Overview

The intelligent and highly flexible SIRIUS M200D motor starters for distributed installation start, monitor and protect motors and loads up to 5.5 kW.

The M200D motor starters are available in four versions:

- **Basic functionality**
  - Available as direct-on-line and reversing starters in a rugged design
  - Electromechanical or electronic switching version
  - Low variance - only two device versions up to 5.5 kW thanks to wide range setting
  - All versions have the same enclosure size.
  - Degree of protection IP65
  - Quick and failsafe wiring of system and motor cables using ISO 23570 plug-in connector technology (Q4/2 and Q8/0)
  - Robust and widely used M12 connection method for digital inputs and outputs
  - Integrated feeder connector monitoring
  - Full motor protection through overload protection and a temperature sensor (PTC, TC)
  - Short-circuit and overload protection integrated
  - Integrated repair switch lockable with three locks (multi-level service)
  - Uniform wiring to the SINAMICS G110D, SINAMICS G110M and SINAMICS G120D frequency inverters and to the ET 200pro distributed I/O system
  - Extensive diagnostics concept using LEDs
  - Optional integrated manual local control with key-operated switch (ordering option)
  - Optionally available brake actuation with voltages from 180 V DC (no rectifier needed in motor) or 230/400 V AC (order versions)

Article No. scheme

<table>
<thead>
<tr>
<th>Motor starters</th>
<th>Article number</th>
<th>Setting range for rated operational current $I_a$</th>
<th>Starter version</th>
<th>Product function</th>
<th>Brake actuation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type</td>
<td>AS-i Basic</td>
<td>AS-i Standard</td>
<td>PROFIBUS/PROFINET</td>
<td>Electromechanical starters</td>
<td>Direct-on-line starters</td>
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<tr>
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<td></td>
<td>with integrated contactor</td>
<td>with manual local operation</td>
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<td>with thyristors</td>
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</tr>
</tbody>
</table>

Example: 3RK13 1 5 – 6 A 0 – 3 A A 0

Note:
The Article No. scheme shows an overview of product versions for better understanding of the logic behind the article numbers.

For your orders please use the article numbers quoted in the selection and ordering data.
Motor Starters for Use in the Field, High Degree of Protection
SIRIUS M200D Motor Starters

General data

Benefits

M200D motor starters provide the following advantages for customers:

- High plant availability through plug-in capability of the main circuit, communication and I/Os – relevant for installing and replacing devices
- Cabinet-free construction and near-motor installation thanks to the high degree of protection IP65
- The motor starters record the actual current flow for the parameterizable electronic motor overload protection. Reliable messages concerning the overshooting or undershooting of setpoint values for comprehensive motor protection. All motor protection functions can be defined by simple parameterization
- Low stock levels and low order costs thanks to a wide setting range for the electronic motor protection of 1:10 (only two device versions up to 5.5 kW)
- The integrated wide range for the current enables a single device to cover numerous standard motors of different sizes.
- Comprehensive offering of accessories, including ready-assembled cables
- The M200D motor starters can be installed with a few manual steps. The integrated plug-in technology enables far lower wiring outlay. Preassembled cables can be plugged directly onto the motor starter module.
- Easy and user-friendly installation because all versions have the same enclosure dimensions.
- Fast and user-friendly commissioning using optional manual local operation
- Increase of process speed through integrated functions such as "Quick Stop" and "Disable Quick Stop", e.g. at points and crossings
- Optional manual local control with momentary-contact and latching operation for easier start up and easier servicing

Application

The high degree of protection IP65 makes the M200D motor starters suitable in particular for use on extensive conveying systems such as are found in mail sorting centers, airports, automotive factories and the packaging industry.

For simple drive tasks, particularly in conveyor applications, the new SINAMICS G110D frequency inverter series with a performance range from 0.75 kW to 7.5 kW and degree of protection IP65 is the ideal partner for the M200D motor starters.

SINAMICS G110D allow for stepless speed control of three-phase asynchronous motors and comply with the requirements for materials handling applications with frequency control (for further information, see Catalog D 31.2).

For simple drive tasks in conveyor applications in which a frequency inverter integrated into the motor is required, the SINAMICS G110M frequency inverter with a performance range from 0.37 kW to 4 kW and degree of protection IP65/66 is the ideal partner. The SINAMICS G110M is available individually as a frequency inverter for self-assembly and pre-mounted on SIMOGEAR geared motors, and with its conveyor-specific functions it satisfies the requirements of conveyor technology applications (for further information, see Catalog D 31.2).

Use of SIRIUS M200D motor starters in conjunction with IE3/IE4 motors

Note:

For the use of SIRIUS M200D motor starters in conjunction with highly energy-efficient IE3/IE4 motors, please observe the information on dimensioning and configuring; see Application Manual "Controls with IE3/IE4 Motors" https://support.industry.siemens.com/cs/ww/en/view/94770820.

For more information, see page 1/7.
Overview

For motor control using AS-Interface there are the following M200D motor starter versions: SIRIUS M200D AS-i Basic and SIRIUS M200D AS-i Standard (basic functionality, see page 9/41 “SIRIUS M200D Motor Starters” → “General data” → “Overview”).

SIRIUS M200D AS-i Basic

Functionality

• Easy and fast on-site start up through parameterization of local setting knobs (DIP switches) and rotary coding switches for adjusting the rated operational current. The rotary coding switch has an OFF position for deactivating the overload protection with the help of the thermal motor model when using a temperature sensor.

Communications

• AS-i communication with A/B addressing according to Spec V2.1

• The AS-i bus is connected cost-effectively using an M12 connection on the device. Of the four digital inputs, two are contained in the process image and can therefore be used in the PLC program. The other two inputs are locally effective and permanently assigned with functions.

• The LEDs can provide comprehensive diagnostics of the device on the spot. In addition to diagnostics using the PAE process image, the device can create up to 15 different diagnostic signals per slave. The message with the highest priority can be read out through the AS-i communication. This is yet another new development which distinguishes the M200D AS-i Basic motor starter from the rest of the market and adds innovative technology, maximum availability and transparency to the system.

SIRIUS M200D AS-i Standard

The intelligent and highly flexible M200D AS-i standard motor starter in A/B technology starts and protects motors and loads up to 5.5 kW. They are available in direct-on-line or reversing starter versions, in a mechanical version and also an electronic version (the latter with soft start function).

The M200D AS-i Standard motor starter is the most functional member of the SIRIUS motor starter family in the high degree of protection IP65 for AS-i communication. Consistency with other products of the SIRIUS M200D motor starter range and with the frequency converter and ET 200pro I/O system is assured.

Functionality

• AS-i communication with A/B addressing according to Spec 3.0

• Electronic version also with soft start function

• AS-i slave profile 7AE/7AS with process image 6E/4A

• Full TIA integration: All digital inputs and outputs exist in the cyclic process image and are visible through AS-i, providing maximum flexibility and best adaptability to the application.

• Additionally expanded diagnostics using data record through AS-i bus

• Complete plant monitoring using statistics data record and current value monitoring by means of data records

• Parameterization through AS-i bus with the help of data records or an expanded process image from the user program

• Control of the motor starter using a command data record from the user program

• Flexible assignment of the digital inputs and outputs with all available assignable input actions

• Parameterization using Motor Starter ES at the local interface (ordering option for start up software)

• Diagnostics with the help of Motor Starter ES (ordering option for start up software)

Mounting and installation

The M200D motor starters can be installed with a few manual steps. The integrated plug-in technology enables far lower wiring outlay. Connecting cables can be plugged directly onto the motor starter module. Swapping of the connecting wires and malfunctions within the plant are prevented by preassembled cables. The AS-i bus is connected cost-effectively using an M12 connection on the device. All versions feature identical enclosure sizes, which simplifies system design and conversion.

Parameterization and configuration

The particularly robust M200D AS-i Standard motor starter is characterized by numerous functions which can be flexibly parameterized. It enables highly flexible parameterization through the AS-i bus using data records from the user program as well as user-friendly local parameterization using the Motor Starter ES start up software through the local point-to-point interface.

Functions can be flexibly assigned to the digital inputs and outputs, adapting them to all possible conveyor applications. All motor protection functions, limit values and reactions can be defined by parameterization. The AS-i Standard is unique. In its 6E/4A process image the motor starter sends all four digital inputs and the digital output via the process image to the PLC in cyclic mode. System configuration and system documentation are facilitated not least by a number of CAX data.

Operation

The new generation of motor starters is characterized by its advanced functionality, maximum flexibility and extremely high degree of automation.

All digital inputs and outputs exist in the cyclic process image. All limit values for monitoring functions and their reactions are parameterizable and therefore adaptable to the application. The motor starters record the actual current flow. Evaluating the current of the parameterizable solid-state overload protection increases the availability of the drives, as do reliable messages concerning the overshooting or undershooting of setpoint values.

Diagnostics and maintenance

The M200D sets new standards for diagnostics. In addition to diagnostics using the PAE process image and diagnostics by “parameter echo” (up to 15 different diagnostic signals per slave can be read out via AS-i communication), the possibility of reading out diagnostic data records is unique on the market.

The AS-i Standard is recommended in particular for expansive and highly automated system components because the possibility of monitoring devices and systems with data records (statistical data, measured values and device diagnostics) provides an in-depth view of the plant from the control room, guaranteeing the monitoring process and increasing plant availability.

