LEADING SWISS PRODUCTS

Qualimaster

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TD QMS III

Measuring device for torque and force

The Qualimaster with the TD QMS III are designed for automated and manual testing of mechanical parts.

The integrated programmable drive control allows any test procedures; set to be evaluated for tolerance through a variety of ways.

Large, lighted LCD graphic screen for a display of measurement curves and numerical results.

The good-bad evaluation is done automatically regarding the programmable window and strip tolerances. Various actuators and sensors can be connected to the device, so it can be used universally.

With the PC software Qualisync the device can be configured and controlled via PC and any numbers of results and graphs can be stored.

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TECHNICAL DESCRIPTION

Evaluation of Results
Both manual and automatic measurement evaluation provide such features as measurement trigger, measurement cursors as well as range and window tolerances. The pass/fail evaluation is displayed on the LCD and with an LED. There is also an I2C bus or RS-232 output interface.

Piece Counter
The integrated piece counter indicates the number of pieces manufactured and faults which occur.

Communication
The numerical measurement results can be output on a printer or to a PC through a RS-232 interface. .

Measurements
The Qualimaster is normally used for performing torque and force measurements. The measurement range and the accuracy are defined by the sensor used. The simultaneous recording of up to 4 analogue measured quantities is normally performed according to time, the rotation angle or the displacement.

Motor Control
The Qualimaster system with programmable motor control is suitable for test tasks which require the test sample to be driven, positioned or adjusted. It is possible to carry out all possible motion sequences by choosing a suitable drive unit.

Custom Applications
The Qualimaster can also be used as the core of a customer-specific test facility. It can be adapted to the corresponding requirements with optional accessories and software. The system can be used for manual operation or with Automated Test Equipment.

Memory
- Program memory for 20 measuring programs.
- Measured value memory for 40000 values.
- Result memory for 1000 measurements.
- Memory for sensor-specific or SI-Box (Sensor-Interface-Box) parameters.

Data Acquisition
3 separate connections with the following features:
- Input for analogue measurement signals ± 10 V.
- Measurement accuracy ± 0.1 % FSR.
- ± 12 bit resolution.
- Acquisition rate of 100, 1000 or 5000 measurements per second and channel.
- Connection for the I²C bus.
- 1 measurement channel for torque measurement based on motor current. Same specifications as the other measuring channels (connection with special motor circuitry).

Motor Control
Connection for DC motor or a measuring head
- Output for directly driving a DC motor ± 10 V / 1 A (<10 W).
- Measuring head for torque measurement based on motor current.
- Input for digital encoder (with line driver).
- Connection for the I²C bus.

Connection for External Servo Amplifier
- Output for driving an external servo amplifier, control signal ± 10 V / 10 mA.
- Output 0 - 10 V / 10 mA for additional functions.
- Digital output for sense of rotation (TTL).
- Digital output for brake or stop (TTL).
- Digital output On/Off (TTL).
- Digital input for faults (TTL).

Interfaces
- 2 x RS-232 interface, D-Sub 9-pin.
- Connection for I2C bus, D-Sub 9-pin.

Details
ABS plastic case, color titanium.
Dimensions: 275 x 550 x 115 mm (L x H x D).
Weight: approximately. 3.0 kg.

Mains connection
Plug-in supply adapter for 230 V~ or 120 V~.
Output: 12 V DC / 1A or 12 V DC / 2 A.

Clock
Real-time clock with time and date.

Accessories
External servo amplifier for motors with increased power.

Customer-specific interface circuits.

Customer-specific mechanical test add-ons.

PC software Qualisysnc for control, configuration and measurement acquisition.

Printer for graphics and text.

Large selection of tension and force sensors. Angle and displacement transducers.

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