

# Torque and Rotation Angle Measurement *INSPECT +*

**SCHATZ**<sup>®</sup>  
ADVANCED QUALITY



- integrated Bluetooth data interface
- convenient data management and documentation
- graphic analysis of measurement sequences
- high-resolution, illuminated graphic display
- freely programmable control inputs and outputs

## Applications

The microprocessor-controlled *INSPECT +* is particularly suitable for static and dynamic measurement of torques and rotation angles when used with torque transducers and rotation angle transducers. It can be used for testing and monitoring torque wrenches, air-powered nutrunners, dc electric nutrunners, and pulse tools. Measured and appraised values can also be entered manually.

The instrument's light weight and ability to operate from mains supply or battery power allow it to be installed in a fixed location for continuous use, or used as a portable instrument in production, on construction sites and in field service.

*INSPECT +* provides all the features necessary for transferring statistical data (SPC version) or summary data analyses to printers for documentation purposes. For example, data can be sent to a PC via a Bluetooth wireless link.

## Description

Data and functions are entered in the *INSPECT +* using a keypad. Supplementary data, such as product numbers, can be read in using a barcode scanner.

The large, illuminated graphic display shows measured values in large figures for good readability. Supplementary information, such as station designations, is shown in plain text (SPC version).





The proper sensor is automatically selected by the integrated sensor management system.

The sensor sends its serial number to the instrument, along with other data. This ensures solid documentation.

Up to 5000 stored measurement values can be sent to a PC or a printer.

# Torque and Rotation Angle Measurement *INSPECT* +



Specifications				
Model No.	5413-2015 G 	5413-2025 G [A] 	5413-2015 SPC 	5413-2025 SPC [A] 
Measurement channels	Analog (torque)	Analog / incremental (torque / rotation angle) [connect. for active transducers]	Analog (torque)	Analog / incremental (torque / rotation angle) [connect. for active transducers]
Special features	Average-value measurement of friction curves (run-up suppression)		Up to 900 stations can be entered Client operation in PC dialog.	
	Integrated transducer management, SCHATZ@AUTOCODE, date & time, help text function, password protection, language selection, audible warning signal, inversion point detection, automatic storage of graphic sequences for NOK bolted joints, and much more.			
Analysis capabilities			CEUS 8.1 PC software; large-format display	
Data entry capability	Calibration value, threshold value, inversion point detection, dead time, upper and lower limits, baud rate, units, language, sensor data, number of seconds for statistics			
Additional specific entry options		Snug torque, angular division, peak angle value, upper & lower angular limits	Station numbers, number of random samples, shift, supplementary information, password, manual entry of measured data	Same as 5413-2015 SPC and 5413-2025 G
Storage capacity	1000 measurements, 500 transducers, 50 graphic sequences		5000 measurements, 500 transducers, 1000 parameter sets, 50 graphic sequences	
Measurement units	N-m, N-cm, kN, kg-f-cm, ft-lb, in-lb			
Accuracy class (for the entire measurement chain)	DIN 1319 T3: 0.25; DIN 51309: 1			
Filter frequency	Adjustable 1 Hz – 4 kHz			
Signal amplifier	DC precision amplifier			
Nominal calibration	0.5 mV/V – 5 mV/V			
Transducer port	120–1000 Ohm (Active transducer option)			
Nominal supply voltage range	5 V DC			
Angular encoder supply voltage		5 V		5 V
Power supply	110 V / 230 V, 50– 60 Hz universal AC line adapter with 3 adapter plugs; power pack with quick-charge battery for battery operation (line/battery operation)			
Operating and charging times	Removable rechargeable battery, 10 h / 2 h for battery operation			
Keypad	Membrane keypad, 21 keys (alphanumeric)			
Display	Graphic display, illuminated, 320 × 240 pixels, 120 × 89 mm, LED indicator for OK / NOK			

Dimensions & connectors	
Connectors	AC line adapter: 12-V external power socket
	Transducer: 16-pin ODU 702.121.720.315.016 [12-pin ODU for active sensors]
	RS 232 serial interface: Canon DE-9s-K91
	Control inputs & outputs: Canon DA-15s-K91
	Barcode scanner: 5-pin ODU 701.011.710.315.005
Additional interfaces	Bluetooth
Dimensions (L × W × H)	280 × 185 × 87 mm
Weight	approx. 1.8 kg
Accessories	Plastic carrying case, AC line adapter Optional: barcode scanner, impact protection, CEUS® 8.1 PC software

Specifications subject to change without notice.