



APPLIED MEASUREMENTS LTD.
Transducer Specialists...

+44 (0) 118 981 7339

info@appmeas.co.uk

<https://appmeas.co.uk>

YDSA Miniature Rotary Torque Transducers

Key Features:

- Capacities 0-0.2Nm to 0-50Nm
- 1.3mV/V Output
- Very Compact Size
- Non-Linearity: $<\pm 0.2\%$ /Rated Capacity
- Maximum Speed 8000rpm
- Suitable For Low Range Torque Measurements
- 3 Year Warranty



The [YDSA miniature rotary torque transducers](#) have a parallel shaft and are designed for low capacity applications. Their compact size makes them suitable for mounting in small spaces. They feature high accuracy and high speed/RPM capability.

Typical applications include the monitoring of high speed, low torque electrical motors, pumps and gearboxes.

For easy installation the YDSA features an integrated mounting pedestal and a detachable cable assembly.

The YDSA series can be further complimented by any of our range of instrumentation to offer a complete system, supplied and calibrated from a single supplier, please speak to our [technical sales team](#).

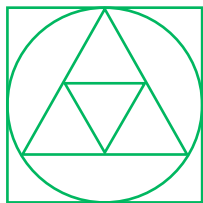
Need a small static torque transducer? Have a look at our [miniature static shaft torque sensor](#).

Options:

- Amplified Analogue Outputs: 4-20mA / $\pm 10\text{Vdc}$ / 0-10Vdc / 0-5Vdc
- RS485 Digital Output: ASCII, Modbus or CAN Protocol
- TEDS (Transducer Electronic Data Sheet) TEDS Allows Plug & Play with TEDS Enabled Instrumentation.
- USB Version (via DSC-USB)
- Single or Multi-Channel PC-Based Monitoring & Data Logging System
- Wireless Version (via T24 Instrumentation)
- Supplied with any Instrumentation and Calibrated as a Complete System with UKAS Traceable Certificate

Applications:

- Electrical Motor Testing
- Pump Testing
- Quality Assurance Departments
- Torque Tool Testing
- Measuring Fastening or Breakaway Torque of Bolts & Nuts
- Calibrating Automated Torque Screwdrivers, Spanners & Wrenches
- In-Line Torque Measurement
- Portable Torque Testing Equipment
- Robotics



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Specification:

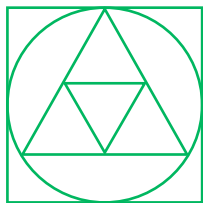
Rated Capacity (RC)	Nm	0.2, 0.5, 1, 2, 3, 5, 10, 30, 50
Rated Output (FSO)	mV/V	1.3 nominal
Zero Balance/Offset	±%/Rated Output	<1 typical
Output Symmetry (cw vs ccw)	±%/Rated Output	<0.5
Non-Linearity	±%/Full Scale Output	0.2
Hysteresis	%/Full Scale Output	0.2
Repeatability	±%/Full Scale Output	0.1
Temperature Effect on Zero	±%/Full Scale Output/ °C	<0.005
Temperature Effect on Output	±/Applied Torque/ °C	<0.009
Bridge Resistance	Ohms	350 nominal
Insulation Resistance	Megaohms @ 500Vdc	300
Excitation Voltage	Volts AC or DC	10 recommended (2-15 acceptable)
Operating Temperature Range	°C	-20 to +70
Compensated Temperature Range	°C	-10 to +60
Storage Temperature Range	°C	-20 to +70
Safe Overload	% of Rated Capacity	150
Ultimate Overload	% of Rated Capacity	300
IP Rating (Environmental Protection)		IP50
Weight	kg	0.5
Fatigue Rating		10 ⁸ cycles typical
Cable Length (as standard)		3 metres
Cable Type		Ø4mm, 4-core screened
Frequency Response	ms	<10 typical
Resolution		1 part in 50,000 (with appropriate instrumentation)

Wiring Diagram:

Wire	Designation
Red	+ve excitation (Pin A)
White	-ve excitation (Pin C)
Black	+ve signal (Pin D)
Green	-ve signal (Pin B)
Screen	To ground - not connected to transducer body (Pin E)

Dimensions (mm):

