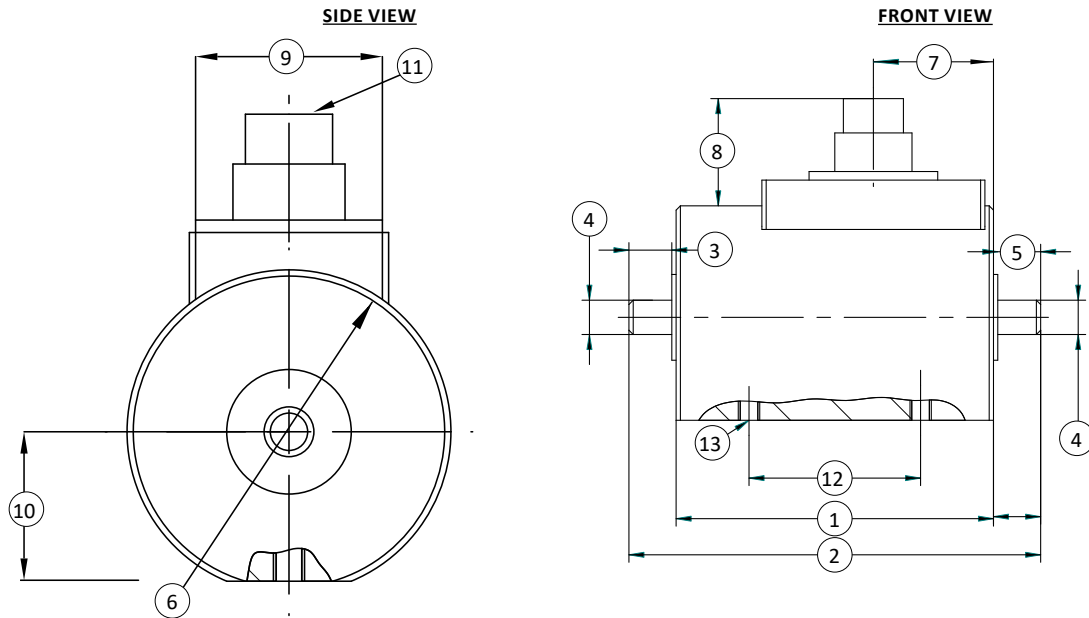
### ELECTRICAL CONNECTION

6-PIN TS12 ELECTRICAL CONNECTION		7-PIN TS12 ELECTRICAL CONNECTION	
PIN	FUNCTION	PIN	FUNCTION
1	Excitation (-)	1	Excitation (-)
2	Excitation (+)	2	Excitation (+)
3	Shield	3	Shield
4	Signal (+)	4	Signal (+)
5	Signal (GND)	5	Signal (GND)
6	Cal. Control (Option) Connect to Pin 2	6	Cal. Control (Option) Connect to Pin 2
		7	NC

### OPTIONS

- 100% Control Signal (RCAL)
- Key DIN 6885-1

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### DIMENSIONS

See Drawing	CAPACITY									
	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)
	0.005, 0.001, 0.02	0.044, 0.089, 0.177	0.03, 0.05	0.26, 0.44	0.1, 0.2, 0.3, 0.5, 1, 2, 5	0.85, 1.77, 2.66, 4.43, 8.85, 17.7, 44.3	10, 15	88.5, 133	20, 30	177, 265
mm	in	mm	in	mm	in	mm	in	mm	in	
(1)	37	1.6	48	1.9	48	1.9	48	1.9	73	2.9
(2)	48	1.9	65	2.6	85	3.3	85	3.3	111.5	4.39
(3)	5	0.2	7	0.3	17	0.7	17	0.7	18	0.7
(4)	Ø4 g6	Ø0.1573/ 0.1570	Ø6 g6	Ø0.2361/ 0.2357	Ø8 g6	Ø0.3148/ 0.3148/	Ø10 g6	Ø0.3935/ 0.3931	Ø18 h6	Ø0.7087/ 0.7082
(5)	5	0.2	8	0.3	18	0.7	18	0.7	19	0.7
(6)	Ø20	Ø0.8	Ø32	Ø1.3	Ø32	Ø1.3	Ø32	Ø1.3	Ø51	Ø2.0
(7)	14	0.6	25	1.0	25	1.0	25	1.0	40	1.6
(8)	12.5	0.5	8	-	8	-	8	-	8	-
(9)	Ø9	Ø0.4	-	-	-	-	-	-	-	-
(10)	12 <sup>±0.1</sup>	0.5 <sup>±0.004</sup>	-	-	-	-	-	-	-	-
(11)	7 Pin		7 Pin		7 Pin		7 Pin		6 Pin	
(12)	20	0.8	-		-		-		-	
(13)	M2.5		-		-		-		-	

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### DIMENSIONS (CONTINUED)

See Drawing	CAPACITY									
	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)
	50, 100	443, 885	200, 500	1.77K, 4.43K	1K	8.85K	2K, 5K	17K, 44.3K	10K, 20K	85.5K 177K
	mm	in	mm	in	mm	in	mm	in	mm	in
(1)	73	2.9	79.5	3.1	107	4.2	135	5.3	140	5.5
(2)	147.5	5.81	159.5	6.28	262	10.3	377	14.8	470	18.5
(3)	36	1.4	38	1.5	58	2.3	110	4.3	120	4.7
(4)	∅18 h6	∅0.7087/ 0.7082	∅32 h6	∅1.2598/ 1.2592	∅50 h7	∅1.9685/ 1.9675	∅70 h7	∅2.7559/ 2.7549	∅110 h7	∅4.3307/ 4.3293
(5)	37	1.5	40	1.6	66	2.6	126	5.0	160	6.3
(6)	∅51	∅2.0	∅66	∅2.6	∅97	∅3.8	∅112	∅4.4	∅173	∅6.8
(7)	40	1.6	40	1.6	53.5	2.1	53.5	2.1	53.5	2.1
(8)	8	0.3	8	0.3	8	0.3	8	0.3	8	0.3
(9)	-	-	-	-	-	-	-	-	-	-
(10)	-	-	-	-	-	-	-	-	-	-
(11)	6 Pin		6 Pin		6 Pin		6 Pin		6 Pin	
(12)	-		-		-		-		-	
(13)	-		-		-		-		-	