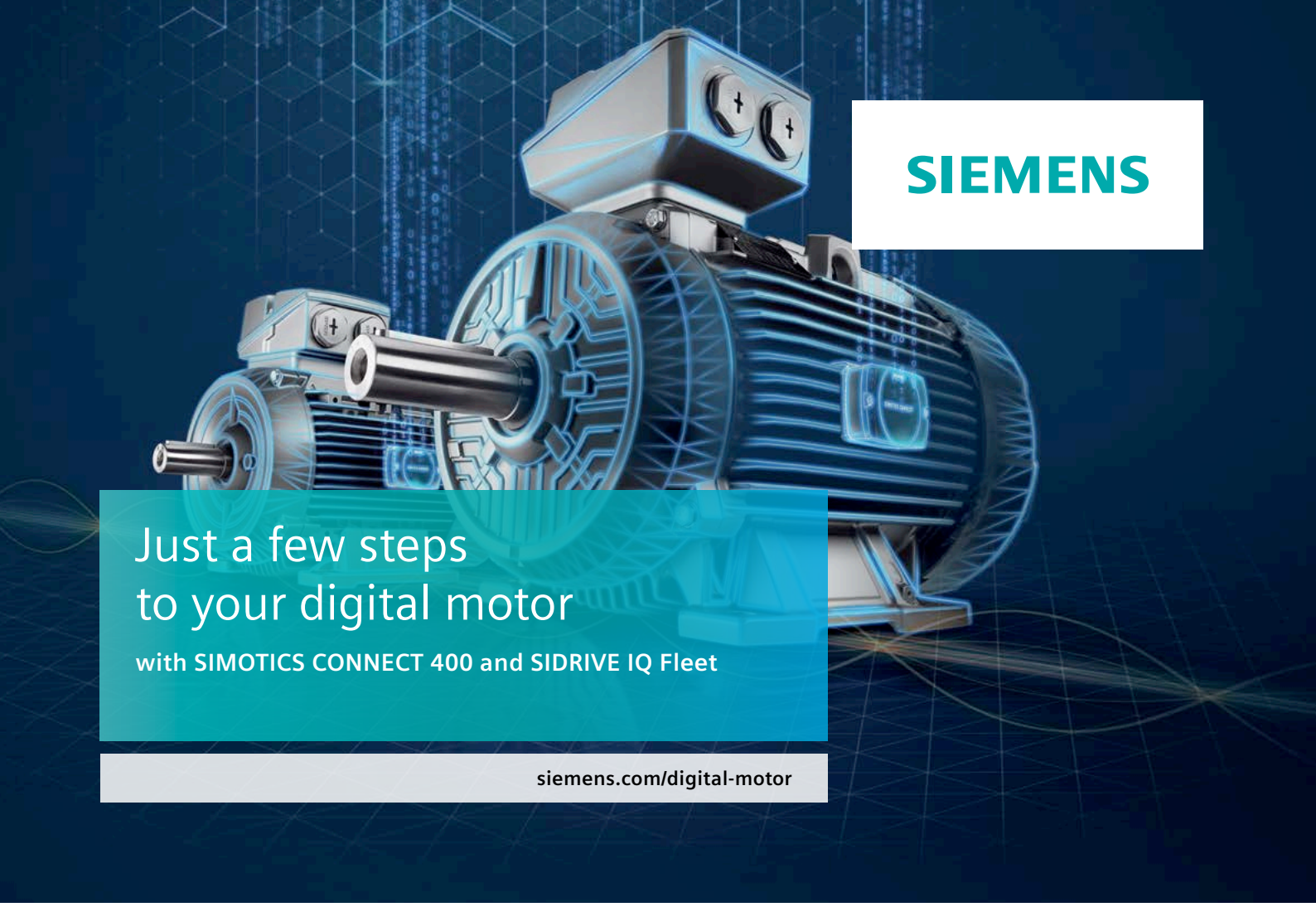


SIEMENS

Just a few steps to your digital motor

with SIMOTICS CONNECT 400 and SIDRIVE IQ Fleet

siemens.com/digital-motor

The fast and simple way to your digital motor

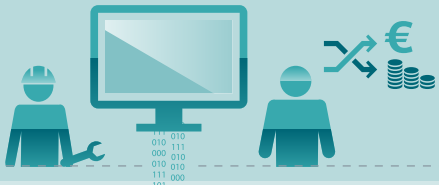
Drive systems keep production running and play a key role in countless production processes. Faults or the failure of individual drive components often result in costly production outages, which is why it's so important to monitor the condition of the machine park. The prevention of failures through timely and deliberate action requires an end-to-end operational transparency – and measures such as targeted, proactive maintenance.

