

## Motor Starters for Use in the Field, High Degree of Protection



|      |  |
|------|--|
|      | <b>Price groups</b>  |
|      | PG 212, 215, 216, 218, 219, 230, 241, 250, 2AP, 337, 343, 346, 41B, 41J, 42C, 42D, 572, 589, 5K1, 5K2, 5N2, 753, 2AP |
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### SIRIUS M200D motor starters

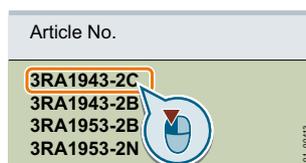
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#### Note:

Conversion tool, see [www.siemens.com/sirius/conversion-tool](http://www.siemens.com/sirius/conversion-tool)

#### clickable

Click on an article number in the catalog PDF to call it up in the Industry Mall and you will have access to all the required information.



Or directly on the Internet, e.g. [www.siemens.com/product?3RA1943-2C](http://www.siemens.com/product?3RA1943-2C)

# Motor Starters for Use in the Field, High Degree of Protection

## Introduction

### Overview



3RK1304



3RK1315

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| <b>ET 200pro motor starters</b>  |   |      |
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| Standard motor starters  | <b>3RK1304</b>  | 9/8  |
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| <b>Hybrid fieldbus connections</b>                                     |   |      |
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### Flexible and cost-efficient distributed starter solutions

Be it their high degree of protection, compact design or integrated multifunctionality – our motor starters and soft starters for use in the field are ideal for realizing distributed drive solutions. The modular concepts, distributed power supply and integrated safety technology of our portfolio for a high degree of protection consistently supports current trends in drive technology.

# Motor Starters for Use in the Field, High Degree of Protection

## ET 200pro Motor Starters

General data

### Overview

#### ET 200pro motor starters in I/O system ET 200pro

SIMATIC ET 200pro is the modular I/O system with high degree of protection IP65/66/67 for local, cabinet-free use. The ET 200pro motor starters with the high degree of protection IP65 are an integral part of ET 200pro.



ET 200pro motor starter: Isolator module, Standard starter and High Feature starter mounted on a wide module rack

#### ET 200pro motor starters (see pages 9/8 and 9/9)

- Only two variants up to 5.5 kW
- All settings can be parameterized by bus
- Comprehensive diagnostic signals
- Support for PROFlenergy
- Overload can be acknowledged by remote reset
- Current unbalance monitoring
- Stall protection
- EMERGENCY START function on overload
- Current value transmission by bus
- Current limit monitoring
- Full support of acyclic services
- Direct-on-line or reversing starters
- Power bus connection can be plugged in using Han Q4/2 plug-in connectors
- Motor feeder with Han Q8/0 connector
- Conductor cross-section up to 6 x 4 mm<sup>2</sup>
- 25 A per segment (power looped through using jumper plug)
- In the Standard and High Feature versions (with 4 DI on-board)
- Electromechanical switching and electronic switching
- Electronic starter for direct activation or with integrated soft starter function
- Supplied with 400 V AC brake contact as an option
- Temperature sensor can be connected (Thermoclick or PTC type A)
- Provision of the motor current in PROFlenergy format to higher-level systems, motor current shutdown in dead times using PROFlenergy

#### More information

Homepage, see [www.siemens.com/ET200pro](http://www.siemens.com/ET200pro)

Industry Mall, see [www.siemens.com/product?3RK1304](http://www.siemens.com/product?3RK1304)

Further components in the ET 200pro distributed I/O system:

- Catalog ST 70
- Industry Mall, see [www.siemens.com/product?ET200pro](http://www.siemens.com/product?ET200pro)

#### ET 200pro isolator modules (see page 9/10)

The isolator module with switch disconnecter function is used for safe disconnection of the 400 V operational voltage during repair work in the plant and provides an integrated group fusing function (i.e. additional group short-circuit protection for all subsequently supplied motor starters).

Depending on the power distribution concept, all stations can be equipped with an isolator module as an option.

#### Safety applications

Safety Solution local (see page 9/11)

With the Safety local modules

- Safety local isolator module and
  - 400 V disconnecting module
- with an appropriate connection, safety level PL e (according to ISO 13849-1) can be reached.

Safety Solution PROFIsafe (see page 9/14)

With the Safety PROFIsafe modules

- F-Switch and
  - 400 V disconnecting module
- with an appropriate connection, safety levels SIL 3 (according to IEC 62061) and PL e (according to ISO 13849-1) can also be reached.

#### Functionality

With the ET 200pro motor starters, any three-phase loads can be protected and switched.

The ET 200pro motor starters are available with mechanical and also electronic contacts.

The ET 200pro electromechanical starters are offered as direct-on-line starters (DSe) and reversing starters (RSe) as **Standard** and **High Feature** versions. There are device versions with or without control for externally fed brakes with 400 V AC.

Compared with the Standard motor starters, the **High Feature, mechanical** motor starter also has:

- Four digital inputs
- Advanced parameterization options

The ET 200pro electronic starters are offered as direct-on-line starters (sDSte/sDSte) and reversing starters (sRSSte/sRSte) in the High Feature version.

Compared with the High Feature mechanical motor starters, the **High Feature, electronic** motor starter also has:

- Soft starting and smooth ramp-down function
- Deactivated soft start function as an electronic starter for applications with a high switching frequency
- Advanced parameterization options

## Motor Starters for Use in the Field, High Degree of Protection

### ET 200pro Motor Starters

#### General data

As a result of the protection concept with solid-state overload evaluation and the use of SIRIUS switching devices, size S00, additional advantages are realized on the Standard and High Feature motor starters – advantages that soon make themselves positively felt particularly in manufacturing processes with high plant stoppage costs:

- Configuration is made easier by the fine modular structure with ET 200pro. When using ET 200pro motor starters, the parts list per load feeder is reduced to two main items: the bus module and the motor starter. This makes the ET 200pro ideal for modular machine concepts or solutions for conveying systems and in machine-tool building.
- Expansions are easily possible through the subsequent adding of modules. The innovative plug-in technology also does away with the wiring needed up to now. Through the hot swapping function (disconnection and connection during operation) a motor starter can be replaced within seconds if necessary, without having to shut down the ET 200pro station and with it the process in the plant. The motor starters are therefore recommendable in particular for applications with special demands on availability. Storage costs are also optimized by the low level of variance (two units up to 5.5 kW).
- With four locally acting inputs available on the High Feature motor starter it is possible to realize autonomous special functions that work independently of the bus and the higher level control system, e.g. as a quick stop on gate valve controls or limit position disconnectors. In parallel with this, the states of these inputs are signaled to the control system.

#### Article No. scheme

| Product versions      |                                       | Article number   |          |          |  |   |
|-----------------------|---------------------------------------|--|----------|----------|--|---|
| <b>Motor starters</b> |                                       | <b>3RK1304 – 5</b> <input type="checkbox"/> S <input type="checkbox"/> 0 – <input type="checkbox"/> A A <input type="checkbox"/> |          |          |  |   |
| Setting range         | 0.15 ... 2.0 A<br>1.5 ... 12 A        | <b>K</b>   |          |          |  |   |
|                       |                                       | <b>L</b>   |          |          |  |   |
| Product function      | Direct-on-line starters DSe           |  | <b>4</b> | <b>4</b> |  | Standard  |
|                       | Reversing starters RSe                |  | <b>4</b> | <b>5</b> |  | Standard  |
|                       | Direct-on-line starters DSe           |  | <b>4</b> | <b>2</b> |  | High Feature                                    |
|                       | Reversing starters RSe                |  | <b>4</b> | <b>3</b> |  | High Feature                                    |
|                       | Direct-on-line starters sDSSSte/sDSte |  | <b>7</b> | <b>2</b> |  | High Feature                                    |
|                       | Reversing starters sDSSSte/sDSte      |  | <b>7</b> | <b>3</b> |  | High Feature                                    |
| Inputs/outputs        | Without brake output                  |  |          |          |  | <b>0</b>  |
|                       | With brake output                     |  |          |          |  | <b>3</b> 400 V AC, with High Feature + 4 inputs |
| Example               |                                       | <b>3RK1304 – 5</b> <b>K</b> <b>S</b> <b>4</b> <b>0</b> – <b>4</b> <b>A</b> <b>A</b> <b>0</b>                                     |          |          |  |   |

| Product versions |                            | Article number  |  |  |          |                                |
|------------------|----------------------------|---|--|--|----------|--------------------------------|
| <b>Modules</b>   |                            | <b>3RK1304 – 0</b> H S 0 0 – <input type="checkbox"/> A A 0 |  |  |          |                                |
| Product function | Isolator modules           |   |  |  | <b>6</b> |                                |
|                  | Isolator modules           |   |  |  | <b>7</b> | Safety modules local           |
|                  | 400 V disconnecting module |   |  |  | <b>8</b> | Safety modules local/PROFIsafe |
| Example          |                            | <b>3RK1304 – 0</b> H S 0 0 – <b>6</b> A A 0                 |  |  |          |                                |

#### Note:

The article number schemes show 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

## ET 200pro Motor Starters

## General data

| Type  | Standard motor starters |   | High Feature motor starters      |                                |
|---|-------------------------|---|----------------------------------|--------------------------------|
|   | DSe, RSe                |   | DSe, RSe                         | sDSSSte, sDSte, sRSSSte, sRSte |
| <b>Technology designation<sup>1)</sup></b>                          |                         |   |                                  |                                |
| <b>Device functions (firmware features)</b>                         |                         |   |                                  |                                |
| Parameterizable rated operational current                           |                         | ✓   |                                  |                                |
| Integrated short-circuit protection                                 |                         | ✓   |                                  |                                |
| Parameterizable current limit values                                |                         | --  | ✓ 2 limit values                 |                                |
| Parameterizable response in case of current limit violation         |                         | --  | ✓                                |                                |
| Zero current monitoring   |                         | ✓   |                                  |                                |
| Parameterizable response in case of zero current violation          |                         | ✓   |                                  |                                |
| Parameterizable current unbalance limit                             | %                       | -- Fixed limit value (30 x I <sub>e</sub> ) | ✓ 30 ... 60 x I <sub>e</sub>     |                                |
| Parameterizable response in case of unbalance limit violation       |                         | ✓   |                                  |                                |
| Motor blocking monitoring   |                         | --  | ✓                                |                                |
| Parameterizable blocking current limit                              | %                       | --  | ✓ 150 ... 1 000 x I <sub>e</sub> |                                |
| Parameterizable blocking time limit                                 | s                       | --  | ✓ 1 ... 5                        |                                |
| Current value transmission  |                         | ✓   |                                  |                                |
| Group warning diagnostics   |                         | --  | ✓ Parameterizable                |                                |
| Group diagnostics   |                         | ✓ Parameterizable                           |                                  |                                |
| <b>EMERGENCY START</b>  |                         |   |                                  |                                |
| <b>Digital inputs</b>   |                         |   |                                  |                                |
| • Parameterizable input signal                                      |                         | --  | ✓ 4 inputs                       |                                |
| • Parameterizable input level                                       |                         | --  | ✓ Latching/non-latching          |                                |
| • Parameterizable input signal delay                                | ms                      | --  | ✓ NC/NO contacts                 |                                |
| • Parameterizable input signal extension                            | ms                      | --  | ✓ 10 ... 80                      |                                |
| • Parameterizable input control actions                             |                         | --  | ✓ 0 ... 200                      |                                |
|   |                         |   | ✓ 12 different actions           |                                |
| <b>Brake output (400 V AC)</b>                                      |                         |   |                                  |                                |
|   |                         | ✓ Order option                              |                                  |                                |
| Parameterizable brake enabling delay                                | s                       | ✓ -2.5 ... +2.5                             |                                  |                                |
| Parameterizable holding time of the brake during stopping           | s                       | ✓ 0 ... 25                                  |                                  |                                |
| Parameterizable start up type                                       |                         | --  |                                  | ✓                              |
| Parameterizable ramp-down time                                      |                         | --  |                                  | ✓                              |
| Parameterizable starting voltage                                    |                         | --  |                                  | ✓                              |
| Parameterizable stopping voltage                                    |                         | --  |                                  | ✓                              |
| Local device interface  |                         | ✓   |                                  |                                |
| Firmware update   |                         | ✓ By specialists                            |                                  |                                |
| Thermal motor model   |                         | ✓   |                                  |                                |
| Parameterizable trip class  |                         | -- CLASS 10 fixed                           | ✓ CLASS 5, 10, 15, 20            |                                |
| Parameterizable response in case of overload of thermal motor model |                         | --  | ✓ 3 possible states              |                                |
| Advance warning limit for motor heating                             | %                       | --  | ✓ Parameterizable 0 ... 95       |                                |
| Advance warning limit time-related trip reserve                     | s                       | --  | ✓ Parameterizable 0 ... 500      |                                |
| Parameterizable recovery time                                       | min                     | --  | ✓ 1 ... 30                       |                                |
| Parameterizable protection against voltage failure                  |                         | -- Permanently integrated                   | ✓                                |                                |
| Reversing start function  |                         | ✓ Order option                              |                                  |                                |
| Parameterizable interlock time for reversing starters               |                         | -- 150 ms fixed                             | ✓ 0 ... 60 s                     |                                |
| Integrated logbook functions  |                         | ✓ 3 device logbooks                         |                                  |                                |
| Integrated statistics data memory                                   |                         | ✓   |                                  |                                |
| Parameterizable response in case of CPU/master stop                 |                         | ✓   |                                  |                                |
| <b>PROFenergy profile support</b>                                   |                         |   |                                  |                                |
| • Disconnection of the motor current during idle times              |                         | ✓   |                                  |                                |
| • Measured motor current values                                     |                         | ✓   |                                  |                                |
| <b>Device indications</b>   |                         |   |                                  |                                |
| • Group fault   |                         | SF LED (red)                                |                                  |                                |
| • Switching state   |                         | STATE LED (red, yellow, green)              |                                  |                                |
| • Device status   |                         | DEVICE LED (red, yellow, green)             |                                  |                                |
| • Digital inputs  |                         | --  | IN 1 ... IN 4, LED               |                                |

✓ Function available

-- Function not available

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

## Motor Starters for Use in the Field, High Degree of Protection

### ET 200pro Motor Starters

#### General data

##### Benefits

ET 200pro motor starters provide the following advantages:

- High flexibility thanks to a modular and compact design
- Little variance among all motor starter versions (two units up to 5.5 kW)
- Extensive parameterization using STEP 7 HW Config
- Increase of plant availability through fast replacement of units (easy mounting and plug-in technology)
- Extensive diagnostics and information for preventive maintenance
- Parameterizable inputs for on-site control functions (High Feature)
- Cabinet-free design thanks to high degree of protection IP65

##### Application

The SIMATIC ET 200pro motor starters are ideal for the use of several spatially concentrated distributed drive solutions in which several motors, or digital or analog sensors and actuators are addressed from a distributed station. They are perfectly suited for protecting and switching any AC loads.

##### **Application areas**

The SIMATIC ET 200pro motor starters are suitable for numerous sectors of industry, e.g. machinery and plant engineering or conveying applications.

##### ***Use of ET 200pro motor starters in conjunction with IE3/IE4 motors***

##### Note:

For the use of ET 200pro motor starters in conjunction with highly energy-efficient IE3/IE4 motors, please observe the information on dimensioning and configuring, [see Application Manual](#).

For more information, [see page 1/7](#).

# Motor Starters for Use in the Field, High Degree of Protection

## ET 200pro Motor Starters

### General data

#### Technical specifications

| More information  |  |   |  |
|---|--|---|--|
| Manual, see <a href="https://support.industry.siemens.com/cs/ww/en/view/22332388">https://support.industry.siemens.com/cs/ww/en/view/22332388</a> |  | Notes on security:<br>System networking requires suitable protective measures (including network segmentation for IT security) in order to ensure safe plant operation.<br>For more information on the subject of Industrial Security, see <a href="http://www.siemens.com/industrialsecurity">www.siemens.com/industrialsecurity</a> . |  |
| Type  |  | Standard motor starters<br>Mechanically switching<br>without inputs   | High Feature motor starters<br>Mechanically switching<br>with inputs<br>Mechanically switching<br>with inputs and soft<br>starter function |
| Technology designation <sup>1)</sup>  |  | DSe, RSe  | DSe, RSe<br>sDSSSte, sDSte,<br>sRSSSte, sRSte  |
| Mechanics and environment   |  |   |  |
| Motor starters or modules that can be connected to ET 200pro<br>With width of 110 mm  |  | max. 8  |  |
| Mounting dimensions (W x H x D)<br>• Direct-on-line starters and reversing starters   | mm   | 110 x 230 x 150   | 110 x 230 x 160  |
| Permissible ambient temperature<br>• During operation<br>• During storage   | °C<br>°C                                   | -25 ... +55, from +40 with derating<br>-40 ... +70  |  |
| Permissible mounting position   |  | Vertical, horizontal  |  |
| Vibration resistance acc. to IEC 60068, Part 2-6  | g  | 2   |  |
| Shock resistance acc. to IEC 60068, Part 2-27   | g/ms                                       | Half-sine 15/11   |  |
| Degree of protection  |  | IP65  |  |
| Pollution degree  |  | 3, IEC 60664 (IEC 61131)  |  |
| Electrical specifications   |  |   |  |
| Power consumption at 24 V DC<br>• From auxiliary circuit L+/M (U1)<br>• From auxiliary circuit A1/A2 (U2)   | mA<br>mA                                   | Approx. 40<br>Approx. 200   |  |
| Rated operational current $I_g$ for power bus   | A  | 25  |  |
| Rated operational voltage $U_g$<br>• Approval according to EN 60947-1, Appendix N<br>• Approval according to CSA and UL                           | V AC<br>V AC<br>V AC                       | 400 (50/60 Hz)<br>Up to 400 (50/60 Hz)<br>Up to 600 (50/60 Hz)  |  |
| Approval<br>• DIN VDE 0106, Part 101<br>• CSA and UL approval   | V<br>V                                     | Up to 400<br>Up to 600  |  |
| Conductor cross-sections<br>• Incoming power supply   | mm <sup>2</sup>                            | Max. 6 x 4  |  |
| Touch protection  |  | Finger-safe   |  |
| Rated impulse withstand voltage $U_{imp}$   | kV   | 6   |  |
| Rated insulation voltage $U_i$  | V  | 400   |  |
| Rated operational current $I_g$ for starters<br>• AC-1 / 2 / 3 at 40 °C<br>- At 400 V<br>- At 500 V<br>• AC-4 at 40 °C<br>- At 400 V              | A<br>A<br>A                                | 0.15 ... 2.0/1.5 ... 12.0<br>0.15 ... 2.0/1.5 ... 9.0<br>0.15 ... 2.0/1.5 ... 4.0   |  |
| Rated short-circuit breaking capacity   | kA   | 100 at 400 V  |  |
| Type of coordination acc. to IEC 60947-4-1  |  | 1   |  |
| Power of three-phase motors at 400 V  | kW   | Max. 5.5  |  |
| Utilization categories  |  | AC-1, AC-2, AC-3, AC-4  |  |
| Protective separation between main and auxiliary circuits   | V  | 400, acc. to EN 60947-1, Appendix N   |  |
| Endurance of contactor<br>• Mechanical<br>• Electrical  | Operating<br>cycles<br>Operating<br>cycles | 30 million<br>Up to 10 million; depending on the current loading<br>(see manual)  |  |
| Permissible switching frequency   |  | Depending on the current loading, motor starting time, and relative ON period<br>(see manual)   |  |
| Operating times at 0.85 ... 1.1 x $U_g$<br>• Closing delay<br>• Opening delay   | ms<br>ms                                   | 11 ... 50<br>5 ... 45   |  |

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

<sup>2)</sup> If the soft starter control function is deactivated, the permissible rated operational current is reduced to 9 A up to CLASS 10.  
<sup>3)</sup> With parameterization as electronic starter max. 4 kW.  
<sup>4)</sup> 8-hour operation.

# Motor Starters for Use in the Field, High Degree of Protection

## ET 200pro Motor Starters

Standard motor starters **IE3/IE4 ready**

### Overview

The functionality, device functions, and technical specifications of the Standard motor starter are described in "ET 200pro Motor Starters, General data" (see page 9/3 onwards).

