2 System Description

2.1 DRC electronic motor – the new mechatronic drive solution

Permanent-field synchronous motor with integrated drive electronics, motor efficiency class IE4, and energy-saving potential of up to 50%: This is how the new DRC electronic motor from SEW-EURODRIVE can be characterized in brief. The DRC motor supplements the product portfolio of mechatronic drive systems by a particularly flexible drive solution for mounting to various gear unit types. Helical, parallel-shaft helical and helical-bevel gear units can be mounted directly using flange and pinion shaft.

This flexibility and the resulting universal use make the DRC motor attractive for many industries, such as logistics, automobile industry, food and beverage industry, airport logistics, and construction industry. The DRC electronic motor is the optimal and efficient mechatronic drive solution for conveyors, such as belt, chain and link-belt conveyors. Equipping the DRC with an optional brake makes it also suited for use in inclining tracks and hoists.

The following figure shows the DRC2 and DRC1 electronic motors:
System Description
DRC electronic motor – the new mechatronic drive solution

The following figure shows a DRC helical gearmotor and a DRC helical-bevel gearmotor:
2.2 Overview of DRC motors

- Combination of a permanent-field synchronous motor (nominal speed 2000 rpm) with integrated drive electronics in a completely enclosed housing:
  - No fan
  - IP65 and IP66 degree of protection
- Power:
  - Size DRC 1: 0.55 kW (2.6 Nm nominal torque)
  - Size DRC 2: 1.5 kW (7.2 Nm nominal torque)
- Overload capacity of 250%
- High gear unit flexibility: A completely new mechatronic drive system is generated together with a highly efficient helical-bevel, helical or parallel-shaft helical gear unit
- IEC flanges for stand-alone motors and for combination with IEC adapters
- With mechanical brake as option
- Efficient mechatronic drive with IE4 motor efficiency class allows for saving up to 50% of energy.
- Mechatronic drive system from a single source: All individual components are perfectly matched, are reliable and durable, and significantly contribute to a high level of system availability.
- Possible installation topologies/communication interfaces: Single Line Network Installation (SNI), SEW system bus controller (DSC), binary (DBC) or AS-Interface (DAC).
- Can be used worldwide
  - Supply voltage of 3 x AC 380 – 500 V at 50/60 Hz
  - Significantly reduced number of variants, simplified selection and project planning
- Integrated safety function STO (Safe Torque Off)
2.3 **DRC drive units**

2.3.1 **DRC sizes**

- DRC1 electronic motor (0.55 kW, 2.6 Nm nominal torque)
- DRC2 electronic motor (1.5 kW, 7.2 Nm nominal torque)

2.3.2 **DRC variants**

- Stand-alone motor with IEC flange
- Gearmotor with R, F, K, or SPIROPLAN® gear units

2.3.3 **Example**

The following figure shows drive units consisting of DRC1/DRC2 electronic motor and R gear unit:
2.3.4 Installation technology

You can order DRC drive units with the following installation technology:

- **DBC** = Direct Binary Communication
- **DAC** = Direct AS-Interface Communication
  
  For DRC-DAC, you can choose between the variants binary slave GLK30 or double slave GLK31.
- **DSC** = Direct SBus Communication
- **SNI** = Single Line Network Installation

2.3.5 Design type with/without application slot

The following types of electronics covers of DRC-DSC and DRC-SNI units are available for all sizes (DRC1 and DRC2):

- Electronics cover **without** application slot
- Electronics cover **with** application slot

The electronics cover of DRC-DBS and DRC-DAC is designed without application slot.

The following figure shows the possible types:

![Electronics cover without application slot](image1)

![Electronics cover with application slot](image2)

Electronics cover **without** application slot

Electronics cover **with** application slot

(in the example shown with installed GIO12B option)
2.3.6 Application options

Application options are installed in the application slot of the DRC motor and implement specific interfaces, such as binary inputs or binary outputs.

The energy supply of the option as well as the communication between DRC and the option are contactless.

**Application option**

**GIO12B**

The GIO12B application option allows for controlling up to 2 digital actuators and for processing up to 4 digital sensors.

