



With NORDAC FUSION, NORD DRIVESYSTEMS launches a powerful drive system that combines motor and inverter into a compact unit.

Thanks to the optimal electrical and mechanical adjustment of both components, NORDAC FUSION achieves high power density, while particular attention was given to keeping the installation space as small as possible. Users benefit from a ready-to-use system that operates reliably once connected. This eliminates extensive parameterisation or time-consuming selection of components. NORDAC FUSION is the answer for everyone, who looks for maximum drive power in a very small space – simple, quick and efficient.

For logistics projects with a high level of automation, this means: less engineering efforts per drive axle, faster commissioning and consistently high drive quality – from the first conveying point to the last transfer station. NORDAC

# POWERFUL, COMPACT AND READY TO USE

## NORDAC FUSION: combines motor and inverter into a compact high-performance unit

FUSION's decentralised design furthermore allows for direct mounting on the respective unit. Centralised control cabinets are thus no longer required and wiring efforts are considerably reduced.

### NORDAC FUSION – Various combinations

NORDAC FUSION combines asynchronous motors (IE3) and permanent magnet synchronous motors (IE5+) in ventilated and unventilated versions with a decentralised NORDAC ON frequency inverter. The optimised motor/inverter combinations cover a power range from 0.31 to 3.7 kW. They feature consistent safety and communication properties, are suitable for worldwide use, and can be ideally complemented with a gear unit from the manufacturer's modular product range.

The decentralised frequency inverters are characterised by their compact design, full plug-in capability and high reliability. Special features include the integrated PLC and their multi-protocol Ethernet interface. PROFINET, EtherNet/IP and EtherCAT can be easily set via parameters. Integrated safety functions enable safe operation of almost all motion sequences in automated production.

### Advanced communication and safety functions

Apart from STO and SS1, the NORDAC ON series will also feature the motion monitoring function SLS, SMS or SSM for fail-safe control of the rotary movement. They can be integrated via PROFIsafe or FSoE into a fail-safe application within an existing Industrial Ethernet network. Stand-alone use is also possible. The safe 1/3 digital inputs and outputs can be used to incorporate fail-safe peripheral components or functions. Emergency stop buttons, safety door switches, photoelectric sensors, etc. can thus be connected directly. Two safe single-channel digital inputs can be combined into one safe two-channel digital input, and two safe outputs can be combined into one safe two-channel output. The level of functional safety can thus be individually set with NORDAC FUSION as well.

### Encoderless control in dynamic applications

Another advantage is the encoderless control of NORDAC FUSION with the manufacturer's highly efficient IE5+ synchronous motors (PMSM). Using the CFC open-loop injection method, the motor's rotor position and speed can



*NORDAC FUSION – the compact drive solution with the decentralised NORDAC ON inverter for dynamic applications*

be captured without additional sensors. With this, NORD offers a robust, streamlined and economical drive solution that is also suitable for dynamic applications.

### Highly efficient IE5+ motor technology

NORD's highly efficient IE5+ permanent magnet synchronous motors (PMSM) are characterised by a constantly high efficiency of up to 95% over a wide torque range. In partial load and partial speed ranges, they therefore achieve optimum energy consumption performance and allow for a reduction of variants for more streamlined production,

logistics, warehousing and service processes.

### Ideal for demanding environments

The NORDAC FUSION drive solution can be used up to a temperature of -30 °C. The combination of IE5+ synchronous motors and NORDAC ON PURE with NXD tupH® is, for example, suitable for wash-down applications in the food sector. Ethernet on board, hybrid cables and daisy chain technology enable efficient and hygienic topologies that are more streamlined and easier to clean than conventional decentralised wiring.