

M420 Rotary Torque Transducers

Accurate • Easy to Use • Reliable & Robust

Ranges from 0-10Nm up to 0-60,000Nm

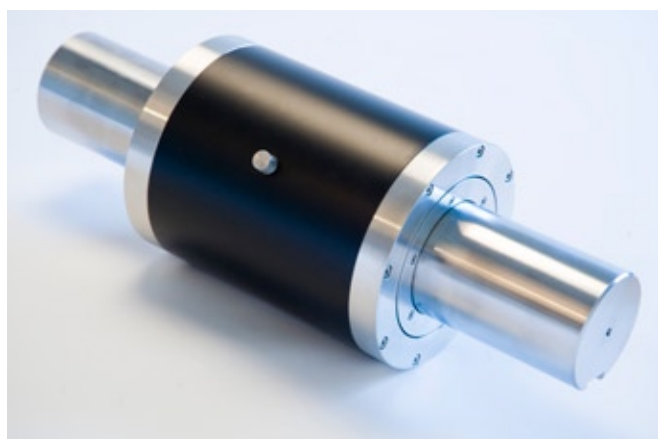
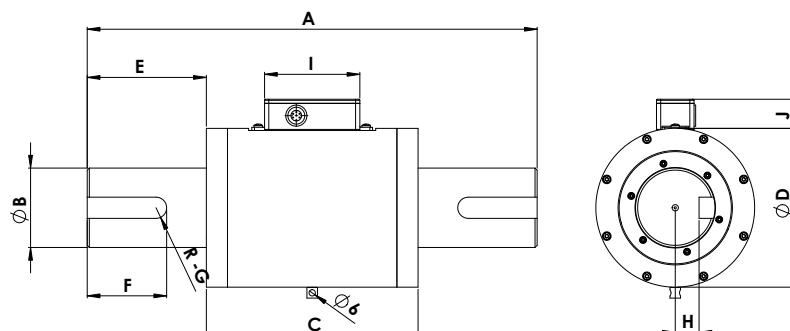
Datum Electronics M420 Rotary Torque Transducers measure the speed and torque strain in a rotating shaft. Signal output is transmitted directly from the shaft as serial data. The data can then be processed by a control system, logging system or a PC (through a USB converter if required) or by one of Datum's torque indicators. Whatever the instrumentation, Series 420 transducers are designed to provide you with highly stable, noise immune, easily accessible and accurate data.



The range is available in 6 body sizes. To help meet individual requirements from stock, a number of intermediate torque ranges are offered with each body size - starting from 0-10Nm to 0-100Nm on Size 1, rising to 0-15,000Nm and 0-20,000Nm on Size 5. The bespoke Size 6 offers a range of 0- 60,000Nm (details on request).

The M420 Series is currently used in over 50 countries throughout the world. Accurate, reliable and competitively priced and resistant to oil, grease, dust, etc., it is an ideal solution for most general test rig applications.

Datum Electronics is a leader in the design and manufacture of torque and power measurement products and systems. The M420 Series is one of a number of standard solutions available, the company also manufacture modular and custom solutions and are always please to discuss these options with you.



M420 Series Specifications	
Accuracy (combined non-linearity hysteresis)	+/- 0.1%
Repeatability	+/- 0.05%
Mechanical Overload	150% rated load (200% to order)
Operating Temperature Range	0 to 75C
Compensated Temperature Range	15 to 50C
Temperature Effect on Zero	+/- 0.0035% per deg C
Temperature Effect on Span	+/- 0.0035% per deg C
Supply Voltage	12Vdc
Output	RS232 Serial Data
Analogue Output Options (for torque and speed if selected)	+/- 10Vdc +/- 5Vdc 4-20mA 12mA+/-8mA
Speed Output Option	1 ppr as rpm within serial data

	M420 S1-A	M420 S1-B	M420 S1-C	M420 S1-D	M420 S2-A	M420 S2-B	M420 S3-A	M420 S3-B	M420 S4-A	M420 S4-B	M420 S5-A	M420 S5-B
Nm	10	25	50	100	250	500	1000	2000	5000	10000	15000	20000
Rating Lbft	7.4	18.4	36.9	73.8	184.4	368.8	737.6	1475.1	3687.8	7375.6	11063.4	14751.2
Std max RPM	10000	10000	10000	10000	8000	8000	4000	4000	3000	3000	2500	2500
HS max RPM	18000	18000	18000	18000	12000	12000	8000	8000	4500	4500	3500	3500
Weight Kgs	0.91	0.91	0.91	0.91	2.44	2.44	6.7	6.7	20.3	20.3	34.0	34.0
A Overall Length	184	184	184	184	240	240	315	315	425	425	415	415
B Shaft Diam g6 fit	15	15	15	15	30	30	50	50	75	75	110	110
C Body Length	129	129	129	129	150	150	147	147	200	200	175	175
D Body Diam	60	60	60	60	85	85	105	105	150	150	170	170
E Exposed Shaft Length	27.5	27.5	27.5	27.5	45	45	84	84	112	112	120	120
F Keyway Length	22.5	22.5	22.5	22.5	44	44	78.5	78.5	75	75	32	32
G Keyway Width	5	5	5	5	8	8	12	12	20	20	18	18
H Keyway Depth off centre	4.3	4.3	4.3	4.3	11	11	20	20	30	30	44	44
I Output Module Length	note 1	note 1	note 1	note 1	90	90	90	90	90	90	90	90
J Output Module Height	note 1	note 1	note 1	note 1	26	26	26	26	26	26	26	26