### Selection and ordering data

| Version | SD | Article No. | Price per PU | PU (UNIT, SET, M) | PS* | PG |
|---------|----|-------------|--------------|-------------------|-----|----|
|         | d  |             |              |                   |     |    |

#### Standard motor starters, mechanical Motor protection: thermal model



DSe Standard

#### DSe direct-on-line starters<sup>1)</sup>

- Without brake output
- With brake output 400 V AC

2

2

3RK1304-5□S40-4AA0

3RK1304-5□S40-4AA3

1

1

1 unit

1 unit

42D

42D

#### RSe reversing starters<sup>1)</sup>

- Without brake output
- With brake output 400 V AC

2

2

3RK1304-5□S40-5AA0

3RK1304-5□S40-5AA3

1

1

1 unit

1 unit

42D

42D

Setting range  
Rated operational current

- 0.15 ... 2.0 A
- 1.5 ... 12.0 A

Additional price

None

✓

K  
L

<sup>1)</sup> Only functions when used together with the backplane bus module and the wide module rack. The backplane bus module and the wide module rack must be ordered separately (see "Accessories for ET 200pro motor starters", page 9/19).

# Motor Starters for Use in the Field, High Degree of Protection

## ET 200pro Motor Starters

**IE3/IE4 ready** High Feature motor starters

### Overview

The functionality, device functions, and technical specifications of the High Feature motor starter are described in "ET 200pro Motor Starters, General data" (see page 9/3 onwards).

The High Feature motor starter differs from the Standard motor starter in having more parameters and four integrated, freely-parameterizable digital inputs.

### Selection and ordering data

| Version | SD | Article No. | Price per PU | PU (UNIT, SET, M) | PS* | PG |
|---------|----|-------------|--------------|-------------------|-----|----|
|         | d  |             |              |                   |     |    |

#### High Feature motor starters, mechanical Motor protection: thermal model



RSe High Feature

##### DSe direct-on-line starters<sup>1)</sup>

- Without brake output and with 4 inputs
- With brake output 400 V AC and 4 inputs

2

3RK1304-5□S40-2AA0

1

1 unit 42D

5

3RK1304-5□S40-2AA3

1

1 unit 42D

##### RSe reversing starters<sup>1)</sup>

- Without brake output and with 4 inputs
- With brake output 400 V AC and 4 inputs

2

3RK1304-5□S40-3AA0

1

1 unit 42D

2

3RK1304-5□S40-3AA3

1

1 unit 42D

Setting range  
Rated operational current

- 0.15 ... 2.0 A
- 1.5 ... 12.0 A

Additional price  
None

K  
L

✓

#### High Feature motor starters<sup>2)</sup>, electronic Full motor protection, comprising thermal motor protection and thermistor motor protection



sRSSt High Feature

##### Direct-on-line starters sDSSSt/sDSt<sup>1)2)</sup>

- Without brake output and with 4 inputs
- With brake output 400 V AC and 4 inputs

2

3RK1304-5□S70-2AA0

1

1 unit 42D

5

3RK1304-5□S70-2AA3

1

1 unit 42D

##### Reversing starters sRSSSt/sRSt<sup>1)2)</sup>

- Without brake output and with 4 inputs
- With brake output 400 V AC and 4 inputs

2

3RK1304-5□S70-3AA0

1

1 unit 42D

2

3RK1304-5□S70-3AA3

1

1 unit 42D

Setting range  
Rated operational current

- 0.15 ... 2.0 A
- 1.5 ... 12.0 A

Additional price  
None

K  
L

✓

<sup>1)</sup> Only functions when used together with the backplane bus module and the wide module rack. The backplane bus module and the wide module rack must be ordered separately (see "Accessories for ET 200pro motor starters", page 9/19).

<sup>2)</sup> The solid-state motor starters can be used not only as solid-state motor starters with a high level of switching frequency but also as fully fledged soft starters for soft starting and stopping. The changeover from motor starter to soft starter takes place through reparameterization in HW Config. Depending on the setting, this results in the following current ranges:

- Parameterization as solid-state motor starter: 0.15 to 2 A and 1.5 to 9 A (4 kW)
- Parameterization as soft starter: 0.15 to 2 A and 1.5 to 12 A (5.5 kW).

## Motor Starters for Use in the Field, High Degree of Protection

### ET 200pro Motor Starters

ET 200pro isolator modules **IE3/IE4 ready**

#### Overview

The isolator module with integrated group fusing function (i.e. additional group short-circuit protection for all subsequently supplied motor starters) and switch disconnecter function is used for safe disconnection of the 400 V operational voltage in the plant.

Depending on the power distribution concept, all stations can be equipped with an isolator module as an option.

The following properties apply to the isolator module:

- Increase of plant availability through fast replacement of units (easy mounting and plug-in technology)
- Cabinet-free design thanks to high degree of protection IP65

The isolator module is available in addition in a safety version (see "Safety local isolator module" on page 9/11).

#### Technical specifications

| Type  | Isolator modules |                 |
|---|------------------|-----------------|
| <b>General data</b>   |                  |                 |
| <b>Mounting dimensions (W x H x D)</b>                          |                  |                 |
| • Direct-on-line starters and reversing starters                | mm               | 110 x 230 x 170 |
| <b>Permissible ambient temperature</b>                          |                  |                 |
| • During operation  | °C               | -25 ... +55     |
| • During storage  | °C               | -40 ... +70     |
| <b>Permissible mounting position</b>                            |                  |                 |
|   |                  | Any             |
| <b>Vibration resistance acc. to IEC 60068 Part 2-6</b>          |                  |                 |
|   | g                | 2               |
| <b>Shock resistance acc. to IEC 60068 Part 2-27</b>             |                  |                 |
|   | g/ms             | Half-sine 15/11 |
| <b>Power consumption</b>  |                  |                 |
| • From auxiliary circuit L+/M (U1)                              | mA               | Approx. 20      |
| • From auxiliary circuit A1/A2 (U2)                             |                  | --              |
| <b>Rated operational current <math>I_e</math> for power bus</b> |                  |                 |
|   | A                | 25              |
| <b>Rated operational voltage <math>U_e</math></b>               |                  |                 |
|   | V                | 400             |
| <b>Approvals according to</b>                                   |                  |                 |
| • DIN VDE 0106, Part 101  | V                | Up to 500       |
| • CSA and UL  | V                | Up to 600       |
| <b>Conductor cross-sections</b>                                 |                  |                 |
| • Incoming power supply   | mm <sup>2</sup>  | Max. 6 x 4      |

| Type   | Isolator modules |  |
|--|------------------|--|
| <b>Degree of protection</b>                                      |                  |  |
|  |                  | IP65                                     |
| <b>Touch protection</b>  |                  |  |
|  |                  | Finger-safe                              |
| <b>Pollution degree</b>  |                  |  |
|  |                  | 3, IEC 60664 (IEC 61131)                 |
| <b>Rated impulse withstand voltage <math>U_{imp}</math></b>      |                  |  |
|  | kV               | 6  |
| <b>Rated insulation voltage <math>U_i</math></b>                 |                  |  |
|  | V                | 400                                      |
| <b>Rated operational current <math>I_e</math> for starters</b>   |                  |  |
| • AC-1 / 2 / 3 at 40 °C  |                  |  |
| - At 400 V   | A                | 25                                       |
| - At 500 V   | A                | 25                                       |
| <b>Rated short-circuit breaking capacity</b>                     |                  |  |
|  | kA               | 50 at 400 V                              |
| <b>Type of coordination acc. to IEC 60947-4-1</b>                |                  |  |
|  |                  | 2  |
| <b>Protective separation between main and auxiliary circuits</b> |                  |  |
|  | V                | 400, according to DIN VDE 0106, Part 101 |
| <b>Device functions</b>  |                  |  |
| • Group diagnostics  |                  | Yes, parameterizable                     |
| <b>Device indications</b>  |                  |  |
| • Group fault  |                  | SF LED (red)                             |

#### Selection and ordering data

| Version | SD | Article No. | Price per PU | PU (UNIT, SET, M) | PS* | PG |
|---------|----|-------------|--------------|-------------------|-----|----|
|         | d  |             |              |                   |     |    |

#### ET 200pro isolator modules, mechanical

| Isolator modules <sup>1)</sup> | SD | Article No.               | Price per PU | PU (UNIT, SET, M) | PS*    | PG  |
|--------------------------------|----|---------------------------|--------------|-------------------|--------|-----|
| Rated operational current 25 A | 2  | <b>3RK1304-OHS00-6AA0</b> |              | 1                 | 1 unit | 42D |



3RK1304-OHS00-6AA0

<sup>1)</sup> Only functions when used together with the related 110 mm backplane bus module and the wide module rack. The backplane bus module and the wide module rack must be ordered separately (see page 9/19).

# Motor Starters for Use in the Field, High Degree of Protection

## ET 200pro Motor Starters

### ET 200pro Safety Motor Starters Solutions Local/PROFIsafe

#### Safety modules local

#### Overview

##### **Safety Solution local**

With the Safety local modules

- Safety local isolator module and
  - 400 V disconnecting module
- with an appropriate connection, safety level PL e (according to ISO 13849-1) can be reached.



ET 200pro motor starter (Safety Solution local): Safety local isolator module, disconnecting module, Standard starter and High Feature starter mounted on a wide module rack

##### **Safety local isolator module**

The Safety local isolator module is a repair switch with integrated safety evaluation functions that can be parameterized using DIP switches.

It is used for

- Connection of a 1- or 2-channel EMERGENCY STOP circuit up to PL e (protective door or EMERGENCY STOP pushbuttons) and parameterizable start behavior
- For controlling the 400 V disconnecting module by means of a safety rail signal

##### **400 V disconnecting module**

The 400 V disconnecting module enables the safe disconnection of an operational voltage of 400 V up to PL e. For operation in a Safety Solution local application, it functions only in combination with the Safety local isolator module.

For operation in a Safety PROFIsafe application it functions only in combination with the F-Switch.

##### **Functionality**

###### Safety local isolator module

The Safety local isolator module features the same functions as a standard isolator module with an additional local safety function.

The Safety local isolator module contains a 3TK2841 module and is equipped with M12 terminals for the connection of external safety components.

Terminals 1 and 2 can be used to connect either 1-channel or 2-channel EMERGENCY STOP circuits or protective door circuits (IN 1, IN 2).

For monitored starts, an external START switch can be connected to terminal 3.

The required safety functions can be set using two slide switches located under the left M12 opening.

In the event of an EMERGENCY STOP, the Safety local isolator module trips the downstream 400 V disconnecting module. This safely separates the 400 V circuit up to PL e.

In combination with the 400 V disconnecting module, the Safety local isolator module can be used for safety applications up to PL e.

###### 400 V disconnecting module

The 400 V disconnecting module can be used together with the Safety local isolator module for local safety applications and together with the F-Switch for PROFIsafe safety applications.

It contains two contactors connected in series for safety-related disconnection of the main circuit.

The auxiliary circuit supply of the device is over a safety power rail in the backplane bus module.

The 400 V disconnecting module can be used in conjunction with the Safety local isolator module or with the F-Switch for safety applications up to PL e.

# Motor Starters for Use in the Field, High Degree of Protection

## ET 200pro Motor Starters

## ET 200pro Safety Motor Starters Solutions Local/PROFIsafe

### Safety modules local

#### Technical specifications

| Type   |                 | Safety local isolator module                | 400 V disconnecting module |
|--|-----------------|---|----------------------------|
| <b>General data</b>  |                 |   |                            |
| <b>Mounting dimensions (W x H x D)</b>                           |                 |   |                            |
| • Direct-on-line starters and reversing starters                 | mm              | 110 x 230 x 170                             | 110 x 230 x 150            |
| <b>Permissible ambient temperature</b>                           |                 |   |                            |
| • During operation   | °C              | -25 ... +55                                 |                            |
| • During storage   | °C              | -40 ... +70                                 |                            |
| <b>Permissible mounting position</b>                             |                 | Any   |                            |
| <b>Vibration resistance acc. to IEC 60068, Part 2-6</b>          |                 | 2 g   |                            |
| <b>Shock resistance acc. to IEC 60068, Part 2-27</b>             |                 | Half-sine 15 g/11 ms                        |                            |
| <b>Power consumption</b>   |                 |   |                            |
| • From auxiliary circuit L+/M (U1)                               | mA              | Approx. 20                                  |                            |
| • From auxiliary circuit A1/A2 (U2)                              |                 | --  |                            |
| <b>Rated operational current <math>I_e</math> for power bus</b>  | A               | 25  |                            |
| <b>Rated operational voltage <math>U_e</math></b>                | V               | 400 (50/60 Hz)                              |                            |
| <b>Approval DIN VDE 0106, Part 101</b>                           | V               | Up to 500                                   |                            |
| <b>CSA and UL approval</b>                                       | V               | Up to 600                                   |                            |
| <b>Conductor cross-sections</b>                                  |                 |   |                            |
| Incoming power supply  | mm <sup>2</sup> | Max. 6 x 4                                  |                            |
| <b>Degree of protection</b>                                      |                 | IP65  |                            |
| <b>Touch protection</b>  |                 | Finger-safe                                 |                            |
| <b>Pollution degree</b>  |                 | 3, IEC 60664 (IEC 61131)                    |                            |
| <b>Rated impulse withstand voltage <math>U_{imp}</math></b>      | kV              | 6   |                            |
| <b>Rated insulation voltage <math>U_i</math></b>                 | V               | 400   |                            |
| <b>Rated operational current <math>I_e</math> for starters</b>   |                 |   |                            |
| • AC-1 / 2 / 3 at 40 °C  |                 |   |                            |
| - At 400 V   | A               | 16  | 25                         |
| - At 500 V   | A               | 16  | 25                         |
| <b>Rated short-circuit breaking capacity</b>                     | kA              | 50 at 400 V                                 |                            |
| <b>Type of coordination acc. to IEC 60947-4-1</b>                |                 | 2   |                            |
| <b>Protective separation between main and auxiliary circuits</b> | V               | 400,<br>according to DIN VDE 0106, Part 101 |                            |
| <b>Operating times at 0.85 ... 1.1 x <math>U_s</math></b>        |                 |   |                            |
| • Closing delay  | ms              | --  | 25 ... 100                 |
| • Opening delay  | ms              | --  | 7 ... 10                   |
| <b>Device functions</b>  |                 |   |                            |
| • Group diagnostics  |                 | Yes, parameterizable                        |                            |
| <b>Device indications</b>  |                 |   |                            |
| • Group fault  |                 | SF LED (red)                                |                            |

**Motor Starters for Use in the Field, High Degree of Protection**

ET 200pro Motor Starters

ET 200pro Safety Motor Starters Solutions Local/PROFIsafe

**IE3/IE4 ready****Safety modules local****Selection and ordering data**

| Version | SD | Article No. | Price per PU | PU (UNIT, SET, M) | PS* | PG |
|---------|----|-------------|--------------|-------------------|-----|----|
|         | d  |             |              |                   |     |    |

**Safety modules local**

3RK1304-OHS00-7AA0

**Safety local isolator module<sup>1)2)</sup>**

Rated operational current 16 A

5

**3RK1304-OHS00-7AA0**

1

1 unit

42D



3RK1304-OHS00-8AA0

**400 V disconnecting module<sup>3)4)</sup>**

Rated operational current 25 A

2

**3RK1304-OHS00-8AA0**

1

1 unit

42D

- 1) The Safety local isolator module only functions when used together with the 400 V disconnecting module.
- 2) Only in combination with the special backplane bus module for the Safety Local isolator module (see "Accessories for ET 200pro motor starters", page 9/19).
- 3) The 400 V disconnecting module functions only when used together with the Safety local isolator module or with the F-Switch.
- 4) The 400 V disconnecting module functions only when used together with the backplane bus module and the wide module rack. The backplane bus module and the wide module rack must be ordered separately (see "Accessories for ET 200pro motor starters", page 9/19).

# Motor Starters for Use in the Field, High Degree of Protection

## ET 200pro Motor Starters

## ET 200pro Safety Motor Starters Solutions Local/PROFIsafe

Safety modules PROFIsafe **IE3/IE4 ready**

### Overview

#### Safety Solution PROFIsafe

With the Safety PROFIsafe modules

- F-Switch and
- 400 V disconnecting module

With an appropriate connection, safety levels SIL 3 (according to IEC 62061) and PL e (according to ISO 13849-1) can be reached.

#### F-Switch PROFIsafe

Fail-safe digital inputs/outputs in degrees of protection IP65 to IP67 for near-machine, cabinet-free use.

#### Fail-safe digital inputs

- For the fail-safe reading in of sensor information (1-/2-channel)
- Including integrated discrepancy evaluation for 2V2 signals
- Internal sensor supplies (incl. testing) available

#### Fail-safe digital outputs

- Three fail-safe PP-switching outputs for safe switching of the backplane busbars

The F-Switch is certified up to SIL 3/PL e and has detailed diagnostics.

It supports PROFIsafe in PROFIBUS configurations as well as in PROFINET configurations.

#### Note:

Safety characteristics, see page 16/6.

#### Functionality

The PROFIsafe F-Switch is a fail-safe solid-state module for PROFIsafe safety applications. It has two fail-safe inputs and outputs for safe switching of the 24 V supply over backplane busbars. In combination with the 400 V disconnecting module, fail-safe disconnection of ET 200pro motor starters is possible in PROFIsafe applications up to SIL 3/PL e.

#### 400 V disconnecting module

See "Safety modules local", Overview, page 9/11 and Technical specifications, page 9/12.

### Selection and ordering data

| Version   | SD   | Article No. | Price per PU              | PU (UNIT, SET, M) | PS*    | PG  |
|---|--|-------------|---------------------------|-------------------|--------|-----|
| <b>Safety modules PROFIsafe</b>   |  |             |                           |                   |        |     |
|  | <b>400 V disconnecting modules<sup>1)2)</sup></b><br>Rated operational current 25 A  | 2           | <b>3RK1304-0HS00-8AA0</b> | 1                 | 1 unit | 42D |
| 3RK1304-0HS00-8AA0  |  |             |                           |                   |        |     |
|  | <b>F-Switch PROFIsafe</b><br>24 V DC, including bus module<br><b>Note:</b><br>Connection module must be ordered separately | 1           | <b>6ES7148-4FS00-0AB0</b> | 1                 | 1 unit | 241 |
| 6ES7148-1FS00-0AB0  |  |             |                           |                   |        |     |
|   | <b>Connection modules for F-Switch</b><br>24 V DC  | 1           | <b>6ES7194-4DA00-0AA0</b> | 1                 | 1 unit | 241 |

<sup>1)</sup> The 400 V disconnecting module functions only when used together with the Safety local isolator module or with the F-Switch.

<sup>2)</sup> The 400 V disconnecting module functions only when used together with the backplane bus module and the wide module rack. The backplane bus module and the wide module rack must be ordered separately (see "Accessories for ET 200pro motor starters", page 9/19).

