The force in torque management

TMFS Rotary Torque Measuring Flange

Non-contacting, coupling, in-line rotary torque transducer.

The TMFS torque measuring flange is an in-line rotary torque transducer based on the strain gauge principle.

It has an integral signal conditioner, which produces either analogue or digital outputs, which are then transmitted through a non-contacting system. There is no bearing between the rotor and stator and as such, the unit is free from wear.

The transducer has a very short flange to flange dimension, with the rotor being installed from one side (normally the test specimen side). This allows for easy and cost-effective assembly into a drive line.

The TMFS series is available in a variety of sizes ranging from 50Nm up to 5000Nm.

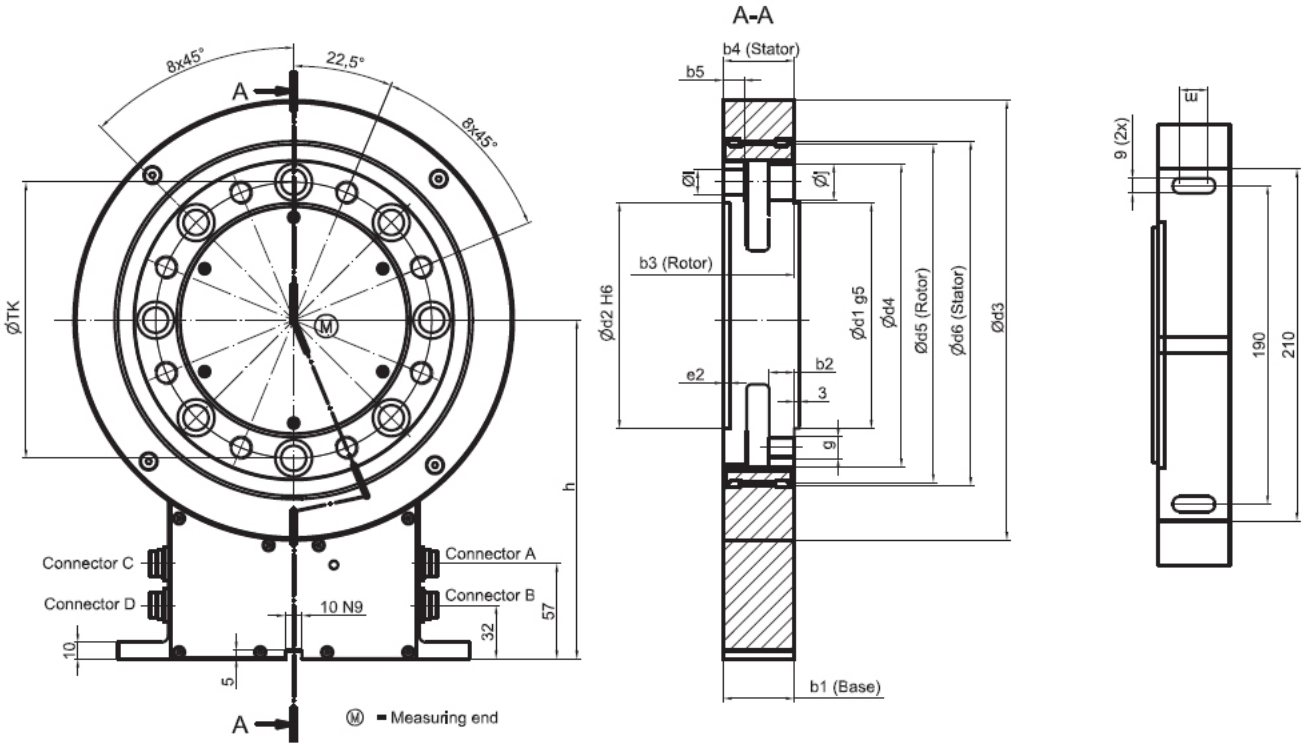
For pricing, availability or further technical information about the TMFS series, contact us via our website at www.crane-electronics.com or get in touch via email at sales@crane-electronics.com.