The following figure shows the GIO12B application option:

![GIO12B application option](image1)

**GIO13B**

The GIO13B application option comes equipped with the following interfaces:

- 1 digital output
- 4 digital inputs (two of them can be used as primary frequency input)
- 1 analog output
- 1 analog input

The following figure shows the GIO13B application option:

![GIO13B application option](image2)
2.3.7 General unit properties

- Wide voltage range 3 x AC 380 V to AC 500 V
- High overload capacity for all sizes
- 4Q capability due to integrated brake coil installed as standard
- Line filter integrated as standard. EMC-compliant installation ensures compliance with limit class C3 to EN 61800-3 (class A, group 2 according to EN 55011).
- LED display for operating and fault states
- Protective functions for full protection of the inverter and the motor:
  - Short circuit
  - Overload
  - Overvoltage/undervoltage
  - Excess temperature of the frequency inverter
  - Excess temperature in the drive unit
- IPOS integrated positioning and sequence control
- Integrated STO safety function
  - STO (safe torque off according to IEC 61800-5-2) by disconnecting the STO input.
  - Performance level e according to EN ISO 13849-1.
  - SS1(c) (safe stop 1, function variant c according to IEC 61800-5-2) by means of suitable external control (e.g. safety relay with delayed disconnection)
- You find the specific unit properties of DBC, DAC, DSC and SNI variants in the subsequent chapters.
2.4 Installation topology DBC – Direct Binary Communication

2.4.1 Description

The mechatronic drive solution DRC-DBC was developed by SEW-EURODRIVE specifically for stand-alone solutions and applications with simple functions. DIP switches and potentiometers allow for simple and fast startup without the need for a PC. The unit is controlled via the binary inputs either by a central PLC or in local/manual mode.

2.4.2 Topology

The following figure shows an installation topology with Direct Binary Communication:

[Diagram showing installation topology with DBC communication]

[1] Safety switching device/safety controller
2.4.3 Characteristics

- Simple startup without PC via DIP switches and potentiometer
- Parameterizable fixed speeds and ramps
- Binary input control and signal relay evaluation via PLC
- Local mode via binary inputs
- Interface for diagnostics and parameterization

2.4.4 Application examples

- Simple conveyors
- Rotary tables
- Adjustment drives
- Agitators and mixers
- Crushers and shredders
- Presses

2.4.5 Application options

- Simple stand-alone applications and single applications
- For applications that require soft startup behavior
- Applications with 2 fixed speeds
- For applications with high breakaway torques
- Applications with/without STO safety function


2.5 **Installation topology DAC – Direct AS-Interface Communication**

2.5.1 **Description**

DRC-DAC electronic motors allow for easy communication connection using the standard AS-Interface protocol. Parameterizable fixed speeds and ramps, integrated STO safety function and connection options for external sensors ensure fast and extremely efficient implementation of material handling systems.

DRC-DAC electronic motors are available in the following variants:

- Binary slave GLK30
- Double slave GLK31

2.5.2 **Topology**

The following figure shows an installation topology with Direct AS-Interface Communication:

![Diagram of installation topology](image.png)

[1] Control cabinet level
[2] Field level
2.5.3 Characteristics

- Simple communication connection
- Parameterizable fixed speeds and ramps
- Control via worldwide standard AS-Interface
- Connection of external sensors to the actuator
- Voltage supply for connected sensors
- Local mode via binary inputs
- Interface for diagnostics and parameterization

2.5.4 Application examples

- Accumulating roller conveyor
- Roller and wheel conveyors
- Pallet conveyors
- Rotary tables

2.5.5 Application options

- For applications that require soft startup behavior
- Signal feedback of connected sensors
- For applications that require a lot of space
- Applications with/without STO safety function
2.6 **Installation topology SNI – Single Line Network Installation**

2.6.1 **Description**

SNI stands for Single Line Network Installation and is based on the principle of using a single line for power supply and communication. The signals required for communication are modulated onto the power line in the high-frequency range and are available for each connected station.

The innovative Single Line Network Installation (SNI) concept allows for a completely new plant topology for a consistent plant decentralization. Compared to conventional decentralized technology, this new technology reduces installation effort, time, and cost. Only one power cable must be routed instead of three lines (400 V, 24 V, bus). This reduces the time and costs for installation, which decreases the total costs of the plant. The single-line principle also reduces the risk of hidden faults in the wiring of the communication lines.

Single Line Network Installation (SNI) makes separate bus cables almost completely redundant.

