



APPLIED MEASUREMENTS LTD.
Transducer Specialists...

+44 (0) 118 981 7339

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<https://appmeas.co.uk>

DTDR-F Wireless Torque Transducer

Key Features:

- Capacities: 0-10Nm to 0-50,000Nm
- Wireless Telemetry Data Output
- Non-Linearity: $<\pm 0.1\%$ /Rated Capacity Typical
- Battery-Powered (Rechargeable In-Situ)
- Max Speed: 6500rpm (Balanced to Grade G6,3 per ISO 1940)
- IP65 Protection Rating
- 3 Year Warranty



The DTDR-F series of wireless telemetry torque sensors are designed for the measurement of direct torque in rotating and static applications where a truly wireless device with on-board power supply and statorfree data transmission is required.

The DTDR-F utilises the latest T24 range of battery-powered wireless telemetry equipment that offers ease-of-use alongside robust data transmission and superb battery life.

The DTDR-F's data output can be fed into any T24 receiver module to provide an output or display to suit your requirement, options include; analogue voltage or current output, portable handheld display, USB to PC for display and data logging, large LED displays, alarm relays and printers. As the signal can be read by multiple modules any simultaneous combination of these is possible if required.

The complete assembly is rated to IP65 making it suitable for many common research, testing and industrial applications.

We can also customise the design to suit your application exactly if needed, simply [contact our technical sales team](#) to discuss your requirement. Take a look at our [full range of torque sensors](#).

Options:

- Vacuum Application Versions
- Single or Multi-Channel PC-Based Monitoring & Data Logging System
- Fatigue Rated - Available all Capacities
- Mounting Options
- Customised Flanges to your Dimensions/ Design

Applications:

- Quality Assurance Departments
- Torque Tool Testing
- In-Line Torque Measurement
- Portable Torque Testing Equipment
- Shaft Torque Measurement
- Driveline Torque Measurement
- Product Development
- Renewable Energy Research + Development



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Specification:

Rated Capacity (RC)	Nm	0-10, 0-25, 0-50, 0-100, 0-200, 0-500, 0-1000, 0-2000, 0-3000, 0-5000, 0-10k, 0-20k, 0-30k, 0-50k (Higher and lower capacities also available)
Operating Modes	Clockwise (CW)/Counter-Clockwise (CCW) / Clockwise (CW) & Counter-Clockwise (CCW)	
Output		2.4GHz Wireless Telemetry: Compatible with all T24 Modules*
Output Bandwidth	±%Full Scale Output	up to 200Hz (2kHz optional)
Non-Linearity	±%/Full Scale Output	<0.1 typical
Hysteresis	±%/Full Scale Output	<0.1
Repeatability	±%/Full Scale Output	<0.05
Temperature Effect on Zero	±Reading/ °C	<0.010
Temperature Effect on Output	±/Reading/ °C	<0.020
Operating Temperature Range	°C	0 to +50 (temperature range when charging +15 to +45)
Compensated Temperature Range	°C	+10 to +50
Safe Overload	% of Rated Capacity	150
Ultimate Overload	% of Rated Capacity	>200
IP Rating (Environmental Protection)		IP65
Weight		Speak to sales
Fatigue Rating	Fully Reversed Cycles	20 million (standard version) / 200 million (fatigue-rated version)
Power Supply		Integrated 3.6V Lithium-Ion Rechargeable Battery
Range	metres	120 (in ideal conditions)
Maximum Rotational Speed	rpm	6500
Balancing		Grade G6,3 (per ISO 1940 standards)
Construction Materials		Aluminium Alloy (>500Nm) / Stainless Steel (1000Nm>) & Acetal