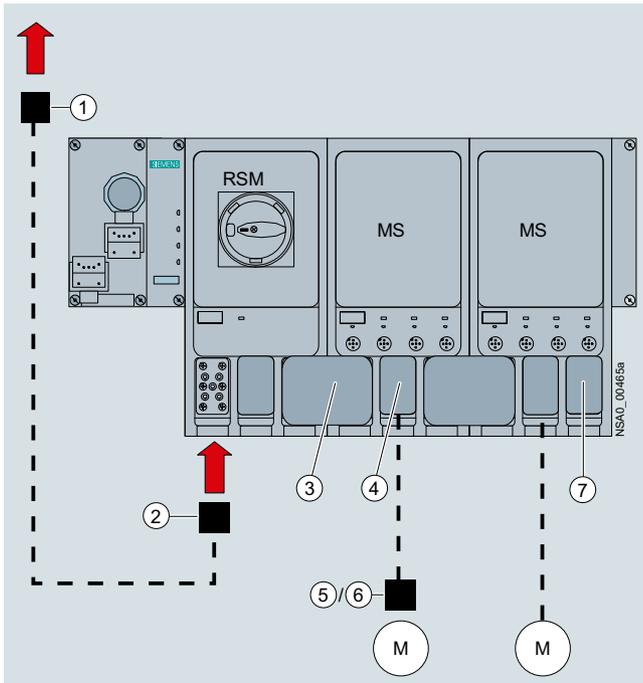
# Motor Starters for Use in the Field, High Degree of Protection

## ET 200pro Motor Starters

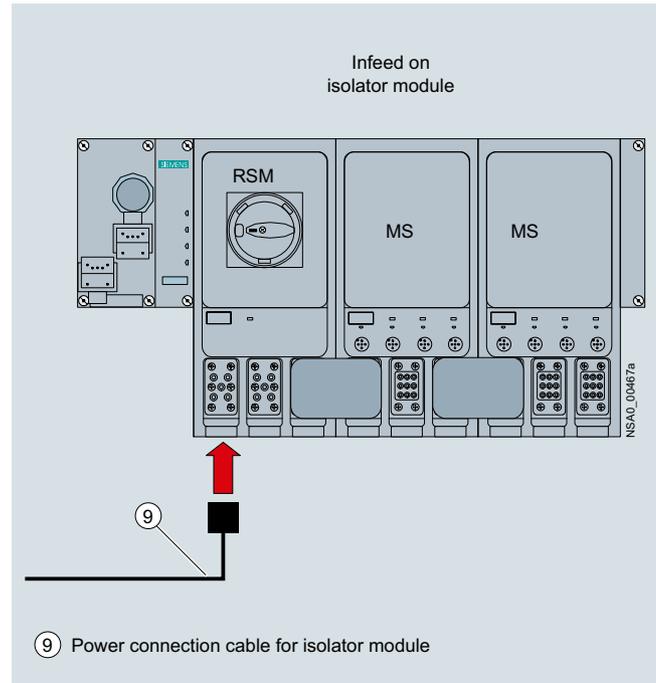
### ET 200pro Safety Motor Starters Solutions Local/PROFIsafe

#### Accessories for ET 200pro motor starters

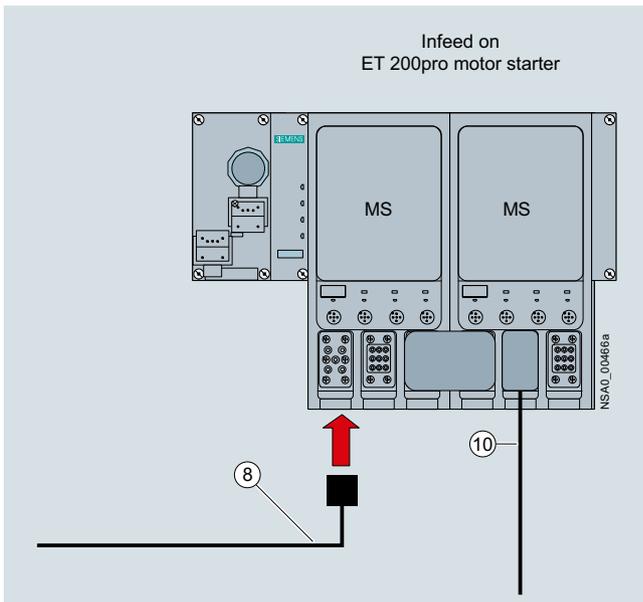
#### Overview



Basic design of an ET 200pro version with (from the left) connection module for IM, interface module for communication (IM), RSM isolator module, two ET 200pro motor starters (MS), and connections for energy



Infeed on the RSM isolator module



Infeed on the ET 200pro motor starter

#### Legend:

- ① Power feeder plug (see page 9/17)
- ② Power connection plug (see page 9/17)
- ③ Power jumper plug (see page 9/17)
- ④ Motor connection plug (see page 9/17)
- ⑤ Motor plug (see page 9/17)
- ⑥ Motor plug with EMC suppressor circuit (see page 9/17)
- ⑦ Power loop-through plug (see page 9/17)
- ⑧ Power connection cable (see page 9/17)
- ⑨ Power connection cable for isolator module (see page 9/17)
- ⑩ Motor cable (see page 9/18)

## Motor Starters for Use in the Field, High Degree of Protection

### ET 200pro Motor Starters

### ET 200pro Safety Motor Starters Solutions Local/PROFIsafe

#### Accessories for ET 200pro motor starters

##### Power bus

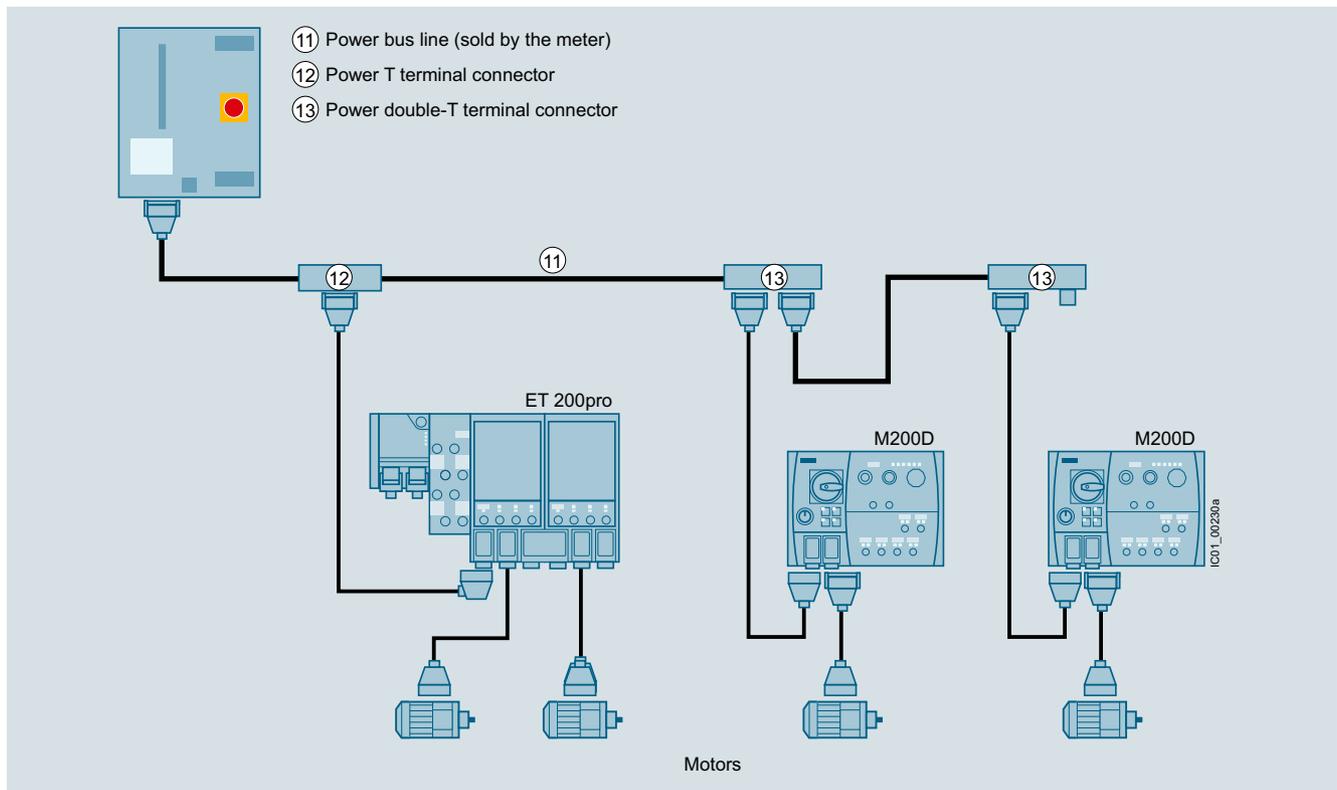
The power supply to the field devices (ET 200pro motor starters, M200D motor starters) is provided via the power bus, in which the power T terminal connectors or power double-T terminal connectors are connected by power bus cables.

##### 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.



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

##### Motor control via PROFIBUS

The interface modules (IM) for PROFIBUS can be combined with three different connection modules for connecting PROFIBUS DP and the power supply:

- Direct connection with cable bushings
- ECOFAST connection with hybrid fieldbus cables (with two copper cores for data transmission with PROFIBUS DP, and four copper cores for the power supply), and ECOFAST connectors (HanBrid)<sup>1)</sup>
- M12, 7/8" connection
  - with M12 connecting cable and M12 plugs for data transmission with PROFIBUS DP
  - with 7/8" connecting cable and 7/8" plugs for the power supply<sup>2)</sup>

For the connection modules with the associated accessories, see "Accessories ET 200pro interface modules", page 9/20).

##### Motor control via PROFINET

For the connection modules with the associated accessories, see Accessories for ET 200pro interface modules, page 9/22 onwards.

<sup>1)</sup> 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 (see page 9/66).

<sup>2)</sup> On the control cabinet bushings with two M12 sockets for the PROFIBUS M12 connecting cables (see page 9/66), the 24 V supply of the motor starters is implemented via separate 7/8" connecting cables.

# Motor Starters for Use in the Field, High Degree of Protection

## ET 200pro Motor Starters

### ET 200pro Safety Motor Starters Solutions Local/PROFIsafe

#### Accessories for ET 200pro motor starters

#### Selection and ordering data

| Version  | SD | Article No.          | Price per PU | PU (UNIT, SET, M) | PS*    | PG  |
|--|----|----------------------|--------------|-------------------|--------|-----|
|  | d  |                      |              |                   |        |     |
| <b>Incoming power supply</b>   |    |                      |              |                   |        |     |
| <b>① Power feeder plugs</b>  |    |                      |              |                   |        |     |
| Connector set for incoming power 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. bushing                      |    |                      |              |                   |        |     |
| • 5 male contacts, 2.5 mm <sup>2</sup>   | 5  | <b>3RK1911-2BS60</b> |              | 1                 | 1 unit | 42D |
| • 5 male contacts, 4 mm <sup>2</sup>   | 5  | <b>3RK1911-2BS20</b> |              | 1                 | 1 unit | 42D |
| • 5 male contacts, 6 mm <sup>2</sup>   | 5  | <b>3RK1911-2BS40</b> |              | 1                 | 1 unit | 42D |
| <b>② Power connection plugs</b>  |    |                      |              |                   |        |     |
| Connector set for incoming power supply for connection to ET 200pro motor starters/ET 200pro isolator modules, comprising a cable-end connector hood, angular outgoing feeder, female insert for HAN Q4/2, including bushing |    |                      |              |                   |        |     |
| • 5 female contacts, 2.5 mm <sup>2</sup>   | 5  | <b>3RK1911-2BE50</b> |              | 1                 | 1 unit | 42D |
| • 5 female contacts, 4 mm <sup>2</sup>   | 5  | <b>3RK1911-2BE10</b> |              | 1                 | 1 unit | 42D |
| • 5 female contacts, 6 mm <sup>2</sup>   | 5  | <b>3RK1911-2BE30</b> |              | 1                 | 1 unit | 42D |
| <b>⑧ Power connection cables, assembled at one end</b>   |    |                      |              |                   |        |     |
| Power connection cable for ET 200pro motor starters, open at one end, for HAN Q4/2, angular, 4 x 4 mm <sup>2</sup>   |    |                      |              |                   |        |     |
| • Length 1.5 m   | 5  | <b>3RK1911-0DB13</b> |              | 1                 | 1 unit | 42D |
| • Length 5.0 m   | 5  | <b>3RK1911-0DB33</b> |              | 1                 | 1 unit | 42D |
| <b>⑨ Power connection cables for isolator module, assembled at one end</b>   |    |                      |              |                   |        |     |
| Power connection cable for ET 200pro isolator modules, open at one end, for HAN Q4/2, angular, insert turned at isolator module end, 4 x 4 mm <sup>2</sup>   |    |                      |              |                   |        |     |
| • Length 1.5 m   | 30 | <b>3RK1911-0DF13</b> |              | 1                 | 1 unit | 42D |
| • Length 5.0 m   | 30 | <b>3RK1911-0DF33</b> |              | 1                 | 1 unit | 42D |
| <b>Power loop-through on the field device</b>  |    |                      |              |                   |        |     |
| <b>③ Power jumper plugs</b>  |    |                      |              |                   |        |     |
|  | 2  | <b>3RK1922-2BQ00</b> |              | 1                 | 1 unit | 42D |
| <b>⑦ Power loop-through plugs</b>  |    |                      |              |                   |        |     |
| Connector set for power loop-through for connection to ET 200pro motor starters/ET 200pro isolator modules, comprising a cable-end connector hood, angular outgoing feeder, pin insert for HAN Q4/2, including bushing       |    |                      |              |                   |        |     |
| • 4 male contacts, 2.5 mm <sup>2</sup>   | 5  | <b>3RK1911-2BF50</b> |              | 1                 | 1 unit | 42D |
| • 4 male contacts, 4 mm <sup>2</sup>   | 5  | <b>3RK1911-2BF10</b> |              | 1                 | 1 unit | 42D |
| <b>Motor cables</b>  |    |                      |              |                   |        |     |
| <b>④ Motor connection plugs</b>  |    |                      |              |                   |        |     |
| Connector set for motor cable for connection to ET 200pro motor starters, comprising a cable-end connector hood, angular outgoing feeder, pin insert for HAN Q8/0, incl. bushing   |    |                      |              |                   |        |     |
| • 8 male contacts, 1.5 mm <sup>2</sup>   | 5  | <b>3RK1902-OCE00</b> |              | 1                 | 1 unit | 42D |
| • 6 male contacts, 2.5 mm <sup>2</sup>   | 5  | <b>3RK1902-OCC00</b> |              | 1                 | 1 unit | 42D |
| <b>⑤ Motor plugs</b>   |    |                      |              |                   |        |     |
| 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 bushing                                     |    |                      |              |                   |        |     |
| • 7 female contacts, 1.5 mm <sup>2</sup>   | 30 | <b>3RK1911-2BM21</b> |              | 1                 | 1 set  | 42D |
| • 7 female contacts, 2.5 mm <sup>2</sup>   | 30 | <b>3RK1911-2BM22</b> |              | 1                 | 1 set  | 42D |
| <b>⑥ Motor plugs with EMC suppressor circuit</b>   |    |                      |              |                   |        |     |
| Connector set for motor cable for connection to motors, comprising a cable-end connector hood, straight outgoing feeder, female insert for HAN 10e with EMC suppressor circuit, including star jumper, including bushing     |    |                      |              |                   |        |     |
| • 7 female contacts, 1.5 mm <sup>2</sup>   | 30 | <b>3RK1911-2BL21</b> |              | 1                 | 1 set  | 42D |
| • 7 female contacts, 2.5 mm <sup>2</sup>   | 30 | <b>3RK1911-2BL22</b> |              | 1                 | 1 set  | 42D |

# Motor Starters for Use in the Field, High Degree of Protection

## ET 200pro Motor Starters

## ET 200pro Safety Motor Starters Solutions Local/PROFIsafe

### Accessories for ET 200pro motor starters

| Version   | SD | Article No.          | Price per PU | PU (UNIT, SET, M) | PS*      | PG  |
|---|----|----------------------|--------------|-------------------|----------|-----|
| <b>Motor cables (continued)</b>   |    |                      |              |                   |          |     |
| <b>⑩ Motor cables, assembled at one end</b>   |    |                      |              |                   |          |     |
| Open at one end, HAN Q8, angular, length 5 m  |    |                      |              |                   |          |     |
| • For motor without brake, for ET 200pro, 4 x 1.5 mm <sup>2</sup>   | 15 | <b>3RK1911-0EB31</b> |              | 1                 | 1 unit   | 42D |
| • For motor with brake for ET 200pro, 6 x 1.5 mm <sup>2</sup>   | 30 | <b>3RK1911-0ED31</b> |              | 1                 | 1 unit   | 42D |
| • For motor without brake, with thermistor, for ET 200pro, 6 x 1.5 mm <sup>2</sup>  | 30 | <b>3RK1911-0EF31</b> |              | 1                 | 1 unit   | 42D |
| • For motor with brake and thermistor for ET 200pro, 8 x 1.5 mm <sup>2</sup>  | 30 | <b>3RK1911-0EG31</b> |              | 1                 | 1 unit   | 42D |
| <b>Power bus</b>  |    |                      |              |                   |          |     |
| <b>⑫ Power T terminal connectors</b>  |    |                      |              |                   |          |     |
| 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 mm <sup>2</sup> / 4 mm <sup>2</sup>   | 5  | <b>3RK1911-2BF01</b> |              | 1                 | 1 unit   | 42D |
| • 4 mm <sup>2</sup> / 6 mm <sup>2</sup>   | 5  | <b>3RK1911-2BF02</b> |              | 1                 | 1 unit   | 42D |
| <b>⑬ Power double-T terminal connectors</b>   |    |                      |              |                   |          |     |
| 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 mm <sup>2</sup> / 6 mm <sup>2</sup>   | 5  | <b>3RK1911-2BG02</b> |              | 1                 | 1 unit   | 42D |
| <b>Sealing set (comprising 2 seals)</b>   |    |                      |              |                   |          |     |
| For power T/power double-T terminal connectors  |    |                      |              |                   |          |     |
| • For power cables with Ø 10 ... 13 mm  | 5  | <b>3RK1911-5BA00</b> |              | 1                 | 1 unit   | 42D |
| • For power cables with Ø 13 ... 16 mm  | 5  | <b>3RK1911-5BA10</b> |              | 1                 | 1 unit   | 42D |
| • For power cables with Ø 16 ... 19 mm  | 5  | <b>3RK1911-5BA20</b> |              | 1                 | 1 unit   | 42D |
| • For power cables with Ø 19 ... 22 mm  | X  | <b>3RK1911-5BA30</b> |              | 1                 | 1 unit   | 42D |
| • Blanking plugs  | 5  | <b>3RK1911-5BA50</b> |              | 1                 | 1 unit   | 42D |
| <b>Further accessories for power connections</b>  |    |                      |              |                   |          |     |
| <b>Crimping tool</b>  |    |                      |              |                   |          |     |
|    | 15 | <b>3RK1902-0CW00</b> |              | 1                 | 1 unit   | 42D |
| for pins/sockets, 4 mm <sup>2</sup> and 6 mm <sup>2</sup>   |    |                      |              |                   |          |     |
| <b>Dismantling tools</b>  |    |                      |              |                   |          |     |
| • For male and female contacts for 9-pole HAN Q4/2 inserts  | 15 | <b>3RK1902-0AB00</b> |              | 1                 | 1 unit   | 42D |
| • For male and female contacts for 9-pole HAN Q8 inserts  | 5  | <b>3RK1902-0AJ00</b> |              | 1                 | 1 unit   | 42D |
| <b>Sealing caps</b>   |    |                      |              |                   |          |     |
| For 9-pole power socket connectors  |    |                      |              |                   |          |     |
| • 1 unit per pack   | 5  | <b>3RK1902-0CK00</b> |              | 1                 | 1 unit   | 42D |
| • 10 units per pack   | 5  | <b>3RK1902-0CJ00</b> |              | 1                 | 10 units | 42D |
|    |    |                      |              |                   |          |     |
| 3RK1902-0CK00   |    |                      |              |                   |          |     |

# Motor Starters for Use in the Field, High Degree of Protection

## ET 200pro Motor Starters

### ET 200pro Safety Motor Starters Solutions Local/PROFIsafe

#### Accessories for ET 200pro motor starters

| Version                    | SD | Article No.  | Price per PU | PU (UNIT, SET, M) | PS*      | PG  |
|----------------------------|----|--|--------------|-------------------|----------|-----|
|                            | d  |  |              |                   |          |     |
| <b>Further accessories</b> |    |  |              |                   |          |     |
|                            |    | <b>Module racks, wide<sup>1)</sup></b>   |              |                   |          |     |
|                            | 1  | • Length 500 mm  |              | 1                 | 1 unit   | 250 |
|                            | 1  | • Length 1 000 mm  |              | 1                 | 1 unit   | 250 |
|                            | 1  | • Length 2 000 mm  |              | 1                 | 1 unit   | 250 |
|                            |    | <b>Module racks, wide, compact<sup>1)</sup></b>  |              |                   |          |     |
|                            | 1  | • Length 500 mm  |              | 1                 | 1 unit   | 250 |
|                            | 1  | • Length 1 000 mm  |              | 1                 | 1 unit   | 250 |
|                            | 1  | • Length 2 000 mm  |              | 1                 | 1 unit   | 250 |
|                            |    | <b>Backplane bus modules 110 mm<sup>2)</sup></b>   |              |                   |          |     |
|                            | 2  | <b>3RK1922-2BA00</b>   |              | 1                 | 1 unit   | 42D |
|                            | 2  | <b>3RK1922-2BA01</b>   |              | 1                 | 1 unit   | 42D |
|                            |    | <b>Handheld devices</b>  |              |                   |          |     |
|                            | 5  | For ET 200pro motor starters (or for ET 200S High Feature and M200D motor starters) for local operation  |              | 1                 | 1 unit   | 42D |
|                            |    | <b>Notes:</b>  |              |                   |          |     |
|                            |    | • The motor-starter-specific serial interface cables must be ordered separately.   |              |                   |          |     |
|                            |    | • The RS 232 interface cable 3RK1922-2BP00 is used for the MS ET 200pro.   |              |                   |          |     |
|                            |    | <b>RS 232 interface cable</b>  |              |                   |          |     |
|                            | 5  | Serial data connection between ET 200pro (or M200D) motor starters and the RS 232 interface of a PC/PG/laptop (with the Motor Starter ES software) or the handheld device 3RK1922-3BA00. |              | 1                 | 1 unit   | 42D |
|                            |    | <b>USB interface cable, 2.5 m</b>  |              |                   |          |     |
|                            | 3  | Serial data connection between ET 200pro (or M200D) motor starters and the USB interface of a PC/PG/laptop (with the Motor Starter ES software).   |              | 1                 | 1 unit   | 346 |
|                            |    | <b>M12 sealing caps</b>  |              |                   |          |     |
|                            | ▶  | For sealing unused M12 input or output sockets (one set contains ten sealing caps)   |              | 100               | 10 units | 42C |
|                            |    | <b>Motor suppression module <b>NEW</b></b>   |              |                   |          |     |
|                            |    | RC element for installation in motor terminal box  |              |                   |          |     |
|                            | 15 | • Type of construction square  |              | 1                 | 1 unit   | 42D |
|                            | 15 | • Type of construction round   |              | 1                 | 1 unit   | 42D |



3RK1922-3BA00



3RK1901-1KA00



3RK1911-6EA00



3RK1911-6EB00

<sup>1)</sup> The wide module rack can accommodate all ET 200pro motor starters and any optional modules (isolator module, Safety local isolator module and 400 V disconnecting module).

