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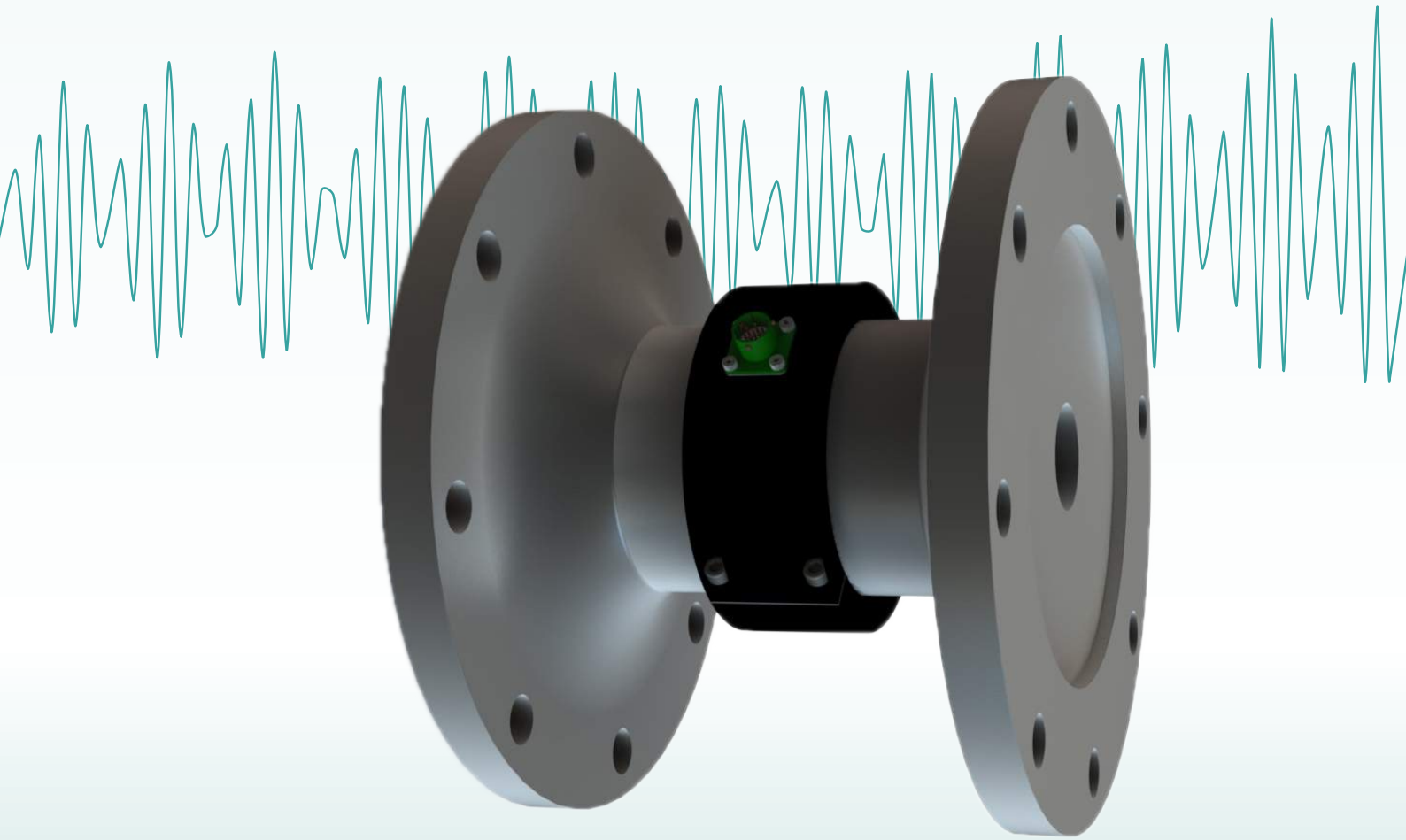
FF410 STATIC TORQUE TRANSDUCER DATASHEET



