

## NORDAC Frequency Inverters with Integrated PLC

**Integrated PLC** converts the combination of a NORD frequency inverter and a geared motor into a complete system solution.

The software tool NORD CON with functions for IEC 61131-3 programming (Structured Text and instruction list) extends the NORD system solution.

Thanks to integration of a PLC into the frequency inverter:

- Application-specific special functions close to the drive unit can be efficiently programmed and parameterised in the same way as all other frequency inverter functions.
- Direct access to the parameters as well as the analog and digital inputs and outputs of the frequency inverter, for example for pre-processing of signals, is enabled.
- Complete implementation of sequence and movement control, for example positioning applications are possible without the use of a central control unit.

**MULTIPURPOSE:  
NORDAC PRO  
SK 500E**



- Frequency inverters**
- Power range up to 160 kW
  - Control cabinet installation
  - IP20

**VERSATILE:  
NORDAC FLEX  
SK 200E**



- Frequency inverters**
- Power range up to 22 kW
  - Wall or motor installation
  - IP55, IP66

**ECONOMICAL:  
NORDAC BASE  
SK 180E**



- Frequency inverters**
- Power range up to 2.2 kW
  - Wall or motor installation
  - IP55, IP66, IP69K

**CONVENIENT:  
NORDAC LINK  
SK 250E**



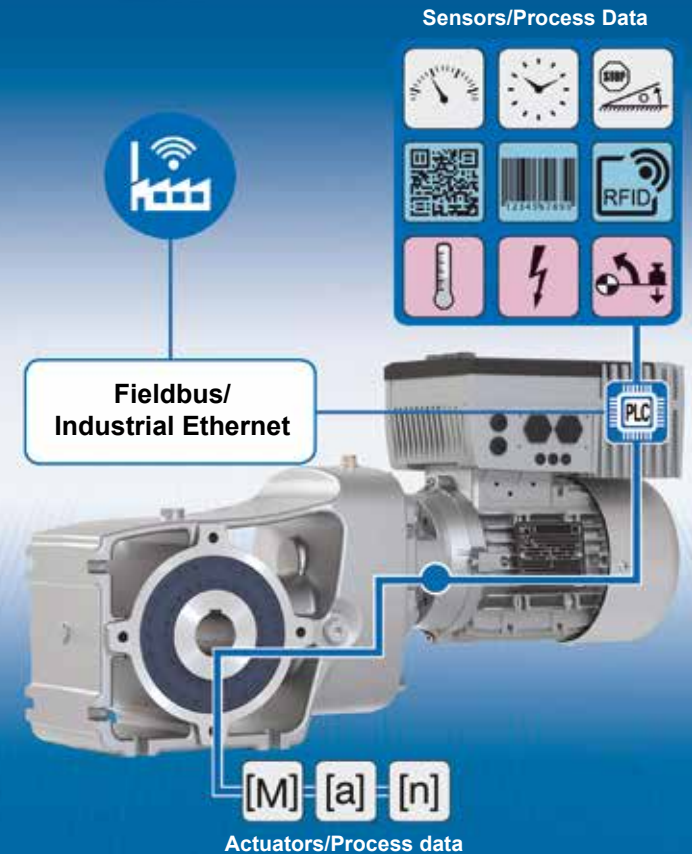
- Frequency inverters**
- Power range up to 7.5 kW
  - Field installation
  - IP55, IP65

**COST-EFFECTIVE:  
NORDAC LINK  
SK 155E**



- Motor starter**
- Power range up to 3 kW
  - Field installation
  - IP65

# DER ANTRIEB INTEGRATED PLC



**Centralised drive solution**  
(complete machine)

**The integrated PLC** in the frequency inverter replaces the central control unit of the machine and includes control of all sensors and actuators.



*Application example: Machine for dicing, cutting and grating cheese or meat*

**Decentralised drive solution**  
(complete drive axis)

**The integrated PLC** in the frequency inverter performs functions close to the drive unit and includes control of all sensors and actuators.



*Application example: Transfer unit with movement control and pre-processing of sensor signals for the field bus connection*

**NORD CON** follows the trend towards "high-level programming languages" in the field of automation, supporting the Structured Text programming language according to IEC 61131-3.

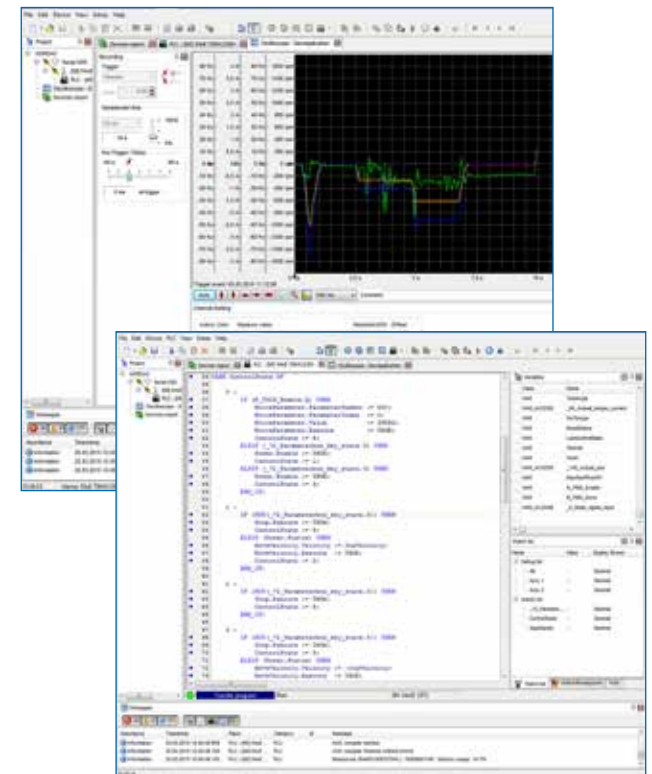
This enables standardised programming of drive functions with PLCopen Motion Control function blocks.

Use of manufacturer-independent PLCopen Motion Control function blocks reduces complexity and therefore reduces application development costs.

Specific NORD functions support the use of internal I/Os in the PLC program. This enables simple implementation of logical control and the control of movements, for example in positioning applications.

**With the integrated PLC in the NORD frequency inverter, customised solutions close to the drive unit can be implemented without an application-specific firmware or the cost-intensive verification and validation of firmware.**

**NORD CON** is a free software tool, which was developed for the parameterisation, programming, diagnosis and control of NORD frequency inverters. This tool enables the offline production and testing of PLC programs independently from the inverter. NORD CON is available for all SK 500E series inverters (control cabinet technology), as well as SK 180E and SK 200E inverters (decentralised technology).



*NORD CON PLC Editor and Oscilloscope function*