Preventive maintenance can be carried out with the integrated maintenance timer and plant downtimes prevented as a result in advance.

Local control of a drive is possible using the ordering option with integrated manual operation. This is yet another new development which distinguishes the M200D AS-i Standard motor starter from the rest of the market and adds innovative technology, maximum availability and transparency to the plant.
## General data

### Device functions (firmware features)

#### Slave on the bus

<table>
<thead>
<tr>
<th>Fieldbus</th>
<th>AS-i</th>
</tr>
</thead>
<tbody>
<tr>
<td>Slave type</td>
<td>A/B acc. to Spec 2.1</td>
</tr>
<tr>
<td>Number of assigned AS-i addresses on the bus</td>
<td>1</td>
</tr>
<tr>
<td>Number of stations per AS-i master</td>
<td>Max. 62 devices</td>
</tr>
<tr>
<td>AS-i master profile</td>
<td>M3 and higher</td>
</tr>
</tbody>
</table>

#### Parameter assignment

- DIP switches
- Potentialmeter for rated operational current
- Motor Starter ES
- Data records through AS-i

#### Diagnostics

- Diagnostics through parameter channel
- Acyclic through data records
- Expanded process image PAE 4 bytes

#### Process image

- Process image: 4E/3A, 6E/4A

#### Data channels

- Local optical interface (manual local)
- AS-i bus
- Motor Starter ES through local interface: --
- Motor Starter ES through bus: --

#### Data records\(^1\) (acyclic)

- Parameterization: --
- Diagnostics: --
- Measured values: --
- Statistics: --
- Commands: --

#### Inputs

- Number: 4
- Of these in the process image: 2 through AS-i
- Input action: For permanently assigned functions, see manual\(^2\)
- Quick stop: Permanent function: latching, edge-triggered

#### Outputs

- Number: 1
- Output action: Permanent function: assigned with group fault, Parameterizable: For function, see manual\(^3\)

#### Brake output

- 180 V DC / 230/400 V AC / none

#### Motor protection

- Overload protection: Electronic, wide range 1:10
- Short-circuit protection
- Full motor protection
- Temperature sensor: Parameterizable using DIP switches: PTC or Thermoclick or deactivated, Parameterizable using Motor Starter ES, data record: PTC or Thermoclick or deactivated

\(^1\) The data records are a reduced selection compared with PROFIBUS/PROFINET.


Motor Starters for Use in the Field, High Degree of Protection
SIRIUS M200D Motor Starters
M200D Motor Starters for AS-Interface

General data

Device functions (firmware features)

<table>
<thead>
<tr>
<th>Device function</th>
<th>SIRIUS M200D AS-i Basic</th>
<th>SIRIUS M200D AS-i Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Repair switch</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Current limit monitoring bottom</td>
<td>--</td>
<td>Parameterizable</td>
</tr>
<tr>
<td>Current limit monitoring top</td>
<td>--</td>
<td>Parameterizable</td>
</tr>
<tr>
<td>Zero current detection</td>
<td>✓ Parameterizable</td>
<td></td>
</tr>
<tr>
<td>Blocking current</td>
<td>✓ Parameterizable</td>
<td></td>
</tr>
<tr>
<td>Unbalance</td>
<td>✓ Parameterizable</td>
<td></td>
</tr>
<tr>
<td>Load type</td>
<td>✓ Parameterizable</td>
<td></td>
</tr>
<tr>
<td>Shutdown class</td>
<td>✓ Parameterizable using DIP switches: CLASS 10/deactivated</td>
<td>Parameterizable using Motor Starter ES, data record: CLASS 5, 10, 15, 20</td>
</tr>
<tr>
<td>Protection against voltage failure</td>
<td>✓ Parameterizable</td>
<td>Parameterizable: activated/deactivated</td>
</tr>
</tbody>
</table>

Soft starter control function

- Soft start function -- ✓ Only solid-state version
- Bypass function -- ✓ Only solid-state version

✓ Function available
-- Function not available

Application

The M200D AS-i standard is particularly suitable for highly automated applications in conveyor systems requiring devices and systems to be monitored to prevent or limit plant downtime. The option of planning the functions of the motor starter or its interfaces also creates the prerequisite for fine-adjustment to the function of the motor starter in the application and hence provides for extreme flexibility.


For more information, see page 1/7.

Technical specifications

More information

- Device manuals for SIRIUS M200D AS-i Basic and Standard, see:
- FAQs, see https://support.industry.siemens.com/cs/ww/en/ps/16324/faq

Notes on security:

In order to protect plants, systems, machines and networks against cyber threats, it is necessary to implement – and continuously maintain – a holistic, state-of-the-art industrial security concept. Siemens products and solutions only represent one component of such a concept.

For more information about the subject of Industrial Security, see www.siemens.com/industrialsecurity.
## General data

### Type

<table>
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<tr>
<th></th>
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<td>s .......</td>
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</tbody>
</table>

### Mechanics and environment

<table>
<thead>
<tr>
<th>Dimension (W x H x D)</th>
<th>mm</th>
<th>294 x 215 x 159</th>
</tr>
</thead>
</table>

### Permissible ambient temperature

- **During operation**: °C 25 ... +55
- **During storage**: °C -40 ... +70

### Weight

- g 2 880/3 130
- 3 220/3 420

### Permissible mounting position

- Vertical, horizontal, lying

### Vibration resistance acc. to IEC 60068 Part 2-6

- g 2

### Shock resistance

- **Acc. to IEC 60068 Part 2-27**: g/ms 12/11 half-sine
- **Without influencing the contact position**: g/ms 9.8/5 or 5.9/10

### Degree of protection acc. to IEC 529

- IP65

### Installation altitude

- **Up to 1 000 m**: No derating
- **Up to 2 000 m**: 1 % per 100 m

### Cooling

- Convection

### Protection class IEC 536 (VDE 0106-1)

- 1

## Electrical specifications

### Control circuit

- Operating voltage $U_{\text{As-i}}$ V DC 26.5 ... 31.6
- Supply voltage $U_{\text{aux}}$ V DC 20.4 ... 28.8
- Power consumption from AS-i (incl. 200 mA sensor supply) mA < 300

### Main circuit

- Maximum power of three-phase motors at 400 V AC kW 5.5
- Rated operational voltage $U_{\text{e}}$ V AC 400 (50/60 Hz) 600 (50/60 Hz) 480 (50/60 Hz) 600 (50/60 Hz) 480 (50/60 Hz)
- Rated operational current range A 0.15 ... 2 / 1.5 ... 12 0.15 ... 2 / 1.5 ... 12 0.15 ... 2 / 1.5 ... 12
- Rated operational current range for soft starting A -- 0.15 ... 2 / 1.5 ... 9 --
- Rated operational current range for direct-on-line starting A -- 0.15 ... 2 / 1.5 ... 9

### Rated operational current for starters $I_{s}$ at 400 V AC

- **400 V at AC-1 / 2 / 3** A 12 -- 12 --
- **500 V at AC-1 / 2 / 3** A 9 -- 9 --
- **400 V at AC-4** A 4 -- 4 --
- **400 V at AC-53a** A -- 9 -- 12 for soft starting 9 for direct-on-line starting

### Rated ultimate short-circuit breaking capacity $I_{q}$

- **400 V AC** A 50 20 50 20
- **500 V AC** A 50 50

### Short-circuit protection

- **At $I_{\text{emax}} = 2 A$** integrated, 2 x $I_{e} = 26 A$
- **At $I_{\text{emax}} = 9 / 12 A$** integrated, 2 x $I_{e} = 208 A$

### Brake actuation (option)

- **Operational voltage** V 230/400 AC or 180 DC
- **Uninterrupted current** A < 0.5 at 230/400 V AC < 0.8 at 180 V DC

### Short-circuit protection

- Yes, 1 A melting fuse

---

1) DS .... Direct-on-line starters
   RS .... Reversing starters
   DSS .... Direct-on-line soft starters
   RSS .... Reversing soft starters
   te ....... Full motor protection (thermal + electronic)
   s ......... Electronic switching with semiconductor.

