Features

- Capacities 0.5Nm – 1000Nm.
- Linearity ±0.2% RO.
- IP40 rating.

Applications

- Test machines.
- Process control.

Description

The TQ-TRS is a static torque transducer; it is a small device produced from stainless steel and is completely laser welded. The TRS is ideal for applications that require quick coupling and long-term stability.

The TRS has been designed for test rig applications where static or dynamic measurement are required.

NOTE: Torque transducers are supplied calibrated in a single direction as standard, either clockwise or anti-clockwise. If calibration in both directions is required, please specify this on enquiring.

Typical Specification

PARAMETER	VALUE		UNITS
Capacities Range	0.5	2.5, 5, 10, 25, 50, 100, 250, 500, 1000	Nm
Rated Output	1	2	mV/V
Sensitivity Tolerance	0.5		±% of Rated Output
Linearity & Hysteresis	0.2		±% of Rated Output
Temperature Effect ON ZERO	0.02		±% of Rated Output/°C
Temperature Effect ON OUTPUT	0.02		±% of Rated Output/°C
Input Resistance NOMINAL LOAD	825±50		Ω
Output Resistance NOMINAL LOAD	700±2		Ω
Insulation Resistance	>2		GΩ
Zero Balance	≤1		±% of Rated Output
Excitation NOMINAL SUPPLY RANGE	1-15		Volts AC or DC
Excitation MAXIMUM SUPPLY	18		Volts AC or DC
Mechanical Limit SERVICE LOAD	100		% of Rated Output
Mechanical Limit SAFE OVERLOAD	150		% of Rated Output
Mechanical Limit ULTIMATE OVERLOAD	>300		% of Rated Output
Mechanical Limit SAFE DYNAMIC LOAD	70		% of Rated Output
Temperature Range OPERATING	-10 to +70		°C
Temperature Range STORAGE	-20 to +80		°C
Environmental Sealing	IP40		-
Cable	5		m
Construction Material	Stainless Steel		-

PROCESS COUPLING (Nm) ACCORDING TO UNI ISO 1174-1	
0.5, 2.5, 5, 10	■ 1/4”
25, 50	■ 3/8”
100, 250	■ 1/2”
500, 1000	■ 3/4”

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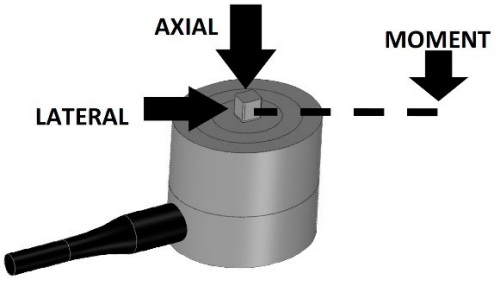
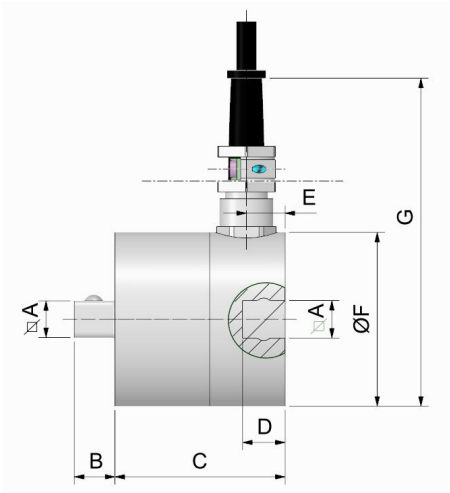
	Nm	0.5	2.5	5	10	25	50	100	250	500	1000
Maximum Axial Permissible Load	kN	0.38	0.38	0.5	0.9	2.2	3.5	6	9.5	18	28
Maximum Lateral Permissible Load	N	15	15	15	30	30	80	150	180	250	400
Bending Limit Moment	Nm	1	1	1.5	3.5	4.5	15	20	42	65	170

NOTE: *For correct measurement, both axial and transverse forces and bending moment should be absent. In case they are present, they must not exceed the indicated values, to be reduced in the simultaneous presence of multiple stresses.*



Outline Dimensions in millimetres



RATING (Nm)	■A	B	C	D	E	F	G
0.5, 2.5, 5, 10	1/4"	7.5	44	8	10	45	85
25, 50	3/8”	10.5	44	11	10	45	85
100, 250	1/2"	15.0	44	16	10	45	85
500, 1000	3/4"	22.5	53.5	24	17.5	51	91

Ordering Codes

RATING (Nm)	ORDERING CODE
0.5	MTRS05NM
2.5	MTRS2.5NM
5	MTRS5NM
10	MTRS10NM
25	MTRS25NM
50	MTRS50NM
100	MTRS100NM
250	MTRS250NM
500	MTRS500NM
1000	MTRS1KNM

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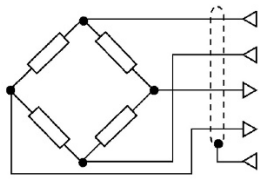
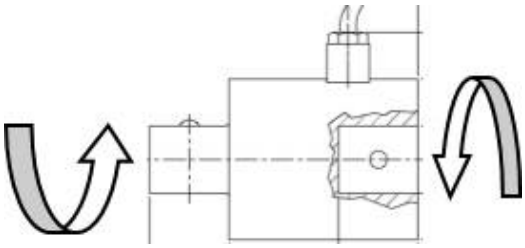
Wiring Details

	OUTPUT	CABLE[1]
	EXCITATION+	RED
	OUTPUT+	WHITE
	EXCITATION-	BLACK
	OUTPUT-	YELLOW
	----------	SHIELD[2]

[1] PVC 105°C shielded cable, 5.2mm Ø with 6 tinned 0.35mm^2 Ø conductors. [2] Connected to the body of the torque transducer.

Loading Mode



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