

Torque-/angle transducer with rotary shaft SCHATZ®-INSPECT

SCHATZ[®]
ADVANCED QUALITY



- measurement range from 0.1 to 20 N·m
- accuracy class 0.5
- maintenance free slip ring technology
- width 31 mm
- SCHATZ-AUTOCODE identification

Application

The torque transducer with rotating shaft is especially suitable for dynamic determination of torque at miniature pneumatic- or electronic tools as well as spindles during bolt assembly. These can be tested and monitored during the working sequence in production but also in workshops or laboratories.

Thanks to the rapid connection the transducer is suitable for regular random-sample testing of repeatable accuracy of nutrunners in mass production assembly.

However, the transducer is as well applicable at static operation or in a built-in application for tool control.

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 sliprings.

The drive and output of the torque transducer 5413-1251 show a drive with outside hexagon ¼" form E and an output inner hexagon ¼" form D according to DIN 3126.

The transducer shows extremely small dimensions and a very low weight.

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-System automatically identifies and calibrates the transducer at connection.

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| Technical data | | | |
|-------------------------------------|--|---------|----------|
| Model No. | 5413-1251 | | |
| Capacity/N-m/ lb-ft | 5/3.688 | 10/7.38 | 20/14.75 |
| Connection | 1 / 4" hexagon form E outside/D inside | | |
| Weight/kg | 0.2 | 0.2 | 0.2 |
| Maximum permissible axial force/N | 100 | 100 | 380 |
| Maximum permissible bending/ N-m | 0,2 | 0,2 | 0,4 |
| Accuracy class to DIN 51309 | 0,5 | | |
| Accuracy | ± 0,25 % | | |
| 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 | 1...10 V | | |
| Maximum sensor supply voltage | 15V | | |
| Rated temperature range | 0...70°C | | |
| Service temperature range | -20...80°C | | |
| Storage temperature range | -50...85°C | | |
| Maximum rotational speed | 2500 rpm | | |

These transducers are also available with plug (Lemo(2G/14 pts) Model No. 5413-1251-S

| Dimensions/connection dimensions | | |
|----------------------------------|------------------------------------|-------|
| Connecting cable | permanently connected, 5 m long | |
| Plug | ODU-Mini-Snap Series B 16-pol. pin | |
| Dimensions/mm | A | 114,5 |
| | B | 55 |
| | C | 42 |
| | D | 31 |
| | E | 42 |
| | F | 17,5 |

torque measuring bridge

