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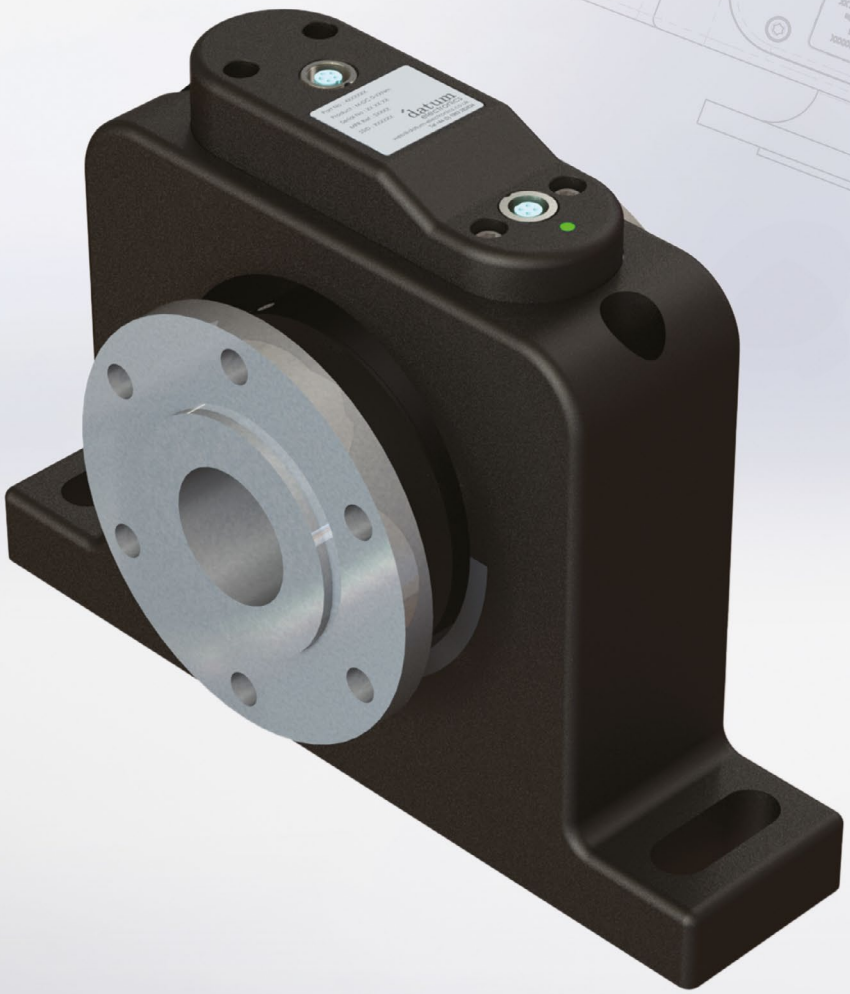

425 SERIES

FF425 Connect Flanged Torque Transducer

PRODUCT OVERVIEW

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425 SERIES

FF425 Connect Flanged Torque Transducer

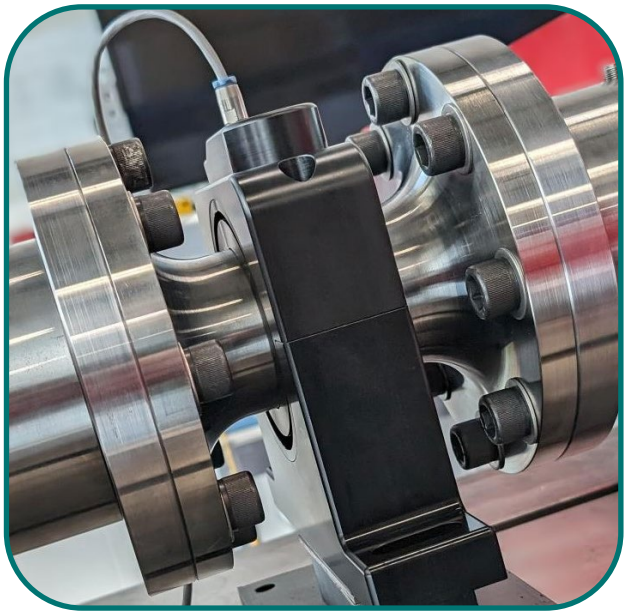
The Datum Connect (DC) Series Torque Transducers are the latest offering from Datum Electronics range of cutting-edge contactless torque monitoring solutions.