4) Only systems with grounded neutral point permitted.
Selection and ordering data

M200D AS-i Basic without manual local operation

<table>
<thead>
<tr>
<th>Version</th>
<th>SD</th>
<th>Article No.</th>
<th>Price per PU</th>
<th>PU (UNIT, SET, M)</th>
<th>PS*</th>
<th>PG</th>
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</thead>
<tbody>
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<td>3RK1315-6S41-8AA</td>
<td>1 1 unit 42D</td>
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</tr>
</tbody>
</table>

Electromechanical starters (with integrated contactor)

- Rated operational current setting range/A
  - 0.15 ... 2
  - 1.5 ... 12
- Direct-on-line starters/reversing starters
  - Direct-on-line starters
  - Reversing starters
  - Direct-on-line starters with manual local operation
  - Reversing starters with manual local operation
- Brake actuation
  - Without brake actuation
  - Brake actuation (230/400 V AC)
  - Brake actuation (180 V DC)

Electronic starters (with thyristors)

- Rated operational current setting range/A
  - 0.15 ... 2
  - 1.5 ... 9
- Direct-on-line starters/reversing starters
  - Direct-on-line starters
  - Reversing starters
  - Direct-on-line starters with manual local operation
  - Reversing starters with manual local operation
- Brake actuation
  - Without brake actuation
  - Brake actuation (230/400 V AC)
  - Brake actuation (180 V DC)
Motor Starters for Use in the Field, High Degree of Protection
SIRIUS M200D Motor Starters
M200D Motor Starters for AS-Interface

M200D Standard motor starters  **IE3/IE4 ready**

### Selection and ordering data

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<thead>
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<th>Version</th>
<th>Article No.</th>
<th>Price per PU (UNIT, SET, M)</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>3RK1325-6S41-AA</td>
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</tbody>
</table>

#### Electromechanical starters (with integrated contactor)

- **Rated operational current setting range/A**
  - 0.15 ... 2
  - 1.5 ... 12
- **Direct-on-line starters/reversing starters**
  - Direct-on-line starters
  - Reversing starters
  - Direct-on-line starters with manual local operation
  - Reversing starters with manual local operation
- **Brake actuation**
  - Without brake actuation
  - Brake actuation (230/400 V AC)
  - Brake actuation (180 V DC)

<table>
<thead>
<tr>
<th>Version</th>
<th>Article No.</th>
<th>Price per PU (UNIT, SET, M)</th>
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<tr>
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<td>3RK1325-6S71-AA</td>
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</tr>
</tbody>
</table>

#### Electronic starters (with thyristors)

- **Rated operational current setting range/A**
  - 0.15 ... 2
  - 1.5 ... 12
- **Direct-on-line starters/reversing starters**
  - Direct-on-line starters
  - Reversing starters
  - Direct-on-line starters with manual local operation
  - Reversing starters with manual local operation
- **Brake actuation**
  - Without brake actuation
  - Brake actuation (230/400 V AC)
  - Brake actuation (180 V DC)

* You can order this quantity or a multiple thereof.
* Illustrations are approximate
Overview

The intelligent, highly flexible M200D PROFIBUS/PROFINET motor starters are the most functional motor starters of the SIRIUS motor starter family in the high degree of protection IP65 for PROFIBUS/PROFINET communication.

They start and protect motors and loads up to 5.5 kW. Direct-on-line and reversing starter versions are available, in a mechanical version and also an electronic version (the latter with soft start function).

The particularly robust M200D PROFIBUS/PROFINET motor starters are characterized by numerous functions which can be flexibly parameterized. Their modular design comprises a motor starter module and a communication module.

The M200D PROFINET motor starters enable TIA-integrated parameterization through PROFINET from STEP 7 – in familiar, user-friendly manner with the look and feel of PROFIBUS.

Functionality

- For basic functionality, see page 9/41 "SIRIUS M200D Motor Starters" ➞ "General data" ➞ "Overview"
- Electronic version also with soft start function
- Robust and widely used M12 connection method for the digital inputs and outputs and the PROFIBUS/PROFINET bus connection
- All four digital inputs and two digital outputs exist in the cyclic process image. This provides complete transparency of the process on the control level
- Full TIA integration: All digital inputs and outputs exist in the cyclic process image and are visible through the bus, providing maximum flexibility and excellent adaptability to the application
- Flexible assignment of the digital inputs and outputs with all available assignable input actions
- Extensive diagnostics concept using LEDs and through the bus with the TIA-compatible mechanisms
- Expanded diagnostics using data records
- Complete plant monitoring using statistics data record and current value monitoring by means of data records
- Parameterization through PROFIBUS/PROFINET bus with the help of data records from the user program
- Control of the motor starter using a command data record from the user program
- Removable modular control unit – quicker device replacement and therefore lower costs when device outages occur – since existing wiring is on the control unit and only one device needs to be replaced
- Parameterization in STEP 7 HW Config using Motor Starter ES (ordering option for start up software)
- Start up and diagnostics with the help of Motor Starter ES (ordering option for start up software)
- Trace function through Motor Starter ES for optimized start up and tracking of process and device values

Only with PROFINET:

- Just one bus system from the MES level to the devices – no routers
- More stations on the bus and possible configuration of flexible bus structures
- Automatic re-parameterization in case of device replacement thanks to proximity detection
- Wireless integration of plant segments in difficult environments using WLAN
- Easier expansion of the system thanks to a higher number of stations on the bus and elimination of terminating resistors
Motor Starters for Use in the Field, High Degree of Protection
SIRIUS M200D Motor Starters
M200D Motor Starters for PROFIBUS/PROFINET

General data

Mounting and installation
The M200D PROFIBUS/PROFINET motor starter is comprised of the communication module and the motor starter module. Only the motor starter module has to be replaced therefore when replacing devices. This saves time and money. The communication module remains as an active station on the bus and all other system components continue running. This prevents downtimes.

The integrated plug-in technology enables far lower wiring outlay: Connecting cables can be plugged directly onto the motor starter module. The PROFINET bus is connected cost-effectively using an M12 connection on the device. All versions have identical enclosure dimensions for easier system design and conversion.

Parameterization and configuration
All motor protection functions, limit values and reactions can be defined by parameterization.

The user has several user-friendly options for the parameterization. In addition to parameterization directly from STEP 7, which also permits automatic re-parameterization in case of device replacement, it is possible to use the user-friendly Motor Starter ES start up software. By connecting a programming device directly to PROFIBUS/PROFINET and the Motor Starter ES start up software, the devices can also be conveniently programmed from a central point through the bus. Also, parameters can be changed during operation from the user program using the data record mechanism so that the function of the motor starter is adapted to the process when required. With the help of a PC and the Motor Starter ES software it is also possible to perform the parameterization through the local point-to-point interface on-site.

Functions can be flexibly assigned to the digital inputs and outputs, adapting them to all possible conveyor applications. All digital inputs and outputs exist in the cyclic process image. All limit values for monitoring functions and their reactions are parameterizable and therefore adaptable to the application. Consistency with other products of the SIRIUS M200D motor starter range and with the frequency converter and ET 200pro I/O system is assured.

Only with M200D PROFINET motor starters
Thanks to the integrated proximity detection, the device name does not need to be issued manually when a device is replaced. The name is issued automatically by the neighboring devices which note the “names” of the devices in their proximity. No additional start up measures are required therefore when replacing a device.

The new motor starter generation is characterized by high functionality, maximum flexibility and the highest level of automation. PROFINET is especially recommended for large-scale and highly automated system components, since the possibility of monitoring the devices or plants with data records (statistical data, measured values and devices diagnoses) ensures a broader insight into the plant by the control room, and hence increases the availability of the plant sustainably.

Operation
The motor starters record the actual current flow. Evaluating the current of the parameterizable solid-state overload protection increases the availability of the drives, as do reliable signals concerning the overshooting or undershooting of setpoint values.

Diagnostics and maintenance
Diagnostics is provided through numerous mechanisms – and can be used as the customer prefers.

The motor starter is TIA-diagnostics compatible, which means that when a fault is identified, a diagnostics alarm is distributed, which invokes the diagnostics OB in the case of a SIMATIC control. The fault can be evaluated as usual in the user program.

The M200D motor starter offers a large variety of diagnostics data through data records. Its functionality is without equal on the market. There are extensive options for reading out data from the motor starter for monitoring devices, systems or processes.

The motor starter is equipped internally with three logbooks for device faults, motor starter trips and events that are issued with a time stamp. These logbooks can be read out of the motor starter at any time in the form of data records and provide the plant operator with plenty of information about the state of his plant and process which he can use to carry out improvements.

With the slave pointer and statistical data functions it is possible to read out, for example, the maximum internal current values or the number of motor starter connection operations for plant monitoring purposes. This allows deviations in the process to be monitored, but also optimum initial commissioning to take place. The user can draw conclusions about the actual load conditions of the devices in his process and on this basis can optimize his plant maintenance intervals.

The device diagnostics data record contains details of all the states of the motor starter, the device configuration and the communication status as a basis for central device and plant monitoring.

With installation and maintenance functions (I&M), information on modules employed and data specified by the user during configuration, such as location designations, are stored in the motor starter. I&M functions are used for troubleshooting faults and localizing changes in hardware in a plant or checking the system configuration. Reordering a device is particularly easy as the result.

The integrated maintenance timer can be used to implement preventative maintenance and avoid plant downtimes through look-ahead servicing.

Another new addition is the TRACE integrated into the ES motor starter software. It can be used to record measured values as a function of time following a trigger event. This enables process flows to be recorded and their timing optimized.

Local control of a drive is possible using the ordering option with integrated manual operation. This is yet another new development which distinguishes the M200D PROFIBUS/PROFINET motor starter from the rest of the market and adds innovative technology, maximum availability and transparency to the system.

M200D PROFINET motor starters with PROFInergy
Increasing energy prices, far-reaching ecological problems worldwide and the threat of climate change make it necessary for you to be more conscious about your use of energy.

Active and effective energy management is possible with PROFInergy.

PROFInergy is a manufacturer-independent profile on PROFINET, which can be used by all manufacturers, has been standardized by PNO\(^1\) and supports switching off electrical devices during dead times and measuring the energy flow.

\(^1\) In the PNO (PROFIBUS Nutzerorganisation e. V. – PROFIBUS User Organization), manufacturers and users have come together to agree on the PROFIBUS and PROFINET standardized communication technologies.
**Switching off during dead times**

PROFIenergy supports the targeted switching-off of loads during dead time.

These can be planned short breaks of a few minutes (such as lunch breaks), longer dead times (such as nights) or unplanned dead times. Energy is always saved when no power is required.