<sup>2)</sup> The backplane bus module is a prerequisite for operation of the ET 200pro motor starter and the optional module.

#### Notes:

- For motor control with PROFIBUS, see page 9/20
- For motor control with PROFINET, see page 9/22
- For Manual "SIMATIC ET 200pro Motor Starters", see <https://support.industry.siemens.com/cs/ww/en/view/22332388>

# Motor Starters for Use in the Field, High Degree of Protection

## ET 200pro Motor Starters

### ET 200pro – interface modules

#### Selection and ordering data

| Version   | SD | Article No.               | Price per PU | PU (UNIT, SET, M) | PS*     | PG  |
|---|----|---------------------------|--------------|-------------------|---------|-----|
|   | d  |                           |              |                   |         |     |
| <b>IM 154-1 and IM 154-2 interface modules</b>  |    |                           |              |                   |         |     |
| <b>IM 154-1 interface module</b><br>For ET 200pro; for communication between ET 200pro and higher-level masters over PROFIBUS DP  | 1  | <b>6ES7154-1AA01-0AB0</b> |              | 1                 | 1 unit  | 250 |
| <b>IM 154-2 DP High Feature interface module</b><br>For ET 200pro; for communication between ET 200pro and higher-level masters over PROFIBUS DP; support of PROFIsafe  | 1  | <b>6ES7154-2AA01-0AB0</b> |              | 1                 | 1 unit  | 250 |
| <b>Accessories</b>  |    |                           |              |                   |         |     |
| <b>CM IM DP ECOFAST connection modules</b><br>For connection of PROFIBUS DP and 24 V power supply to PROFIBUS interface modules, 2 ECOFAST Cu connections   | 1  | <b>6ES7194-4AA00-0AA0</b> |              | 1                 | 1 unit  | 250 |
| <b>CM IM DP direct connection modules</b><br>For direct connection of PROFIBUS DP and 24 V power supply to PROFIBUS interface modules, up to 6 M20 screwed cable bushings   | 1  | <b>6ES7194-4AC00-0AA0</b> |              | 1                 | 1 unit  | 250 |
| <b>CM IM DP M12 7/8" connection modules</b><br>For connection of PROFIBUS DP and 24 V power supply to PROFIBUS interface modules, 2 x M12 and 2 x 7/8"  | 1  | <b>6ES7194-4AD00-0AA0</b> |              | 1                 | 1 unit  | 250 |
| <b>Accessories for CM IM DP ECOFAST</b>   |    |                           |              |                   |         |     |
| <b>PROFIBUS ECOFAST hybrid cables, assembled</b><br>With 2 ECOFAST connectors, trailing cable with 2 x Cu 0.64 mm <sup>2</sup> and 4 x Cu 1.5 mm <sup>2</sup> , in various lengths:   |    |                           |              |                   |         |     |
| • 1.5 m   | 1  | <b>6XV1830-7BH15</b>      |              | 1                 | 1 unit  | 5K2 |
| • 3.0 m   | 1  | <b>6XV1830-7BH30</b>      |              | 1                 | 1 unit  | 5K2 |
| • 5.0 m   | 1  | <b>6XV1830-7BH50</b>      |              | 1                 | 1 unit  | 5K2 |
| • 10 m  | 1  | <b>6XV1830-7BN10</b>      |              | 1                 | 1 unit  | 5K2 |
| • 15 m  | 1  | <b>6XV1830-7BN15</b>      |              | 1                 | 1 unit  | 5K2 |
| • 20 m  | 1  | <b>6XV1830-7BN20</b>      |              | 1                 | 1 unit  | 5K2 |
| <b>PROFIBUS ECOFAST hybrid cables GP, assembled</b><br>With 2 ECOFAST connectors, trailing cable with 2 x Cu 0.64 mm <sup>2</sup> and 4 x Cu 1.5 mm <sup>2</sup> , in various lengths:  |    |                           |              |                   |         |     |
| • 1.5 m   | 1  | <b>6XV1860-3PH15</b>      |              | 1                 | 1 unit  | 5K2 |
| • 3.0 m   | 1  | <b>6XV1860-3PH30</b>      |              | 1                 | 1 unit  | 5K2 |
| • 5.0 m   | 1  | <b>6XV1860-3PH50</b>      |              | 1                 | 1 unit  | 5K2 |
| • 10 m  | 1  | <b>6XV1860-3PN10</b>      |              | 1                 | 1 unit  | 5K2 |
| • 15 m  | 1  | <b>6XV1860-3PN15</b>      |              | 1                 | 1 unit  | 5K2 |
| • 20 m  | 1  | <b>6XV1860-3PN20</b>      |              | 1                 | 1 unit  | 5K2 |
| <b>PROFIBUS ECOFAST hybrid cables, non-assembled</b><br>Trailing cable with 2 x Cu 0.64 mm <sup>2</sup> and 4 x Cu 1.5 mm <sup>2</sup> , in various lengths:  |    |                           |              |                   |         |     |
| • 50 m  | 1  | <b>6XV1830-7AN50</b>      |              | 1                 | 1 unit  | 5K2 |
| • 100 m   | 1  | <b>6XV1830-7AT10</b>      |              | 1                 | 1 unit  | 5K2 |
| <b>PROFIBUS ECOFAST hybrid connectors 180</b><br>ECOFAST Cu, 2 x Cu, 4 x 1.5 mm <sup>2</sup> , HANBRID connectors   |    |                           |              |                   |         |     |
| • With pin insert, pack of 5  | 1  | <b>6GK1905-0CA00</b>      |              | 1                 | 5 units | 5K2 |
| • With female insert, pack of 5   | 1  | <b>6GK1905-0CB00</b>      |              | 1                 | 5 units | 5K2 |
| <b>PROFIBUS ECOFAST hybrid connectors, angular</b><br>ECOFAST Cu, 2 x Cu, 4 x 1.5 mm <sup>2</sup> , HANBRID connectors  |    |                           |              |                   |         |     |
| • With pin insert, pack of 5  | 1  | <b>6GK1905-0CC00</b>      |              | 1                 | 5 units | 5K2 |
| • With female insert, pack of 5   | 1  | <b>6GK1905-0CD00</b>      |              | 1                 | 5 units | 5K2 |
| <b>Accessories for CM IM DP Direct</b>  |    |                           |              |                   |         |     |
| <b>PROFIBUS trailing cables</b><br>Max. acceleration 4 m/s <sup>2</sup> , 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 1 000 m. | 1  | <b>6XV1830-3EH10</b>      |              | 1                 | 1 M     | 5K2 |
| <b>PROFIBUS FC Food bus cables</b><br>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 1 000 m.                                 | 1  | <b>6XV1830-0GH10</b>      |              | 1                 | 1 M     | 5K2 |
| <b>PROFIBUS FC Robust bus cables</b><br>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 1 000 m.      | 1  | <b>6XV1830-0JH10</b>      |              | 1                 | 1 M     | 5K2 |
| <b>Power cables</b><br>5-core, 5 x 1.5 mm <sup>2</sup> , trailing, sold by the meter, minimum order quantity 20 m, maximum order quantity 1 000 m.  | 1  | <b>6XV1830-8AH10</b>      |              | 1                 | 1 M     | 5K2 |

## Motor Starters for Use in the Field, High Degree of Protection ET 200pro Motor Starters

### ET 200pro – interface modules

| Version   | SD | Article No.               | Price<br>per PU | PU<br>(UNIT,<br>SET, M) | PS*      | PG  |
|---|----|---------------------------|-----------------|-------------------------|----------|-----|
| <b>IM 154-1 and IM 154-2 interface modules (continued)</b>  |    |                           |                 |                         |          |     |
| <b>Accessories for CM IM DP M12 7/8"</b>  |    |                           |                 |                         |          |     |
| <b>PROFIBUS M12 connecting cables</b>   |    |                           |                 |                         |          |     |
| Preassembled with two M12 plugs, 5-pole, in various lengths:  |    |                           |                 |                         |          |     |
| • 1.5 m   | 1  | <b>6XV1830-3DH15</b>      |                 | 1                       | 1 unit   | 5K1 |
| • 2.0 m   | 1  | <b>6XV1830-3DH20</b>      |                 | 1                       | 1 unit   | 5K1 |
| • 3.0 m   | 1  | <b>6XV1830-3DH30</b>      |                 | 1                       | 1 unit   | 5K1 |
| • 5.0 m   | 1  | <b>6XV1830-3DH50</b>      |                 | 1                       | 1 unit   | 5K1 |
| • 10 m  | 1  | <b>6XV1830-3DN10</b>      |                 | 1                       | 1 unit   | 5K1 |
| • 15 m  | 1  | <b>6XV1830-3DN15</b>      |                 | 1                       | 1 unit   | 5K1 |
| <b>7/8" connecting cables for power supply</b>  |    |                           |                 |                         |          |     |
| 5-core, 5 x 1.5 mm <sup>2</sup> , trailing, preassembled with two 7/8" plugs, 5-pole, in various lengths:   |    |                           |                 |                         |          |     |
| • 1.5 m   | 1  | <b>6XV1822-5BH15</b>      |                 | 1                       | 1 unit   | 5K1 |
| • 2.0 m   | 1  | <b>6XV1822-5BH20</b>      |                 | 1                       | 1 unit   | 5K1 |
| • 3.0 m   | 1  | <b>6XV1822-5BH30</b>      |                 | 1                       | 1 unit   | 5K1 |
| • 5.0 m   | 1  | <b>6XV1822-5BH50</b>      |                 | 1                       | 1 unit   | 5K1 |
| • 10 m  | 1  | <b>6XV1822-5BN10</b>      |                 | 1                       | 1 unit   | 5K1 |
| • 15 m  | 1  | <b>6XV1822-5BN15</b>      |                 | 1                       | 1 unit   | 5K1 |
| <b>M12 connectors</b>   |    |                           |                 |                         |          |     |
| For ET 200eco, with axial cable feeder  |    |                           |                 |                         |          |     |
| • With pin insert, pack of 5  | 1  | <b>6GK1905-0EA00</b>      |                 | 1                       | 5 units  | 5K2 |
| • With pin insert, pack of 5  | 1  | <b>6GK1905-0EB00</b>      |                 | 1                       | 5 units  | 5K2 |
| <b>PROFIBUS M12 bus termination plugs</b>   |    |                           |                 |                         |          |     |
| With pin insert   |    |                           |                 |                         |          |     |
|   | 1  | <b>6GK1905-0EC00</b>      |                 | 1                       | 5 units  | 5K2 |
| <b>7/8" connectors</b>  |    |                           |                 |                         |          |     |
| For ET 200eco, with axial cable feeder  |    |                           |                 |                         |          |     |
| • With pin insert, pack of 5  | 1  | <b>6GK1905-0FA00</b>      |                 | 1                       | 5 units  | 5K2 |
| • With female insert, pack of 5   | 1  | <b>6GK1905-0FB00</b>      |                 | 1                       | 5 units  | 5K2 |
| <b>M12 sealing caps</b>   |    |                           |                 |                         |          |     |
| For protection of unused M12 terminals on ET 200pro   |    |                           |                 |                         |          |     |
|   | ▶  | <b>3RX9802-0AA00</b>      |                 | 100                     | 10 units | 42C |
| <b>7/8" sealing caps</b>  |    |                           |                 |                         |          |     |
| For protection of unused 7/8" terminals on ET 200pro, pack of 10 units per packing unit   |    |                           |                 |                         |          |     |
|   | 1  | <b>6ES7194-3JA00-0AA0</b> |                 | 1                       | 10 units | 250 |
| <b>General accessories</b>  |    |                           |                 |                         |          |     |
| <b>ET 200pro module racks</b>   |    |                           |                 |                         |          |     |
| • Narrow, for interface, solid-state and power modules  |    |                           |                 |                         |          |     |
| - 500 mm  | 1  | <b>6ES7194-4GA00-0AA0</b> |                 | 1                       | 1 unit   | 250 |
| - 1 000 mm  | 1  | <b>6ES7194-4GA60-0AA0</b> |                 | 1                       | 1 unit   | 250 |
| - 2 000 mm, can be cut to length  | 1  | <b>6ES7194-4GA20-0AA0</b> |                 | 1                       | 1 unit   | 250 |
| • Compact, for interface, solid-state and power modules   |    |                           |                 |                         |          |     |
| - 500 mm  | 1  | <b>6ES7194-4GC70-0AA0</b> |                 | 1                       | 1 unit   | 250 |
| - 1 000 mm  | 1  | <b>6ES7194-4GC60-0AA0</b> |                 | 1                       | 1 unit   | 250 |
| - 2 000 mm, can be cut to length  | 1  | <b>6ES7194-4GC20-0AA0</b> |                 | 1                       | 1 unit   | 250 |
| • Wide, for interface, solid-state, power modules and motor starters  |    |                           |                 |                         |          |     |
| - 500 mm  | 1  | <b>6ES7194-4GB00-0AA0</b> |                 | 1                       | 1 unit   | 250 |
| - 1 000 mm  | 1  | <b>6ES7194-4GB60-0AA0</b> |                 | 1                       | 1 unit   | 250 |
| - 2 000 mm, can be cut to length  | 1  | <b>6ES7194-4GB20-0AA0</b> |                 | 1                       | 1 unit   | 250 |
| • Wide, for I/O modules and motor starters  |    |                           |                 |                         |          |     |
| - 500 mm  | 1  | <b>6ES7194-4GD00-0AA0</b> |                 | 1                       | 1 unit   | 250 |
| - 1 000 mm  | 1  | <b>6ES7194-4GD10-0AA0</b> |                 | 1                       | 1 unit   | 250 |
| - 2 000 mm  | 1  | <b>6ES7194-4GD20-0AA0</b> |                 | 1                       | 1 unit   | 250 |
| <b>Spare fuses</b>  |    |                           |                 |                         |          |     |
| 12.5 A quick-response, for interface and power modules, pack of 10  |    |                           |                 |                         |          |     |
|   | 1  | <b>6ES7194-4HB00-0AA0</b> |                 | 1                       | 10 units | 250 |
| <b>PROFIBUS FastConnect bus cables</b>  |    |                           |                 |                         |          |     |
| Standard type with special design for fast installation, 2-core, shielded, sold by the meter; delivery unit max. 1 000 m; minimum order quantity 20 m   |    |                           |                 |                         |          |     |
|   | 1  | <b>6XV1830-0EH10</b>      |                 | 1                       | 1 M      | 5K1 |
| <b>PROFIBUS hybrid standard cables GP</b>   |    |                           |                 |                         |          |     |
| Standard PROFIBUS hybrid cable with 2 power cores (1.5 mm <sup>2</sup> ) for supplying data and power to the ET 200pro  |    |                           |                 |                         |          |     |
|   | 1  | <b>6XV1860-2R</b>         |                 | 1                       | 1 M      | 5K2 |
| <b>SIMATIC Manual Collection</b>  |    |                           |                 |                         |          |     |
| Electronic manuals on DVD, several languages:<br>S7-200, TD 200, S7-300, M7-300, C7, S7-400, M7-400, STEP 7, Engineering Tools, Runtime Software, SIMATIC DP (Distributed I/O), SIMATIC HMI (Human Machine Interface), SIMATIC NET (Industrial Communication) |    |                           |                 |                         |          |     |
|   | X  | <b>6ES7998-8XC01-8YE0</b> |                 | 1                       | 1 unit   | 219 |
| <b>SIMATIC Manual Collection – Update service for 1 year</b>  |    |                           |                 |                         |          |     |
| Scope of supply: the current DVD S7 Manual Collection as well as the three subsequent updates   |    |                           |                 |                         |          |     |
|   | 5  | <b>6ES7998-8XC01-8YE2</b> |                 | 1                       | 1 unit   | 219 |