2.6.2 **Topology**

The following figure shows the basic installation topology with SNI (Single Line Network Installation):

![Diagram](5010730379)

- **[1]** Control cabinet level
- **[2]** Field level
2.6.3 Features

- Power and communication through one power cable
  - A maximum of 10 SNI actuators in total
  - Permitted cable length between controller and last actuator max. 100 m
- Reduction in the number of components
- No fieldbus wiring necessary
- No risk of hidden faults in the bus cabling
- Reduced startup times
- Shorter project runtime/reduction of project costs
- Optional motion control inputs (via plug connectors) for local mode or sensor inputs

2.6.4 Application examples

- Belt conveyors
- Pallet conveyors
- Roller and wheel conveyors
- Screw conveyors
- Container and packaging unit transports
- Chain and drag-chain conveyors

2.6.5 Application options

- As a drive for applications with high breakaway and starting torques
- Conveyor systems with variable speeds
- As drive for applications that require soft and/or defined startup behavior.
- As group drive for easier implementation of synchronous operation
- Applications with/without STO safety function
2.7 Installation topology of DSC – Direct SBus Installation

2.7.1 Description

DRC-DSC electronic motors with SEW system bus allow for the functional integration of the mechatronic drive system in applications close to the machine.

High performance and short response times distinguish this variant and enable reliable implementation of challenging drive tasks in the field of machine automation.

2.7.2 Topology

The following figure shows an installation topology with Direct SBus Installation:

[Diagram of installation topology]

[1] Control cabinet level
[2] Field level
2.7.3 Features

- Integrated system interface. Permitted cable length between controller and last actuator when using the recommended hybrid cable:
  - 1 Mbaud: 25 m
  - 500 Kbaud: 50 m
- Fast communication for short cycle times
- Hybrid cable for minimum installation effort
- System bus controller for control cabinet or fieldbus installation with integrated PLC
- High drive dynamics and performance
- Optional motion control inputs (via plug connector) for local mode or sensor inputs

2.7.4 Application examples

- Pallet conveyors
- Machine-integrated conveyor belts
- Feeding conveyors
- Synchronized feeder conveyors
- Reversing drives

2.7.5 Application options

- As a drive for applications with high breakaway and starting torques
- As a drive for conveyor systems that must be operated dynamically at varying speeds
- Forming intelligent function groups
- Universal application due to large control range of 1:2000
- Applications with/without STO safety function
2.8 Combined installation topology

The following figure shows a combined topology with single line network and SBus installation:

- **Control cabinet level**
- **Field level**

[1] Control cabinet level
[2] Field level
2.9 **SEW-EURODRIVE control technology – Overview**

2.9.1 Flexible solutions for effective drive automation

Controlling motions efficiently and individually – this is at the focus of control technology from SEW-EURODRIVE for functional and economical automation of machines.

The control technology excels by offering a universal, scalable, and powerful range of controllers and software optimally matched to the drives and drive electronic components of the modular system. The practical benefits are great both in terms of functionality and cost effectiveness.

Control technology from SEW-EURODRIVE offers a wide variety of flexible components. These components can be combined to form efficient drive solutions that can be easily integrated into numerous automation concepts. In this way, new functional and economic potential can be created in many machine automation projects, including the reduction of investment and startup costs, production capacities, or any follow-up costs for maintenance and repair.

2.9.2 System overview

The following figure shows the basic system overview of control technology from SEW-EURODRIVE:

Controllers from SEW-EURODRIVE are available in "configurable" (CCU) or "programmable" (MOVI-PLC®) variants. In addition, the controllers offer different installation options (control cabinet installation or decentralized installation) and different performance classes.

---

**Diagram:**

- **Plant control (Plant level)**
- **System control (System level)**
- **Device control (Field level)**

**Connections:**
- **Ethernet**
- **Fieldbus**

**Components:**
- **Controller**
- **CCU: configurable**
- **MOVI-PLC®: programmable**

---
2.10 Controllers/fieldbus gateways

2.10.1 MOVIFIT® FDC-SNI for controlling SNI actuators

**INFORMATION**
For detailed information about MOVIFIT® FDC, refer to chapter "Technical data of MOVIFIT® FDC."

The following figure shows a MOVIFIT® FDC-SNI unit and an DRC2 electronic motor:

![MOVIFIT® FDC-SNI unit and DRC2 electronic motor](image)

---

**Features of MOVIFIT® FDC-SNI**

- Up to 16 drive units can be connected, among them up to 10 SNI actuators
- Single Line Network Installation – SNI
- Voltage range 3 x AC 380 – 500 V
- Easy data management with SD memory card
- Configurable application modules or free programming in accordance with IEC 61131-3
- Industrial Ethernet with the following protocols:
  - PROFINET
  - Ethernet/IP
  - Modbus TCP
- Service interfaces via
  - USB
  - Ethernet
- 12 binary inputs + 4 binary inputs/outputs
- Maintenance switch
**SD memory card**

The SD memory card in the EBOX serves for the central data management of MOVIFIT® FDC. It contains the firmware, the IEC program, and user data.

