

Torque transducer with rotary shaft and square drive

SCHATZ®-INSPECT

SCHATZ®
ADVANCED QUALITY



- measuring ranges from 0.2...10000 N·m
- accuracy class 0.5
- slip ring design maintenance free
- impulse nutrunner proof
- SCHATZ-AUTOCODE identification

Application

The torque transducer with rotary shaft is particularly suitable for dynamic measurement of torques during screwed or bolted assembly.

Air powered, electric or impulse nutrunners can be tested or monitored during the working sequence in production and in the workshop or laboratory.

The transducer is suitable for regular random-sample testing of repeatable accuracy of nutrunners in mass production assembly because the square drives enable it to be fitted quickly.

The torque transducer can also be used for static operation or for continuous operation in measuring friction.

Description

The measurement shaft of the torque transducer is fitted with strain gauges. Power is supplied and the measurement signals transferred via extremely low wear slip rings.

The drive and output square according to ISO 1174 permits rapid connection between power drive and socket tool.

This enables the transducer to be fitted quickly between nutrunner and socket tool.

A rugged steel housing protects the internal parts of the torque transducer so that measurements are possible under rough production conditions.

The transducers are equipped with a permanently 5-metre connecting cable provided with a connecting plug for SCHATZ measuring instruments or alternatively with a LEMO plug.

The integrated SCHATZ-AUTOCODE automatically identifies and calibrates the transducer at connection.

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Technical data	5413-1100					
Model No.	/100	/200	/500	/1K	/2K	/5K
Capacity/N·m*	100	200	500	1000	2000	5000
Square	1/2"	1/2"	3/4"	1"	1 1/2"	1 1/2"
Weight/kg	0.7	0.8	1.0	1.3	9.2	9.2
Maximum permissible axial force/N	1000	2000	2500	2500	2500	2500
Maximum permissible bending/Nm	2.00	2.50	8.00	16.00	16.00	16.00
Accuracy class to DIN 51309	0.5			1		
Accuracy	± 0.25 %			± 0.5 %		
Maximum service load	1.2 x measurement range (20% overload)					
Breaking load	1.5 x measurement range (50% overload)					
Bridge resistance	350 Ω					
Calibration resistance	40 kΩ					
Nominal sensitivity	2 mV/V					
Nominal sensor supply voltage range	10 V					
Maximum sensor supply voltage	15V					
Rated temperature range	0...70°C					
Service temperature range	-20...80°C					
Storage temperature range	-40...85°C					
Maximum rotational speed	5000 U/min			3000 U/min		

These transducers are also available with plug (LEM0/2G/14 pts) instead of the standard 5 m cable.

Dimensions/connections dimensions						
Connecting cable	permanently connected, 5 m long					
Plug	ODU-Mini-Snap Serie B 16-pole pin					
Dimensions/mm	A	87	101	112	231.5	
	B	55.5	56.5	60.0	160	
	C	59	68	83	157	
	D	45	54	68	133	
	E	15	21	24	30	
	F	16.5	23.5	28	41.5	
	ØG	24	34	44.5	74.8	