# Motor Starters for Use in the Field, High Degree of Protection

## ET 200pro Motor Starters

### ET 200pro – interface modules

| Version  | SD | Article No.               | Price per PU | PU (UNIT, SET, M) | PS*      | PG  |
|--|----|---------------------------|--------------|-------------------|----------|-----|
| d  |    |                           |              |                   |          |     |
| <b>IM 154-3 PN and IM 154-4 PN interface modules</b>   |    |                           |              |                   |          |     |
| <b>IM 154-3 PN High Feature interface modules</b> <b>NEW</b><br>For communication between ET 200pro and a higher-level controller via PROFINET IO; support of PROFIsafe.<br>Order connection module 6ES7194-4AK00-0AA0 separately. | 1  | <b>6ES7154-3AB00-0AB0</b> |              | 1                 | 1 unit   | 250 |
| <b>IM 154-4 PN High Feature interface modules</b><br>For communication between ET 200pro and a higher-level controller via PROFINET IO; support of PROFIsafe.<br>Order connection module 6ES7194-4AK00-0AA0 separately.            | 1  | <b>6ES7154-4AB10-0AB0</b> |              | 1                 | 1 unit   | 250 |
| <b>Accessories</b>   |    |                           |              |                   |          |     |
| <b>Connection modules for IM 154-3 PN High Feature</b>   |    |                           |              |                   |          |     |
| • <b>Connection module CM IM PN M12, 7/8" S</b> <b>NEW</b><br>For connection of PROFINET PN and 24 V power supply to PROFINET interface modules, 2 x M12 and 2 x 7/8"  | 1  | <b>6ES7194-4AK00-0AA0</b> |              | 1                 | 1 unit   | 250 |
| <b>Connection modules for IM 154-4 PN High Feature</b>   |    |                           |              |                   |          |     |
| • <b>CM IM PN M12 connection modules, 7/8"</b><br>For connection of PROFINET PN and 24 V power supply to PROFINET interface modules, 2 x M12 and 2 x 7/8"  | 1  | <b>6ES7194-4AJ00-0AA0</b> |              | 1                 | 1 unit   | 250 |
| • <b>CM IM PN 2xRJ45 connection modules</b><br>For connection of PROFINET PN and 24 V power supply to PROFINET interface modules, 2 x RJ45 and 2 x push-pull power connectors  | 1  | <b>6ES7194-4AF00-0AA0</b> |              | 1                 | 1 unit   | 250 |
| • <b>CM IM PN 2xSCRJ FO connection modules</b><br>For connection of PROFINET PN and 24 V power supply to PROFINET interface modules, 2 x SCRJ FO and 2 x push-pull power connectors  | 1  | <b>6ES7194-4AG00-0AA0</b> |              | 1                 | 1 unit   | 250 |
| <b>M12 sealing caps</b><br>For protection of unused M12 terminals on ET 200pro   | ▶  | <b>3RX9802-0AA00</b>      |              | 100               | 10 units | 42C |
| <b>IE M12 connecting cables</b><br>Preassembled with two M12 plugs, max. 85 m, in various lengths:   |    |                           |              |                   |          |     |
| • 0.3 m  | 1  | <b>6XV1870-8AE30</b>      |              | 1                 | 1 unit   | 5K1 |
| • 0.5 m  | 1  | <b>6XV1870-8AE50</b>      |              | 1                 | 1 unit   | 5K1 |
| • 1.0 m  | 1  | <b>6XV1870-8AH10</b>      |              | 1                 | 1 unit   | 5K1 |
| • 1.5 m  | 1  | <b>6XV1870-8AH15</b>      |              | 1                 | 1 unit   | 5K1 |
| • 2.0 m  | 1  | <b>6XV1870-8AH20</b>      |              | 1                 | 1 unit   | 5K1 |
| • 3.0 m  | 1  | <b>6XV1870-8AH30</b>      |              | 1                 | 1 unit   | 5K1 |
| • 5.0 m  | 1  | <b>6XV1870-8AH50</b>      |              | 1                 | 1 unit   | 5K1 |
| • 10 m   | 1  | <b>6XV1870-8AN10</b>      |              | 1                 | 1 unit   | 5K1 |
| • 15 m   | 1  | <b>6XV1870-8AN15</b>      |              | 1                 | 1 unit   | 5K1 |
| For more special lengths with 90° or 180° cable feeder, see <a href="http://support.automation.siemens.com/WWW/view/en/26999294">http://support.automation.siemens.com/WWW/view/en/26999294</a>                                    |    |                           |              |                   |          |     |
| <b>7/8" sealing caps</b><br>1 pack = 10 units  | 1  | <b>6ES7194-3JA00-0AA0</b> |              | 1                 | 10 units | 250 |
| <b>7/8" connecting cables for power supply</b><br>5-core, 5 x 1.5 mm <sup>2</sup> , trailing, preassembled with two 7/8" plugs, 5-pole, max. 50 m, in various lengths:   |    |                           |              |                   |          |     |
| • 1.5 m  | 1  | <b>6XV1822-5BH15</b>      |              | 1                 | 1 unit   | 5K1 |
| • 2.0 m  | 1  | <b>6XV1822-5BH20</b>      |              | 1                 | 1 unit   | 5K1 |
| • 3.0 m  | 1  | <b>6XV1822-5BH30</b>      |              | 1                 | 1 unit   | 5K1 |
| • 5.0 m  | 1  | <b>6XV1822-5BH50</b>      |              | 1                 | 1 unit   | 5K1 |
| • 10 m   | 1  | <b>6XV1822-5BN10</b>      |              | 1                 | 1 unit   | 5K1 |
| • 15 m   | 1  | <b>6XV1822-5BN15</b>      |              | 1                 | 1 unit   | 5K1 |
| For more special lengths with 90° or 180° cable feeder, see <a href="http://support.automation.siemens.com/WWW/view/en/26999294">http://support.automation.siemens.com/WWW/view/en/26999294</a>                                    |    |                           |              |                   |          |     |
| <b>Power cables</b><br>5-core, 5 x 1.5 mm <sup>2</sup> , trailing, sold by the meter, minimum order quantity 20 m, maximum order quantity 1 000 m.   | 1  | <b>6XV1830-8AH10</b>      |              | 1                 | 1 M      | 5K2 |
| <b>7/8" connectors</b><br>For ET 200eco, with axial cable feeder   |    |                           |              |                   |          |     |
| • With pin insert, pack of 5   | 1  | <b>6GK1905-0FA00</b>      |              | 1                 | 5 units  | 5K2 |
| • With female insert, pack of 5  | 1  | <b>6GK1905-0FB00</b>      |              | 1                 | 5 units  | 5K2 |
| <b>Industrial Ethernet FastConnect installation cables</b>   |    |                           |              |                   |          |     |
| • <b>IE FC TP standard cables GP 2 x 2;</b><br>Sold by the meter, delivery unit max. 1 000 m; minimum order quantity 20 m  | 1  | <b>6XV1840-2AH10</b>      |              | 1                 | 1 M      | 5K1 |
| • <b>IE FC TP trailing cables 2 x 2;</b><br>Sold by the meter, delivery unit max. 1 000 m; minimum order quantity 20 m   | 1  | <b>6XV1840-3AH10</b>      |              | 1                 | 1 M      | 5K1 |
| • <b>IE FC TP trailing cables GP 2 x 2;</b><br>Sold by the meter, delivery unit max. 1 000 m; minimum order quantity 20 m  | 1  | <b>6XV1870-2D</b>         |              | 1                 | 1 M      | 5K2 |
| • <b>IE TP torsion cables GP 2 x 2;</b><br>Sold by the meter, delivery unit max. 1 000 m; minimum order quantity 20 m  | 1  | <b>6XV1870-2F</b>         |              | 1                 | 1 M      | 5K2 |
| • <b>IE FC TP marine cables 2 x 2;</b><br>Sold by the meter, delivery unit max. 1 000 m; minimum order quantity 20 m   | 1  | <b>6XV1840-4AH10</b>      |              | 1                 | 1 M      | 5K1 |

## Motor Starters for Use in the Field, High Degree of Protection

### ET 200pro Motor Starters

#### ET 200pro – interface modules

| Version   | SD | Article No.               | Price per PU | PU (UNIT, SET, M) | PS*      | PG  |
|---|----|---------------------------|--------------|-------------------|----------|-----|
| <b>IM 154-3 PN and IM 154-4 PN interface modules (continued)</b>  |    |                           |              |                   |          |     |
| <b>IE RJ45 Plug PRO</b><br>RJ45 plug-in connector for field assembly in degree of protection IP65/67, plastic enclosure, insulation displacement method, for SCALANCE X-200IRT PRO and ET 200pro; 1 pack = 1 unit   | 1  | <b>6GK1901-1BB10-6AA0</b> |              | 1                 | 1 unit   | 5K2 |
| <b>IE SC RJ POF Plug PRO</b><br>SC RJ plug-in connector for field assembly for POF fibers in degree of protection IP65/67, plastic enclosure, for SCALANCE X-200IRT PRO and ET 200pro, 1 pack = 1 unit  | 1  | <b>6GK1900-0MB00-6AA0</b> |              | 1                 | 1 unit   | 5K2 |
| <b>IE SC RJ PCF Plug PRO</b><br>SC RJ plug-in connector for field assembly for PCF fibers in degree of protection IP65/67, plastic enclosure, for SCALANCE X-200IRT PRO, 1 pack = 1 unit  | 1  | <b>6GK1900-0NB00-6AA0</b> |              | 1                 | 1 unit   | 5K2 |
| <b>Power Plug PRO</b><br>5-pole power plug-in connector for field assembly for 2 x 24 V power supply in degree of protection IP65/67, plastic enclosure, for SCALANCE X-200IRT and ET 200pro, 1 pack = 1 unit   | 1  | <b>6GK1907-0AB10-6AA0</b> |              | 1                 | 1 unit   | 5K2 |
| <b>IE Panel Feedthrough</b><br>Control cabinet bushing for transition from M12 connection method (D-coded, IP65) to RJ45 connection method (IP20)<br><br>• 1 pack = 5 units   | 1  | <b>6GK1901-0DM20-2AA5</b> |              | 1                 | 5 units  | 5K2 |
| <b>Push-pull connectors</b><br>For 1L+/2L+, non-assembled   | 1  | <b>6GK1907-0AB10-6AA0</b> |              | 1                 | 1 unit   | 5K2 |
| <b>Covers for RJ45 push-pull sockets</b><br>5 units per pack  | 1  | <b>6ES7194-4JD50-0AA0</b> |              | 1                 | 5 units  | 250 |
| <b>Covers for push-pull power sockets (1L+, 2L+)</b><br>5 units per pack  | 1  | <b>6ES7194-4JA50-0AA0</b> |              | 1                 | 5 units  | 250 |
| <b>General accessories</b>  |    |                           |              |                   |          |     |
| <b>ET 200pro module racks</b>   |    |                           |              |                   |          |     |
| • Narrow, for interface, solid-state and power modules  |    |                           |              |                   |          |     |
| - 500 mm  | 1  | <b>6ES7194-4GA00-0AA0</b> |              | 1                 | 1 unit   | 250 |
| - 1 000 mm  | 1  | <b>6ES7194-4GA60-0AA0</b> |              | 1                 | 1 unit   | 250 |
| - 2 000 mm, can be cut to length  | 1  | <b>6ES7194-4GA20-0AA0</b> |              | 1                 | 1 unit   | 250 |
| • Compact, for interface, solid-state and power modules   |    |                           |              |                   |          |     |
| - 500 mm  | 1  | <b>6ES7194-4GC70-0AA0</b> |              | 1                 | 1 unit   | 250 |
| - 1 000 mm  | 1  | <b>6ES7194-4GC60-0AA0</b> |              | 1                 | 1 unit   | 250 |
| - 2 000 mm, can be cut to length  | 1  | <b>6ES7194-4GC20-0AA0</b> |              | 1                 | 1 unit   | 250 |
| • Wide, for interface, solid-state, power modules and motor starters  |    |                           |              |                   |          |     |
| - 500 mm  | 1  | <b>6ES7194-4GB00-0AA0</b> |              | 1                 | 1 unit   | 250 |
| - 1 000 mm  | 1  | <b>6ES7194-4GB60-0AA0</b> |              | 1                 | 1 unit   | 250 |
| - 2 000 mm, can be cut to length  | 1  | <b>6ES7194-4GB20-0AA0</b> |              | 1                 | 1 unit   | 250 |
| • Wide, for I/O modules and motor starters  |    |                           |              |                   |          |     |
| - 500 mm  | 1  | <b>6ES7194-4GD00-0AA0</b> |              | 1                 | 1 unit   | 250 |
| - 1 000 mm  | 1  | <b>6ES7194-4GD10-0AA0</b> |              | 1                 | 1 unit   | 250 |
| - 2 000 mm  | 1  | <b>6ES7194-4GD20-0AA0</b> |              | 1                 | 1 unit   | 250 |
| <b>Spare fuses</b><br>12.5 A quick-response, for interface and power modules, pack of 10  | 1  | <b>6ES7194-4HB00-0AA0</b> |              | 1                 | 10 units | 250 |
| <b>SIMATIC Manual Collection</b><br>Electronic manuals on DVD, several languages:<br>S7-200, TD 200, S7-300, M7-300, C7, S7-400, M7-400, STEP 7, Engineering Tools, Runtime Software, SIMATIC DP (Distributed I/O), SIMATIC HMI (Human Machine Interface), SIMATIC NET (Industrial Communication) | X  | <b>6ES7998-8XC01-8YE0</b> |              | 1                 | 1 unit   | 219 |
| <b>SIMATIC Manual Collection – Update service for 1 year</b><br>Scope of supply: the current DVD S7 Manual Collection as well as the three subsequent updates   | 5  | <b>6ES7998-8XC01-8YE2</b> |              | 1                 | 1 unit   | 219 |

# Motor Starters for Use in the Field, High Degree of Protection

## ET 200pro Motor Starters

### ET 200pro – CPUs

#### Standard CPUs

#### Selection and ordering data

| Version  | SD | Article No.               | Price per PU | PU (UNIT, SET, M) | PS*      | PG  |
|--|----|---------------------------|--------------|-------------------|----------|-----|
| <b>IM 154-8 PN/DP CPU interface modules</b>  |    |                           |              |                   |          |     |
| <b>IM 154-8 PN/DP CPU interface modules, V3.2</b><br>PROFINET IO Controller for operating distributed I/Os on PROFINET, with integrated PLC functionality  | 1  | <b>6ES7154-8AB01-0AB0</b> |              | 1                 | 1 unit   | 250 |
| <b>Accessories</b>   |    |                           |              |                   |          |     |
| <b>MMC 64 KB<sup>1)</sup></b><br>For program backups   | 1  | <b>6ES7953-8LF31-0AA0</b> |              | 1                 | 1 unit   | 230 |
| <b>MMC 128 KB<sup>1)</sup></b><br>For program backups  | 1  | <b>6ES7953-8LG31-0AA0</b> |              | 1                 | 1 unit   | 230 |
| <b>MMC 512 KB<sup>1)</sup></b><br>For program backups  | 1  | <b>6ES7953-8LJ31-0AA0</b> |              | 1                 | 1 unit   | 230 |
| <b>MMC 2 MB<sup>1)</sup></b><br>For program backups and/or firmware updates  | 1  | <b>6ES7953-8LL31-0AA0</b> |              | 1                 | 1 unit   | 230 |
| <b>MMC 4 MB<sup>1)</sup></b><br>For program backups  | 1  | <b>6ES7953-8LM31-0AA0</b> |              | 1                 | 1 unit   | 230 |
| <b>MMC 8 MB<sup>1)</sup></b><br>For program backups  | 1  | <b>6ES7953-8LP31-0AA0</b> |              | 1                 | 1 unit   | 230 |
| <b>Connection modules</b><br>For CPU IM 154-8 PN/DP, with 4 x M12 and 2 x 7/8", for connection of PROFINET and PROFIBUS DP   | 1  | <b>6ES7194-4AN00-0AA0</b> |              | 1                 | 1 unit   | 250 |
| <b>SCALANCE X-200 Industrial Ethernet switches</b><br>With integrated SNMP access, web diagnostics, copper cable diagnostics and PROFINET diagnostics, SCALANCE X208PRO for configuring line, star and ring structures, in degree of protection IP65, with eight 10/100 Mbps M12 ports, including eleven M12 dust covers | 1  | <b>6GK5208-0HA10-2AA6</b> |              | 1                 | 1 unit   | 5N2 |
| <b>Industrial Ethernet FC RJ45 Plug 180</b><br>RJ45 plug-in connector for Industrial Ethernet, with robust metal enclosure and integrated insulation displacement contacts for connection of Industrial Ethernet FC installation cables; with 180° cable feeder  |    |                           |              |                   |          |     |
| • 1 unit   | 1  | <b>6GK1901-1BB10-2AA0</b> |              | 1                 | 1 unit   | 5K1 |
| • 10 units   | 1  | <b>6GK1901-1BB10-2AB0</b> |              | 1                 | 10 units | 5K1 |
| • 50 units   | 1  | <b>6GK1901-1BB10-2AE0</b> |              | 1                 | 50 units | 5K1 |
| <b>Industrial Ethernet FastConnect installation cables</b>   |    |                           |              |                   |          |     |
| • FastConnect standard cable   | 1  | <b>6XV1840-2AH10</b>      |              | 1                 | 1 M      | 5K1 |
| • FastConnect trailing cable   | 1  | <b>6XV1840-3AH10</b>      |              | 1                 | 1 M      | 5K1 |
| • FastConnect marine cable   | 1  | <b>6XV1840-4AH10</b>      |              | 1                 | 1 M      | 5K1 |
| <b>Industrial Ethernet FastConnect installation cables</b>   |    |                           |              |                   |          |     |
| • <b>IE FC TP trailing cables GP 2 x 2;</b><br>Sold by the meter, delivery unit max. 1 000 m; minimum order quantity 20 m  | 1  | <b>6XV1870-2D</b>         |              | 1                 | 1 M      | 5K2 |
| • <b>IE TP torsion cables GP 2 x 2;</b><br>Sold by the meter, delivery unit max. 1 000 m; minimum order quantity 20 m  | 1  | <b>6XV1870-2F</b>         |              | 1                 | 1 M      | 5K2 |
| <b>Industrial Ethernet FastConnect Stripping tools</b>   | 1  | <b>6GK1901-1GA00</b>      |              | 1                 | 1 unit   | 5K2 |
| <b>IE connecting cables M12-180/M12-180</b>  |    |                           |              |                   |          |     |
| • Preassembled IE FC TP trailing cables GP 2 x 2 (PROFINET type C) with two 4-pole M12 plugs (4-pole, D-coded), degree of protection IP65/IP67, in various lengths:  |    |                           |              |                   |          |     |
| - 0.3 m  | 1  | <b>6XV1870-8AE30</b>      |              | 1                 | 1 unit   | 5K1 |
| - 0.5 m  | 1  | <b>6XV1870-8AE50</b>      |              | 1                 | 1 unit   | 5K1 |
| - 1.0 m  | 1  | <b>6XV1870-8AH10</b>      |              | 1                 | 1 unit   | 5K1 |
| - 1.5 m  | 1  | <b>6XV1870-8AH15</b>      |              | 1                 | 1 unit   | 5K1 |
| - 2.0 m  | 1  | <b>6XV1870-8AH20</b>      |              | 1                 | 1 unit   | 5K1 |
| - 3.0 m  | 1  | <b>6XV1870-8AH30</b>      |              | 1                 | 1 unit   | 5K1 |
| - 5.0 m  | 1  | <b>6XV1870-8AH50</b>      |              | 1                 | 1 unit   | 5K1 |
| - 10 m   | 1  | <b>6XV1870-8AN10</b>      |              | 1                 | 1 unit   | 5K1 |
| - 15 m   | 1  | <b>6XV1870-8AN15</b>      |              | 1                 | 1 unit   | 5K1 |
| • PROFINET M12 connecting cables, trailing, preassembled at both ends with M12 plugs, angular (pin), in various lengths:   |    |                           |              |                   |          |     |
| - 3.0 m  | 15 | <b>3RK1902-2NB30</b>      |              | 1                 | 1 unit   | 42D |
| - 5.0 m  | 15 | <b>3RK1902-2NB50</b>      |              | 1                 | 1 unit   | 42D |
| - 10 m   | 15 | <b>3RK1902-2NC10</b>      |              | 1                 | 1 unit   | 42D |
| • PROFINET M12 connecting cables, trailing, preassembled at one end with M12 plugs, angular (one end with pin, one end open), in various lengths:  |    |                           |              |                   |          |     |
| - 3.0 m  | 15 | <b>3RK1902-2HB30</b>      |              | 1                 | 1 unit   | 42D |
| - 5.0 m  | 15 | <b>3RK1902-2HB50</b>      |              | 1                 | 1 unit   | 42D |
| - 10 m   | 15 | <b>3RK1902-2HC10</b>      |              | 1                 | 1 unit   | 42D |

<sup>1)</sup> For operation of the CPU, an MMC is essential.