MOVIFIT® FDC is available with the following memory cards:

<table>
<thead>
<tr>
<th>Short designation</th>
<th>SD card</th>
<th>Feature</th>
</tr>
</thead>
<tbody>
<tr>
<td>R95</td>
<td>OMC41B-T0</td>
<td>Parameterizable</td>
</tr>
<tr>
<td>R96</td>
<td>OMH41B-T0</td>
<td>Programmable</td>
</tr>
</tbody>
</table>

**Configurable application controller (control card)**

When using SD card OMC41B-T0, you can use MOVIFIT® FDC as configurable application controller (CCU).

You can then execute standardized application modules created by SEW-EURODRIVE. The application modules can be started up quickly and conveniently by graphical configuration.

**Performance class CCU standard**

The "CCU standard" performance class is intended for application modules with single-axis functionality and medium response times. A maximum of 16 axes (max. 10 of them SNI axes) can be connected to a configurable application controller.

The following application modules are available:

- Speed control
- Cam positioning
- Bus positioning with 6 process data
- Single-axis universal module

**Performance class CCU advanced**

Performance class "CCU advanced" is intended for application modules with single-axis and multi-axis functionality and fast response times. A maximum of 16 axes can be connected to a configurable application controller.

You can operate application modules with technology level T0 or higher.
| **Freely programmable motion and logic controller card (MOVI-PLC®)** | When using SD card OMH41B-T0, you can use MOVIFIT® FDC as freely programmable motion and logic controller MOVI-PLC®. MOVI-PLC® is a series of programmable motion and logic controllers. It allows drive solutions, logic processes and sequence controls to be automated simply and efficiently using IEC 61131-3 compliant programming languages.  
- MOVI-PLC® is a **universal** solution because it is able to control the entire portfolio of SEW inverters and offers a simple upgrade to a more powerful MOVI-PLC® version, thanks to its universal execution of the programs.  
- MOVI-PLC® is **scalable** due to several different hardware platforms (standard, advanced, etc.) and modular software concepts (libraries for numerous applications).  
- MOVI-PLC® is **powerful** due to comprehensive technologies (such as electronic cam, synchronous operation) and the control of sophisticated applications. |
| **MOVI-PLC® standard performance class** |  
- The control card of the performance class “MOVI-PLC® Standard” enables coordinated single-axis movements and integration of external inputs/outputs as well as drive operator panels (DOP). This means the control card is suitable for use as a module controller or stand-alone controller for machines of medium complexity. |
| **MOVI-PLC® advanced performance class** |  
- The performance class “MOVI-PLC® advanced” is characterized by a greater variety of interfaces and a higher performance level, which allows complex calculations and interpolated movements, for example. This means the option is suitable for the automation of cells and machines. The integrated Ethernet interface enables direct connection of the DH.41B controller to the control level. |
2.10.2 Fieldbus gateways for SNI actuators

For connecting a drive system with DRC-SNI or MOVIGEAR® SNI [4] to the PROFIBUS or DeviceNet fieldbus system, you can operate MOVIFIT® FDC [3] together with the UFF41B fieldbus gateway [1]. Configuration and parameter setting is carried out using a plug-in in MOVITOOLS® MotionStudio.

[1] UFF41B fieldbus gateway with SD card OMG42B
[2] MOVIFIT® FDC
[3] SNI actuators
2.10.3 Controllers and fieldbus gateways for SBus actuators

The following products of SEW-EURODRIVE are available to connect a drive system with DRC-DSC® or MOVIGEAR® DSC to a fieldbus or Ethernet system.