**Measuring and visualizing the energy flow as a basis of energy management**

The objective of energy management is to optimize the use of energy in a company – from the purchasing of energy through to the consumption of energy – economically and ecologically. Analyses of energy consumption over time can be used to control energy flows, avoid energy peaks, improve ratings and thus save costs.

**PROFIenergy in the M200D PROFINET motor starter**

The M200D PROFINET motor starter supports the “switching during dead times” and “current measurement values” functions of the motor current using PROFIenergy. These are called commands, because they trigger a reaction in the M200D motor starter.

---

**Device functions (firmware features)**

### Slave on the bus

<table>
<thead>
<tr>
<th>Fieldbus</th>
<th>PROFIBUS to M12</th>
<th>PROFIBUS to M12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adjustable number of stations</td>
<td>1 … 125</td>
<td>1 … 128 with CPU 315, CPU 317</td>
</tr>
</tbody>
</table>

### Parameter assignment

| DIP switches | For address setting and terminating resistor |
| Motor Starter ES | Through bus, optical interface |
| PROFIBUS/PROFINET data records | |
| From STEP 7/HW Config | |

### Diagnostics

| Acyclic through data records | |
| Diagnostic interrupt support | |

### Process image

| Process image | 2 bytes PAE/ 2 bytes PAA |

### Data channels

| Local optical interface (manual local) | |
| Motor Starter ES through local interface | |
| Using Motor Starter ES through bus | |

### Data records (acyclic)

| Parameterization | Using DS 131 (DS = data record) |
| Diagnostics | Device-specific DS 92 |
| Measured values | Measured values DS 94 |
| Statistics | Statistical data DS 95 |
| Commands | Using DS 93 |
| Slave pointer | Slave pointer DS 96 |
| Logbook | Using Motor Starter ES and data records: device faults DS 72, tripping operation DS 73, events DS 75 |
| Device identification | Using DS 100 |
| I&M data | Using DS 231 ... 234 |

### Inputs

| Number | 4 |
| Of these in the process image | 4 |
| Input action | Parameterizable: Flexibly assignable action; see manual
1) |
| Quick stop | Parameterizable: latching, non-latching |

Motor Starters for Use in the Field, High Degree of Protection
SIRIUS M200D Motor Starters
M200D Motor Starters for PROFIBUS/PROFINET

General data

SIRIUS M200D
PROFIBUS

SIRIUS M200D
PROFINET

Device functions (firmware features)

<table>
<thead>
<tr>
<th>Outputs</th>
<th>Number</th>
<th>✓ 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Of these in the process image</td>
<td>✓ 2</td>
<td></td>
</tr>
<tr>
<td>Output action</td>
<td>✓ Parameterizable: Flexibly assignable action; see manual 1)</td>
<td></td>
</tr>
</tbody>
</table>

Brake output

180 V DC / 230/400 V AC / none ✓

Motor protection

| Overload protection | ✓ Electronic, wide range 1:10 |
| Short-circuit protection | ✓ |
| Full motor protection | ✓ |
| Temperature sensor | ✓ Parameterizable using Motor Starter ES, data record: PTC or Thermoclick or deactivated |

Device function

| Repair switch | ✓ |
| Current limit monitoring bottom | ✓ Parameterizable |
| Current limit monitoring top | ✓ Parameterizable |
| Zero current detection | ✓ Parameterizable: tripping, warning |
| Blocking current | ✓ Parameterizable |
| Unbalance | ✓ Parameterizable |
| Load type | ✓ Parameterizable: single-phase and three-phase |
| Shutdown class | ✓ Parameterizable using Motor Starter ES, data record: CLASS 5, 10, 15, 20 |
| Protection against voltage failure | ✓ Parameterizable: activated/deactivated |

Support for PROFIenergy profile

| Switching during dead times | -- | 3 |
| Measured motor current values | -- | 3 |

Soft starter control function

| Soft start function | ✓ |
| Bypass function | ✓ Only solid-state version |

✓ Function available
-- Function not available

Benefits

M200D PROFINET motor starters with PROFIenergy

Both standards and laws are making environmental protection and energy management increasingly important, as is the desire to cut energy costs in production facilities and thus ensure a sustainable competitive advantage.

It is thus an objective within the industry to save energy and actively reduce CO₂ emissions. By the careful use of valuable resources, the manufacturer-independent PROFIenergy profile on PROFINET can make an active contribution to environmental protection.

Application

M200D PROFIBUS/PROFINET motor starters are particularly suitable for fully TIA-integrated, highly automated conveyor applications that meet all needs with regard to the monitoring of devices and systems and preventive maintenance.

Adaptability of the motor starter functions and maximum flexibility of the device enable a broad range of application without any limits. The PROFINET-specific expansions are the best assurance of a future-proof investment.
## Technical specifications

### More information

Device manual for M200D PROFIBUS/PROFINET, see https://support.industry.siemens.com/cs/ww/en/view/38823402
FAQs, see https://support.industry.siemens.com/cs/ww/en/ps/16325/faq

Notes on security:
In order to protect plants, systems, machines and networks against cyber threats, it is necessary to implement – and continuously maintain – a holistic, state-of-the-art industrial security concept. Siemens products and solutions only represent one component of such a concept.
For more information about the subject of Industrial Security, see www.siemens.com/industrialsecurity.

### Type

- **M200D PROFIBUS/PROFINET motor starter modules**
  - Electromechanical switching: DSte/RSte
  - Electronic switching: sDSSte/sRSSte

### Mechanics and environment

<table>
<thead>
<tr>
<th>Mounting dimensions (W x H x D)</th>
<th>mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Without communication module</td>
<td>294 x 215 x 159</td>
</tr>
<tr>
<td>With communication module</td>
<td>295 x 215 x 163</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Permissible ambient temperature</th>
<th>°C</th>
</tr>
</thead>
<tbody>
<tr>
<td>During operation</td>
<td>-25 ... +55</td>
</tr>
<tr>
<td>During storage</td>
<td>-40 ... +70</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Weight</th>
<th>g</th>
</tr>
</thead>
<tbody>
<tr>
<td>DSte/Re</td>
<td>2820/3080</td>
</tr>
<tr>
<td>RSte</td>
<td>3160/3360</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Permissible mounting position</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vertical, horizontal, lying</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Vibration resistance acc. to IEC 60068 Part 2-6</th>
<th>g</th>
</tr>
</thead>
<tbody>
<tr>
<td>DSte/Re</td>
<td>2</td>
</tr>
<tr>
<td>RSte</td>
<td>2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Shock resistance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acc. to IEC 60068 Part 2-27</td>
</tr>
<tr>
<td>Without influencing the contact position</td>
</tr>
<tr>
<td>DSte/Re</td>
</tr>
<tr>
<td>RSte</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Degree of protection acc. to IEC 529</th>
</tr>
</thead>
<tbody>
<tr>
<td>DSte/Re</td>
</tr>
<tr>
<td>RSte</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Installation altitude</th>
</tr>
</thead>
<tbody>
<tr>
<td>Up to 1 000 m</td>
</tr>
<tr>
<td>No derating</td>
</tr>
<tr>
<td>Up to 2 000 m</td>
</tr>
<tr>
<td>1% per 100 m</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cooling</th>
</tr>
</thead>
<tbody>
<tr>
<td>Convection</td>
</tr>
</tbody>
</table>

| Protection class IEC 536 (VDE 0166-1) | 1 |

### Electrical specifications

#### Main circuit

<table>
<thead>
<tr>
<th>Maximum power of three-phase motors at 400 V AC</th>
<th>kW</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>5.5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Rated operational voltage Uₑ</th>
<th>400 V (50/60 Hz)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Approval acc. to UL and CSA</td>
<td>600 V (50/60 Hz)</td>
</tr>
<tr>
<td>Rated operational current range</td>
<td>0.15 ... 2 / 1.5 ... 12</td>
</tr>
<tr>
<td>Rated operational current range for soft starting</td>
<td>--</td>
</tr>
<tr>
<td>Rated operational current range for direct-on-line starting</td>
<td>0.15 ... 2 / 1.5 ... 9</td>
</tr>
<tr>
<td>Rated operational current for starters Iₑ at 400 V AC</td>
<td></td>
</tr>
<tr>
<td>400 V at AC-1 / 2 / 3</td>
<td>A</td>
</tr>
<tr>
<td>500 V at AC-1 / 2 / 3</td>
<td>A</td>
</tr>
<tr>
<td>400 V at AC-4</td>
<td>A</td>
</tr>
<tr>
<td>400 V at AC-53a</td>
<td>A</td>
</tr>
<tr>
<td>Mechanical endurance of contactor</td>
<td>Operating cycles</td>
</tr>
<tr>
<td>Trip class</td>
<td>CLASS 5, 10, 15, 20</td>
</tr>
<tr>
<td>Permissible switching frequency</td>
<td>See manual2)</td>
</tr>
<tr>
<td>Rated ultimate short-circuit breaking capacity Iₚ</td>
<td></td>
</tr>
<tr>
<td>At 400 V AC</td>
<td>kA</td>
</tr>
<tr>
<td>At 500 V AC</td>
<td>kA</td>
</tr>
<tr>
<td>Short-circuit protection</td>
<td></td>
</tr>
<tr>
<td>At Iₑmax = 2 A</td>
<td>20³)</td>
</tr>
<tr>
<td>At Iₑmax = 9 / 12 A</td>
<td>integrated, 2 x 13 Iₑ = 26 A</td>
</tr>
</tbody>
</table>

1) DS .... Direct-on-line starters
   RS .... Reversing starters
   DSS ... Direct-on-line soft starters
   RSS ... Reversing soft starters
   te ...... Full motor protection (thermal + electronic)
   s ........ Electronic switching with semiconductor.


