ROTARY HAPTIC MODULE DHM

So-called rotary haptic measuring systems are used to test rotary actuators in the automotive and consumer sectors to record and evaluate their haptic torque curves.

The rotary haptic module DHM is a measuring system that has been specially developed for this purpose and can be easily integrated in automatic systems and in laboratory equipment.

The measuring range of ± 100 mNm and an integrated overload protection to prevent excessive torques cover the torque curves of all conventional rotary actuators. The module can be combined with the various gripper variations in the DHG3 series for adjustment to special requirements in terms of rotary actuator geometry. An integrated electric drive opens and closes the gripper.

The surrounding housing protects the system from external influences and protects the user from moving parts, so that the module can be used without a safety enclosure.

Radial backlash compensation

One special feature of the system consists in its high tolerance to radial offset between module and rotary actuator. This offset may be up to 0.5 mm in each direction without negatively affecting the measuring result. There is therefore no need for elaborate fine adjustment of the rotary actuator.

Integrated encoder

The system has an integrated encoder for exact allocation of torque and angle of rotation.

Technical data

Measuring range	± 100 mNm
Sampling rate	10 kHz
Analog measuring signal	-5 ... 5 V
Tol. radial offset of the test finger	0.5 mm
Mass	approx 2000 g
Max. angular viscosity	360 °/s
Nominal angular velocity	60 °/s
Operating temperature	10 ... 40 °C
Storage temperature	10 ... 70 °C
Dimensions (L x W x H)	see drawing

Control and evaluation

The module is controlled either via Ethernet or via the DIO interface.

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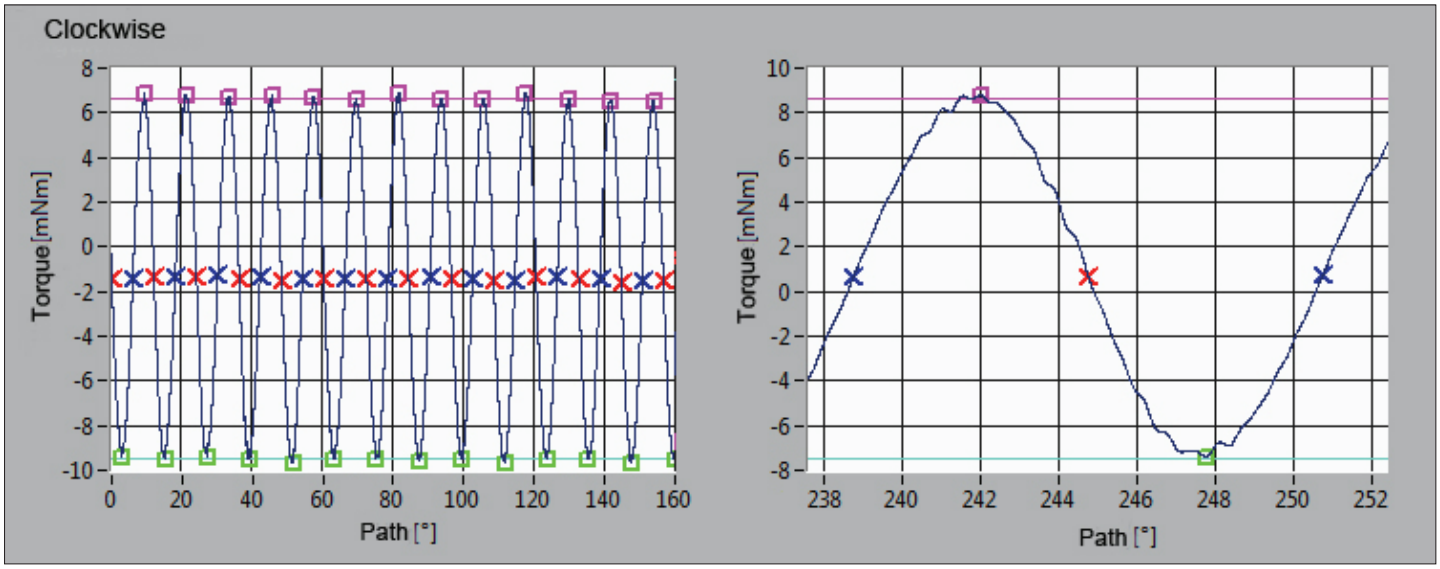
Measuring signal and suitability as measuring system

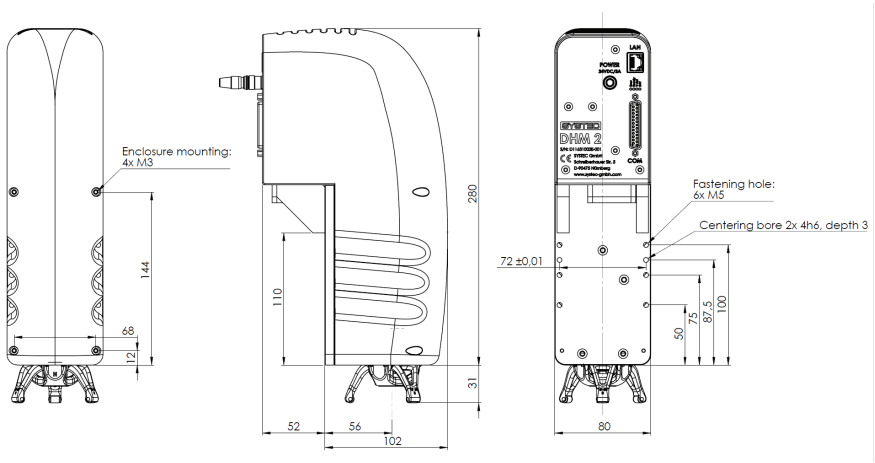
The system supplies an analog signal that indicates the torque acting on the gripper. The following diagram shows the measured torque curve of the torque transfer standard measure DTN 38.



The DTN 38 can be used to verify the suitability of the rotary haptic module DHM as a measuring system in accordance with the guidelines on "Capability certification of measuring systems" (tolerance range T ≥ ± 2.5 mNm; cgk value ≥ 2.00).

Dimensions and installation

The rotary haptic module is aligned with two straight pins (DIN 6326 4m6) and fastened to a suitable holder with four to six screws (M4).



Options

- Purely electric system with electrical gripper opener.
- Inline version 80 mm wide for parallel measurement.

Contact

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