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FF410 Static Torque Transducer

DESCRIPTION

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 FF420 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 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

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 transducer into your rig is made more efficient than other manufacturing options. The minimum operating envelope of the Series 410 reaction torque transducer starts from as little as 100mm and will increase depending upon torque measurement requirements.

TORQUE RATINGS

The Series 410 Reaction Torque Transducers have been designed with nominal rated torque levels in Nm. We can modify the torque range to include lb/ft, in/lbs or similar based upon your requirements. Nominally rated torque levels include:

250Nm

500Nm

1,000Nm

2,000Nm

5,000Nm

10,000Nm

FEATURES

Flange Mounted static transducer

Flange torque transducer to match standard 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

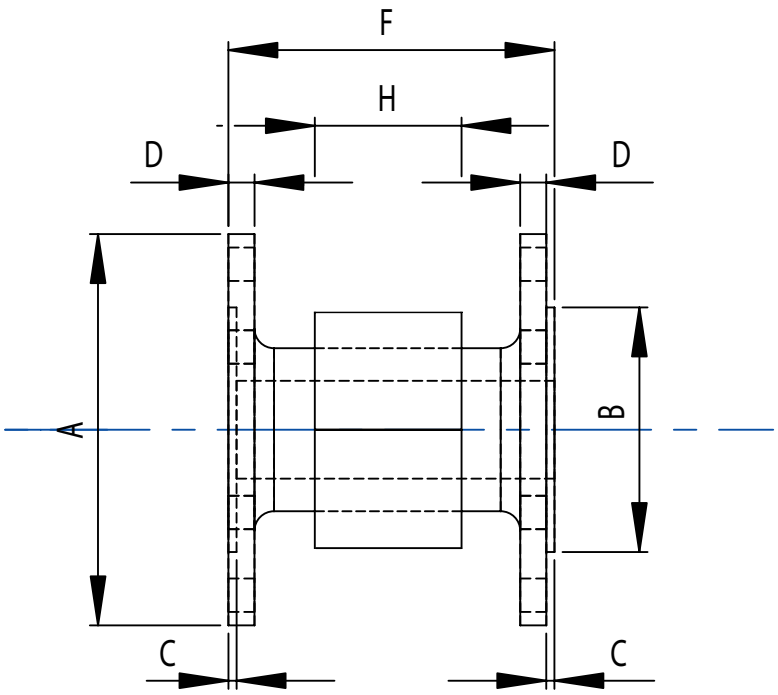
Standard FF410 reaction torque sensor range available from 250Nm-10,000Nm

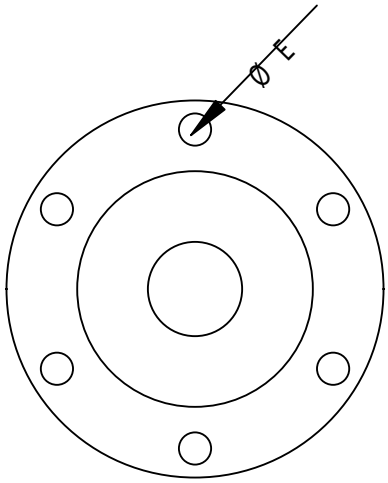
Full Bridge strain gauge output compatible with Datum Type310, Type324, Type 300 Indicators.

Please enquire for more details of our full static range of torque transducer

FF410 SPECIFICATIONS & DIMENSIONS

TORQUE	A	B	C	D	No. OF HOLES	E (+0.2mm)	E (PCD)
250Nm	100mm	57mm	2.5mm	8.0mm	6	8.25mm	84mm
500Nm	100mm	57mm	2.5mm	8.0mm	6	8.25mm	84mm
700Nm	100mm	57mm	2.5mm	8.0mm	6	8.25mm	84mm
1,000Nm	120mm	75mm	2.5mm	8.0mm	8	10.25mm	101.5mm
1,600Nm	120mm	75mm	2.5mm	8.0mm	8	10.25mm	101.5mm
1,900Nm	120mm	75mm	2.5mm	8.0mm	8	10.25mm	101.5mm
2,900Nm	150mm	90mm	3.0mm	10.0mm	8	12.1mm	130mm
4,400Nm	150mm	90mm	3.0mm	10.0mm	8	12.1mm	130mm
5,100Nm	180mm	110mm	3.0mm	12.0mm	8	14.1mm	155.5mm
7,300Nm	180mm	110mm	3.0mm	15.0mm	10	16.1mm	155.5mm
13,000Nm	225mm	140mm	4.4mm	20.0mm	8	16.1mm	196mm





TECHNICAL DATA

Operating Temperature
0 to + 70C

Storage Temperature
- 40 to + 85C

Temperature Effect on Span
0.001% per C

Temperature Effect on Zero
0.002% per C

Calibration Temperature
22C

Environmental Protection
IP54 IP65 to order if required)

Cable Length
4 metres (standard) longer if required

Combined Error
0.2% of FSD

Sensitivity
1.8mV/V (nominal)

Hysteresis / Repeatability
0.15% of FSD

Excitation Voltage
5 - 15VDC

Max Overload capacity
150% of full load

Bridge Resistance
700ohms (nominal)

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