3) Only systems with grounded neutral point permitted.
## General data

<table>
<thead>
<tr>
<th>Line voltage</th>
<th>380 V AC</th>
<th>400 V AC</th>
<th>440 V AC</th>
<th>480 V AC</th>
<th>500 V AC</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Brake voltage with brake control 180 V DC</strong>&lt;sup&gt;1)&lt;/sup&gt;</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operational voltage</td>
<td>V</td>
<td>230/400 AC or 180 DC</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Uninterrupted current</td>
<td>A</td>
<td>&lt; 0.5 at 230/400 V AC, &lt; 0.8 at 180 V DC</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Short-circuit protection</td>
<td></td>
<td>Yes, 1 A melting fuse</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rectified brake voltage</td>
<td></td>
<td>171 V DC</td>
<td>180 V DC</td>
<td>198 V DC</td>
<td>216 V DC</td>
</tr>
<tr>
<td><strong>Recommended brake coil voltage for Siemens motors</strong></td>
<td></td>
<td>170 ... 200 V DC</td>
<td>170 ... 200 V DC</td>
<td>184 ... 218 V DC</td>
<td>184 ... 218 V DC</td>
</tr>
</tbody>
</table>

<sup>1</sup> Integrated brake control supplies DC power supply for the brake.

### Electrical specifications

#### Control circuit

<table>
<thead>
<tr>
<th>Operational voltage</th>
<th>V DC</th>
<th>20.4 ... 28.8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power consumption from</td>
<td>mA</td>
<td>&lt; 300</td>
</tr>
<tr>
<td></td>
<td>mA</td>
<td>&lt; 100</td>
</tr>
</tbody>
</table>

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## Selection and ordering data

### M200D communication modules for PROFIBUS

**Communication module for PROFIBUS**  
M12 connection for communication, 7/8” for 24 V power supply  
Version SD 15  
Article No. 3RK1305-0AS01-0AA0  
Price per PU 1  
PU (UNIT, SET, M) unit 42D  

### M200D communication modules for PROFINET

**Communication module for PROFINET**  
M12 connection for communication, 7/8” for 24 V power supply  
Version SD 15  
Article No. 3RK1335-0AS01-0AA0  
Price per PU 1  
PU (UNIT, SET, M) unit 42D  

### M200D motor starter modules for PROFIBUS/PROFINET

**Electromechanical starters (with integrated contactor)**  
Version SD 15  
Article No. 3RK1395-6-S41-S AD  
Price per PU 1  
PU (UNIT, SET, M) unit 42D  

<table>
<thead>
<tr>
<th>Rated operational current setting range/A</th>
<th>Additional price</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.15 ... 2</td>
<td>None</td>
</tr>
<tr>
<td>1.5 ... 12</td>
<td>✓</td>
</tr>
</tbody>
</table>

**Direct-on-line starters/reversing starters**  
- Direct-on-line starters  
- Reversing starters  
- Direct-on-line starters with manual local operation  
- Reversing starters with manual local operation  

**Brake actuation**  
- Without brake actuation  
- Brake actuation (230/400 V AC)  
- Brake actuation (180 V DC)  

### Electronic starters (with thyristors)

**Rated operational current setting range/A**  
- 0.15 ... 2  
- 1.5 ... 12  

**Direct-on-line starters / reversing starters**  
- Direct-on-line starters  
- Reversing starters  
- Direct-on-line starters with manual local operation  
- Reversing starters with manual local operation  

**Brake actuation**  
- Without brake actuation  
- Brake actuation (230/400 V AC)  
- Brake actuation (180 V DC)
Motor Starters for Use in the Field, High Degree of Protection
SIRIUS M200D Motor Starters
Software

Motor Starter ES

■ Overview

More information

Homepage, see www.siemens.com/sirius-engineering
Industry Mall, see www.siemens.com/product?3ZS1
Technical specifications and system requirements, see https://support.industry.siemens.com/cs/ww/en/ps/16713/td

Motor Starter ES for parameterization, monitoring, diagnostics and testing of motor starters

Motor Starter ES is used for the start up, parameterization, diagnostics, documentation and preventive maintenance of SIMATIC ET 200S, ET 200pro, ECOFAST and M200D motor starters.

For detailed information on the Motor Starter ES software, see page 14/14.
**Overview**

Power and motor connection on the M200D motor starter (in this example: M200D for AS-i)

- **1** Power feeder plug
- **2** Power connection plug
- **3** Incoming energy supply cable
- **4** Motor connection plug
- **5** Motor plug
- **6** Motor cable

Communication connection using AS-Interface and digital inputs and outputs

- **7** Connection for motor control with AS-i communication
- **8** AS-Interface M12 feeder
- **9** Connection for digital input (IO communication, 5-pole)
- **10** Connection for digital output (IO communication, 4 or 5-pole)

Communication connection using PROFIBUS and digital inputs and outputs

- **11** Connection for digital input (IO communication, 5-pole)
- **12** Connection for digital output (IO communication, 4 or 5-pole)
- **13** PROFIBUS connection (input)
- **14** PROFIBUS connection (loop)
- **15** Connection for 24 V supply (infeed)
- **16** Connection for 24 V supply (loop)

Communication connection using PROFINET and digital inputs and outputs

- **17** Connection for digital input (IO communication, 5-pole)
- **18** Connection for digital output (IO communication, 4 or 5-pole)
- **19** Connection for 24 V supply (infeed)
- **20** Connection for 24 V supply (loop)
- **21** Connection with PROFINET (input on the left, loop on the right)
Motor Starters for Use in the Field, High Degree of Protection
SIRIUS M200D Motor Starters
Accessories

For all M200D motor starters

Power supply to the motors via the power bus with power T and double-T terminal connectors linked by power bus cables, spur lines to the field devices (motor starters), and power loop-through connections to the motors via motor connection cables.

**Power bus**

The power supply to the field devices (ET 200pro motor starters, M200D motor starters) is provided via the power bus, in which the power T terminal connectors or power double-T terminal connectors are connected by power bus cables.

**Feeders**

From the terminal connectors, spur lines with Han Q4/2 plugs lead to the field devices, from which the motors are supplied with power via motor connection cables.

**Interruption-free thanks to power terminal connectors**

In finger-safe connection technology the power T terminal connectors and power double-T terminal connectors connect the components of a feeder to the power bus. They ensure interruption-free operation, i.e. the power bus is not interrupted when the components are plugged in.
### Selection and ordering data

The accessories listed below represent a basic selection sorted by:

- Accessories for all M200D motor starters
- Accessories for M200D motor starters for AS-interface
- Accessories for M200D motor starters for PROFIBUS
- Accessories for M200D motor starters for PROFINET

<table>
<thead>
<tr>
<th>Version</th>
<th>SD Article No.</th>
<th>Price per PU</th>
<th>PU (UNIT, SET, M)</th>
<th>PS*</th>
<th>PG</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mountable accessories</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M200D protective brackets</td>
<td>5 3RK1911-3BA00</td>
<td>1 1 unit</td>
<td>42D</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Incoming power supply

<table>
<thead>
<tr>
<th>Description</th>
<th>SD Article No.</th>
<th>Price per PU</th>
<th>PU (UNIT, SET, M)</th>
<th>PS*</th>
<th>PG</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power feeder plugs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Connector set for energy supply, e.g. for connecting to T terminal connectors, comprising a coupling enclosure, straight outgoing feeder (with bracket), pin insert for HAN Q4/2, incl. gland</td>
<td>5 3RK1911-2BS60</td>
<td>1 1 unit</td>
<td>42D</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- 5 male contacts, 2.5 mm²</td>
<td>5 3RK1911-2BS20</td>
<td>1 1 unit</td>
<td>42D</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- 5 male contacts, 4 mm²</td>
<td>5 3RK1911-2BS40</td>
<td>1 1 unit</td>
<td>42D</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Power connection plugs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Connector set for energy supply for connection to M200D motor starters, comprising a cable-end connector hood, angular outgoing feeder, female insert for HAN Q4/2, incl. gland</td>
<td>5 3RK1911-2BE50</td>
<td>1 1 unit</td>
<td>42D</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- 5 female contacts, 2.5 mm²</td>
<td>2 female contacts, 0.5 mm²</td>
<td>5 3RK1911-2BE10</td>
<td>1 1 unit</td>
<td>42D</td>
<td></td>
</tr>
<tr>
<td>- 5 female contacts, 4 mm²</td>
<td>2 female contacts, 0.5 mm²</td>
<td>5 3RK1911-2BE30</td>
<td>1 1 unit</td>
<td>42D</td>
<td></td>
</tr>
<tr>
<td>Power connection cable</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Assembled at one end with 'N' and jumper pin 11 and 12 for plug monitoring, with HAN Q4/2, angular; open at one end; 5 x 4 mm²</td>
<td>Length 1.5 m</td>
<td>10 3RK1911-0DC13</td>
<td>1 1 unit</td>
<td>42D</td>
<td></td>
</tr>
<tr>
<td>- Length 5.0 m</td>
<td>10 3RK1911-0DC33</td>
<td>1 1 unit</td>
<td>42D</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Motor cables

