



SIEMENS

Ingenuity for life

Health-Check: Diagnostics of Electric Generators and Motors

Product Description

[siemens.cz/sem�](https://www.siemens.cz/sem�)

The main cause of machine failure is component ageing during operation. Any unplanned machine outage means high losses. Moreover, even a small machine part failure can spread damage to the main machine components.

It is important to diagnose failure at the early stage before damage extends to other components of the machine. Our service engineers provide a top-quality diagnostic service of your generator or motor in the field. After diagnostic work is completed you will be given a report and recommendation for future actions.

Benefits

- Early detection of weak points on the winding insulation system
- Early detection of weak points in mechanical parts
- Recommendation of necessary spare parts pooling, maintenance, repair and overhaul
- Reduction of production downtimes and costs due to plannable measures
- Maximizing the service life of the electric machines
- Comprehensive health-check report
- Data archiving for comparative measurements and trend analyses

Risks

- Neglect of early symptoms can cause a major machine failure with significant financial losses
- Risk of outage during failure (causing further financial losses due to production stoppage)
- Safety risks

Siemens offers the following diagnostic measures

- Winding resistance measurement
- Measuring winding insulation states
- Winding test using a Baker surge generator (up to 40 kV)
- Withstand voltage test
- Vibration measurement and diagnostics of all vibration frequency spectra
- Animation of deflection shapes
- Rotary misbalance check
- Recording measurements of electrical quantities
- Laser alignment of machines
- Thermal camera measurement
- Bearing current and shaft voltage measurement
- Stator current analysis (identification of machine rotor condition)
- Machine interior endoscopy



Basic data

Machine type:	Synchronous generator 0,5 up to 25 MVA Synchronous and asynchronous motors 0,5 up to 20 MW
Frame sizes:	400 mm – 1340 mm
Speed:	500 r.p.m. – 1 800 r.p.m.
Frequency:	50 Hz – 60 Hz
Voltage:	380 V – 13,8 kV
Type of cooling system:	IC01, IC31, IC81W and others
Mounting form:	Horizontal feet mounted, Flanged bearing shield or shaft end, Vertical flange mounted
Degree of protection:	IP 23, IP 44, IP 54 and others
Standards:	IEC, EN, DIN, VDE and others Marine certification (DNV-GL, ABS, BV, LRS, CSS, RINA, RMRS and others)
Explosion protection:	Ex p/Ex n
Machine weight:	5 through 40 tons

Contact

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For more information please go to:
www.siemens.cz/sem

Other Customer Service products

- Spare parts management
- Generator and motor retrofits
- Preventive maintenance and field service
- Repairs in a production plant or through a network of SIEMENS repair shops
- Service contracts
- Commissioning
- Trainings