

## RTA/RTD - Single & Dual Range Torque Transducers

### Product Overview

The RTA and RTD Torque Transducers provide accurate Torque measurement at speeds of up to 50,000rpm. The series has integral signal conditioning providing a  $\pm 5V$  output and they also provide 60 TTL pulses for additional Speed measurement. For speeds below 7000rpm, a 360-pulse option is also available.

The RTA and RTD series of single and dual range Torque Transducers have turndown ratios of 10:1 or 5:1. RS232 communications is an added option, along with a range of digital readouts for Torque, Speed and Power if required.

#### System Specifications:

Full scale output:	0 $\pm$ 5V	Accuracy (RTA):	< $\pm$ 0.1% fs
Operating Temp:	0 to +70°C	Overload Capacity:	150% fs
RTD lower scale:	< $\pm$ 0.2%fs	Storage Temp:	-25 to +80°C
Supply Voltage:	11 to 30VDC	Repeatability:	$\pm$ 0.02% fs
Zero Shift:	< $\pm$ 0.005%/C°	Power input (approx.):	2.5W
Maximum frequency:	1 kHz	Span Shift:	< $\pm$ 0.01%/C°

### Industrial Measurements

Watling Drive  
Sketchley Meadows  
Hinckley LE10 3EY  
Tel: +44(0) 1332 810 240  
sales@indmeas.co.uk  
www.indmeas.co.uk



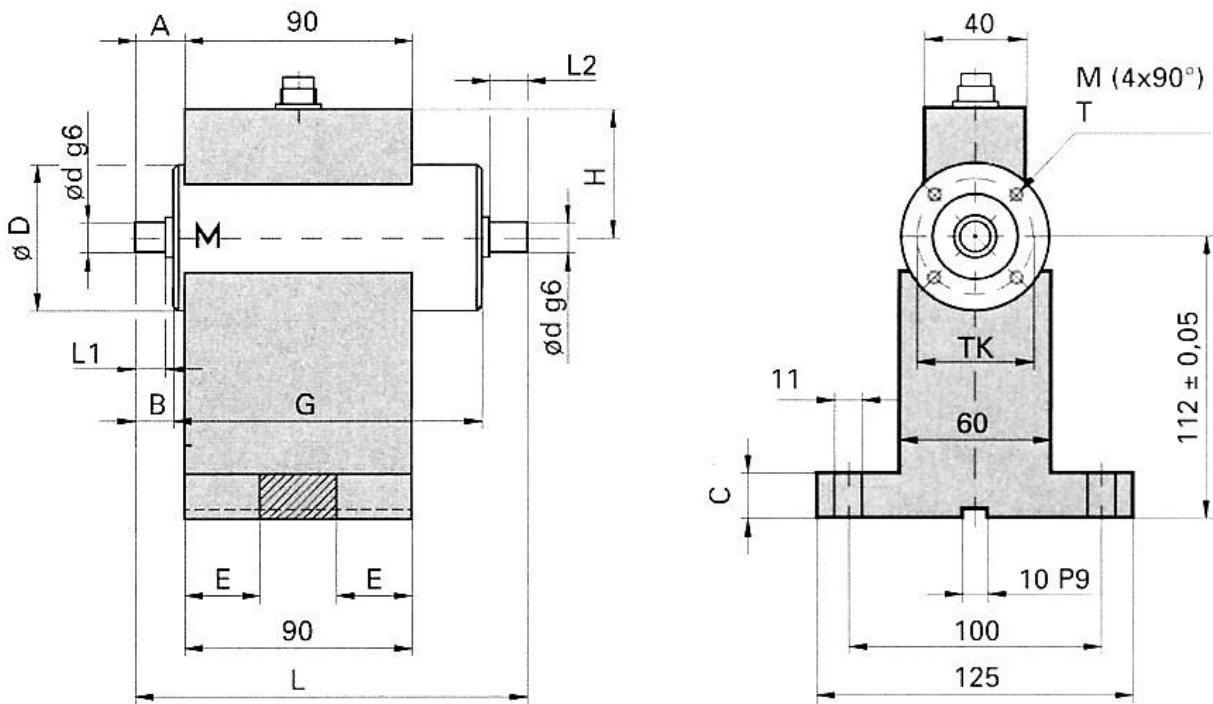
Model RTA/RTD	Rated Torque (Nm)	Std. Max Speed	Option Max Speed	Stiffness (Nm/rad)	Model RTA/RTD	Rated Torque (Nm)	Std. Max Speed	Option Max Speed	Stiffness (Nm/rad)
0.2	0.2	20000	50000	40	50	50	12000	30000	9100
0.5	0.5	20000	50000	40	100	100	12000	30000	13500
1	1.0	20000	50000	230	200	200	8000	20000	60000
2	2.0	20000	50000	350	500	500	8000	20000	100000
5	5.0	20000	50000	450	1000	1000	8000	20000	135000
10	10	20000	50000	700	2000	2000	5000	10000	520000
20	20	20000	50000	800	5000	5000	5000	10000	720000