# Motor Starters for Use in the Field, High Degree of Protection

## ET 200pro Motor Starters

### ET 200pro – CPUs

## Standard CPUs

| Version   | SD | Article No.               | Price per PU | PU (UNIT, SET, M) | PS*      | PG  |
|---|----|---------------------------|--------------|-------------------|----------|-----|
| <b>IM 154-8 PN/DP CPU interface modules (continued)</b>   |    |                           |              |                   |          |     |
| <b>IE FC M12 Plug PRO</b>   |    |                           |              |                   |          |     |
| PROFINET M12 connectors, D-coded with quick-connect technology, axial outgoing feeder   |    |                           |              |                   |          |     |
| • 1 unit  | 1  | <b>6GK1901-0DB20-6AA0</b> |              | 1                 | 1 unit   | 5K1 |
| • 8 units   | 1  | <b>6GK1901-0DB20-6AA8</b> |              | 1                 | 8 units  | 5K1 |
| • PROFINET M12 connectors, D-coded, angular   | 5  | <b>3RK1902-2DA00</b>      |              | 1                 | 1 unit   | 42D |
| <b>IE Panel Feedthrough</b>   |    |                           |              |                   |          |     |
| Control cabinet bushing for transition from M12 connection method (D-coded, IP65/IP67) to RJ45 connection method (IP20), 1 pack = 5 units   |    |                           |              |                   |          |     |
|   | 1  | <b>6GK1901-0DM20-2AA5</b> |              | 1                 | 5 units  | 5K2 |
| <b>7/8" connecting cables for power supply</b>  |    |                           |              |                   |          |     |
| • 5-core, 5 x 1.5 mm <sup>2</sup> , trailing, preassembled with two 7/8" plugs (axial outgoing feeder), 5-pole, max. 50 m, in various lengths:  |    |                           |              |                   |          |     |
| - 1.5 m   | 1  | <b>6XV1822-5BH15</b>      |              | 1                 | 1 unit   | 5K1 |
| - 2.0 m   | 1  | <b>6XV1822-5BH20</b>      |              | 1                 | 1 unit   | 5K1 |
| - 3.0 m   | 1  | <b>6XV1822-5BH30</b>      |              | 1                 | 1 unit   | 5K1 |
| - 5.0 m   | 1  | <b>6XV1822-5BH50</b>      |              | 1                 | 1 unit   | 5K1 |
| - 10 m  | 1  | <b>6XV1822-5BN10</b>      |              | 1                 | 1 unit   | 5K1 |
| - 15 m  | 1  | <b>6XV1822-5BN15</b>      |              | 1                 | 1 unit   | 5K1 |
| - For more special lengths with 90° or 180° cable feeder, see <a href="http://support.automation.siemens.com/WWW/view/en/26999294">http://support.automation.siemens.com/WWW/view/en/26999294</a> |    |                           |              |                   |          |     |
| • Trailing power cables, 5 x 1.5 mm <sup>2</sup> , preassembled at both ends with 7/8" connectors, angular (one end with socket, one end with pin), in various lengths:                           |    |                           |              |                   |          |     |
| - 3.0 m   | 15 | <b>3RK1902-3NB30</b>      |              | 1                 | 1 unit   | 42D |
| - 5.0 m   | 15 | <b>3RK1902-3NB50</b>      |              | 1                 | 1 unit   | 42D |
| - 10 m  | 15 | <b>3RK1902-3NC10</b>      |              | 1                 | 1 unit   | 42D |
| • Trailing power cables, 5 x 1.5 mm <sup>2</sup> , preassembled at one end with 7/8" connector with female insert, angular (one end with socket, one end open), in various lengths:               |    |                           |              |                   |          |     |
| - 3.0 m   | 15 | <b>3RK1902-3GB30</b>      |              | 1                 | 1 unit   | 42D |
| - 5.0 m   | 15 | <b>3RK1902-3GB50</b>      |              | 1                 | 1 unit   | 42D |
| - 10 m  | 15 | <b>3RK1902-3GC10</b>      |              | 1                 | 1 unit   | 42D |
| <b>Power cables</b>   |    |                           |              |                   |          |     |
| 5-core, 5 x 1.5 mm <sup>2</sup> , trailing, sold by the meter, minimum order quantity 20 m, maximum order quantity 1 000 m  |    |                           |              |                   |          |     |
|   | 1  | <b>6XV1830-8AH10</b>      |              | 1                 | 1 M      | 5K2 |
| <b>7/8" connectors</b>  |    |                           |              |                   |          |     |
| For ET 200eco, with axial cable feeder  |    |                           |              |                   |          |     |
| • With pin insert, pack of 5  | 1  | <b>6GK1905-0FA00</b>      |              | 1                 | 5 units  | 5K2 |
| • With female insert, pack of 5   | 1  | <b>6GK1905-0FB00</b>      |              | 1                 | 5 units  | 5K2 |
| • Angular, with female insert, 1 unit   | 5  | <b>3RK1902-3DA00</b>      |              | 1                 | 1 unit   | 42D |
| • Angular with pin insert, 1 unit   | 5  | <b>3RK1902-3BA00</b>      |              | 1                 | 1 unit   | 42D |
| <b>7/8" covers, pack of 10</b>  |    |                           |              |                   |          |     |
|   | 1  | <b>6ES7194-3JA00-0AA0</b> |              | 1                 | 10 units | 250 |
| <b>Twisted pair connecting cables 4 x 2 with RJ45 connectors</b>  |    |                           |              |                   |          |     |
| • 0.5 m   | 1  | <b>6XV1870-3QE50</b>      |              | 1                 | 1 unit   | 5K1 |
| • 1 m   | 1  | <b>6XV1870-3QH10</b>      |              | 1                 | 1 unit   | 5K1 |
| • 2 m   | 1  | <b>6XV1870-3QH20</b>      |              | 1                 | 1 unit   | 5K1 |
| • 6 m   | 1  | <b>6XV1870-3QH60</b>      |              | 1                 | 1 unit   | 5K1 |
| • 10 m  | 1  | <b>6XV1870-3QN10</b>      |              | 1                 | 1 unit   | 5K1 |
| <b>Crossed twisted pair connecting cables 4 x 2 with RJ45 connectors</b>  |    |                           |              |                   |          |     |
| • 0.5 m   | 1  | <b>6XV1870-3RE50</b>      |              | 1                 | 1 unit   | 5K1 |
| • 1 m   | 1  | <b>6XV1870-3RH10</b>      |              | 1                 | 1 unit   | 5K1 |
| • 2 m   | 1  | <b>6XV1870-3RH20</b>      |              | 1                 | 1 unit   | 5K1 |
| • 6 m   | 1  | <b>6XV1870-3RH60</b>      |              | 1                 | 1 unit   | 5K1 |
| • 10 m  | 1  | <b>6XV1870-3RN10</b>      |              | 1                 | 1 unit   | 5K1 |
| <b>M12 sealing caps</b>   |    |                           |              |                   |          |     |
| For protection of unused M12 terminals on ET 200pro   |    |                           |              |                   |          |     |
|   | ▶  | <b>3RX9802-0AA00</b>      |              | 100               | 10 units | 42C |
| <b>M12 sealing caps with female thread</b>  |    |                           |              |                   |          |     |
| 5 units   | 1  | <b>6ES7194-4JD60-0AA0</b> |              | 1                 | 5 units  | 250 |
| <b>PROFIBUS M12 connecting cables</b>   |    |                           |              |                   |          |     |
| Preassembled with two 5-pole M12 plugs/sockets, max. 100 m in various lengths:  |    |                           |              |                   |          |     |
| • 1.5 m   | 1  | <b>6XV1830-3DH15</b>      |              | 1                 | 1 unit   | 5K1 |
| • 2.0 m   | 1  | <b>6XV1830-3DH20</b>      |              | 1                 | 1 unit   | 5K1 |
| • 3.0 m   | 1  | <b>6XV1830-3DH30</b>      |              | 1                 | 1 unit   | 5K1 |
| • 5.0 m   | 1  | <b>6XV1830-3DH50</b>      |              | 1                 | 1 unit   | 5K1 |
| • 10 m  | 1  | <b>6XV1830-3DN10</b>      |              | 1                 | 1 unit   | 5K1 |
| • 15 m  | 1  | <b>6XV1830-3DN15</b>      |              | 1                 | 1 unit   | 5K1 |
| For more special lengths with 90° or 180° cable feeder, see <a href="http://support.automation.siemens.com/WWW/view/en/26999294">http://support.automation.siemens.com/WWW/view/en/26999294</a>   |    |                           |              |                   |          |     |

# Motor Starters for Use in the Field, High Degree of Protection

## ET 200pro Motor Starters

### ET 200pro – CPUs

#### Standard CPUs

| Version   | SD         | Article No.                 | Price per PU | PU (UNIT, SET, M) | PS* | PG |
|---|------------|-----------------------------|--------------|-------------------|-----|----|
| d   |            |                             |              |                   |     |    |
| <b>IM 154-8 PN/DP CPU interface modules (continued)</b>   |            |                             |              |                   |     |    |
| <b>PROFIBUS M12 bus termination plugs, female insert</b>  | 1          | <b>6GK1905-0ED00</b>        |              | 1 5 units         | 5K2 |    |
| <b>PROFIBUS M12 bus termination plugs, pin insert</b>   | 1          | <b>6GK1905-0EC00</b>        |              | 1 5 units         | 5K2 |    |
| <b>M12 plug-in connectors, axial outgoing feeder, with pin insert</b>   | 1          | <b>6GK1905-0EA00</b>        |              | 1 5 units         | 5K2 |    |
| <b>PROFIBUS FC standard cable GP</b><br>Standard type with special design for fast installation, 2-core, shielded,<br>Sold by the meter: max. delivery unit 1 000 m, minimum order quantity 20 m  | 1          | <b>6XV1830-0EH10</b>        |              | 1 1 M             | 5K1 |    |
| <b>PROFIBUS FC trailing cable</b><br>2-core, shielded   | 1          | <b>6XV1830-3EH10</b>        |              | 1 1 M             | 5K2 |    |
| <b>PROFIBUS FC food cable</b><br>2-core, shielded<br>Sold by the meter: max. delivery unit 1 000 m, minimum order quantity 20 m   | 1          | <b>6XV1830-0GH10</b>        |              | 1 1 M             | 5K2 |    |
| <b>PROFIBUS FC robust cables</b><br>2-core, shielded<br>Sold by the meter: max. delivery unit 1 000 m, minimum order quantity 20 m  | 1          | <b>6XV1830-0JH10</b>        |              | 1 1 M             | 5K2 |    |
| <b>PROFIBUS M12 connectors</b><br>5-pole, B-coded, metal enclosure, 1 pack = 5 units  |            |                             |              |                   |     |    |
| • Female insert   | 1          | <b>6GK1905-0EB00</b>        |              | 1 5 units         | 5K2 |    |
| <b>CPU 1516pro-2 PN</b>   |            |                             |              |                   |     |    |
| <b>CPU 1516pro-2 PN</b><br>Work memory 1 MB for program, 5 MB for data, PROFINET IO IRT interface,<br>PROFINET IO RT interface; SIMATIC Memory Card required  | 1          | <b>6ES7516-2PN00-0AB0</b>   |              | 1 1 unit          | 215 |    |
| <b>Accessories</b>  |            |                             |              |                   |     |    |
| <b>SIMATIC Memory Card</b>  |            |                             |              |                   |     |    |
| • 4 MB <sup>1)</sup>  | <b>NEW</b> | 1 <b>6ES7954-8LC03-0AA0</b> |              | 1 1 unit          | 212 |    |
| • 12 MB <sup>1)</sup>   | <b>NEW</b> | 1 <b>6ES7954-8LE03-0AA0</b> |              | 1 1 unit          | 212 |    |
| • 24 MB <sup>1)</sup>   | <b>NEW</b> | 1 <b>6ES7954-8LF03-0AA0</b> |              | 1 1 unit          | 212 |    |
| • 256 MB <sup>1)</sup>  | <b>NEW</b> | 1 <b>6ES7954-8LL03-0AA0</b> |              | 1 1 unit          | 212 |    |
| • 2 GB <sup>1)</sup>  |            | 1 <b>6ES7954-8LP02-0AA0</b> |              | 1 1 unit          | 212 |    |
| • 32 GB <sup>1)</sup>   |            | 1 <b>6ES7954-8LT03-0AA0</b> |              | 1 1 unit          | 212 |    |
| <b>Connection modules</b><br>CM CPU 2PN M12 / 7/8",<br>with 3 x M12 and 2 x 7/8", for connection of 2 x PROFINET  | 1          | <b>6ES7194-4AP00-0AA0</b>   |              | 1 1 unit          | 215 |    |
| <b>Industrial Ethernet FC RJ45 Plug 180</b><br>RJ45 plug-in connector for Industrial Ethernet, with robust metal enclosure<br>and integrated insulation displacement contacts for connection of<br>Industrial Ethernet FC installation cables; with 180° cable feeder |            |                             |              |                   |     |    |
| • 1 unit  | 1          | <b>6GK1901-1BB10-2AA0</b>   |              | 1 1 unit          | 5K1 |    |
| • 10 units  | 1          | <b>6GK1901-1BB10-2AB0</b>   |              | 1 10 units        | 5K1 |    |
| • 50 units  | 1          | <b>6GK1901-1BB10-2AE0</b>   |              | 1 50 units        | 5K1 |    |
| <b>Industrial Ethernet FastConnect installation cables</b>  |            |                             |              |                   |     |    |
| • FastConnect standard cable  | 1          | <b>6XV1840-2AH10</b>        |              | 1 1 M             | 5K1 |    |
| • FastConnect trailing cable  | 1          | <b>6XV1840-3AH10</b>        |              | 1 1 M             | 5K1 |    |
| • FastConnect marine cable  | 1          | <b>6XV1840-4AH10</b>        |              | 1 1 M             | 5K1 |    |
| <b>Industrial Ethernet FastConnect installation cables</b>  |            |                             |              |                   |     |    |
| • <b>IE FC TP trailing cables GP 2 x 2;</b><br>Sold by the meter, delivery unit max. 1 000 m; minimum order quantity 20 m   | 1          | <b>6XV1870-2D</b>           |              | 1 1 M             | 5K2 |    |
| • <b>IE TP torsion cables GP 2 x 2;</b><br>Sold by the meter, delivery unit max. 1 000 m; minimum order quantity 20 m   | 1          | <b>6XV1870-2F</b>           |              | 1 1 M             | 5K2 |    |
| <b>Industrial Ethernet FastConnect</b><br>Stripping tools   | 1          | <b>6GK1901-1GA00</b>        |              | 1 1 unit          | 5K2 |    |
| <b>IE connecting cables M12-180/M12-180</b>   |            |                             |              |                   |     |    |
| • Preassembled IE FC TP trailing cables GP 2 x 2 (PROFINET type C) with two 4-pole<br>M12 plugs (4-pole, D-coded), degree of protection IP65/IP67, in various lengths:  |            |                             |              |                   |     |    |
| - 0.3 m   | 1          | <b>6XV1870-8AE30</b>        |              | 1 1 unit          | 5K1 |    |
| - 0.5 m   | 1          | <b>6XV1870-8AE50</b>        |              | 1 1 unit          | 5K1 |    |
| - 1.0 m   | 1          | <b>6XV1870-8AH10</b>        |              | 1 1 unit          | 5K1 |    |
| - 1.5 m   | 1          | <b>6XV1870-8AH15</b>        |              | 1 1 unit          | 5K1 |    |
| - 2.0 m   | 1          | <b>6XV1870-8AH20</b>        |              | 1 1 unit          | 5K1 |    |
| - 3.0 m   | 1          | <b>6XV1870-8AH30</b>        |              | 1 1 unit          | 5K1 |    |
| - 5.0 m   | 1          | <b>6XV1870-8AH50</b>        |              | 1 1 unit          | 5K1 |    |
| - 10 m  | 1          | <b>6XV1870-8AN10</b>        |              | 1 1 unit          | 5K1 |    |
| - 15 m  | 1          | <b>6XV1870-8AN15</b>        |              | 1 1 unit          | 5K1 |    |
| • PROFINET M12 connecting cables, trailing, preassembled at both ends with<br>M12 plugs, angular (pin), in various lengths:   |            |                             |              |                   |     |    |
| - 3.0 m   | 15         | <b>3RK1902-2NB30</b>        |              | 1 1 unit          | 42D |    |
| - 5.0 m   | 15         | <b>3RK1902-2NB50</b>        |              | 1 1 unit          | 42D |    |
| - 10 m  | 15         | <b>3RK1902-2NC10</b>        |              | 1 1 unit          | 42D |    |

<sup>1)</sup> For operation of the CPU, an MMC is essential

# Motor Starters for Use in the Field, High Degree of Protection

## ET 200pro Motor Starters

### ET 200pro – CPUs

## Standard CPUs

| Version   | SD | Article No.               | Price per PU | PU (UNIT, SET, M) | PS*      | PG  |
|---|----|---------------------------|--------------|-------------------|----------|-----|
| <b>CPU 1516pro-2 PN (continued)</b>   |    |                           |              |                   |          |     |
| <b>IE Connecting Cable M12-180/M12-180 (continued)</b>  |    |                           |              |                   |          |     |
| • PROFINET M12 connecting cables, trailing, preassembled at one end with M12 plugs, angular (one end with pin, one end open), in various lengths:   |    |                           |              |                   |          |     |
| - 3.0 m   | 15 | <b>3RK1902-2HB30</b>      |              | 1                 | 1 unit   | 42D |
| - 5.0 m   | 15 | <b>3RK1902-2HB50</b>      |              | 1                 | 1 unit   | 42D |
| - 10 m  | 15 | <b>3RK1902-2HC10</b>      |              | 1                 | 1 unit   | 42D |
| <b>IE FC M12 Plug PRO</b>   |    |                           |              |                   |          |     |
| PROFINET M12 connectors, D-coded with quick-connect technology, axial outgoing feeder.  |    |                           |              |                   |          |     |
| • 1 unit  | 1  | <b>6GK1901-0DB20-6AA0</b> |              | 1                 | 1 unit   | 5K1 |
| • 8 units   | 1  | <b>6GK1901-0DB20-6AA8</b> |              | 1                 | 8 units  | 5K1 |
| • PROFINET M12 connectors, D-coded, angular   | 5  | <b>3RK1902-2DA00</b>      |              | 1                 | 1 unit   | 42D |
| <b>IE Panel Feedthrough</b>   |    |                           |              |                   |          |     |
| Control cabinet bushing for transition from M12 connection method (D-coded, IP65/IP67) to RJ45 connection method (IP20), 1 pack = 5 units   |    |                           |              |                   |          |     |
|   | 1  | <b>6GK1901-0DM20-2AA5</b> |              | 1                 | 5 units  | 5K2 |
| <b>7/8" connecting cables for power supply</b>  |    |                           |              |                   |          |     |
| 5-core, 5 x 1.5 mm <sup>2</sup> , trailing, preassembled with two 7/8" plugs (axial outgoing feeder), 5-pole, max. 50 m, in various lengths:  |    |                           |              |                   |          |     |
| • 1.5 m   | 1  | <b>6XV1822-5BH15</b>      |              | 1                 | 1 unit   | 5K1 |
| • 2.0 m   | 1  | <b>6XV1822-5BH20</b>      |              | 1                 | 1 unit   | 5K1 |
| • 3.0 m   | 1  | <b>6XV1822-5BH30</b>      |              | 1                 | 1 unit   | 5K1 |
| • 5.0 m   | 1  | <b>6XV1822-5BH50</b>      |              | 1                 | 1 unit   | 5K1 |
| • 10 m  | 1  | <b>6XV1822-5BN10</b>      |              | 1                 | 1 unit   | 5K1 |
| • 15 m  | 1  | <b>6XV1822-5BN15</b>      |              | 1                 | 1 unit   | 5K1 |
| • For more special lengths with 90° or 180° cable feeder, see <a href="http://support.automation.siemens.com/WW/view/en/26999294">http://support.automation.siemens.com/WW/view/en/26999294</a> |    |                           |              |                   |          |     |
| • Trailing power cables, 5 x 1.5 mm <sup>2</sup> , preassembled at both ends with 7/8" connectors, angular (one end with socket, one end with pin), in various lengths:                         |    |                           |              |                   |          |     |
| - 3.0 m   | 15 | <b>3RK1902-3NB30</b>      |              | 1                 | 1 unit   | 42D |
| - 5.0 m   | 15 | <b>3RK1902-3NB50</b>      |              | 1                 | 1 unit   | 42D |
| - 10 m  | 15 | <b>3RK1902-3NC10</b>      |              | 1                 | 1 unit   | 42D |
| • Trailing power cables, 5 x 1.5 mm <sup>2</sup> , preassembled at one end with 7/8" connector with female insert, angular (one end with socket, one end open), in various lengths:             |    |                           |              |                   |          |     |
| - 3.0 m   | 15 | <b>3RK1902-3GB30</b>      |              | 1                 | 1 unit   | 42D |
| - 5.0 m   | 15 | <b>3RK1902-3GB50</b>      |              | 1                 | 1 unit   | 42D |
| - 10 m  | 15 | <b>3RK1902-3GC10</b>      |              | 1                 | 1 unit   | 42D |
| <b>Power cables</b>   |    |                           |              |                   |          |     |
| 5-core, 5 x 1.5 mm <sup>2</sup> , trailing, sold by the meter, minimum order quantity 20 m, maximum order quantity 1 000 m  |    |                           |              |                   |          |     |
|   | 1  | <b>6XV1830-8AH10</b>      |              | 1                 | 1 M      | 5K2 |
| <b>7/8" connectors</b>  |    |                           |              |                   |          |     |
| For ET 200eco, with axial cable feeder  |    |                           |              |                   |          |     |
| • With pin insert, pack of 5  | 1  | <b>6GK1905-0FA00</b>      |              | 1                 | 5 units  | 5K2 |
| • With female insert, pack of 5   | 1  | <b>6GK1905-0FB00</b>      |              | 1                 | 5 units  | 5K2 |
| • Angular, with female insert, 1 unit   | 5  | <b>3RK1902-3DA00</b>      |              | 1                 | 1 unit   | 42D |
| • Angular with pin insert, 1 unit   | 5  | <b>3RK1902-3BA00</b>      |              | 1                 | 1 unit   | 42D |
| <b>7/8" covers, pack of 10</b>  |    |                           |              |                   |          |     |
|   | 1  | <b>6ES7194-3JA00-0AA0</b> |              | 1                 | 10 units | 250 |
| <b>Twisted pair connecting cables 4x2 with RJ45 connectors</b>  |    |                           |              |                   |          |     |
| • 0.5 m   | 1  | <b>6XV1870-3QE50</b>      |              | 1                 | 1 unit   | 5K1 |
| • 1 m   | 1  | <b>6XV1870-3QH10</b>      |              | 1                 | 1 unit   | 5K1 |
| • 2 m   | 1  | <b>6XV1870-3QH20</b>      |              | 1                 | 1 unit   | 5K1 |
| • 6 m   | 1  | <b>6XV1870-3QH60</b>      |              | 1                 | 1 unit   | 5K1 |
| • 10 m  | 1  | <b>6XV1870-3QN10</b>      |              | 1                 | 1 unit   | 5K1 |
| <b>Crossed twisted pair connecting cables 4x2 with RJ45 connectors</b>  |    |                           |              |                   |          |     |
| • 0.5 m   | 1  | <b>6XV1870-3RE50</b>      |              | 1                 | 1 unit   | 5K1 |
| • 1 m   | 1  | <b>6XV1870-3RH10</b>      |              | 1                 | 1 unit   | 5K1 |
| • 2 m   | 1  | <b>6XV1870-3RH20</b>      |              | 1                 | 1 unit   | 5K1 |
| • 6 m   | 1  | <b>6XV1870-3RH60</b>      |              | 1                 | 1 unit   | 5K1 |
| • 10 m  | 1  | <b>6XV1870-3RN10</b>      |              | 1                 | 1 unit   | 5K1 |
| <b>M12 sealing caps</b>   |    |                           |              |                   |          |     |
| For protection of unused M12 terminals on ET 200pro   |    |                           |              |                   |          |     |
|   | ▶  | <b>3RX9802-0AA00</b>      |              | 100               | 10 units | 42C |
| <b>M12 sealing caps with female thread</b>  |    |                           |              |                   |          |     |
| 5 units   | 1  | <b>6ES7194-4JD60-0AA0</b> |              | 1                 | 5 units  | 250 |