Technical Specification

Accuracy Class:	0.1
Supply Voltage:	11 – 30 V
Linearity Error:	<±0.05%
Power Consumption:	<5 W
Output Signal:	±10Vdc
Operating Temp:	10 to 60°C
Overload Capacity:	200%
Storage Temp:	-25 to +60°C
Protection:	IP54

Model No.	Rated Torque (Nm)	Max Speed	Torsional Stiffness (kNm/rad)	Total Weight (Kg)	Rotor Weight (Kg)	Rotor Inertia (Kg.m² (10-³))
TMFS50	50	15000	66	2.3	0.9	1.5
TMFS100	100	15000	238	2.35	0.95	1.6
TMFS200	200	15000	375	3.3	1.7	4.0
TMFS500	500	12000	945	4.9	3.0	11.6
TMFS1000	1000	12000	1462	4.9	3.0	11.1
TMFS2000	2000	10000	3220	7.0	4.5	25.2
TMFS3000	3000	10000	5098	8.7	6.2	27.8
TMFS5000	5000	8000	11442	13.0	10.5	91.6

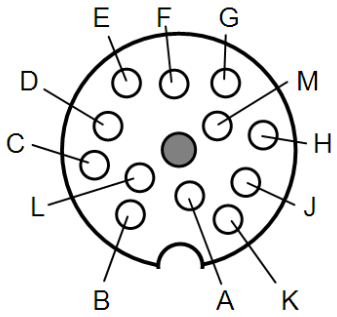
Dimensions



Size	Measuring Range (Nm)	b1	b2	b3	b4	b5	e2	d1 g6	d2 h6	d3	d4	d5	d6	TK	g	h	i	j	m
1	50	40.5	6.5	25	25	8.5	2.5	75	75	172	100	120	124	87	M6	157.5	6.4	11	17
1	100	40.5	6.5	25	25	9.5	2.5	75	75	172	100	120	124	87	M6	157.5	6.4	11	17
2	200	40.5	8.5	30.5	30.5	10.2	2.5	90	90	192	120	140	144	105	M8	167.5	8.4	14	17
3	500	40.5	13	40.5	40.5	12.5	3	110	110	228	155	175	179	133	M12	185.5	13	20	17
3	1000	40.5	13	40.5	40.5	12.5	3	110	110	228	155	175	179	133	M12	185.5	13	20	17
4	2000	42.5	16	42.5	42.5	12.5	4	140	140	263	190	210	214	165	M14	202.5	15	22	17
4	3000	42.5	22	55	42.5	18	4	140	140	263	190	210	214	165	M14	202.5	15	22	17
5	5000	64	21	64	64	24	4	174	174	311	238	255	259	206	M18	226.5	19	30	34

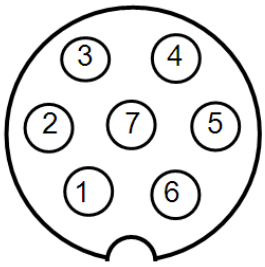
All dimensions are in mm. Details may change without notice.

Wiring Details



12 Pin

PIN	Designation		
A	GND relating to +V supply	G	N/C
B	TXD	H	60 pulses per revolution
C	V out ±10V for rated Torque	J	N/C
D	GND relating to V out	K	Calibration - Off 0 to 2V - On 3.5 to 30V Input resistance = 10kohm
E	DGND relating to speed/cal	L	RXD
F	+V supply 11 to 30V, 4W	M	Screen in sensor to housing



7 Pin

PIN	Designation
1	N/C
2	N/C
3	DGND
4	Calibration - Off 0 to 2V - On 3.5 to 30V
5	TXD (User RS233 option)
6	RXD (User RS232 option)
7	OGND

Locations

UK - Watling Drive, Hinckley, Leicestershire LE10 3EY, UK
USA - 1260 11th Street West, Milan, Illinois 61264, USA
Germany - Im Rank 5, 73655 Plüderhausen, Germany