Crane Electronics Ltd
The force in torque management

CheckStar
In-line Rotary Torque Transducer

Crane's CheckStar sets the standard for dynamic torque and angle measurements of all continuous drive and impulse tools, with proven reliable performance in thousands of applications worldwide.

CheckStar transducers fit in-line between the assembly tool and the fastener, measuring the actual torques applied and the angular rotation of the fastener, under production conditions.

Whatever the vibration and the shock loads experienced, CheckStar's patented contact system ensures a connection is always maintained between the readout and the strain gauges. Inferior systems suffer from "brush bounce" that leads to unreliable torque readings.

The low inertia design of the CheckStar ensures accurate and repeatable measurement of high speed transients, such as the point of shut-off on continuous drive tools and the pulsing of the impulse tools.

CheckStar forms an essential part of the Crane UTA torque system. On board intelligence means the UTA CheckStar is automatically recognised by the Crane readout device, eliminating set-up errors and enabling logging of the serial number against measurements for complete trace ability. An Industry Standard (IS) version is also available where a user needs the advanced features of the CheckStar but the already has a readout device from another manufacturer. Both versions can be specified to include an angle encoder with 0.5° resolution.

Key Features

- ✓ Accuracy +/-0.25% of full scale
- ✓ Patented design ensures no "brush bounce" even when used with impulse tools
- ✓ Compatible with all continuous drive tools, impulse tools and torque wrenches
- ✓ Square and Hex drives available
- ✓ Industry Standard (IS) versions available (2mV/V;1.475mV/V)
- ✓ Low inertia benefits accurate dynamic measurement
- ✓ Angle measurement option with no size increase (0.5° resolution)

Order Information

Crane CheckStar transducers are available in the following versions and sizes:

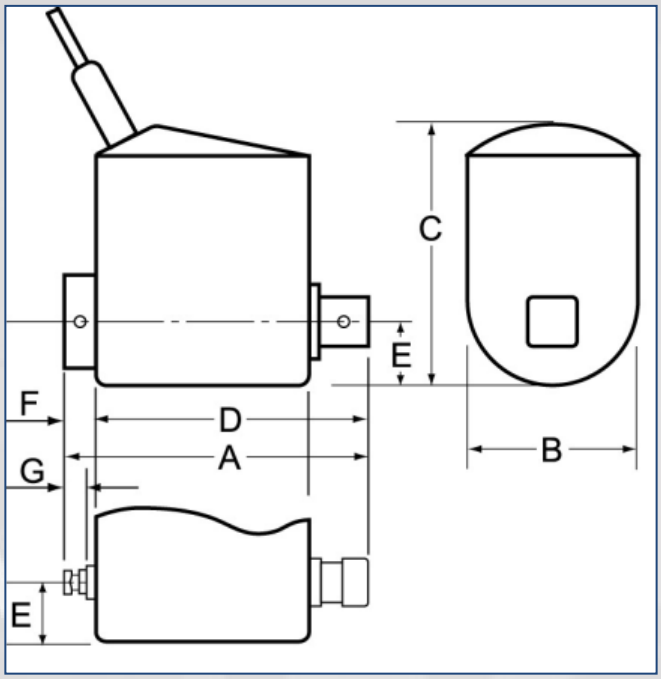
Nm	Version				
		UTA with hex drive	UTA with square drive and spring pin	IS with hex drive	IS with square drive and spring pin
	1	✓		✓	
	2	✓		✓	
	5	✓	✓	✓	✓
	10	✓	✓	✓	✓
	20	✓	✓	✓	✓
	25		✓		✓
	50		✓		✓
	75		✓		✓
	180		✓		✓
	250		✓		✓
	500		✓		✓
	750		✓		✓
	1400		✓		✓
	3000		✓		✓
	5000		✓		✓

(All of the above sizes are available as torque only or torque and angle)

CheckStar Technical Specification:

