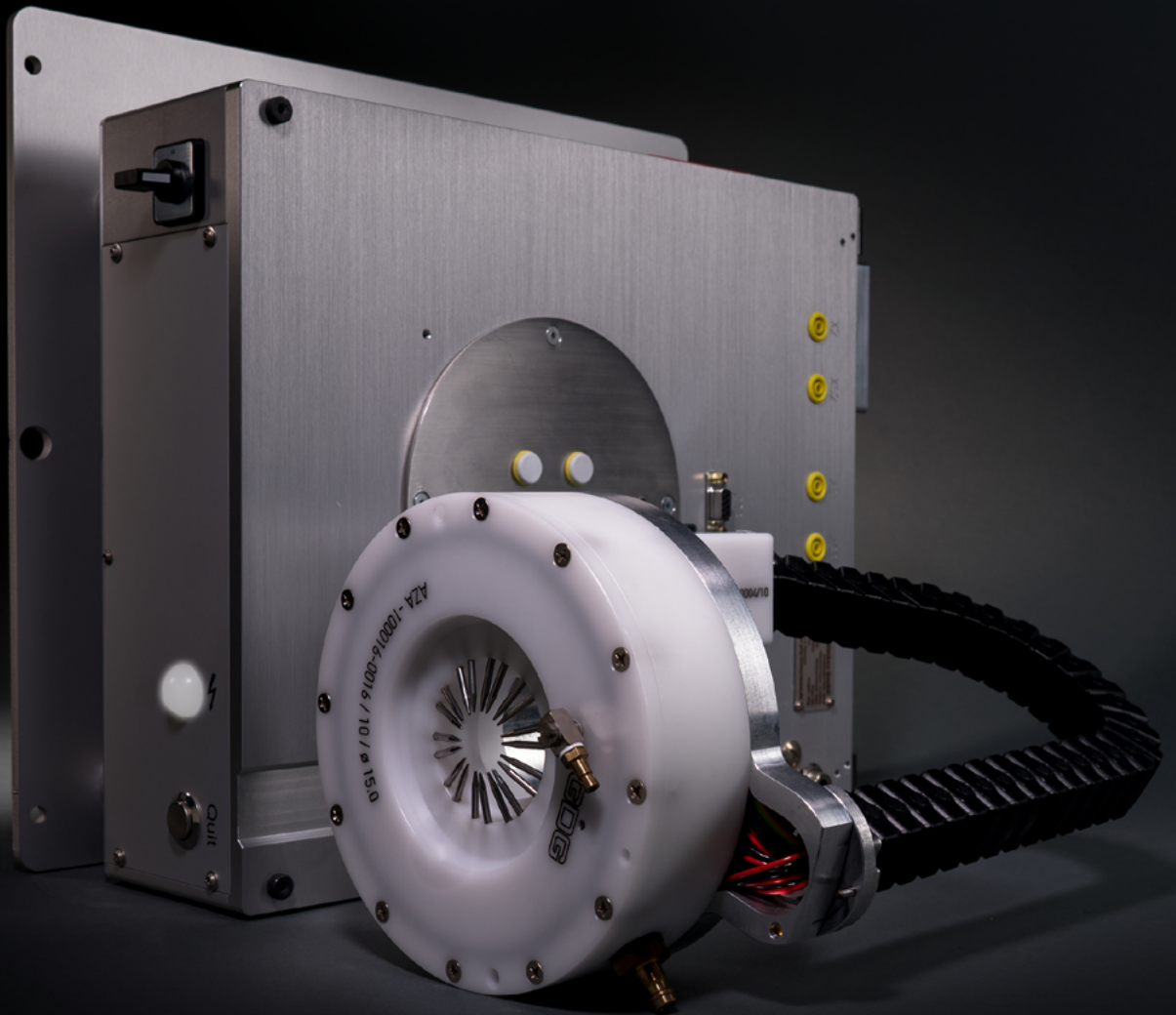


≡ Measurement electronic  
for integration  
for armatures and stators



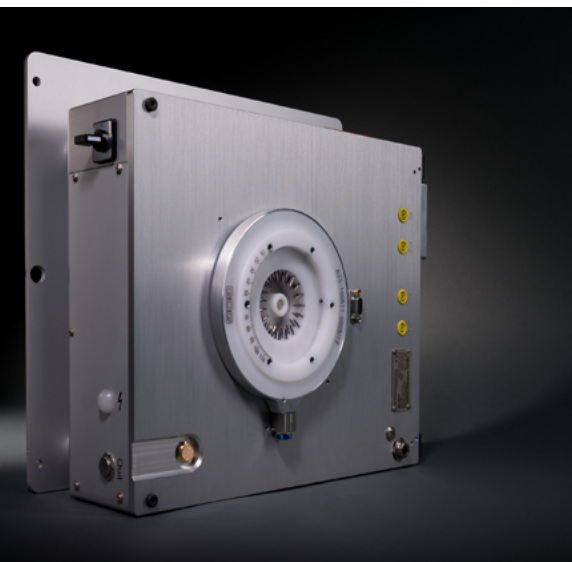
**G D G**  
≡≡≡ testsystems

# Measurement electronic

## for armatures and stators



**MEG - with energy chain**  
dimension: 310 x 475 x 150 mm  
weight: ca. 18 kg



**MEG - with direct head mounting**  
dimension: 310 x 475 x 150 mm  
weight: ca. 18 kg

### General

The measurement electronic is designed for fully automatized testing of electromagnetic properties of armatures and stators. It can be integrated vertically or horizontally in fully automatized production lines and is connected with an industrial PC and a sample contacting.