Fieldbus gateways (control cabinet installation)

The following table shows available variants:

<table>
<thead>
<tr>
<th>Bus systems</th>
<th>PROFIBUS</th>
<th>Interbus</th>
<th>DeviceNet</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>DFP21B/UOH</td>
<td>UF11A</td>
<td>DFD11B/UOH</td>
</tr>
<tr>
<td></td>
<td>DFS11B/UOH</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>DFP21B/UOH</td>
<td>UF11A</td>
<td>DFD11B/UOH</td>
</tr>
<tr>
<td></td>
<td>DFS11B/UOH</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Industrial Ethernet</td>
<td>PROFINET</td>
<td>EtherNet/IP</td>
<td>Modbus TCP</td>
</tr>
<tr>
<td></td>
<td>DFE32B/UOH</td>
<td>DFE33B/UOH</td>
<td>DFE33B/UOH</td>
</tr>
<tr>
<td></td>
<td>DFE21B/UOH</td>
<td>DFE21B/UOH</td>
<td>DFE21B/UOH</td>
</tr>
</tbody>
</table>

Controller (control cabinet installation)

The following table shows available variants:

<table>
<thead>
<tr>
<th>Variant</th>
<th>TYPE</th>
<th>Bus system / Industrial Ethernet</th>
</tr>
</thead>
<tbody>
<tr>
<td>CCU / MOVI-PLC®</td>
<td>DHR21B, DHR41B</td>
<td>PROFINET, Ethernet/IP, Modbus TCP</td>
</tr>
<tr>
<td>CCU / MOVI-PLC®</td>
<td>DHF21B, DHF41B</td>
<td>PROFIBUS, DeviceNet</td>
</tr>
<tr>
<td>MOVI-PLC®</td>
<td>DHE21B, DHE41B</td>
<td>UDP</td>
</tr>
</tbody>
</table>
2.11 Configurable control technology with the Configurable Control Unit (CCU)

2.11.1 Easy configuration of applications

Control technology from SEW-EURODRIVE includes the configurable control unit (CCU) for easily configurable applications with standardized and immediately executable application modules, which merely have to be parameterized. The functions match the specific application and can be configured easily and quickly without any programming knowledge. An integrated diagnostic function enables quick and simple startup.

There is no faster way: Standardized and immediately executable application modules.

2.11.2 Application Configurator

The Application Configurator is a tool that lets users carry out configurations and diagnostics. This practice-oriented solution is independent of the required application module and the SEW-EURODRIVE drive and control components used. All applications are operated in the same easy manner.

2.11.3 Example of a Configurable Control Unit (CCU)

Rapid/creep speed positioning

The "rapid/creep speed positioning" application module is used for simple positioning tasks in materials handling technology (e.g. roller conveyor or rotary table).
Positioning is carried out via 2 initiators with 2 speeds. The first initiator determines the switching point from rapid to creep speed, and the second one determines the stop position. Applications that must position in two directions require 4 initiators.

The following operating modes are supported:

- Jog
- Feed-in (positioning)
- Feed-out
- Lifting/rotating
### System Description

Configurable control technology with the Configurable Control Unit (CCU)

#### 2.11.4 Application modules available for DRC electronic motor and MOVIGEAR®

**INFORMATION**

For detailed information about application modules, refer to the "Configuration Software – Application Configurator for CCU" manual.

The following table lists the permitted combinations of controller types and lower-level units:

<table>
<thead>
<tr>
<th>Application module</th>
<th>Description</th>
<th>Controller (CCU)</th>
<th>Unit (actuator)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Speed control</td>
<td>The &quot;Speed control&quot; application module is used for speed-controlled applications without positioning.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>DHF21B, DHR21B</td>
<td>DRC-DSC MOVIGEAR® B DSC</td>
</tr>
<tr>
<td></td>
<td></td>
<td>DHF41B, DHR41B</td>
<td>DRC-DSC MOVIGEAR® B DSC</td>
</tr>
<tr>
<td></td>
<td></td>
<td>MOVIPRO® ADC</td>
<td>DRC-DSC on SBus 2 MOVIGEAR® B DSC on SBus 2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>MOVIFIT® FDC-SNI</td>
<td>DRC-SNI MOVIGEAR® B SNI DRC-DSC on SBus 2 MOVIGEAR® B DSC on SBus 2</td>
</tr>
<tr>
<td>Rapid/creep positioning</td>
<td>The &quot;Rapid/creep positioning&quot; application module is used for simple positioning tasks in materials handling technology. This includes the following typical applications: • Roller and chain conveyors • Lifting table applications • Rotary table applications Positioning is carried out via 2 initiators with 2 speeds. The first initiator determines the switching point from rapid to creep speed, and the second one determines the stop position. Applications that must position in 2 directions require 4 initiators. The following operating modes are supported: • Jog • Inward conveyance (positioning) • Outward conveyance • Lifting/rotating</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>DHF21B, DHR21B</td>
<td>DRC-DSC MOVIGEAR® B DSC</td>
</tr>
<tr>
<td></td>
<td></td>
<td>DHF41B, DHR41B</td>
<td>DRC-DSC MOVIGEAR® B DSC</td>
</tr>
<tr>
<td></td>
<td></td>
<td>MOVIPRO® ADC</td>
<td>DRC-DSC on SBus 2 MOVIGEAR® B DSC on SBus 2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>MOVIFIT® FDC-SNI</td>
<td>DRC-SNI MOVIGEAR® B SNI DRC-DSC on SBus 2 MOVIGEAR® B DSC on SBus 2</td>
</tr>
<tr>
<td>Application module</td>
<td>Description</td>
<td>Controller (CCU)</td>
<td>Unit (actuator)</td>
</tr>
<tr>
<td>--------------------</td>
<td>------------------------------------------------------------------------------</td>
<td>------------------</td>
<td>-----------------</td>
</tr>
</tbody>
</table>
| **Bus positioning** | The "bus positioning" application module is used for variable positions in conjunction with different speeds and ramps. Positioning is carried out via the built-in motor encoder or an optional distance encoder. Only linear, absolute positioning is supported. You can work with user units. The following operating modes are supported:  
• Jog  
• Referencing  
• Positioning | DHF21B, DHR21B | DRC-DSC MOVIGEAR® B DSC  
DHF41B, DHR41B | DRC-DSC MOVIGEAR® B DSC  
MOVIPRO® ADC | DRC-DSC on SBus 2 MOVIGEAR® B DSC on SBus 2  
MOVIFIT® FDC-SNI | DRC-SNI MOVIGEAR® B SNI DRC-DSC on SBus 2 MOVIGEAR® B DSC on SBus 2 |
| **Universal module** | The "Universal module" application module is used for all speed-controlled and positioning applications. Functional extensions such as synchronization or touch probe evaluation allow for a wide range of possible applications. The module comes equipped with a uniform process data interface that is simply extended if more functions are required. The profiles of the universal module are downward compatible. You can work with user units. | DHF21B, DHR21B | DRC-DSC MOVIGEAR® B DSC  
DHF41B, DHR41B | DRC-DSC MOVIGEAR® B DSC  
MOVIPRO® ADC | DRC-DSC on SBus 2 MOVIGEAR® B DSC on SBus 2  
MOVIFIT® FDC-SNI | DRC-SNI MOVIGEAR® B SNI DRC-DSC on SBus 2 MOVIGEAR® B DSC on SBus 2 |
| **Energy-efficient SRS** | The "energy-efficient SRS" application module was developed to operate energy-efficient high-bay warehouses. The application module allows for energy savings of up to 25% due to optimized travel cycles of vertical lifting drive and horizontal travel drive. A simple interface allows for specifying the target positions and dynamic parameters for the lifting and travel axes. Integrated functions for buffer travel and slack rope detection. The IEC program controls up to 3 axes and can be used for the following devices:  
• MOVIAXIS® (incl. MXR regenerative power supply unit)  
• MOVIDRIVE® | DHF41B, DHR41B (Technology level T2) | Main axis: MOVIDRIVE® B MOVIAXIS®  
Auxiliary axis: DRC-B DSC MOVIGEAR® B DSC (with rapid/creep speed, speed control, bus positioning or universal module) |
## System Description

Configurable control technology with the Configurable Control Unit (CCU)

<table>
<thead>
<tr>
<th>Application module</th>
<th>Description</th>
<th>Controller (CCU)</th>
<th>Unit (actuator)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transparent</td>
<td>The &quot;Transparent&quot; application module is used when the process output data from the higher-level controller (PLC) is forwarded to the lower-level units via the configurable application controller (CCU). The same applies to the process data communication in the opposite direction. The process input data from the lower-level units is forwarded to the PLC via the CCU. The &quot;Transparent&quot; application module supports all the (IPOSplus-based) application modules running directly on the inverter.</td>
<td>MOVIFIT®-FDC</td>
<td>MOVIFIT® FC slave (only Transparent 3PD)</td>
</tr>
</tbody>
</table>