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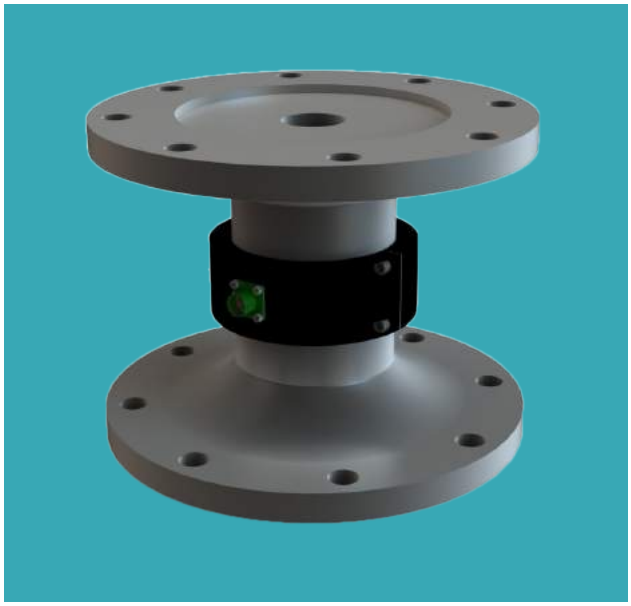


THE DATUM FF410 STATIC TORQUE TRANSDUCER

The Datum Electronics Series 410 Static Torque sensor was developed following demand from our customers for an effective and competitively priced product. Developed from our FF425 rotary torque transducers, the same technology and design principles have been applied to our FF410 reaction transducer range, providing a competitive option, which is simple and effective.

SPECIFICATIONS

The Series FF410 Reaction Torque Transducer design utilises full bridge strain gauge principles. Using the same principles and knowledge gained in the rotary market, the reaction torque range transducer provides the following specifications, with an optional high torsional stiffness model.

- Accurate On Shaft Torque Measurement
- Flexible Rig/Drivetrain fittings (DIN Size Flange)
- Modular System Assembly
- Proven Technology
- Low Maintenance
- Simple Linear Calibration included as standard
- Engineered to Fit Most Drive Components
- Static Torque Measurement
- Full Bridge Strain Gauge Output
- Researched, Designed and Built in the UK

FEATURES

- Flange Mounted Static Transducer
- Flange Torque Transducer to Match Stadard DIN Flanges
- Ideal Design for Easy Fitting To Test Rigs and Drive Systems
- No Bearings for Lightweight Applications
- Unique Design Offers High Torsional Stiffness Model
- Standard FF410 Reaction Torque Sensor Range Available from 100 Nm to 10,000 Nm
- Full Bridge Strain Gauge Output Compatible with DUI (Datum Universal Interface) & Type 133 Amplifier

EASY FIT INTO RIG

The FF410 Static Sensor easily fits into your existing test rig or drive train. Using standard DIN flanges, fitting and coupling, the static FF410 torque transducer is a more efficient than other manufacturing options. The minimum operating envelope of the Series 410 reaction torque transducer starts afrom as litle as 100mm and can increase depending on torque measurement requirements.

