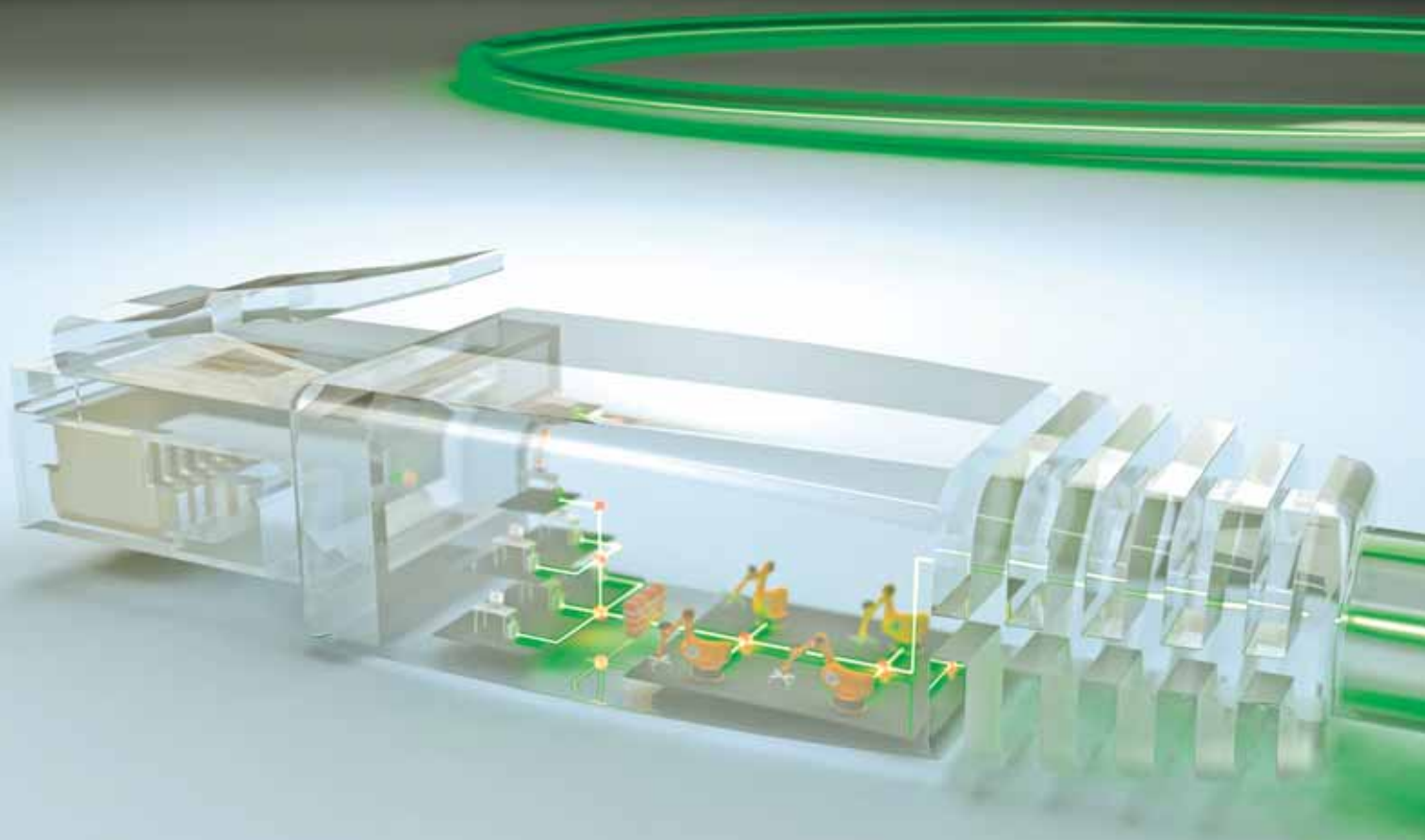


EtherCAT® and Motion Control

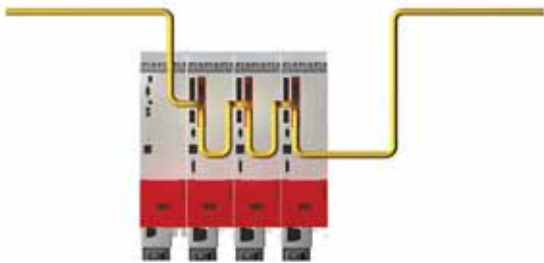
**High-speed Industrial ETHERNET**



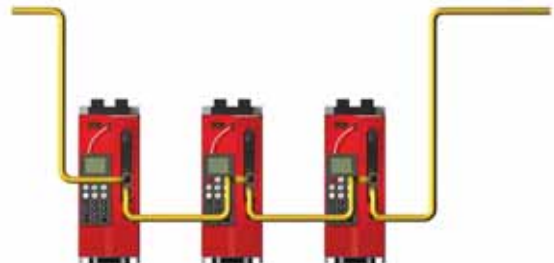
## EtherCAT® and Motion Control – High-speed Industrial ETHERNET

With the EtherCAT® interface modules FSE24B, DFE24B, XFE24A, and MFE72 (in preparation\*), drives from SEW-EURODRIVE can be connected to the EtherCAT® bus system, currently the fastest bus system on the market.

### Fast – Faster – EtherCAT®



**Applications with servo drive systems:**  
**MOVIAXIS® multi-axis servo drive with XFE24A**



**Applications with**  
**MOVIDRIVE® drive inverter with DFE24B**

With synchronization via distributed clock and a synchronization cycle of 0.5 ... 10 ms, the hard realtime communication for MOVIDRIVE® drive inverters and MOVIAXIS® multi-axis servo inverters allows for the following operating modes:

- High-performance Motion Control operation with centrally calculated motion functions and clock-synchronous speed, position or torque settings.
- Use of integrated Motion Control functions such as electronic cam, electronic gear unit, touch probe, positioning, etc. through clock-synchronous control.
- Conventional PLC operation.

## Overview of functions:

|                                           | MOVIAXIS®<br>multi-axis<br>servo inverter                                                  | MOVIDRIVE®<br>drive inverter                                                | MOVITRAC®<br>frequency inverter                                              | Decentralized gear-<br>motor MOVIMOT®<br>with MFE72 field<br>distributor<br>(in preparation*) | SEW drives via<br>DFE24B gateway                         |
|-------------------------------------------|--------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|----------------------------------------------------------|
| Process data                              | 16 words rx/tx<br>with 16 bit<br>each                                                      | 8 words rx/tx<br>with 32 bit each and<br>10 words rx/tx<br>with 16 bit each | 3 words rx/tx with<br>16 bits each or<br>10 words rx/tx with<br>16 bits each | 4 words rx/tx with<br>16 bits each or<br>10 words rx/tx with<br>16 bits each                  | 3 words rx/tx with<br>16 bits each for up<br>to 8 drives |