The DC Torque Transducers are Wi-Fi enabled to communicate with the Datum Connect app (available on both Android and iOS and Windows) and have been designed to fit with most applications and solutions requiring rotary torque measurement.

The high-tech contactless communication system provides data directly proportional to torque, offering a comprehensive range of available digital and analogue outputs.

FF425 System Performance and Benefits

- Accuracy: 0.1%
- Non-Linearity: 0.1%
- Repeatability: 0.05%
- Digital Sample Rate: As standard from 100sps
- Digital outputs of Data through RS485 and Wi-Fi with Datum Connect App, including USB PC test software
- Selectable Analogue Outputs of Torque, Speed & Power: 0-10V, -/-10V, 4-20mA, 12+/-8mA
- Ranges from 0-100Nm up to 30kNm as standard
- High Accuracy
- High Torque Resolution
- Fully Non-Contact Transmission and Hardware
- The customisable flange and PCD option available to customers
- Torque measurement greater than 40kNm please see Datum LTS system



Performance

Non-Linearity	+/-0.1% FSD
Non-Repeatability	+/-0.05% FSD
Noise-free Resolution	20 bit to 13.5 bit (dependent on sample rate)
Digital Sample Rate	Standard 100sps
Analogue Sample Rate	Up to 100sps, standard 20sps
Output Baud Rate	3Mbaud as standard
RPM Measurement	
Included as	1 pulse per rev
Transducer Output Interfaces:	
Serial data via RS485	
Wifi 2.4 Ghz transmission	
Transducer Output Data:	
Torque	Shaft RPM*

*Output of RPM based on 1 pulse per revolution as standard.
*Speak to sales for higher sample rates