CAPACITY (Nm)	A	B	C	ØD	ØE	F	G	M	N	O	ØP	Q	R	RPM
0.1, 0.2	84	52	16	60	8	12	1	34.0	32	42	5.5	59	70	8.000
3, 5	88	56	16	60	12	12	1	34.0	32	42	5.5	59	70	8.000
10, 30	90	58	16	72	18	12	5X5	40.5	32	46	6.5	72	86	8.000
50	118	58	30	72	18	26	5X5	40.5	32	46	6.5	72	86	8.000

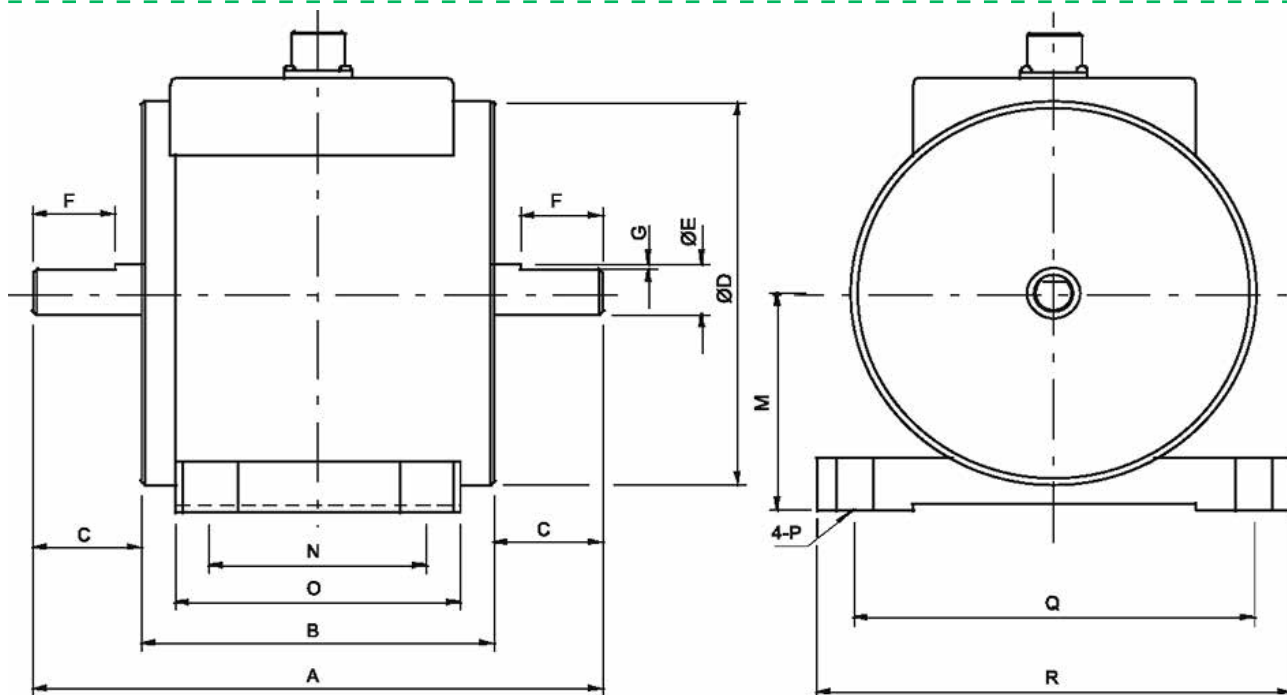


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Ordering Codes:

Core Product	Capacity (inc Engineering Units)	Cable Length (m)	Specials Code	Result
YDSA	0.2Nm	003	000	YDSA-0.2Nm-003-000
YDSA	0.5Nm	003	000	YDSA-0.5Nm-003-000
YDSA	1Nm	003	000	YDSA-1Nm-003-000
YDSA	2Nm	003	000	YDSA-2Nm-003-000
YDSA	3Nm	003	000	YDSA-3Nm-003-000
YDSA	5Nm	003	000	YDSA-5Nm-003-000
YDSA	10Nm	003	000	YDSA-10Nm-003-000
YDSA	30Nm	003	000	YDSA-30Nm-003-000
YDSA	50Nm	003	000	YDSA-50Nm-003-000

Associated Products:



[TR150 Handheld Indicator](#)



[T24 Wireless Telemetry Range](#)



[Intuitive4-L Panel-Mount Indicator](#)



[DSC-USB USB Signal Digitiser](#)



[ICA Miniature Strain Gauge Amplifier](#)



[SGA Signal Conditioner/Amplifier](#)