In the case of low-voltage motors, the simplest way is through digitalization based on the sensor module SIMOTICS CONNECT 400 and the cloud-based analytics app SIDRIVE IQ Fleet. You quickly obtain a comprehensive overview of the operational data of motors used in various applications, such as pumps, fans, or compressors. In just a few steps, everything is installed and the motor is online.

SIDRIVE IQ Fleet enables you to keep a constant overview on the condition of the monitored motors. The availability of genuine operational and condition data enables you not only to make predictions regarding your applications and optimize ongoing processes, but also to develop recommendations for targeted maintenance to avoid unscheduled downtimes.

Gain transparency on your motors

Motor monitoring for maintenance/service optimization or for implementing new business models



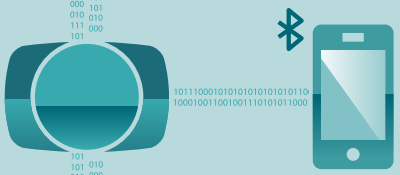
Visualization of and access to motor operating condition via a browser-based application

Data analytics based on actual operational data and the digital twin of the motor in SIDRIVE IQ Fleet

MindSphere

Secure and direct data transmission from a customer's WLAN to MindSphere via the Internet

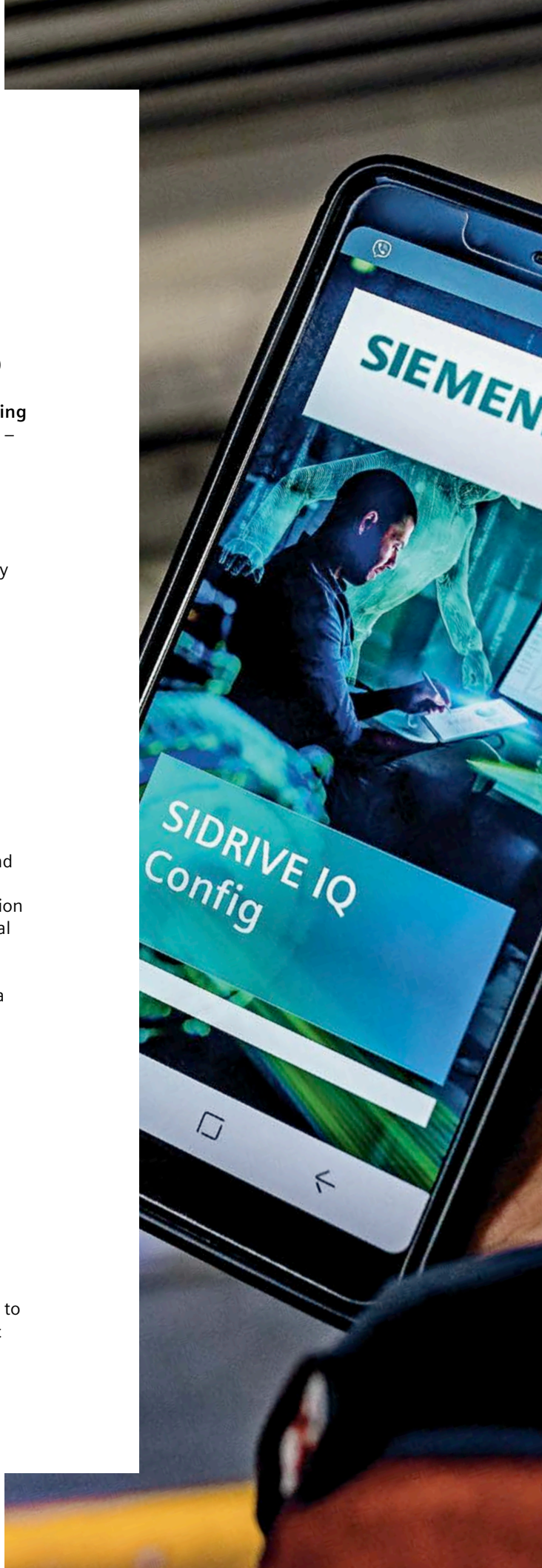
Simple mounting by affixing the SIMOTICS CONNECT 400 to the motor housing and intuitive commissioning of the sensor module via smartphone and Bluetooth



Your benefits

With the plug-&-play connectivity module SIMOTICS CONNECT 400 and the analytics app SIDRIVE IQ Fleet, you can implement a cost-effective, cloud-based solution for **continuous condition monitoring** and comprehensive fleet management of your low-voltage motors – worldwide and 24/7.