Power Supply

12-24Vdc - 400	Via Datum Connect interface

Environment

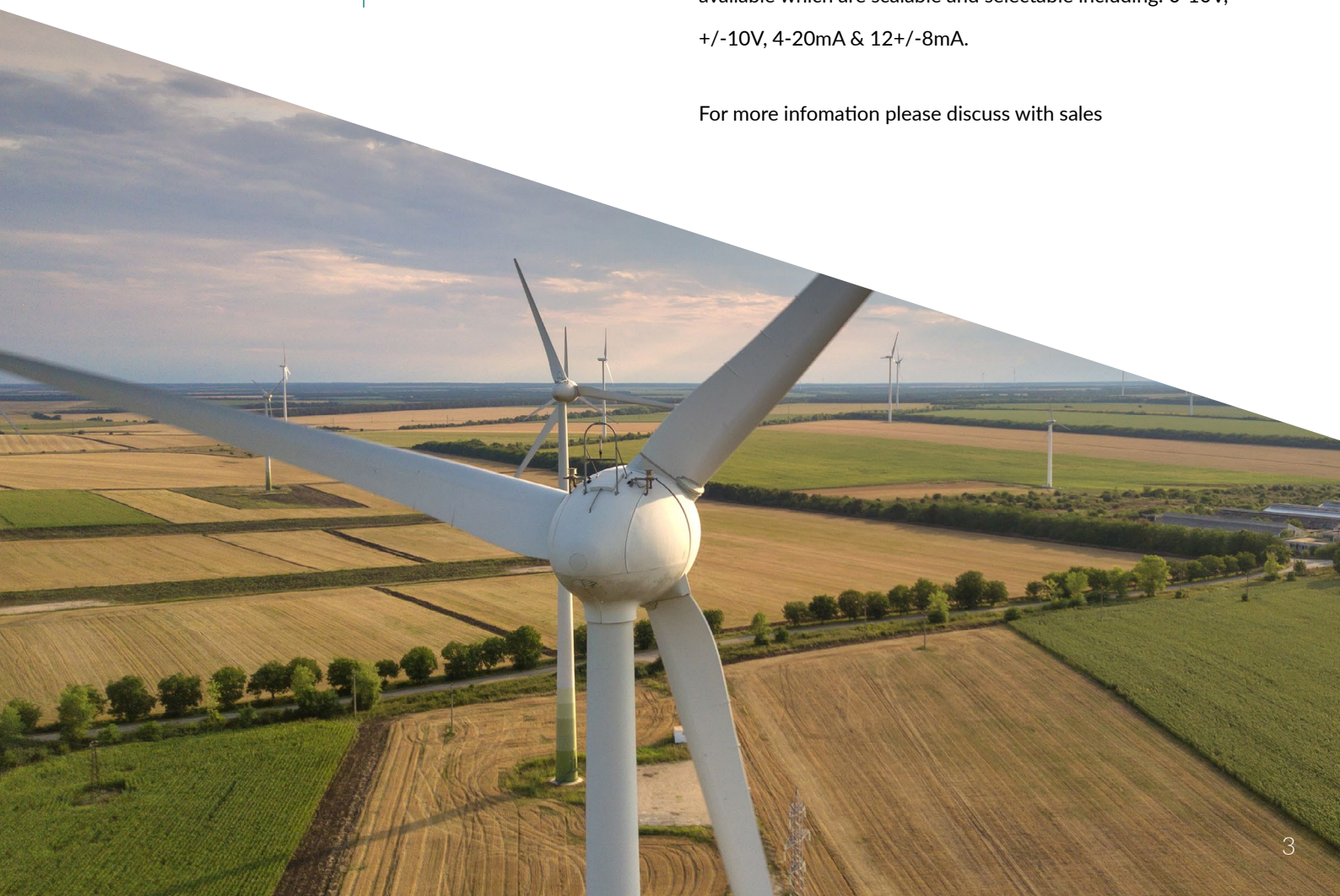
Thermal Stability of Gain per 10˚C	0.02%
Thermal Stability of Zero per 10˚C	0.02%
Normal Specification Range	10 to 60˚C
Operating Range	-10 to +70˚C
Storage Range	-35 to +75˚C
Environmental Protection	IP54
Electromagnetic Compatibility	EN61326-1:2006 (IEC61000-4), IEC60945)

The FF425 Connect is supplied with the Datum Connect Interface [DCI] to give traditional digital and analogue outputs to customers.

Digital outputs include RS485 and USB, supplied with our free of charge software to view and log Torque, Speed and Power Data, log files are a .CSV file to allow for simple analysis.

Individual analogue outputs for Torque, Speed & Power available which are scalable and selectable including: 0-10V, +/-10V, 4-20mA & 12+/-8mA.