# Motor Starters for Use in the Field, High Degree of Protection

## ET 200pro Motor Starters

### ET 200pro – CPUs

#### Fail-safe CPUs

#### Selection and ordering data

| Version   | SD | Article No.               | Price per PU | PU (UNIT, SET, M) | PS*      | PG  |
|---|----|---------------------------|--------------|-------------------|----------|-----|
|   | d  |                           |              |                   |          |     |
| <b>IM 154-8 F PN/DP CPU interface modules</b>   |    |                           |              |                   |          |     |
| <b>IM 154-8 F PN/DP CPU interface modules, V3.2</b>   |    |                           |              |                   |          |     |
| Fail-safe PROFINET IO Controller for operating distributed I/Os on PROFINET, with integrated PLC functionality  |    |                           |              |                   |          |     |
| • 512 KB work memory  | 1  | <b>6ES7154-8FB01-0AB0</b> |              | 1                 | 1 unit   | 241 |
| • 1.5 MB work memory  | 1  | <b>6ES7154-8FX00-0AB0</b> |              | 1                 | 1 unit   | 241 |
| <b>S7 Distributed Safety V5.4 SP5 Update 2 programming tool</b>   |    |                           |              |                   |          |     |
| Task:<br>Configuration software for configuring fail-safe user programs for SIMATIC S7-300F, S7-400F, WinAC RTX F, ET 200S, ET 200M, ET 200iSP, ET 200pro, ET 200eco, ET 200SP  |    |                           |              |                   |          |     |
| Requirement:<br>Windows 7 SP1 (64 bit), Windows 10 Professional/Enterprise (64-bit), Windows Server 2008 R2 SP1 (64-bit), Windows Server 2012 R2 (64-bit), Windows Server 2016 (64-bit); STEP 7 from V5.5 SP1;<br>Please note also the operating system approved for the STEP 7 version used. |    |                           |              |                   |          |     |
| • Floating license for 1 user, software and documentation on DVD; license key on USB flash drive  | 1  | <b>6ES7833-1FC02-0YA5</b> |              | 1                 | 1 unit   | 241 |
| • Floating license for 1 user, software, documentation and license key download <sup>1)</sup> ; email address required for delivery   | 1  | <b>6ES7833-1FC02-0YH5</b> |              | 1                 | 1 unit   | 241 |
| <b>S7 Distributed Safety upgrade</b>  |    |                           |              |                   |          |     |
| • From V5.x to V5.4; floating license for 1 user, software and documentation on DVD; license key on USB flash drive   | 5  | <b>6ES7833-1FC02-0YE5</b> |              | 1                 | 1 unit   | 241 |
| <b>STEP 7 Safety Advanced V15</b>   |    |                           |              |                   |          |     |
| Task:<br>Engineering tool for configuring and programming fail-safe user programs for SIMATIC S7-1200 FC, S7-1500F, S7-1500F Software Controller, S7-300F, S7-400F, WinAC RTX F, ET 200SP F Controller and the fail-safe I/O, ET 200SP, ET 200S, ET 200M, ET 200iSP, ET 200pro and ET 200eco  |    |                           |              |                   |          |     |
| Requirement:<br>STEP 7 Professional V15   |    |                           |              |                   |          |     |
| • Floating license for 1 user, software and documentation on DVD; license key on USB flash drive  | X  | <b>6ES7833-1FA15-0YA5</b> |              | 1                 | 1 unit   | 218 |
| • Floating license for 1 user, software, documentation and license key download <sup>1)</sup> ; email address required for delivery   | 1  | <b>6ES7833-1FA15-0YH5</b> |              | 1                 | 1 unit   | 218 |
| <b>Accessories</b>  |    |                           |              |                   |          |     |
| <b>SIMATIC Micro Memory Cards</b>   |    |                           |              |                   |          |     |
| • MMC 64 KB <sup>2)</sup> for program backup  | 1  | <b>6ES7953-8LF31-0AA0</b> |              | 1                 | 1 unit   | 230 |
| • MMC 128 KB <sup>2)</sup> for program backup   | 1  | <b>6ES7953-8LG31-0AA0</b> |              | 1                 | 1 unit   | 230 |
| • MMC 512 KB <sup>2)</sup> for program backup   | 1  | <b>6ES7953-8LJ31-0AA0</b> |              | 1                 | 1 unit   | 230 |
| • MMC 2 MB <sup>2)</sup> for program backups and/or firmware updates  | 1  | <b>6ES7953-8LL31-0AA0</b> |              | 1                 | 1 unit   | 230 |
| • MMC 4 MB <sup>2)</sup> for program backup   | 1  | <b>6ES7953-8LM31-0AA0</b> |              | 1                 | 1 unit   | 230 |
| • MMC 8 MB <sup>2)</sup> for program backup   | 1  | <b>6ES7953-8LP31-0AA0</b> |              | 1                 | 1 unit   | 230 |
| <b>Connection modules</b>   |    |                           |              |                   |          |     |
| For CPU IM 154-8 PN/DP, with 4 x M12 and 2 x 7/8", for connection of PROFINET and PROFIBUS DP   | 1  | <b>6ES7194-4AN00-0AA0</b> |              | 1                 | 1 unit   | 250 |
| <b>SCALANCE X-200 Industrial Ethernet switches</b>  |    |                           |              |                   |          |     |
| With integrated SNMP access, web diagnostics, copper cable diagnostics and PROFINET diagnostics, SCALANCE X208PRO for configuring line, star and ring structures, in degree of protection IP65, with eight 10/100 Mbps M12 ports, including eleven M12 dust covers                            |    |                           |              |                   |          |     |
| <b>Industrial Ethernet FC RJ45 Plug 90</b>  |    |                           |              |                   |          |     |
| RJ45 plug-in connector for Industrial Ethernet, with robust metal enclosure and integrated insulation displacement contacts for connection of Industrial Ethernet FC installation cables; with 90° cable feeder   |    |                           |              |                   |          |     |
| • 1 unit  | 1  | <b>6GK1901-1BB20-2AA0</b> |              | 1                 | 1 unit   | 5K1 |
| • 10 units  | 1  | <b>6GK1901-1BB20-2AB0</b> |              | 1                 | 10 units | 5K1 |
| <b>Industrial Ethernet FC RJ45 Plug 180</b>   |    |                           |              |                   |          |     |
| RJ45 plug-in connector for Industrial Ethernet, with robust metal enclosure and integrated insulation displacement contacts for connection of Industrial Ethernet FC installation cables; with 180° cable feeder  |    |                           |              |                   |          |     |
| • 1 unit  | 1  | <b>6GK1901-1BB10-2AA0</b> |              | 1                 | 1 unit   | 5K1 |
| • 10 units  | 1  | <b>6GK1901-1BB10-2AB0</b> |              | 1                 | 10 units | 5K1 |
| • 50 units  | 1  | <b>6GK1901-1BB10-2AE0</b> |              | 1                 | 50 units | 5K1 |

<sup>1)</sup> For up-to-date information and download availability, see <http://www.siemens.com/tia-online-software-delivery>.

<sup>2)</sup> For operation of the CPU, an MMC is essential.

# Motor Starters for Use in the Field, High Degree of Protection

## ET 200pro Motor Starters

### ET 200pro – CPUs

## Fail-safe CPUs

| Version   | SD | Article No.               | Price per PU | PU (UNIT, SET, M) | PS*     | PG  |
|---|----|---------------------------|--------------|-------------------|---------|-----|
| <b>IM 154-8 F PN/DP CPU interface modules (continued)</b>   |    |                           |              |                   |         |     |
| <b>Industrial Ethernet FastConnect installation cables</b>  |    |                           |              |                   |         |     |
| • FastConnect standard cable  | 1  | <b>6XV1840-2AH10</b>      |              | 1                 | 1 M     | 5K1 |
| • FastConnect trailing cable  | 1  | <b>6XV1840-3AH10</b>      |              | 1                 | 1 M     | 5K1 |
| • FastConnect marine cable  | 1  | <b>6XV1840-4AH10</b>      |              | 1                 | 1 M     | 5K1 |
| <b>Industrial Ethernet FastConnect installation cables</b>  |    |                           |              |                   |         |     |
| • <b>IE FC TP trailing cables GP 2 x 2:</b><br>Sold by the meter, delivery unit max. 1 000 m; minimum order quantity 20 m   | 1  | <b>6XV1870-2D</b>         |              | 1                 | 1 M     | 5K2 |
| • <b>IE TP torsion cables GP 2 x 2:</b><br>Sold by the meter, delivery unit max. 1 000 m; minimum order quantity 20 m   | 1  | <b>6XV1870-2F</b>         |              | 1                 | 1 M     | 5K2 |
| <b>Industrial Ethernet FastConnect</b><br>Stripping tools   | 1  | <b>6GK1901-1GA00</b>      |              | 1                 | 1 unit  | 5K2 |
| <b>IE connecting cables M12-180/M12-180</b>   |    |                           |              |                   |         |     |
| • Preassembled IE FC TP trailing cables GP 2 x 2 (PROFINET type C) with two 4-pole M12 plugs (4-pole, D-coded), degree of protection IP65/IP67, in various lengths:                             |    |                           |              |                   |         |     |
| - 0.3 m   | 1  | <b>6XV1870-8AE30</b>      |              | 1                 | 1 unit  | 5K1 |
| - 0.5 m   | 1  | <b>6XV1870-8AE50</b>      |              | 1                 | 1 unit  | 5K1 |
| - 1.0 m   | 1  | <b>6XV1870-8AH10</b>      |              | 1                 | 1 unit  | 5K1 |
| - 1.5 m   | 1  | <b>6XV1870-8AH15</b>      |              | 1                 | 1 unit  | 5K1 |
| - 2.0 m   | 1  | <b>6XV1870-8AH20</b>      |              | 1                 | 1 unit  | 5K1 |
| - 3.0 m   | 1  | <b>6XV1870-8AH30</b>      |              | 1                 | 1 unit  | 5K1 |
| - 5.0 m   | 1  | <b>6XV1870-8AH50</b>      |              | 1                 | 1 unit  | 5K1 |
| - 10 m  | 1  | <b>6XV1870-8AN10</b>      |              | 1                 | 1 unit  | 5K1 |
| - 15 m  | 1  | <b>6XV1870-8AN15</b>      |              | 1                 | 1 unit  | 5K1 |
| • PROFINET M12 connecting cables, trailing, preassembled at both ends with M12 plugs, angular (pin), in various lengths:  |    |                           |              |                   |         |     |
| - 3.0 m   | 15 | <b>3RK1902-2NB30</b>      |              | 1                 | 1 unit  | 42D |
| - 5.0 m   | 15 | <b>3RK1902-2NB50</b>      |              | 1                 | 1 unit  | 42D |
| - 10 m  | 15 | <b>3RK1902-2NC10</b>      |              | 1                 | 1 unit  | 42D |
| • PROFINET M12 connecting cables, trailing, preassembled at one end with M12 plugs, angular (one end with pin, one end open), in various lengths:   |    |                           |              |                   |         |     |
| - 3.0 m   | 15 | <b>3RK1902-2HB30</b>      |              | 1                 | 1 unit  | 42D |
| - 5.0 m   | 15 | <b>3RK1902-2HB50</b>      |              | 1                 | 1 unit  | 42D |
| - 10 m  | 15 | <b>3RK1902-2HC10</b>      |              | 1                 | 1 unit  | 42D |
| <b>IE FC M12 Plug PRO</b><br>PROFINET M12 connectors, D-coded with quick-connect technology, axial outgoing feeder.   |    |                           |              |                   |         |     |
| • 1 unit  | 1  | <b>6GK1901-0DB20-6AA0</b> |              | 1                 | 1 unit  | 5K1 |
| • 8 units   | 1  | <b>6GK1901-0DB20-6AA8</b> |              | 1                 | 8 units | 5K1 |
| • PROFINET M12 connectors, D-coded, angular   | 5  | <b>3RK1902-2DA00</b>      |              | 1                 | 1 unit  | 42D |
| <b>IE Panel Feedthrough</b><br>Control cabinet bushing for transition from M12 connection method (D-coded, IP65/IP67) to RJ45 connection method (IP20), 1 pack = 5 units                        |    |                           |              |                   |         |     |
| 1   |    | <b>6GK1901-0DM20-2AA5</b> |              | 1                 | 5 units | 5K2 |
| <b>7/8" connecting cables for power supply</b>  |    |                           |              |                   |         |     |
| • 5-core, 5 x 1.5 mm <sup>2</sup> , trailing, preassembled with two 7/8" plugs (axial outgoing feeder), 5-pole, max. 50 m, in various lengths:  |    |                           |              |                   |         |     |
| - 1.5 m   | 1  | <b>6XV1822-5BH15</b>      |              | 1                 | 1 unit  | 5K1 |
| - 2.0 m   | 1  | <b>6XV1822-5BH20</b>      |              | 1                 | 1 unit  | 5K1 |
| - 3.0 m   | 1  | <b>6XV1822-5BH30</b>      |              | 1                 | 1 unit  | 5K1 |
| - 5.0 m   | 1  | <b>6XV1822-5BH50</b>      |              | 1                 | 1 unit  | 5K1 |
| - 10 m  | 1  | <b>6XV1822-5BN10</b>      |              | 1                 | 1 unit  | 5K1 |
| - 15 m  | 1  | <b>6XV1822-5BN15</b>      |              | 1                 | 1 unit  | 5K1 |
| - For more special lengths with 90° or 180° cable feeder, see <a href="http://support.automation.siemens.com/WW/view/en/26999294">http://support.automation.siemens.com/WW/view/en/26999294</a> |    |                           |              |                   |         |     |
| • Trailing power cables, 5 x 1.5 mm <sup>2</sup> , preassembled at both ends with 7/8" connectors, angular (one end with socket, one end with pin), in various lengths:                         |    |                           |              |                   |         |     |
| - 3.0 m   | 15 | <b>3RK1902-3NB30</b>      |              | 1                 | 1 unit  | 42D |
| - 5.0 m   | 15 | <b>3RK1902-3NB50</b>      |              | 1                 | 1 unit  | 42D |
| - 10 m  | 15 | <b>3RK1902-3NC10</b>      |              | 1                 | 1 unit  | 42D |
| • Trailing power cables, 5 x 1.5 mm <sup>2</sup> , preassembled at one end with 7/8" connector with female insert, angular (one end with socket, one end open), in various lengths:             |    |                           |              |                   |         |     |
| - 3.0 m   | 15 | <b>3RK1902-3GB30</b>      |              | 1                 | 1 unit  | 42D |
| - 5.0 m   | 15 | <b>3RK1902-3GB50</b>      |              | 1                 | 1 unit  | 42D |
| - 10 m  | 15 | <b>3RK1902-3GC10</b>      |              | 1                 | 1 unit  | 42D |
| <b>Power cables</b><br>5-core, 5 x 1.5 mm <sup>2</sup> , trailing, sold by the meter, minimum order quantity 20 m, maximum order quantity 1 000 m   |    |                           |              |                   |         |     |
| 1   |    | <b>6XV1830-8AH10</b>      |              | 1                 | 1 M     | 5K2 |