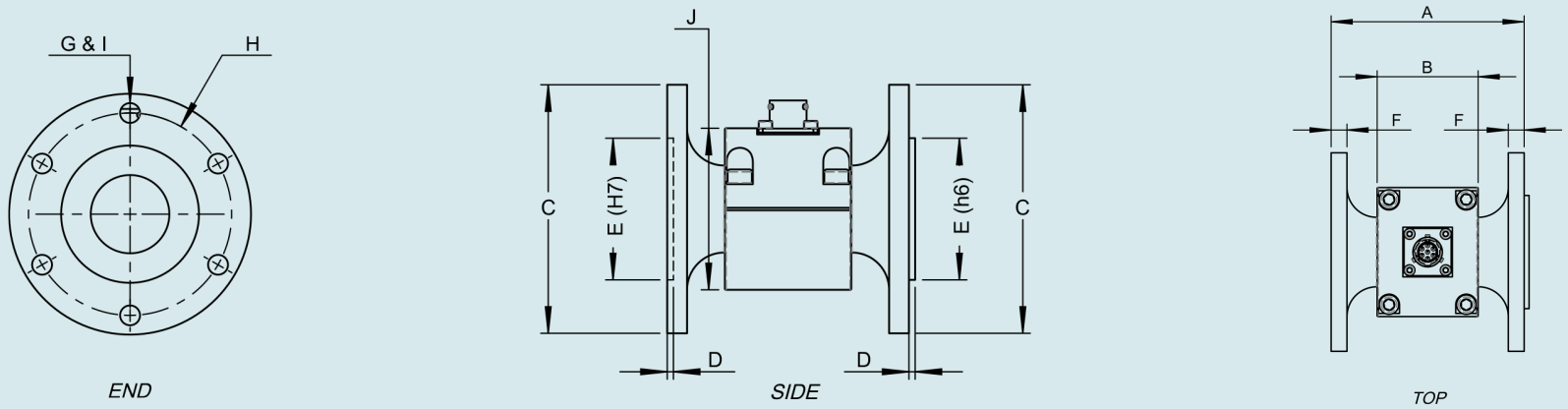
TECHNICAL DATA

Operating Temperature	0 to +70˚C (+32 to +158˚F)
Storage Temperature	-40 to +85˚C (-40 to +185˚F)
Temperature Effect on Span	0.001% per ˚C (0.001% per ˚F)
Temperature Effect on Zero	0.002% per ˚C (0.002% per ˚F)
Calibration Temperarure	22˚C (71.6 ˚F)
Environmental Protection	IP54 (IP68 to order)
Cable Length	4 metres as standard (13.12ft), longer if required
Combined Error	0.2% of FSD
Sensitivity	1.8mV/V (nominal)
Hysteresis / Repeatability	0.1% of FSD
Excitation Voltage	5-15 VDC
Max Overload Capacity	150% of full load
Bridge Resistance	700 ohms (nominal)

Document: 1014 Issue: 6 Date: 07/02/2019

FF410 SPECIFICATIONS & DIMENSIONS

				A	B	C	D	E	F	G	H	I	J
FF410 Model Size	Rated Torque Load, Nm	Rated Torque Load, (lb ft)	Overall Mass, kg	Shaft Length, mm	Body Width, mm	Flange Ø, mm	Male/Female Flange Coupling Height/Depth, mm	Male/Female Flange Coupling Ø H7/h6 TOL (ISO 286), mm	Flange Thickness, mm	Number of Holes per Flange	PCD, mm	Clearance Through Hole ISO 273. Series: Fine	Body Ø, mm
S1	0 - 100	0 - 75	0.62	97.5	51	100	2.5	57	8	6	84	8.4	65
S2 -A	0 - 250	0 - 200	1.27	97.5	51	100	2.5	57	8	6	84	8.4	65
S2 - B	0 - 500	0 - 400	1.34	97.5	51	100	2.5	57	8	6	84	8.4	65
S3 - A	0-1,000	0 - 750	1.81	97.5	51	120	2.5	75	8	8	155.5	10.5	75
S3 - B	0 - 2,000	0 - 1,500	2.26	107.5	51	120	2.5	75	8	8	155.5	10.5	75
S4 - A	0 - 5,000	0 - 4,000	6.24	137	51	180	3	110	12	8	155.5	15	90
S4 - B	0 - 10,000	0 - 8,000	10.01	157	51	185	3	110	15	8	155.5	15	100
S5 - A	0 - 15,000	0 - 12,000	29.51	216	51	250	5.5	140	20	8	217	17	138
S5 - B	0 - 20,000	0 - 15,000	30.12	216	51	250	5.5	140	20	8	217	17	138
S5 - C	0 - 25,000	0 - 20,000	31.5	216	51	285	6	175	20	8	247	19	138
S5 - D	0 - 30,000	0 - 25,000	32.44	216	51	315	6	190	22	8	275	21	138



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