- **Simplicity** and **user-friendliness:**
  - Simple mounting by gluing the sensor module SIMOTICS CONNECT 400 to the motor
  - Fast commissioning and configuration, thanks to the intuitively operated smartphone app SIDRIVE IQ Config
  - Use of standard network hardware (no manufacturer-specific gateways needed)
- **Autonomous design:** Power supply via battery pack and data transfer via WLAN require no connecting cables
- **Optimized serviceability:** Simple as well as ecologically and economically practical maintenance by replacing the battery pack
- **Optimum operational transparency:** SIMOTICS CONNECT 400 and SIDRIVE IQ Fleet help machine operators to better understand their machines and all relevant components. With knowledge of how the motors are currently running and what changes in operation have occurred, it's possible to make predictions about operational performance in the future.
- **Anomaly detection** and **trend analyses** based on historical data for optimizing your plant
- **Adjustable limit values** and **automated alarms** help you to detect impending failures well in advance and prevent them through maintenance activities
- Take advantage of our **expert knowledge of drive technology** by taking into account operational data (including historical), digital twins of the motors, intelligent algorithms, and analytics
- Access to **cloud-based analytics** in MindSphere from any terminal device via a web browser, without software installation
- **Higher data quality** and **precision for Siemens motors**, thanks to the use of equivalent electrical circuit diagrams, product-specific data from production, and other additional elements from the digital twin of the motor



Technical characteristics of SIMOTICS CONNECT 400

General information

Dimensions	
Length x height x depth	125.4 mm x 77.5 mm x 29 mm
Weight	
Weight connectivity module, approx.	0.25 kg
Weight connectivity module including mounting material, approx.	0.50 kg
Mechanics/material	
Housing material	Industrial Plastic Durethan®
material of the mounting bracket // screws	stainless steel // steel, galvanized and passivated
Degree and class of protection	
Degree of protection	IP65
Shock resistance	max. 100 m/s²
Supported motors	Fin-cooled, 3-phase asynchronous low-voltage motors in line operation (DOL) and converter operation (VSD), IEC frames sizes 80 to 450 and NEMA frame sizes 48 to 680

Integrated sensors

Configurable between 1 minute and 1 hour

Temperature measurement	–40° C to +85° C (Resolution: 0.03° C)
Vibration measurement	Overall vibration V_{RMS}, 3-axis, 0.02 to 180 mm/s, 10 Hz to 1.6 kHz
Magnetic field measurement	0.01 Hz to 300 Hz, rotary stray field

Additional information

Power supply	
Type of supply	Battery pack
Battery lifetime	Operating time up to 2 years[1], replaceable for lifetime extension
Data transfer to MindSphere via WLAN	Integration of sensor module in customer WLAN network, configurable MindSphere synchronization interval (1 hour to 48 hours)
Internal data storage	Data storage of min. 48 hours, when MindSphere connection is interrupted "(at a measurement interval of 1 minute)"
Mobile app for commissioning and configuration	SIDRIVE IQ Config (iOS, Android)

Available KPIs in SIDRIVE IQ Fleet

Measured motor parameters	Temperature, radial/tangential/axial vibration, electrical stator frequency, slip frequency
Calculated motor parameters	Motor state (on/off), rotation speed, torque, electrical power, energy consumption, number of starts, hours of operation
Extended monitoring and maintenance support	Maintenance requirements, such as relubrication interval. Monitoring of operational KPIs and anomaly detection based on artificial intelligence.

1) At an environmental temperature of 0° C to 40° C, a measurement interval of 5 minutes and a transmission of the stored data once every 24 hours

For more technical information and documentation, visit:
siemens.com/digital-motor

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