HO / IS ScrewMaster

Tranducerised screwdrivers

Key Features

- **Measures torque applied during fastening operation or inspection overcheck (move-on)**
- **Point of load insensitive**
- **Plug & Play with most Crane display systems (Auto ID)**
- **Rugged construction**
- **1/4" hex female drive**

Product Overview

Crane's HO / IS ScrewMaster is a simple transducerised screwdriver used in conjunction with an external display.

The ScrewMaster measures the torque applied directly to the fastener during the assembly operation or inspection overcheck, communicating the data to a suitable indicator for immediate verification and subsequent data collection.

The transducer element of the ScrewMaster is directly in line with the hex drive, thus making the wrench measurement completely independent of the point of load.

A High Output (HO) version is supplied with an amplified signal to work with most Crane readouts.

An Industry Standard (IS) version is also available, where a user needs the features of ScrewMaster but already has a readout device from another manufacturer.

Specifications

Functional Attributes

Physical measurements	Bi-directional torque (clockwise calibration unless otherwise requested)
Interchangeable attachments	Equipped with a $^{1}/_{4}$" female hexagonal drive – compatible with a wide range of tool adapters (selection supplied – see shipping list on next page)

Physical Attributes

Calibration	Issued with calibration certificate traceable to National and International Standards. IS transducers are normalised calibration unless indicated in table. **Standard Crane calibration:** 10 points; single direction (clockwise unless otherwise requested); 10% to 100% of nominal torque **Bi-direction Crane calibration:** 10 points; each direction; from 10% to 100% of nominal torque **UKAS calibration:** calibration to ISO 26789 Recalibration is recommended every 12 months

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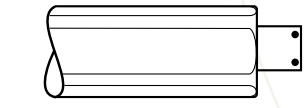
Transducer types	IS: 'Industry Standard' version. Bridge resistance: 350 Ohms. Sensitivity: see table on page 3 Excitation voltage: 5V HO: 'High Output' version. Bridge resistance: 350 Ohms. Sensitivity: 2.5v
Construction	Point of load insensitive – transducer element in line with socket drive Aluminium body Shaft material: stainless steel Overload capacity: 125% rated torque ¼" female hexagonal drive
Connections	HO version: 1m integral cable with strain relief; 25-pin 'D' port (male) for connection to Crane's UTA system readouts IS version: output connector to MIL-C 26482 / BS 9522 FOO 17; shell size 8-4P
Zero stability	< ± 0.1% FSD/°C
Static accuracy	± 0.5% FSD
Operating environment	Temperature: 5 – 40°C Humidity: 10 – 75% non-condensing Ingress protection rating: IP40 (indoor use)
Warranty	12 months parts and labour against faulty workmanship or materials
Shipping list	Screwdriver unit Tool adapters: Phillips no.2; Pozidrive no.2; Slot head; ¼" square drive Integral cable (HO versions only) Blow moulded storage case Calibration certificate User manual

Dimensions & weights



IS Version connector detail

HO Version

Dimensions in mm								
Drive	Torque Capacity	A	B	C	D	E	Weight (IS)	(HO)
1 4" AF	2Nm	146	115	31	11.6	25.3	185g	350g
1 4" AF	5Nm	146	115	31	11.6	34.7	300g	450g

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Order Codes

Order Code	Drive	Nominal torque Nm	Nominal torque Imperial (inlbf)
HO ScrewMaster			
UTA-481-0-1-40-0	1/4" Hex	1	8.9
UTA-481-0-40	1/4" Hex	2	17
UTA-482-0-40	1/4" Hex	5	44
IS ScrewMaster – 2 mV/V Sensitivity			
IS-483-0-1	1/4" Hex	2	17
IS-484-0-1	1/4" Hex	5	44

Accessories List

Item	Description
Hexagonal tool adapters	Various – contact CEL for further details
HO cables	HO ScrewMasters have an integral cable for Plug & Play connection to CEL indicators.
IS cables	Various other cables available for connecting IS transducers to 3rd party indicators – see separate cables datasheet for information.

System Components

Item	Description
HO / IS ScrewMasters may be used in conjunction with the following items:	
TorqueStar *Opta*	In-line torque measurement, break-away torque measurement and joint analysis

Calibration service

Crane Electronics Ltd operates a calibration laboratory accredited by UKAS, the UK Accreditation Service. All Crane products are issued with a calibration certificate traceable to National and International Standards. It is recommended that torque instrumentation is recalibrated at least every 12 months.

Crane Electronics Ltd operates a policy of continuous product development and improvement, and so technical specifications may change without notice. Please clarify with Crane or your distributor that you are referring to the latest technical data sheet.

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The force in torque management

Crane Electronics Ltd
Watling Drive
Sketchley Meadows
Hinckley LE10 3EY
United Kingdom

☎ +44 (0)1455 25 14 88
+44 (0)1455 61 47 17
@ sales@crane-electronics.com
www.crane-electronics.com

Certificate No. FM21539

Certificate No. LRQ 0773110

UKAS CALIBRATION 0464