

TS21 MINIATURE SHAFT STYLE REACTION TORQUE TRANSDUCER (U.S. & METRIC)

FEATURES & BENEFITS

- Capacities from 1 to 100 Nm (8.85 to 885 lbf-in)
- Shaft ends with keys
- Very small measuring ranges

SPECIFICATIONS

ACCURACY – (MAX ERROR)			
Nonlinearity – %FS			±0.2
Hysteresis – %FS			±0.2
Nonrepeatability – %RO			±0.01
TEMPERATURE			
Effect on Zero – %RO / deg	°C		±0.02
Effect on Output – % / deg	°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			1
Excitation Voltage – VDC			2 - 12
Bridge Resistance – Ohm			350
Electrical Connection	m		3
	ft		9.8
MECHANICAL			
Safe Overload – %RO			150
Angular Deflection at Rated Torque			< 0.2
IP Rating			50
Material			Alloy steel

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

STANDARD CONFIGURATION



MODEL TS21 (Shown)

OPTIONS

- Enhanced Accuracy – 0.1% nonlinearity & hysteresis
- Internal Shunt Resistor – 100% output

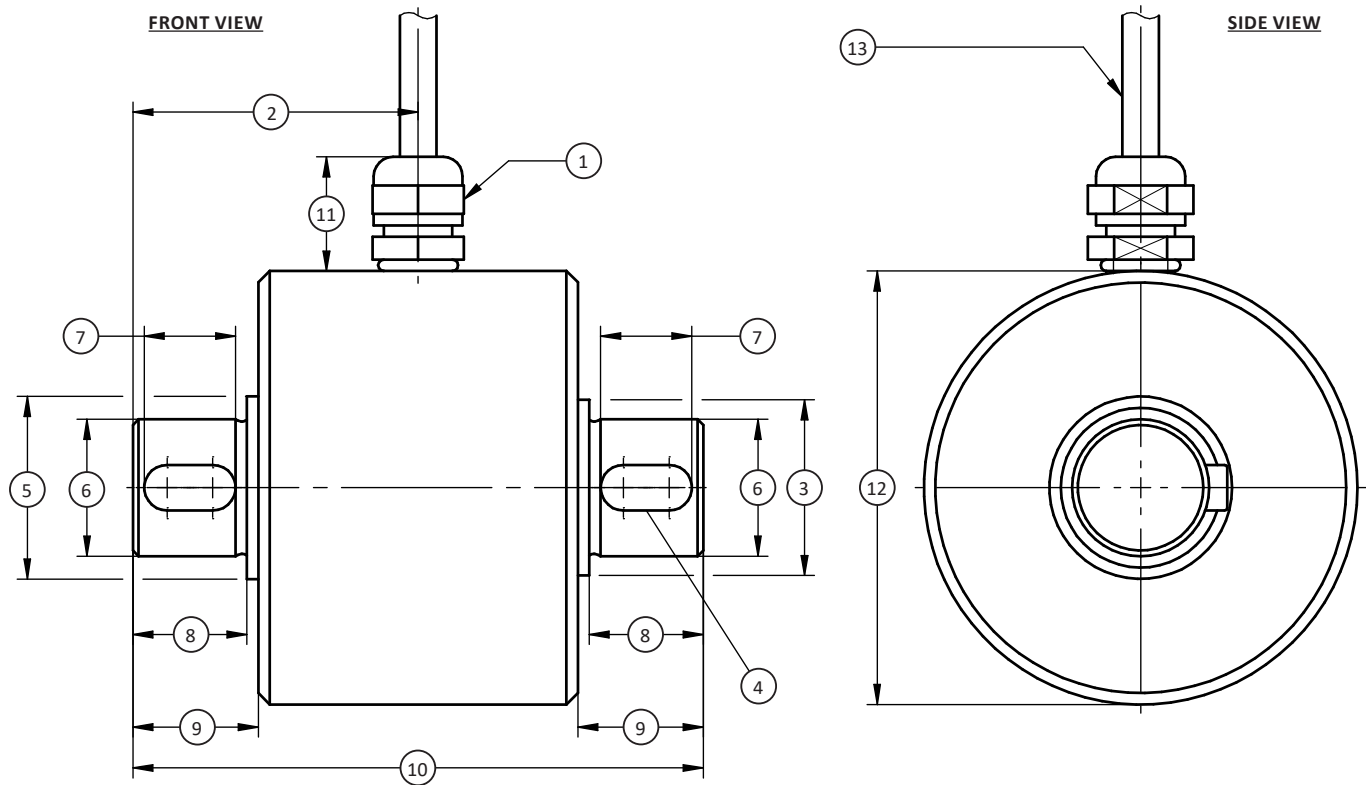
ELECTRICAL CONNECTION

Wire	6-PIN ELECTRICAL CONNECTION	
	Function	
Green	Excitation (-)	
Brown	Excitation (+)	
Yellow	Signal (+)	
White	Signal (-)	
Grey	Control signal (option)	
Shield	Shield	

PERFORMANCE PARAMETERS

CAPACITY		SPRING RATE	MASS MOMENT OF INERTIA – (Kg•m ²)		MAX THRUST LOAD		MAX SHEAR LOAD	
Nm	lbf-in		Drive Side	Test Side	N	lbf	N	lbf
1	8.85	2.78x10 ²	1.10x10 ⁻⁵	3.78x10 ⁻⁷	400	89.9	11	2.5
2	17.7	2.78x10 ²	1.10x10 ⁻⁵	3.78x10 ⁻⁷	400	89.9	11	2.5
5	44.3	8.03x10 ²	1.10x10 ⁻⁵	3.86x10 ⁻⁷	700	157	25	5.6
10	88.5	3.22x10 ³	1.10x10 ⁻⁵	4.07x10 ⁻⁷	1.15K	259	51	11.5
20	177	3.50x10 ³	1.11x10 ⁻⁵	4.47x10 ⁻⁷	1.7K	382	95	21.4
50	443	1.17x10 ⁴	3.24x10 ⁻⁵	4.44x10 ⁻⁶	3.7K	832	190	42.7
100	885	1.55x10 ⁴	3.26x10 ⁻⁵	4.63x10 ⁻⁶	4.35K	978	270	60.7

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DIMENSIONS

See Drawing	CAPACITY			
	Metric (Nm)	U.S. (lbf-in)	Metric (Nm)	U.S. (lbf-in)
	1, 2, 5, 10, 20	8.85, 17.7, 44.3, 88.5, 177	50, 100	443, 885
	mm	in	mm	in
(1)	SW 8		SW 8	
(2)	25	1.0	35	1.4
(3)	Ø15.4	Ø0.61	Ø20.5	Ø0.81
(4)	Key DIN 6885-1		Key DIN 6885-1	
(5)	Ø16	Ø0.6	Ø21	Ø0.8
(6)	Ø12 g6	Ø0.4722 / 0.4718	Ø18 g6	Ø0.7084 / 0.7080
(7)	8	0.3	18	0.7
(8)	10	0.4	20	0.8
(9)	11	0.4	21.5	0.8
(10)	50	2.0	70	2.8
(11)	10	0.4	10	0.4
(12)	Ø38	Ø1.5	Ø49	Ø1.9
(13)	Ø3.2	Ø0.13	Ø3.2	Ø0.13