<table>
<thead>
<tr>
<th>Description</th>
<th>SD Article No.</th>
<th>Price per PU</th>
<th>PU (UNIT, SET, M)</th>
<th>PS*</th>
<th>PG</th>
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</thead>
<tbody>
<tr>
<td>Motor connection plugs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Connector set for motor cable for connection to M200D motor starters, comprising a cable-end connector hood, angular outgoing feeder, female insert for HAN Q8/0, incl. gland</td>
<td>5 3RK1902-0CE00</td>
<td>1 1 unit</td>
<td>42D</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- 8 male contacts, 1.5 mm²</td>
<td>6 male contacts, 2.5 mm²</td>
<td>5 3RK1902-0CC00</td>
<td>1 1 unit</td>
<td>42D</td>
<td></td>
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<tr>
<td>Motor plugs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Connector set for motor cable for connection to motors, comprising a cable-end connector hood, straight outgoing feeder, female insert for HAN 10e, incl. star jumper, including gland</td>
<td>15 3RK1911-2BM21</td>
<td>1 1 set</td>
<td>42D</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- 7 female contacts, 1.5 mm²</td>
<td>7 female contacts, 2.5 mm²</td>
<td>15 3RK1911-2BM22</td>
<td>1 1 set</td>
<td>42D</td>
<td></td>
</tr>
<tr>
<td>Motor cables, assembled at one end</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>For connection to M200D motor starters, HAN Q8(0), angular, length 5 m</td>
<td></td>
<td></td>
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<tr>
<td>- Motor cables for motor without brake, 4 x 1.5 mm²</td>
<td>15 3RK1911-0EB31</td>
<td>1 1 unit</td>
<td>42D</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Motor cables for motor without brake with thermistor, 6 x 1.5 mm²</td>
<td>15 3RK1911-0EF31</td>
<td>1 1 unit</td>
<td>42D</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Motor cable for motor with brake actuation, braking voltage 400 V AC or 180 V DC, 6 x 1.5 mm²</td>
<td>15 3RK1911-0ED31</td>
<td>1 1 unit</td>
<td>42D</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Motor cable for motor with brake actuation, braking voltage 400 V AC or 180 V DC and thermistor, 8 x 1.5 mm²</td>
<td>15 3RK1911-0EG31</td>
<td>1 1 unit</td>
<td>42D</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Motor cable for motor with brake actuation, braking voltage 230 V AC, 6 x 1.5 mm²</td>
<td>15 3RK1911-0EH31</td>
<td>1 1 unit</td>
<td>42D</td>
<td></td>
<td></td>
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<tr>
<td>- Motor cable for motor with brake actuation, braking voltage 230 V AC and thermistor, 8 x 1.5 mm²</td>
<td>15 3RK1911-0EE31</td>
<td>1 1 unit</td>
<td>42D</td>
<td></td>
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</tbody>
</table>
Motor Starters for Use in the Field, High Degree of Protection
SIRIUS M200D Motor Starters
Accessories

For all M200D motor starters

<table>
<thead>
<tr>
<th>Version</th>
<th>SD</th>
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<th>Price per PU</th>
<th>PU (UNIT, SET, M)</th>
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<tbody>
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<td></td>
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<td></td>
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<td></td>
</tr>
</tbody>
</table>

Power bus

**Power T terminal connectors**
For 400 V AC, for connection of feeders (e.g. motor starters) by means of standard round cable at any point of the power bus, by insulation displacement connection, used with preassembled bus segments

- 2.5 mm² / 4 mm²
  - 5 3RK1911-2BF01 1 1 unit 42D
- 4 mm² / 6 mm²
  - 5 3RK1911-2BF02 1 1 unit 42D

**Power double-T terminal connector**
For 400 V AC, for connection of feeders (e.g. motor starters) by means of standard round cable at any point of the power bus, by insulation displacement connection, used with preassembled bus segments, connection of two motor starters possible

- 4 mm² / 6 mm²
  - 5 3RK1911-2BG02 1 1 unit 42D

Sealing set (comprising 2 seals)
For power T/power double-T terminal connectors

- For power cables with
  - Ø 10 ... 13 mm
    - 5 3RK1911-5BA00 1 1 unit 42D
  - Ø 13 ... 16 mm
    - 5 3RK1911-5BA10 1 1 unit 42D
  - Ø 16 ... 19 mm
    - 5 3RK1911-5BA20 1 1 unit 42D
  - Ø 19 ... 22 mm
    - 5 3RK1911-5BA30 1 1 unit 42D
  - Blanking plugs
    - 5 3RK1911-5BA50 1 1 unit 42D

Further accessories for power connections

Crimping tools for pins/sockets 4 mm² and 6 mm²

- 15 3RK1902-0CW00 1 1 unit 42D

Dismantling tools

- For male and female contacts for 9-pole HAN Q4/2 inserts
  - 15 3RK1902-0AB00 1 1 unit 42D
- For male and female contacts for 9-pole HAN Q8 inserts
  - 5 3RK1902-0AJ00 1 1 unit 42D

Sealing caps
For 9-pole power socket connectors

- 1 unit per pack
  - 5 3RK1902-0CK00 1 1 unit 42D
- 10 units per pack
  - 5 3RK1902-0CJ00 1 10 units 42D

For more connection technology products and accessories (e.g. crimping tools), see "Siemens Solution Partners Automation" under "Distributed Field Installation System" technology: www.siemens.com/partnerfinder.

* You can order this quantity or a multiple thereof.
Illustrations are approximate.
**Motor Starters for Use in the Field, High Degree of Protection**  
**SIRIUS M200D Motor Starters**  
**Accessories**

For all M200D motor starters

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<tr>
<td>Motor control with I/O communication</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| **M12 plugs, straight**  
Screw mounting, 5-pole screw terminals, max. 0.75 mm², A-coded, max. 4 A | 10 | 3RK1902-4BA00-5AA0 | 1 | 1 unit | 42D |
| **M12 plugs, angular**  
Screw mounting, 5-pole screw terminals, max. 0.75 mm², A-coded, max. 4 A | 10 | 3RK1902-4DA00-5AA0 | 1 | 1 unit | 42D |
| **Control cable, assembled at one end**  
M12 plugs, angular, screw mounting, 5-pole, 5 x 0.34 mm², A-coded, black PUR sheath, max. 4 A  
• Cable length 1.5 m  
• Cable length 5 m  
• Cable length 10 m | 10 | 3RK1902-4HB15-5AA0 | 1 | 1 unit | 42D |
| | 10 | 3RK1902-4HB50-5AA0 | 1 | 1 unit | 42D |
| | 10 | 3RK1902-4HC01-5AA0 | 1 | 1 unit | 42D |
| **Control cable, assembled at both ends**  
Straight M12 plug, straight M12 socket, screw mounting, 3-pole, 3 x 0.34 mm², A-coded, black PUR sheath, max. 4 A  
• Cable length 1.5 m | 10 | 3RK1902-4PB15-3AA0 | 1 | 1 unit | 42D |

| Further accessories |
| Handheld devices  
For M200D motor starters (or for ET 200pro and ET 200S High Feature motor starters) for local operation.  
The motor starter-specific serial interface cables must be ordered separately.  
The RS 232 interface cable 3RK1922-2BP00 is used for the MS M200D. | 5 | 3RK1922-3BA00 | 1 | 1 unit | 42D |
| **RS 232 interface cable**  
Serial data connection between M200D (or ET 200pro) motor starters and the RS 232 interface of a PC/PG/laptop (with the Motor Starter ES software) or the handheld device 3RK1922-3BA00 | 5 | 3RK1922-2BP00 | 1 | 1 unit | 42D |
| **USB interface cable, 2.5 m**  
Serial data connection between M200D (or ET 200pro) motor starters and the USB interface of a PC/PG/laptop (with the Motor Starter ES software). | 3 | 6SL3555-0PA00-2AA0 | 1 | 1 unit | 346 |
| **M12 sealing caps**  
For sealing unused M12 input and output sockets – not for M12 AS-i communications interface for motor control ①  
(one set contains 10 sealing caps) | | 3RK1901-1KA00 | 100 | 10 units | 42C |
| **RONIS SB30 keys**  
Replacement key for M200D for “manual local control” ordering option | | 3SU1950-0FB80-0AA0 | 1 | 1 unit | 41J |

* You can order this quantity or a multiple thereof.  
Illustrations are approximate

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Motor Starters for Use in the Field, High Degree of Protection
SIRIUS M200D Motor Starters
Accessories

For M200D motor starters for AS-Interface

### Selection and ordering data

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<tr>
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<td></td>
<td></td>
<td>per PU</td>
<td>PU (UNIT, SET, M)</td>
<td>PS*</td>
<td>PG</td>
</tr>
</tbody>
</table>

#### Motor control with AS-i communication

1. **Control cables, assembled at one end**
   - M12 socket, angular, screw mounting, 4-pole, 4 x 0.34 mm²
   - A-coded, black PUR sheath, max. 4 A
   - Cable length: 5 m
   - Article No.: 3RK1902-4GB50-4AA0
   - Price: 1 unit 42D

2. **M12 socket, angled**
   - For screw mounting, 4-pole screw terminals, max. 0.75 mm², A-coded, max. 4 A
   - Article No.: 3RK1902-4CA00-4AA0
   - Price: 1 unit 42D