Applications so far range from truck starters to smallest armatures and stators in dentistry as well as in industry. The testable production spectrum is constantly adapted and expanded to meet customer requirements.

Both armatures and stators can be tested with the same testsystem.

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### Setup

The measurement electronic consists of a solid aluminium housing in which the heart - a measurement board developed by GDG - is mounted. It is used for data acquisition and analysis and is designed for extremely high measurement precision at fast measuring times.

Test probes are specially designed to adapt the measurement electronic to the test sample. This ensures reliable mechanical fixation and electrical contacting. Alternatively, an adapter plug can be used for the electrical connection.

These components are customized and adapted to an existing testsystem, taking into account the customer-specific installation conditions.

For the handling system (PLC) Profibus/Profinet is used, other interfaces on request.

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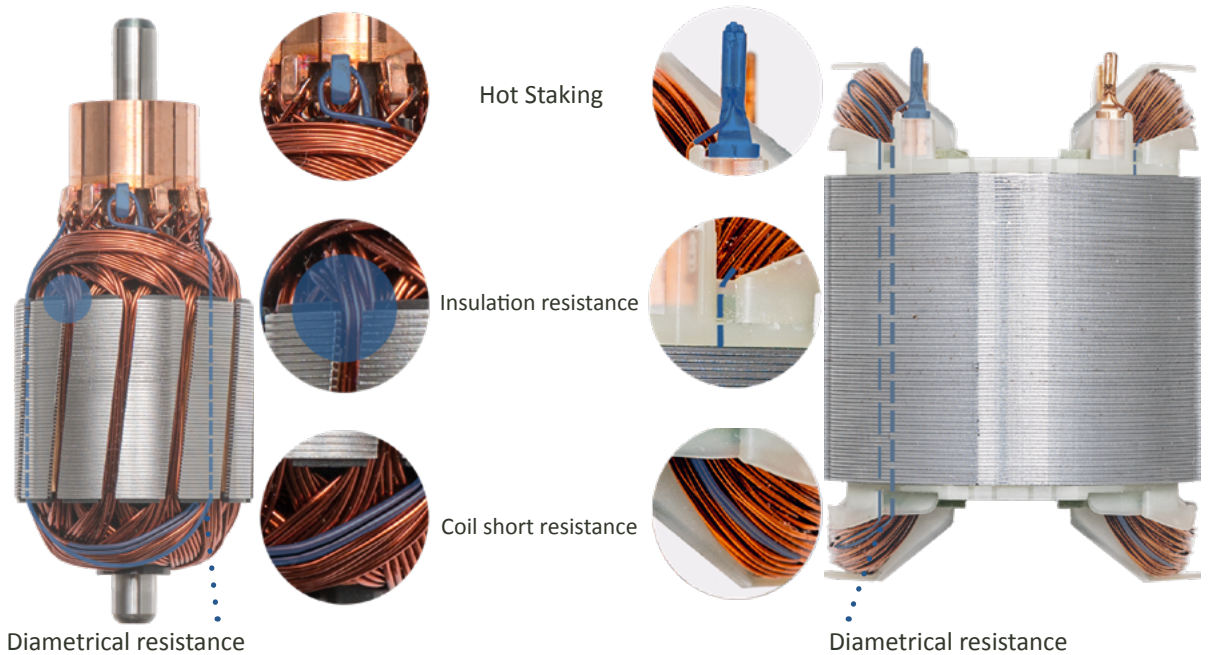
### Software and sequence

The correct contacting of the test sample is ensured by customer's handling.

A previously created type of test sample is selected from a setup database. After the fully automatized test has been started, the further handling is decided depending on the test result (PASS/FAIL).

On demand the following measurements can be executed:

- trial run
- diagnostical tests of specific measurements
- reference run for measurement precision



## Insulation resistance

Test voltage DC:	100 - 1000 V
Test voltage AC:	500 - 5000 V; max. 2 channels synchronized
Current limit:	8 mA

## Diametrical resistance / Coil resistance / Bar to bar

Measurement range:	50 $\mu\Omega$ - 500 $\Omega$ , extended ranges on request
Measurement precision:	$\pm 0,5\%$ or $\pm 5 \mu\Omega$ from measured value

## Welding resistance / Hot Staking

Welding resistance:	wire to collector / terminal
Test current range:	0,1 - 2,3 A
Resolution:	1 $\mu\Omega$
Measurement range:	1 $\mu\Omega$ - 100 m $\Omega$
Measurement precision:	$\pm 0,5\%$ or $\pm 7 \mu\Omega$ from measured value

## Coil short circuit

Test voltage:	100 - 900 V bar / bar
Sensitivity:	one shorted winding

## Optional measurement

Span width CR	HT unsymmetry
Span width HT	circuit test / rotating field test
Coil short circuit extended to > 1 coil	bridge resistance

# MEG overview

## General information

Operating system: Windows

Temperature compensation with room- or infrared temperature sensor

Contact monitoring

4-wire measuring technology

Automatic teach-in by performing trial run

Monitoring of measurement precision with reference samples

Storage of measurement data

## Typical test samples parameter

Diameter of lamination stack: 10 - 160 mm

Height of lamination stack: > 8 mm

Number of bars: 3 - 36

Diameter of axis: 2 - 16 mm

Length of axis: < 230 mm

Diameter of commutator: 5 - 46 mm

## Technical data

Power consumption: max. 150 W

Supply frequency: 50 / 60 Hz

Power supply: 100 - 120 V / 200 - 240 V  $\pm$  10 %

Air pressure: max. 6 bar oilfree

