



Square Drive Static Torque Transducer | DTD-S

High Accuracy, Easily Adaptable, with a Square Drive Shaft

- Lead Time: 10 weeks



AT A GLANCE

- Capacities: 0-10Nm to 0-20kNm
- 2mV/V Output (1.5mV/V on 50kNm model)
- Environmental Protection: IP65
- Accuracy: $< \pm 0.1\%$ /Rated Capacity
- Custom Capacities to 200kNm+

- High Accuracy – Ideal for Calibration or Testing Torque Tools QA Environment
- Protected From Low Pressure Water Jets – Suitable for Most Industrial Environments
- Offshore and Marine Submersible Versions Available
- Fast and Simple Installation Thanks to Customised Shaft and Configuration Options
- Let us Customise the Design to Suit Your Exact Application

DESCRIPTION

The DTD-S series of reaction / static torque transducers have a square drive and are primarily used to measure the fastening or breakaway torque of bolts and nuts. The square drive static torque transducer is ideal for calibrating automated torque screwdrivers, spanners and wrenches.

We are able to offer custom drive sizes and configurations to suit your application if required, and can also offer versions with improved sealing up to IP68 for applications where operating conditions are harsh or involve submersion.

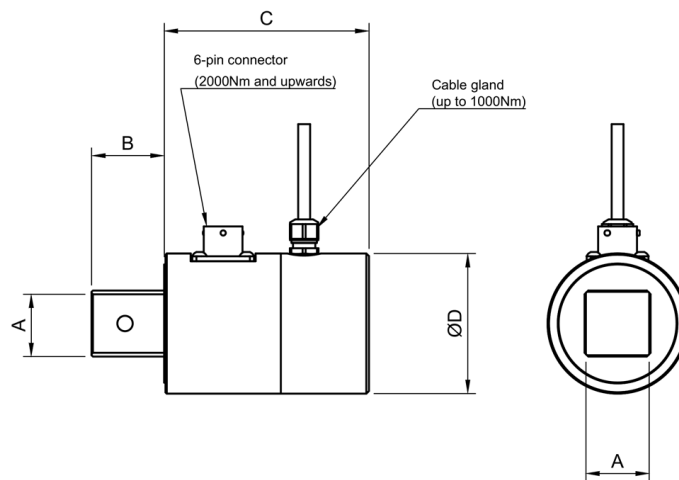
TECHNICAL SPECIFICATIONS

Rated Capacity (RC)	Nm	0-10, 0-20, 0-50, 0-100, 0-200, 0-250, 0-500, 0-1000, 0-2k, 0-5k, 0-10k, 0-20k
Operating Modes		Clockwise (CW)/Counter-Clockwise (CCW) / Clockwise (CW) & Counter-Clockwise (CCW)
Sensitivity (RO)	mV/V	1.5 nominal
Zero Balance/Offset	$\pm\%$ /Rated Output	<1



Rated Capacity (RC)	Nm	0-10, 0-20, 0-50, 0-100, 0-200, 0-250, 0-500, 0-1000, 0-2k, 0-5k, 0-10k, 0-20k
Output Symmetry (CW vs. CCW)	±%/Rated Output	<0.25 typical
Non-Linearity	±%/Rated Output (BFSL)	<0.1
Hysteresis	±%/Full Scale Output	<0.1
Repeatability	±%/Full Scale Output	<0.1
Temperature Effect on Zero	±Full Scale Output/ °C	<0.010
Temperature Effect on Output	±/Reading/ °C	<0.010
Bridge Resistance	Ohms	700 nominal
Insulation Resistance	Megaohms	>5000 @ 50Vdc
Excitation Voltage	Volts AC or DC	10 recommended (2-15 acceptable)
Operating Temperature Range	°C	-20 to +80
Compensated Temperature Range	°C	+20 to +70
Storage Temperature Range	°C	-20 to +80
Safe Overload	% of Rated Capacity	150
Ultimate Overload	% of Rated Capacity	300
IP Rating (Environmental Protection)		IP65
Weight		See dimensions table
Fatigue Rating		10 ⁸ cycles typical
Cable Length (as standard)	metres	3
Cable Type		4-core screened PUR, Ø4.6mm
Construction		Stainless Steel
Resolution		1 part in 250,000 (with appropriate instrumentation)

Product Dimensions



Capacity (Nm)	Square Drive A	B	C	ØD
10	0.250 inch	7.5	48	25
20	0.250 inch	7.5	48	25



Capacity (Nm)	Square Drive A	B	C	ØD
50	0.375 inch	11.5	58	35
100	0.500 inch	15.5	58	35
200	0.750 inch	23	79	54
250	0.750 inch	23	79	54
500	0.750 inch	23	79	54
1000	1.000 inch	28	79	54
2000	1.500 inch	38	95	70
5000	2.000 inch	45	130	90
10000	2.500 inch	55	165	110
20000	3.000 inch	68	212	130
50000	3.500 inch	79	185	180

All dimensions are in mm.

Wiring Details

Wire	Designation
Red	+ve excitation
Blue	-ve excitation
Green	+ve signal (clockwise)
Yellow	-ve signal
Screen	To ground - not connected to sensor body

ORDERING CODES & OPTIONS

Core Product	Capacity (inc Engineering Units)	Cable Length (m)	Specials Code	Example Result
DTD-S	10Nm	003	000	DTD-S-10Nm-003-000
DTD-S	20Nm	003	000	DTD-S-20Nm-003-000
DTD-S	50Nm	003	000	DTD-S-50Nm-003-000
DTD-S	100Nm	003	000	DTD-S-100Nm-003-000
DTD-S	200Nm	003	000	DTD-S-200Nm-003-000
DTD-S	250Nm	003	000	DTD-S-250Nm-003-000
DTD-S	500Nm	003	000	DTD-S-500Nm-003-000
DTD-S	1000Nm	003	000	DTD-S-1000Nm-003-000
DTD-S	2000Nm	003	000	DTD-S-2500Nm-003-000
DTD-S	5000Nm	003	000	DTD-S-5000Nm-003-000
DTD-S	10kNm	003	000	DTD-S-10kNm-003-000
DTD-S	20kNm	003	000	DTD-S-20kNm-003-000

Array



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