## Dimensions

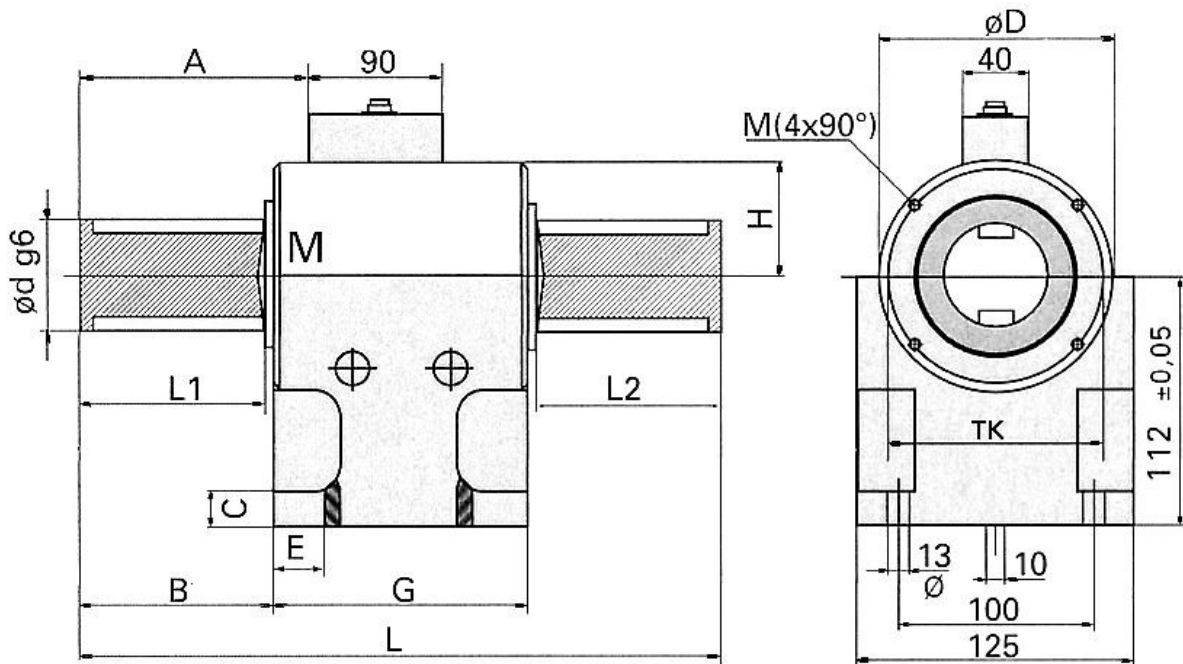
Dimensions are the same for both the standard and high-speed units. Sizes up to and including the RT100 have keyless shafts requiring clamp-type couplings. Larger sizes have twin metric keys to BS4235/DIN6885.

MODEL	L	L1	L2	d (g6)	D	A	B	G	H	M	T	TK
RTA/D 0,2 – 0,5	160.5	16	16	9	58	23.5	19	122	51	M5	10	46
RTA/D 1,0	159	16	16	9	58	22	17.5	122	51	M5	10	46
RTA/D 2 – 5	163	18	18	10	58	24	19.5	122	51	M5	10	46
RTA/D 10 - 20	166	20	20	12	58	25	20.5	122	51	M5	10	46
RTA/D 50 - 100	180	28	28	22	78	43.5	34	113	66	M6	12	64
RTA/D 200-1000	267	60	61	42	98	83.5	64.5	137	78	M6	12	87
RTA/D 2000-5000	418	120	120	70	148	-	-	-	-	M8	16	132