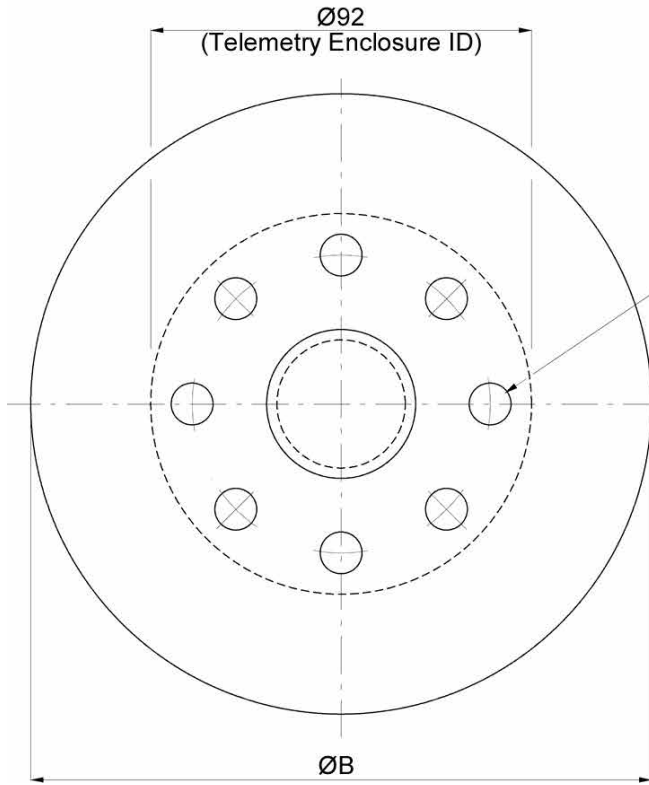
*2kHz model is only compatible with T24-AO1, T24-AO1I, T24-BSi, T24-BSu Modules and the T24 Toolkit Software.

Dimensions (mm):

Capacity (Nm)	A	ØB	ØCH7	D	E	ØF	G
0-10	100	150	38	13	2	72	10.1
0-25	100	150	38	13	2	72	10.1
0-50	100	150	38	13	2	72	10.1
0-100	100	150	38	13	2	72	10.1
0-200	100	150	38	13	2	72	10.1
0-500	100	150	38	13	2	72	10.1
0-1000	110	150	38	19	2	72	10.1
0-2000	110	160	38	19	2	72	10.1
0-3000	130	203	50	30	3	177	16.2
0-5000	140	203	50	35	3	177	16.2
0-10,000	150	203	50	38	3	177	16.2
0-20,000	180	278	60	50	4	235	24.2
0-30,000	180	278	60	50	4	235	24.2
0-50,000	180	278	60	50	4	235	24.2

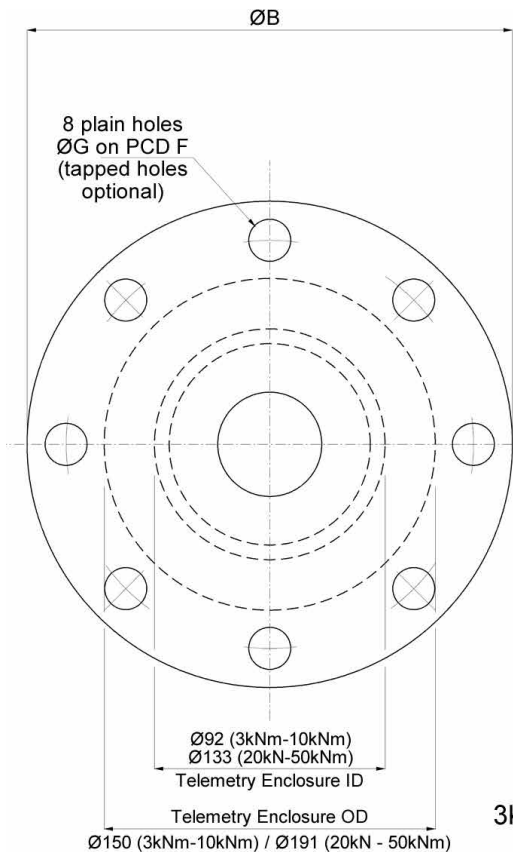
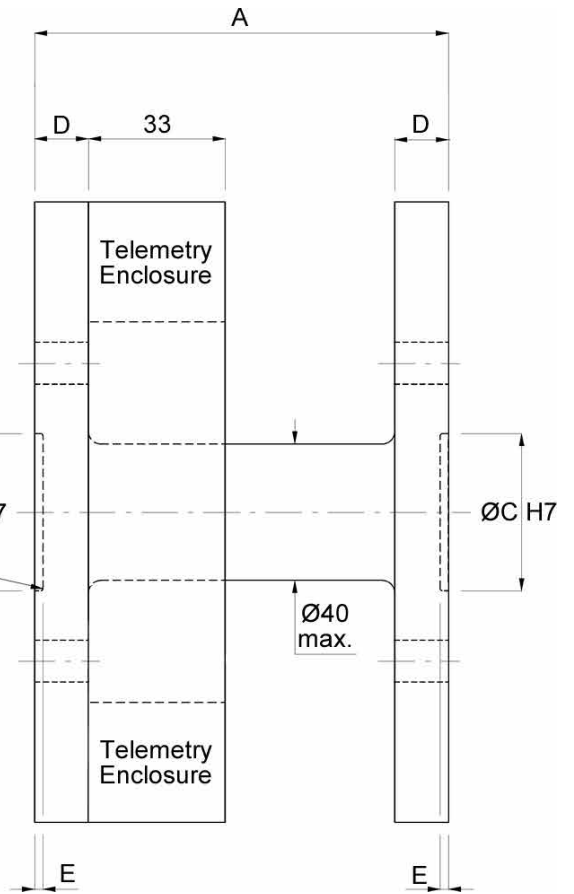