For more infomation please discuss with sales



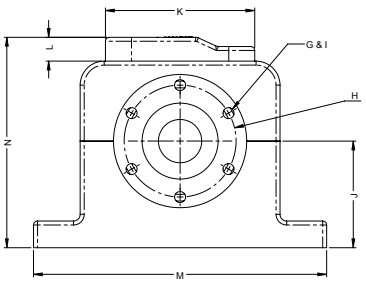
Performance Characteristics

FF425 Model Size	Rated load (Nm)	Rated load (Lbft)	Standard maximum rotational speed (RPM)	Body mass (Kgs)	Rotor mass (Kgs)
Size 1	0-100	73.8	1-10,000	1.057	0.560
Size 2 - A	0-250	184	1-10,000	1.057	1.201
Size 2 - B	0-500	369	1-10,000	1.057	1.276
Size 3 - A	0-1000	738	1-10,000	1.057	1.668
Size 3 - B	0-2000	1475.1	1-10,000	1.057	2.149
Size 4 - A	0-5000	3687.9	1-8,000	1.152	6.112
Size 4 - B	0-10,000	7375.7	1-8,000	1.152	12.162
Size 5 - A	0-15,000	11064	1-6,000	2.138	20.499
Size 5 - B	0-20,000	14751	1-6,000	2.138	22.318
Size 5 - C	0-25,000	18439	1-6,000	2.138	34.608
Size 5 - D	0-30,000	22127	1-6,000	2.138	40.969

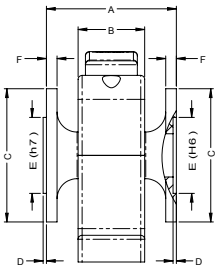
Speak with sales about larger torque requirements.

Alphabet Key for FF425 Model Sizes 1 to 5

END



SIDE



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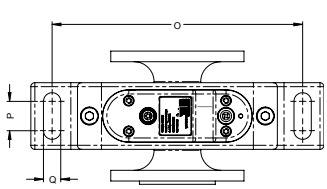

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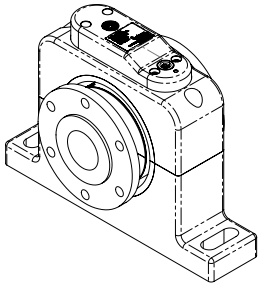

3D models and STEP files are available from Datum Electronics to assist project planning.
Please contact Datum Electronics for more information.

Tech Specifications

FF425 Model Size	Shaft length face to face (mm)	Body width (mm)	Flange Ø (mm)	Male/Female flange coupling extrusion / depth (mm)	Male/Female flange coupling Ø H7/h6 TOL (mm) (ISO 286)	Flange thickness (mm)	Number of holes	PCD (mm)	Hole Specif-ication (ISO 4017 / DIN 933 / ISO 273)
	A	B	C	D	E	F	G	H	I
Size 1	97.5	50	100	2.5	57	8	6	84	M8
Size 2 - A	97.5	50	100	2.5	57	8	6	84	M8
Size 2 - B	97.5	50	100	2.5	57	8	6	84	M8
Size 3 - A	97.5	50	120	2.5	75	8	8	101.5	M10
Size 3 - B	107.5	50	120	2.5	75	8	8	101.5	M10
Size 4 - A	137	50	180	3	110	12	8	155.5	M14
Size 4 - B	157	60	185	3	110	15	8	155.5	M14
Size 5 - A	216	60	250	5.5	140	20	8	217	M16
Size 5 - B	216	60	250	5.5	140	20	8	217	M16
Size 5 - C	216	60	285	6	175	20	8	247	M18
Size 5 - D	216	60	315	6	190	22	8	275	M20

FF425 Model Size	Base to shaft centre (mm)	Output module length (mm)	Output module length (mm)	Base length (mm)	Overall height (mm)	Base fixing slot centre to centre (mm)	Fixing slot length (mm)	Slot width (mm)
	J	K	L	M	N	O	P	Q
Size 1	80	112	8.5	220	143.5	188	22	13
Size 2 - A	80	112	8.5	220	143.5	188	22	13
Size 2 - B	80	112	8.5	220	143.5	188	22	13
Size 3 - A	80	112	8.5	220	143.5	188	22	13
Size 3 - B	80	112	8.5	220	143.5	188	22	13
Size 4 - A	100	112	8.5	220	172.5	188	22	13
Size 4 - B	100	112	8.5	220	172.5	188	22	13
Size 5 - A	100	112	8.5	300	212.5	266	22	13
Size 5 - B	100	112	8.5	300	212.5	266	22	13
Size 5 - C	100	112	8.5	300	212.5	266	22	13
Size 5 - D	100	112	8.5	300	212.5	266	22	13

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