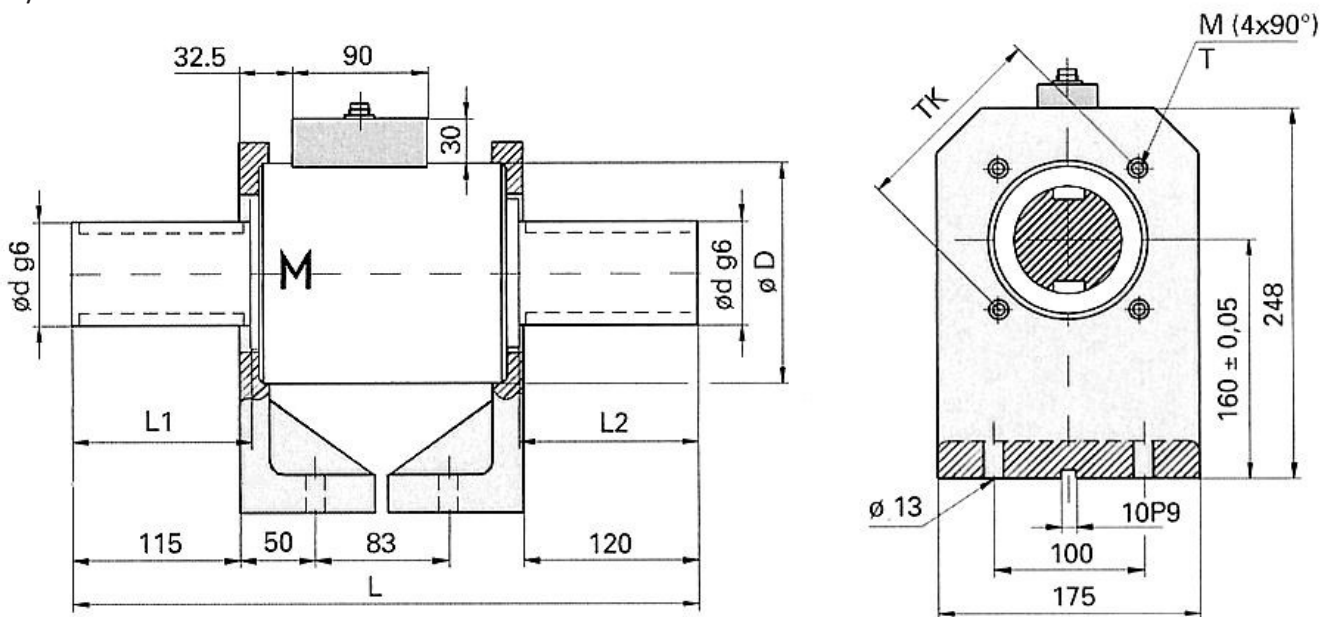
RTA/RTD 0.2 - 100



RTA/RTD 200 - 1000



RTA/RTD 2000 - 5000



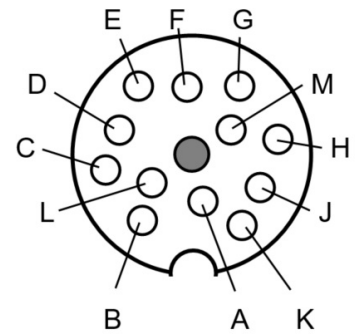
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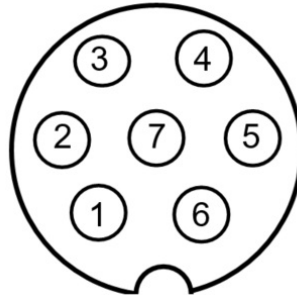
## Wiring Details

PIN	Designation		
A	GND relating to +V supply	G	TTL Level
B	TXD (UMV readout)	H	Open collector output
C	V out $\pm 5V$ for rated Torque $\pm 5V$ for cal result	J	N/C
D	AGND relating to V out	K	Calibration Off: 0 to 2V On: 3.5 to 24V
E	DGND relating to Speed/Cal	L	RXD
F	+V supply 11 - 30Vdc, 2.5W	M	Screen in sensor to housing



## RTD only

PIN	Designation
1	Range activation
2	N/C
3	N/C
4	N/C
5	TXD (user RS232 option)
6	RXD (user RS232 option)
7	DGND



For more information about the RTA/D range or for a quote, call +44 (0) 1332 810 240 or email [sales@indmeas.co.uk](mailto:sales@indmeas.co.uk).

# Providing custom torque solutions

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