10Nm to 2000Nm Capacities



8 plain holes
ØG on PCD F
(tapped holes
optional)

R0.5
max.
both
sides

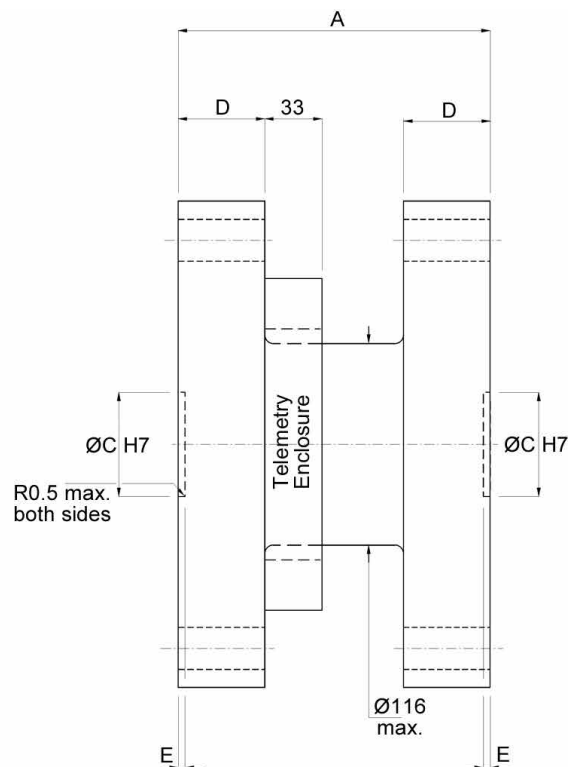


8 plain holes
ØG on PCD F
(tapped holes
optional)

Ø92 (3kNm-10kNm)
Ø133 (20kN-50kNm)
Telemetry Enclosure ID

Telemetry Enclosure OD
Ø150 (3kNm-10kNm) / Ø191 (20kN - 50kNm)

3kNm to 50kNm Capacities



R0.5 max.
both
sides

Ø116
max.



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Ordering Codes:

Core Product	Capacity (inc Engineering Units)	Cable Length (m)	Specials Code	Result
DTDR-F	10Nm	000	000	DTDR-F-10Nm-000-000
DTDR-F	25Nm	000	000	DTDR-F-25Nm-000-000
DTDR-F	50Nm	000	000	DTDR-F-50Nm-000-000
DTDR-F	100Nm	000	000	DTDR-F-100Nm-000-000
DTDR-F	200Nm	000	000	DTDR-F-200Nm-000-000
DTDR-F	500Nm	000	000	DTDR-F-500Nm-000-000
DTDR-F	1000Nm	000	000	DTDR-F-1000Nm-000-000
DTDR-F	2000Nm	000	000	DTDR-F-2000Nm-000-000
DTDR-F	3000Nm	000	000	DTDR-F-3000Nm-000-000
DTDR-F	5000Nm	000	000	DTDR-F-5000Nm-000-000
DTDR-F	10,000Nm	000	000	DTDR-F-10000Nm-000-000
DTDR-F	20,000Nm	000	000	DTDR-F-20000Nm-000-000
DTDR-F	30,000Nm	000	000	DTDR-F-30000Nm-000-000
DTDR-F	50,000Nm	000	000	DTDR-F-50000Nm-000-000

Associated Products:



[T24-HS Simple Handheld Telemetry Display](#)



[T24-HA Advanced Handheld Telemetry Display](#)



[T24-BSU USB Telemetry Base Station](#)



[T24-AO1 Analogue Output Module](#)