| Synchronization with<br>distributed clock | 0.5 ... 10 ms                                                                              | 1 ... 10 ms                                                                 | No                                                                           | No                                                                                            | No                                                       |
| Protocol                                  | CoE (CAN application protocol over EtherCAT®)                                              |                                                                             |                                                                              |                                                                                               |                                                          |
| Engineering                               | Full engineering access for MOVITOOLS® MotionStudio via EtherCAT® master (mailbox gateway) |                                                                             |                                                                              |                                                                                               |                                                          |
| Connection technology                     | 2 RJ45 connectors for linear networking of drives                                          |                                                                             |                                                                              |                                                                                               |                                                          |

\* Available in the 1st quarter of 2014

## Flexible – Versatile – EtherCAT®



**Applications with  
MOVITRAC® frequency inverter with FSE24B**



**Applications with  
SEW drives connected via DFE24B gateway**

Conventional PLC operation with non-synchronized process data (such as control and status values, speed or position setpoint or actual values) allows for control of the application modules (positioning, modulo, winder, etc.) of the MOVIDRIVE® drive inverter. MOVITRAC® frequency inverters and all other SEW drives

with SBus interface can be operated via EtherCAT® just as easily as via other fieldbus systems. The mailbox gateway in the EtherCAT® master ensures unlimited engineering access, for example, for MOVITOOLS® MotionStudio down to the drive level.

## How we're driving the world



**SEW-EURODRIVE**  
Driving the world

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