#### AS-Interface M12 feeder

<table>
<thead>
<tr>
<th>For flat cable</th>
<th>For</th>
<th>Cable length</th>
<th>Cable end in feeder</th>
<th>Article No.</th>
<th>Price</th>
<th>PU (UNIT, SET, M)</th>
<th>PS*</th>
<th>PG</th>
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<tr>
<td>AS-i / Uaux</td>
<td>M12 socket</td>
<td>--</td>
<td>not available</td>
<td>3RK1901-1NR20</td>
<td>1</td>
<td>1 unit</td>
<td>42C</td>
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<tr>
<td>M12 cable box</td>
<td>1 m</td>
<td>not available</td>
<td></td>
<td>3RK1901-1NR21</td>
<td>1</td>
<td>1 unit</td>
<td>42C</td>
<td></td>
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<tr>
<td></td>
<td>2 m</td>
<td>not available</td>
<td></td>
<td>3RK1901-1NR22</td>
<td>1</td>
<td>1 unit</td>
<td>42C</td>
<td></td>
</tr>
<tr>
<td>M12 cable box</td>
<td>1 m</td>
<td>not available</td>
<td></td>
<td>3RK1901-1MN00</td>
<td>1</td>
<td>10 units</td>
<td>42C</td>
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</tr>
</tbody>
</table>

#### Cable terminating piece

For sealing of open cable ends (shaped AS-Interface cable) in IP67

- Article No.: 3RK1901-1MN00
- Price: 10 units 42C

#### AS-Interface shaped cables

<table>
<thead>
<tr>
<th>Material</th>
<th>Color</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rubber</td>
<td>Yellow (AS-Interface)</td>
<td>100 m roll 2</td>
</tr>
<tr>
<td></td>
<td>Black (24 V DC)</td>
<td>1 km drum 5</td>
</tr>
<tr>
<td>TPE</td>
<td>Yellow (AS-Interface)</td>
<td>100 m roll 2</td>
</tr>
<tr>
<td></td>
<td>Black (24 V DC)</td>
<td>1 km drum 5</td>
</tr>
<tr>
<td>TPE special version according to UL Class 2</td>
<td>Yellow (AS-Interface)</td>
<td>100 m roll 5</td>
</tr>
<tr>
<td></td>
<td>Black (24 V DC)</td>
<td>100 m roll 5</td>
</tr>
<tr>
<td>PUR</td>
<td>Yellow (AS-Interface)</td>
<td>100 m roll 2</td>
</tr>
<tr>
<td></td>
<td>Black (24 V DC)</td>
<td>1 km drum 5</td>
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</tbody>
</table>

1) See also page 2/86.
Motor Starters for Use in the Field, High Degree of Protection
SIRIUS M200D Motor Starters
Accessories

For M200D motor starters for AS-Interface

<table>
<thead>
<tr>
<th>Version</th>
<th>SD</th>
<th>Article No.</th>
<th>Price per PU</th>
<th>PU (UNIT, SET, M)</th>
<th>PS*</th>
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<tbody>
<tr>
<td></td>
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<td>3RK1904-2AB02</td>
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<td>1</td>
<td>42C</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>3RK1902-4PB15-3AA0</td>
<td></td>
<td>1</td>
<td>42D</td>
<td></td>
</tr>
</tbody>
</table>

**Further accessories**

AS-Interface addressing unit V 3.0
- For AS-Interface modules and sensors and actuators with integrated AS-Interface according to AS-i Specification V3.0
- For setting the AS-i address of standard slaves, and slaves with extended addressing mode (A/B slaves)
- With input/output test function and many other commissioning functions
- Battery operation with four batteries type AA (IEC LR6, NEDA 15)
- Scope of supply:
  - Addressing unit with four batteries
  - Addressing cable, with M12 plug to addressing plug (hollow plug), length 1.5 m

M12 addressing cables to M12
- Standard M12 cable for addressing slaves with M12 connection, e.g. K60R modules
- When using the current version of the 3RK1904-2AB01 addressing unit
- 1.5 m

**SIRIUS M200D Motor Starter manuals**

Manual –
SIRIUS Motor Starter M200D AS-Interface Basic, see https://support.industry.siemens.com/cs/ww/en/view/35016496

Manual –
Motor Starters for Use in the Field, High Degree of Protection
SIRIUS M200D Motor Starters
Accessories

For M200D motor starters for PROFIBUS

### Selection and ordering data

<table>
<thead>
<tr>
<th>Version</th>
<th>SD</th>
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<td></td>
<td>d</td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

#### Motor control with PROFIBUS

**M12 plugs, angular**
For screw mounting, 5-pole screw terminal, max. 0.75 mm², B-coded, no terminating resistor

- 5 female contacts

![3RK1902-1DA00](image)

<table>
<thead>
<tr>
<th>Article No.</th>
<th>Price per PU</th>
<th>PU (UNIT, SET, M)</th>
<th>PS*</th>
</tr>
</thead>
<tbody>
<tr>
<td>3RK1902-1DA00</td>
<td>1 1 unit</td>
<td>42D</td>
<td></td>
</tr>
</tbody>
</table>

- 5 male contacts

![3RK1902-1BA00](image)

<table>
<thead>
<tr>
<th>Article No.</th>
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<th>PU (UNIT, SET, M)</th>
<th>PS*</th>
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</thead>
<tbody>
<tr>
<td>3RK1902-1BA00</td>
<td>1 1 unit</td>
<td>42D</td>
<td></td>
</tr>
</tbody>
</table>

#### Control cables, assembled at one end

M12, screw mounting, angular, B-coded, no terminating resistor

- 5 female contacts, 3 m

![3RK1902-1GB30](image)

<table>
<thead>
<tr>
<th>Article No.</th>
<th>Price per PU</th>
<th>PU (UNIT, SET, M)</th>
<th>PS*</th>
</tr>
</thead>
<tbody>
<tr>
<td>3RK1902-1GB30</td>
<td>1 1 unit</td>
<td>42D</td>
<td></td>
</tr>
</tbody>
</table>

- 5 female contacts, 5 m

![3RK1902-1GB50](image)

<table>
<thead>
<tr>
<th>Article No.</th>
<th>Price per PU</th>
<th>PU (UNIT, SET, M)</th>
<th>PS*</th>
</tr>
</thead>
<tbody>
<tr>
<td>3RK1902-1GB50</td>
<td>1 1 unit</td>
<td>42D</td>
<td></td>
</tr>
</tbody>
</table>

- 5 female contacts, 10 m

![3RK1902-1GC10](image)

<table>
<thead>
<tr>
<th>Article No.</th>
<th>Price per PU</th>
<th>PU (UNIT, SET, M)</th>
<th>PS*</th>
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<tbody>
<tr>
<td>3RK1902-1GC10</td>
<td>1 1 unit</td>
<td>42D</td>
<td></td>
</tr>
</tbody>
</table>

#### Control cables, assembled at both ends

M12, screw mounting, angular, pin/socket
5-pole, B-coded, no terminating resistor

- 3.0 m

![3RK1902-1NB30](image)

<table>
<thead>
<tr>
<th>Article No.</th>
<th>Price per PU</th>
<th>PU (UNIT, SET, M)</th>
<th>PS*</th>
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<tbody>
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<td>3RK1902-1NB30</td>
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<td>42D</td>
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</table>

- 5.0 m

![3RK1902-1NB50](image)

<table>
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<th>Article No.</th>
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<th>PU (UNIT, SET, M)</th>
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</thead>
<tbody>
<tr>
<td>3RK1902-1NB50</td>
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<td>42D</td>
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</tr>
</tbody>
</table>

- 10.0 m

![3RK1902-1NC10](image)

<table>
<thead>
<tr>
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<th>PU (UNIT, SET, M)</th>
<th>PS*</th>
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</thead>
<tbody>
<tr>
<td>3RK1902-1NC10</td>
<td>1 1 unit</td>
<td>42D</td>
<td></td>
</tr>
</tbody>
</table>

#### Further accessories

**PROFIBUS trailing cables**
Max. acceleration 4 m/s², at least 3 000 000 bending cycles, bending radius at least 60 mm, 2-core, shielded, sold by the meter, minimum order quantity 20 m, maximum order quantity 1000 m

![6XV1830-3EH10](image)

<table>
<thead>
<tr>
<th>Article No.</th>
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<th>PU (UNIT, SET, M)</th>
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<tbody>
<tr>
<td>6XV1830-3EH10</td>
<td>1 1 M</td>
<td>5K2</td>
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</tr>
</tbody>
</table>

**PROFIBUS FC Food bus cable**
With PE outer sheath for operation in the food and beverage industry, 2-core, shielded, sold by the meter, minimum order quantity 20 m, maximum order quantity 1000 m

![6XV1830-0GH10](image)

<table>
<thead>
<tr>
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<th>PU (UNIT, SET, M)</th>
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<tbody>
<tr>
<td>6XV1830-0GH10</td>
<td>1 1 M</td>
<td>5K2</td>
<td></td>
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</tbody>
</table>

**PROFIBUS FC Robust bus cables**
With PUR outer sheath for operation in environments exposed to chemicals and mechanical loads, 2-core, shielded, sold by the meter, minimum order quantity 20 m, maximum order quantity 1000 m

![6XV1830-0JH10](image)