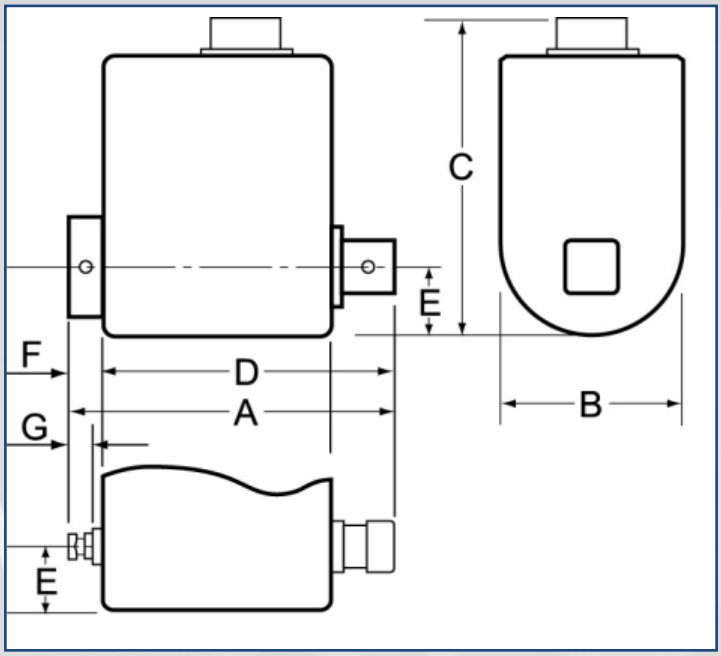
Plug & Play Transducer:	UTA system indicators read the following information from the UTA chip incorporated in the transducer device Torque range, angle encoder data, serial umber, calibration due date
Transducer Types:	UTA: Incorporate data chip enabling automatic transducer recognition with compatible Crane indicators IS: 'Industry Standard' version; Bridge resistance: 350 Ohms
Calibration:	Issued with calibration certificate traceable to National and International Standards **Standard Crane calibration:** 10 points; single direction (clockwise unless otherwise requested); 10% to 100% of nominal torque **Bi-direction Crane calibration:** (optional) 10 points; each direction; from 10% to 100% of nominal torque **UKAS calibration:** (optional) calibration to BS 7882 Recalibration is recommended every 12 months
Construction:	Aluminium housing Stainless steel shaft Overload capacity: 125% rated torque Square drives to ANSI B107-4 – 1982; BS4006 – 1992; DIN 3121 - 1987 Male square drive fitted with detent pin that may be removed if required Female square drive supplied with retaining pin that may be removed if required Female hex drive fitted with ball and spring retainer
Connections:	UTA version: 1m Integral curly cable with strain relief; 25-pin 'D' port (male) for connection to UTA Crane system readouts IS version: output connector to MIL-C 26482 / BS 9522 FOO 17
Zero stability:	< ± 0.1% FSD/°C
Static accuracy:	± 0.25% FSD
Operating environment:	Temperature: +5˚C to +40˚C (-10°C to +60°C) Humidity 10-75% non-condensing Ingress Protection rating: IP40.
Warranty:	12 months parts and labour against faulty workmanship or materials
Patents applicable:	Slip-ring design protected by international patents

Dimensions and Weights - UTA CheckStar



Dimensions in mm								
Drive	A	B	C	D	E	F	G	Weight (Kg)
1/4" Hex	116	30	56	56	13	39	25.5	0.49
1/4" Sq.	71.5	30	56	56	13	6	-	0.50
3/8" Sq.	77	30	59.5	56	15	8	-	0.55
1/2" Sq.	87	42	70	58	21	12	-	0.73
3/4" Sq.	106	52	81	60	26	21	-	1.05
1" Sq.	125	63	91.5	64.5	31.5	29	-	1.80
1 1/2" Sq.	181	102	136	86.5	51	50	-	6.00

Dimensions and Weights - IS CheckStar



Dimensions in mm								
Drive	A	B	C	D	E	F	G	Weight (Kg)
1/4" Hex	116	30	68	56	13	39	25.5	0.21
1/4" Sq.	71.5	30	71.5	56	13	6	-	0.20
3/8" Sq.	77	30	74	56	15	8	-	0.24
1/2" Sq.	87	42	82.5	75.5	21	12	-	0.43
3/4" Sq.	106	52	93.5	60	26	21	-	0.76
1" Sq.	125	63	104	64.5	31.5	29	-	1.50
1 1/2" Sq.	181	102	149	86.5	51	50	-	5.70

Notes

Complete torque management systems from Crane Electronics

UK02/2020v3 - CS

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