<table>
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<tbody>
<tr>
<td>6XV1830-0JH10</td>
<td>1 1 M</td>
<td>5K2</td>
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</table>

**Power cables**
5-core, 5 x 1.5 mm², trailing, sold by the meter, minimum order quantity 20 m, maximum order quantity 1000 m

![6XV1830-8AH10](image)

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<tr>
<th>Article No.</th>
<th>Price per PU</th>
<th>PU (UNIT, SET, M)</th>
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<td>6XV1830-8AH10</td>
<td>1 1 M</td>
<td>5K2</td>
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#### Connection for 24 V power supply of the M200D PROFIBUS/PROFINET

See page 9/65

#### “SIRIUS Motor Starter M200D PROFIBUS / PROFINET” manual

See https://support.industry.siemens.com/cs/ww/en/view/38823402

* You can order this quantity or a multiple thereof. Illustrations are approximate
Selection and ordering data

Motor control with PROFINET

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Motor starters for Use in the Field, High Degree of Protection
SIRIUS M200D Motor Starters
Accessories

For M200D motor starters for PROFINET

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<td></td>
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</tr>
</tbody>
</table>

Further accessories

<table>
<thead>
<tr>
<th>PROFINET IE FC TP standard cable GP 2 x 2 Sold by the meter</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PROFINET IE FC TP trailing cable 2 x 2 Sold by the meter</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PROFINET IE FC TP trailing cable GP 2 x 2 Sold by the meter</th>
</tr>
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<tr>
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</table>

<table>
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<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PROFINET IE FC TP marine cable, 4-core Sold by the meter</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
</tr>
</tbody>
</table>

Power cable
5-core, 5 x 1.5 mm², trailing, sold by the meter, minimum order quantity 20 m, maximum order quantity 1 000 m

<table>
<thead>
<tr>
<th>Version</th>
<th>SD</th>
<th>Article No.</th>
<th>Price per PU</th>
<th>PU (UNIT, SET, M)</th>
<th>PS*</th>
<th>PG</th>
</tr>
</thead>
<tbody>
<tr>
<td>d</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Connection for 24 V power supply of the M200D PROFIBUS/PROFINET

Plugs
On M200D, 7/8” for screw mounting, angular, screw terminal, 1.5 mm²

<table>
<thead>
<tr>
<th>@ 5 female contacts</th>
<th>5</th>
<th>3RK1902-3DA00</th>
<th>1 M 42D</th>
</tr>
</thead>
<tbody>
<tr>
<td>@ 5 male contacts</td>
<td>5</td>
<td>3RK1902-3BA00</td>
<td>1 M 42D</td>
</tr>
</tbody>
</table>

| @ 5 female contacts, 3 m | 15    | 3RK1902-3GB30 | 1 M 42D |
| @ 5 female contacts, 5 m | 15    | 3RK1902-3GB50 | 1 M 42D |
| @ 5 female contacts, 10 m | 15   | 3RK1902-3GC10 | 1 M 42D |

| @ 5 female contacts, 3 m | 15    | 3RK1902-3NB30 | 1 M 42D |
| @ 5 female contacts, 5 m | 15    | 3RK1902-3NB50 | 1 M 42D |
| @ 5 female contacts, 10 m | 15   | 3RK1902-3NC10 | 1 M 42D |

7/8” sealing caps
1 pack = 10 units

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Overview

Hybrid fieldbus connections with HanBrid sockets designed as cabinet bushings transmit data and energy from the control cabinet (IP20) to the field (IP65). They are the interface for jointly routing PROFIBUS DP and the auxiliary voltages into the hybrid fieldbus cable.

On the cabinet bushings with two M12 sockets for the PROFIBUS M12 connecting cables, the 24 V supply of the motor starters is implemented via separate 7/8” connecting cables.

Passive and active hybrid fieldbus connections

The hybrid fieldbus connections are available in two versions which differ in their functionality.

- Passive version
- Active version with signal refresher function to considerably increase the maximum PROFIBUS cable length

Connection methods

The field side is connected using HanBrid or M12 plug-in connectors.

In the case of HanBrid, the following versions are available:

- Socket/socket for feeding into the field
- Pin/socket for looping through in the field

The M12 version is generally configured with socket/socket.

Following connections are available at the rear (cabinet side) in the case of the passive glands:

- Direct connection
- FastConnect connection

The active gland with refresher function has 9-pole Sub-D sockets for the rear connection.

Auxiliary power infeed

HanBrid plug-in connection technology offers the option of feeding in or looping through two separate auxiliary voltages of 24 V DC (switched/unswitched) into the field in addition to the PROFIBUS signal. The terminal block with spring-type terminals on the rear (cabinet side) of the hybrid fieldbus connection provides a variety of interconnecting options for these auxiliary voltages.

Passive hybrid fieldbus connections

- Gland from the control cabinet (IP20) into the field (IP65)
- HanBrid plug-in design socket/socket or pin/socket
- Direct connection or FastConnect connection for PROFIBUS at the rear
- Terminal block with cage clamp (0.25 to 2.5 mm²) for infeeding or forwarding the auxiliary currents

Active hybrid fieldbus connections with refresher function

- Gland from the control cabinet (IP20) into the field (IP65)
- Three independent, electrically separated PROFIBUS segments
- Signal refresher function from and to all segments
- Automatic continuous baud rate detection
- Status/diagnostics displays with LEDs
- Cascading depth of a maximum nine hybrid fieldbus connections
- HanBrid plug-in design socket/socket and pin/socket
- M12 plug-in design socket/socket
- 9-pole Sub D socket connection for PROFIBUS at the rear
- Terminal block with cage clamp (0.25 to 2.5 mm²) for infeeding or forwarding the auxiliary currents
## Technical specifications

### Mechanics and environment

<table>
<thead>
<tr>
<th>Dimension (W x H x D)</th>
<th>mm</th>
<th>93 x 103 x 65</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cutout (W x H)</td>
<td>mm</td>
<td>80 x 90</td>
</tr>
<tr>
<td>Temperature range</td>
<td>°C</td>
<td>-25 ... +60</td>
</tr>
</tbody>
</table>

### Degree of protection

IP20 internal / IP65 on field side

### Material/enclosure

Plastic (black PC), flame retardant

## Electrical specifications

### Rated operational voltage

<table>
<thead>
<tr>
<th>Voltage</th>
<th>V DC</th>
<th>24, ± 25%</th>
</tr>
</thead>
</table>

### Max. rated current

A 10

### Power supply

From 24 V DC not switched (NS)

### Max. power consumption

mA 130

### Mains buffering

ms > 20

### Baud rate detection

Automatic

### Maximum cascading depth

9 hybrid fieldbus connections

### Baud rates

kbps 9.6/19.2/45.4/93.7/187.5/375/750/1500/3000/6000/12000

### Electrical separation

V DC 500

## Selection and ordering data

### Hybrid fieldbus connections

#### Passive

- **Cu/Cu, for feeding into the field**
  - Socket/socket (2 x HanBrid)
  - Pin/socket (2 x HanBrid)
  - Connection IP65 Direct connection
  - Connection IP20 (PROFIBUS) Direct connection
  - Article No. 3RK1911-1AA22
  - Price per PU 1 unit 42D

- **Cu/Cu, for looping through in the field**
  - Socket/socket (2 x HanBrid)
  - Pin/socket (2 x HanBrid)
  - Connection IP65 Direct connection
  - Connection IP20 (PROFIBUS) Direct connection
  - Article No. 3RK1911-1AA32
  - Price per PU 1 unit 42D

- **Cu/Cu, for feeding into the field**
  - Connection IP65 PROFIBUS FastConnect bus connector
  - Connection IP20 (PROFIBUS) PROFIBUS FastConnect bus connector
  - Article No. 3RK1911-1AF22
  - Price per PU 1 unit 42D

- **Cu/Cu, for looping through in the field**
  - Connection IP65 PROFIBUS FastConnect bus connector
  - Connection IP20 (PROFIBUS) PROFIBUS FastConnect bus connector
  - Article No. 3RK1911-1AF32
  - Price per PU 1 unit 42D

#### Active (refresher)

- **Cu/Cu, for feeding into the field**
  - Socket/socket (2 x HanBrid)
  - Pin/socket (2 x HanBrid)
  - Connection IP65 9-pole Sub D socket
  - Connection IP20 (PROFIBUS) 9-pole Sub D socket
  - Article No. 3RK1911-1AJ22
  - Price per PU 1 unit 42D

- **Cu/Cu, for looping through in the field**
  - Socket/socket (2 x HanBrid)
  - Pin/socket (2 x HanBrid)
  - Connection IP65 9-pole Sub D socket
  - Connection IP20 (PROFIBUS) 9-pole Sub D socket
  - Article No. 3RK1911-1AJ32
  - Price per PU 1 unit 42D

- **Cu/Cu, for feeding into the field**
  - Socket/socket (2 x M12)
  - Connection IP65 9-pole Sub D socket
  - Connection IP20 (PROFIBUS) 9-pole Sub D socket
  - Article No. 3RK1911-1AK22
  - Price per PU 1 unit 42D

### Accessories

- **Sealing caps for HanBrid**
  - Protective cover for bus and power supply connection (pack of 10)
  - Article No. 6ES7194-1JB10-0XA0
  - Price per PU 10 units 250

PROFIBUS ECOFAST hybrid cables: see page 9/20.