# Motor Starters for Use in the Field, High Degree of Protection

## ET 200pro Motor Starters

### ET 200pro – CPUs

#### Fail-safe CPUs

| Version   | SD | Article No.               | Price per PU | PU (UNIT, SET, M) | PS* | PG  |
|---|----|---------------------------|--------------|-------------------|-----|-----|
| <b>IM 154-8 F PN/DP CPU interface modules (continued)</b>   |    |                           |              |                   |     |     |
| <b>7/8" connectors</b>  |    |                           |              |                   |     |     |
| For ET 200eco, with axial cable feeder  |    |                           |              |                   |     |     |
| • With pin insert, pack of 5  | 1  | <b>6GK1905-0FA00</b>      |              | 1 5 units         |     | 5K2 |
| • With female insert, pack of 5   | 1  | <b>6GK1905-0FB00</b>      |              | 1 5 units         |     | 5K2 |
| • Angular, with female insert, 1 unit   | 5  | <b>3RK1902-3DA00</b>      |              | 1 1 unit          |     | 42D |
| • Angular with pin insert, 1 unit   | 5  | <b>3RK1902-3BA00</b>      |              | 1 1 unit          |     | 42D |
| <b>7/8" covers, pack of 10</b>  | 1  | <b>6ES7194-3JA00-0AA0</b> |              | 1 10 units        |     | 250 |
| <b>Twisted pair connecting cables 4 x 2 with RJ45 connectors</b>  |    |                           |              |                   |     |     |
| • 0.5 m   | 1  | <b>6XV1870-3QE50</b>      |              | 1 1 unit          |     | 5K1 |
| • 1 m   | 1  | <b>6XV1870-3QH10</b>      |              | 1 1 unit          |     | 5K1 |
| • 2 m   | 1  | <b>6XV1870-3QH20</b>      |              | 1 1 unit          |     | 5K1 |
| • 6 m   | 1  | <b>6XV1870-3QH60</b>      |              | 1 1 unit          |     | 5K1 |
| • 10 m  | 1  | <b>6XV1870-3QN10</b>      |              | 1 1 unit          |     | 5K1 |
| <b>Crossed twisted pair connecting cables 4 x 2 with RJ45 connectors</b>  |    |                           |              |                   |     |     |
| • 0.5 m   | 1  | <b>6XV1870-3RE50</b>      |              | 1 1 unit          |     | 5K1 |
| • 1 m   | 1  | <b>6XV1870-3RH10</b>      |              | 1 1 unit          |     | 5K1 |
| • 2 m   | 1  | <b>6XV1870-3RH20</b>      |              | 1 1 unit          |     | 5K1 |
| • 6 m   | 1  | <b>6XV1870-3RH60</b>      |              | 1 1 unit          |     | 5K1 |
| • 10 m  | 1  | <b>6XV1870-3RN10</b>      |              | 1 1 unit          |     | 5K1 |
| <b>M12 sealing caps</b>   | ▶  | <b>3RX9802-0AA00</b>      |              | 100 10 units      |     | 42C |
| For protection of unused M12 terminals on ET 200pro   |    |                           |              |                   |     |     |
| <b>M12 sealing caps with female thread</b>  | 1  | <b>6ES7194-4JD60-0AA0</b> |              | 1 5 units         |     | 250 |
| 5 units   |    |                           |              |                   |     |     |
| <b>PROFIBUS M12 connecting cables</b>   |    |                           |              |                   |     |     |
| Preassembled with two 5-pole M12 plugs/sockets, max. 100 m, in various lengths:   |    |                           |              |                   |     |     |
| • 1.5 m   | 1  | <b>6XV1830-3DH15</b>      |              | 1 1 unit          |     | 5K1 |
| • 2.0 m   | 1  | <b>6XV1830-3DH20</b>      |              | 1 1 unit          |     | 5K1 |
| • 3.0 m   | 1  | <b>6XV1830-3DH30</b>      |              | 1 1 unit          |     | 5K1 |
| • 5.0 m   | 1  | <b>6XV1830-3DH50</b>      |              | 1 1 unit          |     | 5K1 |
| • 10 m  | 1  | <b>6XV1830-3DN10</b>      |              | 1 1 unit          |     | 5K1 |
| • 15 m  | 1  | <b>6XV1830-3DN15</b>      |              | 1 1 unit          |     | 5K1 |
| For more special lengths with 90° or 180° cable feeder, see <a href="http://support.automation.siemens.com/WWW/view/en/26999294">http://support.automation.siemens.com/WWW/view/en/26999294</a> |    |                           |              |                   |     |     |
| <b>PROFIBUS M12 bus termination plugs, female inserts</b>   | 1  | <b>6GK1905-0ED00</b>      |              | 1 5 units         |     | 5K2 |
| <b>PROFIBUS M12 bus termination plugs, pin inserts</b>  | 1  | <b>6GK1905-0EC00</b>      |              | 1 5 units         |     | 5K2 |
| <b>M12 plug-in connectors, axial outgoing feeder, with pin insert</b>   | 1  | <b>6GK1905-0EA00</b>      |              | 1 5 units         |     | 5K2 |
| <b>PROFIBUS FC standard cable GP</b>  | 1  | <b>6XV1830-0EH10</b>      |              | 1 1 M             |     | 5K1 |
| Standard type with special design for fast installation, 2-core, shielded,<br>Sold by the meter:<br>Max. delivery unit 1 000 m,<br>minimum order quantity 20 m                                  |    |                           |              |                   |     |     |
| <b>PROFIBUS FC trailing cable</b>   | 1  | <b>6XV1830-3EH10</b>      |              | 1 1 M             |     | 5K2 |
| 2-core, shielded  |    |                           |              |                   |     |     |
| <b>PROFIBUS FC food cable</b>   | 1  | <b>6XV1830-0GH10</b>      |              | 1 1 M             |     | 5K2 |
| 2-core, shielded<br>Sold by the meter:<br>Max. delivery unit 1 000 m,<br>minimum order quantity 20 m  |    |                           |              |                   |     |     |
| <b>PROFIBUS FC robust cables</b>  | 1  | <b>6XV1830-0JH10</b>      |              | 1 1 M             |     | 5K2 |
| 2-core, shielded<br>Sold by the meter:<br>Max. delivery unit 1 000 m,<br>minimum order quantity 20 m  |    |                           |              |                   |     |     |
| <b>PROFIBUS M12 connectors</b>  |    |                           |              |                   |     |     |
| 5-pole, B-coded, metal enclosure,<br>1 pack = 5 units   |    |                           |              |                   |     |     |
| • Female insert   | 1  | <b>6GK1905-0EB00</b>      |              | 1 5 units         |     | 5K2 |

# Motor Starters for Use in the Field, High Degree of Protection

## ET 200pro Motor Starters

### ET 200pro – CPUs

## Fail-safe CPUs

| Version  | SD           | Article No.               | Price per PU | PU (UNIT, SET, M) | PS*      | PG  |
|--|--------------|---------------------------|--------------|-------------------|----------|-----|
| <b>CPU 1516pro F-2 PN</b>  |              |                           |              |                   |          |     |
| <b>CPU 1516pro F-2 PN</b><br>Work memory 1.5 MB for program, 5 MB for data,<br>PROFINET IO IRT interface,<br>PROFINET IO RT interface;<br>SIMATIC Memory Card required   | 1            | <b>6ES7516-2GN00-0AB0</b> |              | 1                 | 1 unit   | 216 |
| <b>Accessories</b>   |              |                           |              |                   |          |     |
| <b>SIMATIC Memory Card</b>   |              |                           |              |                   |          |     |
| • 4 MB <sup>1)</sup>   | <b>NEW</b> 1 | <b>6ES7954-8LC03-0AA0</b> |              | 1                 | 1 unit   | 212 |
| • 12 MB <sup>1)</sup>  | <b>NEW</b> 1 | <b>6ES7954-8LE03-0AA0</b> |              | 1                 | 1 unit   | 212 |
| • 24 MB <sup>1)</sup>  | <b>NEW</b> 1 | <b>6ES7954-8LF03-0AA0</b> |              | 1                 | 1 unit   | 212 |
| • 256 MB <sup>1)</sup>   | <b>NEW</b> 1 | <b>6ES7954-8LL03-0AA0</b> |              | 1                 | 1 unit   | 212 |
| • 2 GB <sup>1)</sup>   | 1            | <b>6ES7954-8LP02-0AA0</b> |              | 1                 | 1 unit   | 212 |
| • 32 GB <sup>1)</sup>  | 1            | <b>6ES7954-8LT03-0AA0</b> |              | 1                 | 1 unit   | 212 |
| <b>Connection modules</b>  |              |                           |              |                   |          |     |
| CM CPU 2PN M12 / 7/8";<br>with 3 x M12 and 2 x 7/8", for connection of 2 x PROFINET  | 1            | <b>6ES7194-4AP00-0AA0</b> |              | 1                 | 1 unit   | 215 |
| <b>Industrial Ethernet FC RJ45 Plug 180</b>  |              |                           |              |                   |          |     |
| RJ45 plug-in connector for Industrial Ethernet, with robust metal enclosure and integrated insulation displacement contacts for connection of Industrial Ethernet FC installation cables; with 180° cable feeder |              |                           |              |                   |          |     |
| • 1 unit   | 1            | <b>6GK1901-1BB10-2AA0</b> |              | 1                 | 1 unit   | 5K1 |
| • 10 units   | 1            | <b>6GK1901-1BB10-2AB0</b> |              | 1                 | 10 units | 5K1 |
| • 50 units   | 1            | <b>6GK1901-1BB10-2AE0</b> |              | 1                 | 50 units | 5K1 |
| <b>Industrial Ethernet FastConnect installation cables</b>   |              |                           |              |                   |          |     |
| • FastConnect standard cable   | 1            | <b>6XV1840-2AH10</b>      |              | 1                 | 1 M      | 5K1 |
| • FastConnect trailing cable   | 1            | <b>6XV1840-3AH10</b>      |              | 1                 | 1 M      | 5K1 |
| • FastConnect marine cable   | 1            | <b>6XV1840-4AH10</b>      |              | 1                 | 1 M      | 5K1 |
| <b>Industrial Ethernet FastConnect installation cables</b>   |              |                           |              |                   |          |     |
| • <b>IE FC TP trailing cables GP 2 x 2:</b><br>Sold by the meter, delivery unit max. 1 000 m; minimum order quantity 20 m  | 1            | <b>6XV1870-2D</b>         |              | 1                 | 1 M      | 5K2 |
| • <b>IE TP torsion cables GP 2 x 2:</b><br>Sold by the meter, delivery unit max. 1 000 m; minimum order quantity 20 m  | 1            | <b>6XV1870-2F</b>         |              | 1                 | 1 M      | 5K2 |
| <b>Industrial Ethernet FastConnect</b>   |              |                           |              |                   |          |     |
| Stripping tools  | 1            | <b>6GK1901-1GA00</b>      |              | 1                 | 1 unit   | 5K2 |
| <b>IE connecting cables M12-180/M12-180</b>  |              |                           |              |                   |          |     |
| • Preassembled IE FC TP trailing cables GP 2 x 2 (PROFINET type C) with two 4-pole M12 plugs (4-pole, D-coded), degree of protection IP65/IP67, in various lengths:  |              |                           |              |                   |          |     |
| - 0.3 m  | 1            | <b>6XV1870-8AE30</b>      |              | 1                 | 1 unit   | 5K1 |
| - 0.5 m  | 1            | <b>6XV1870-8AE50</b>      |              | 1                 | 1 unit   | 5K1 |
| - 1.0 m  | 1            | <b>6XV1870-8AH10</b>      |              | 1                 | 1 unit   | 5K1 |
| - 1.5 m  | 1            | <b>6XV1870-8AH15</b>      |              | 1                 | 1 unit   | 5K1 |
| - 2.0 m  | 1            | <b>6XV1870-8AH20</b>      |              | 1                 | 1 unit   | 5K1 |
| - 3.0 m  | 1            | <b>6XV1870-8AH30</b>      |              | 1                 | 1 unit   | 5K1 |
| - 5.0 m  | 1            | <b>6XV1870-8AH50</b>      |              | 1                 | 1 unit   | 5K1 |
| - 10 m   | 1            | <b>6XV1870-8AN10</b>      |              | 1                 | 1 unit   | 5K1 |
| - 15 m   | 1            | <b>6XV1870-8AN15</b>      |              | 1                 | 1 unit   | 5K1 |
| • PROFINET M12 connecting cables, trailing, preassembled at both ends with M12 plugs, angular (pin), in various lengths:   |              |                           |              |                   |          |     |
| - 3.0 m  | 15           | <b>3RK1902-2NB30</b>      |              | 1                 | 1 unit   | 42D |
| - 5.0 m  | 15           | <b>3RK1902-2NB50</b>      |              | 1                 | 1 unit   | 42D |
| - 10 m   | 15           | <b>3RK1902-2NC10</b>      |              | 1                 | 1 unit   | 42D |
| • PROFINET M12 connecting cables, trailing, preassembled at one end with M12 plugs, angular (one end with pin, one end open), in various lengths:  |              |                           |              |                   |          |     |
| - 3.0 m  | 15           | <b>3RK1902-2HB30</b>      |              | 1                 | 1 unit   | 42D |
| - 5.0 m  | 15           | <b>3RK1902-2HB50</b>      |              | 1                 | 1 unit   | 42D |
| - 10 m   | 15           | <b>3RK1902-2HC10</b>      |              | 1                 | 1 unit   | 42D |
| <b>IE FC M12 Plug PRO</b>  |              |                           |              |                   |          |     |
| PROFINET M12 connectors, D-coded with quick-connect technology, axial outgoing feeder  |              |                           |              |                   |          |     |
| • 1 unit   | 1            | <b>6GK1901-0DB20-6AA0</b> |              | 1                 | 1 unit   | 5K1 |
| • 8 units  | 1            | <b>6GK1901-0DB20-6AA8</b> |              | 1                 | 8 units  | 5K1 |
| • PROFINET M12 connectors, D-coded, angular  | 5            | <b>3RK1902-2DA00</b>      |              | 1                 | 1 unit   | 42D |
| <b>IE Panel Feedthrough</b>  |              |                           |              |                   |          |     |
| Control cabinet bushing for transition from M12 connection method (D-coded, IP65/IP67) to RJ45 connection method (IP20), 1 pack = 5 units  | 1            | <b>6GK1901-0DM20-2AA5</b> |              | 1                 | 5 units  | 5K2 |

<sup>1)</sup> For operation of the CPU, an MMC is essential

# Motor Starters for Use in the Field, High Degree of Protection

## ET 200pro Motor Starters

### ET 200pro – CPUs

#### Fail-safe CPUs

| Version   | SD | Article No.               | Price per PU | PU (UNIT, SET, M) | PS*      | PG  |
|---|----|---------------------------|--------------|-------------------|----------|-----|
| <b>CPU 1516pro F-2 PN (continued)</b>   |    |                           |              |                   |          |     |
| <b>7/8" connecting cables for power supply</b>  |    |                           |              |                   |          |     |
| • 5-core, 5 x 1.5 mm <sup>2</sup> , trailing, preassembled with two 7/8" plugs (axial outgoing feeder), 5-pole, max. 50 m, in various lengths:  |    |                           |              |                   |          |     |
| - 1.5 m   | 1  | <b>6XV1822-5BH15</b>      |              | 1                 | 1 unit   | 5K1 |
| - 2.0 m   | 1  | <b>6XV1822-5BH20</b>      |              | 1                 | 1 unit   | 5K1 |
| - 3.0 m   | 1  | <b>6XV1822-5BH30</b>      |              | 1                 | 1 unit   | 5K1 |
| - 5.0 m   | 1  | <b>6XV1822-5BH50</b>      |              | 1                 | 1 unit   | 5K1 |
| - 10 m  | 1  | <b>6XV1822-5BN10</b>      |              | 1                 | 1 unit   | 5K1 |
| - 15 m  | 1  | <b>6XV1822-5BN15</b>      |              | 1                 | 1 unit   | 5K1 |
| - For more special lengths with 90° or 180° cable feeder, see <a href="http://support.automation.siemens.com/WW/view/en/26999294">http://support.automation.siemens.com/WW/view/en/26999294</a> |    |                           |              |                   |          |     |
| • Trailing power cables, 5 x 1.5 mm <sup>2</sup> , preassembled at both ends with 7/8" connectors, angular (one end with socket, one end with pin), in various lengths:                         |    |                           |              |                   |          |     |
| - 3.0 m   | 15 | <b>3RK1902-3NB30</b>      |              | 1                 | 1 unit   | 42D |
| - 5.0 m   | 15 | <b>3RK1902-3NB50</b>      |              | 1                 | 1 unit   | 42D |
| - 10 m  | 15 | <b>3RK1902-3NC10</b>      |              | 1                 | 1 unit   | 42D |
| • Trailing power cables, 5 x 1.5 mm <sup>2</sup> , preassembled at one end with 7/8" connector with female insert, angular (one end with socket, one end open), in various lengths:             |    |                           |              |                   |          |     |
| - 3.0 m   | 15 | <b>3RK1902-3GB30</b>      |              | 1                 | 1 unit   | 42D |
| - 5.0 m   | 15 | <b>3RK1902-3GB50</b>      |              | 1                 | 1 unit   | 42D |
| - 10 m  | 15 | <b>3RK1902-3GC10</b>      |              | 1                 | 1 unit   | 42D |
| <b>Power cables</b>   | 1  | <b>6XV1830-8AH10</b>      |              | 1                 | 1 M      | 5K2 |
| 5-core, 5 x 1.5 mm <sup>2</sup> , trailing, sold by the meter, minimum order quantity 20 m, maximum order quantity 1 000 m  |    |                           |              |                   |          |     |
| <b>7/8" connectors</b>  |    |                           |              |                   |          |     |
| For ET 200eco, with axial cable feeder  |    |                           |              |                   |          |     |
| • With pin insert, pack of 5  | 1  | <b>6GK1905-0FA00</b>      |              | 1                 | 5 units  | 5K2 |
| • With female insert, pack of 5   | 1  | <b>6GK1905-0FB00</b>      |              | 1                 | 5 units  | 5K2 |
| • Angular, with female insert, 1 unit   | 5  | <b>3RK1902-3DA00</b>      |              | 1                 | 1 unit   | 42D |
| • Angular with pin insert, 1 unit   | 5  | <b>3RK1902-3BA00</b>      |              | 1                 | 1 unit   | 42D |
| <b>7/8" covers, pack of 10</b>  | 1  | <b>6ES7194-3JA00-0AA0</b> |              | 1                 | 10 units | 250 |
| <b>Twisted pair connecting cables 4 x 2 with RJ45 connectors</b>  |    |                           |              |                   |          |     |
| • 0.5 m   | 1  | <b>6XV1870-3QE50</b>      |              | 1                 | 1 unit   | 5K1 |
| • 1 m   | 1  | <b>6XV1870-3QH10</b>      |              | 1                 | 1 unit   | 5K1 |
| • 2 m   | 1  | <b>6XV1870-3QH20</b>      |              | 1                 | 1 unit   | 5K1 |
| • 6 m   | 1  | <b>6XV1870-3QH60</b>      |              | 1                 | 1 unit   | 5K1 |
| • 10 m  | 1  | <b>6XV1870-3QN10</b>      |              | 1                 | 1 unit   | 5K1 |
| <b>Crossed twisted pair connecting cables 4 x 2 with RJ45 connectors</b>  |    |                           |              |                   |          |     |
| • 0.5 m   | 1  | <b>6XV1870-3RE50</b>      |              | 1                 | 1 unit   | 5K1 |
| • 1 m   | 1  | <b>6XV1870-3RH10</b>      |              | 1                 | 1 unit   | 5K1 |
| • 2 m   | 1  | <b>6XV1870-3RH20</b>      |              | 1                 | 1 unit   | 5K1 |
| • 6 m   | 1  | <b>6XV1870-3RH60</b>      |              | 1                 | 1 unit   | 5K1 |
| • 10 m  | 1  | <b>6XV1870-3RN10</b>      |              | 1                 | 1 unit   | 5K1 |
| <b>M12 sealing caps</b>   | ▶  | <b>3RX9802-0AA00</b>      |              | 100               | 10 units | 42C |
| For protection of unused M12 terminals on ET 200pro   |    |                           |              |                   |          |     |
| <b>M12 sealing caps with female thread</b>  | 1  | <b>6ES7194-4JD60-0AA0</b> |              | 1                 | 5 units  | 250 |
| 5 units   |    |                           |              |                   |          |     |

# Motor Starters for Use in the Field, High Degree of Protection

## ET 200pro Motor Starters

ET 200pro – I/O modules

### Selection and ordering data

| Version   | SD | Article No.               | Price per PU | PU (UNIT, SET, M) | PS*       | PG  |
|---|----|---------------------------|--------------|-------------------|-----------|-----|
|   | d  |                           |              |                   |           |     |
| <b>Digital expansion modules</b>  |    |                           |              |                   |           |     |
| <b>8 DI digital input modules</b><br>24 V DC, with module diagnostics, including bus module connection module to be ordered separately  | 1  | <b>6ES7141-4BF00-0AA0</b> |              | 1                 | 1 unit    | 250 |
| <b>8 DI High Feature digital input modules</b><br>24 V DC, with channel diagnostics, including bus module connection module to be ordered separately  | 5  | <b>6ES7141-4BF00-0AB0</b> |              | 1                 | 1 unit    | 250 |
| <b>16 DI digital input modules</b><br>24 V DC, with module diagnostics, including bus module connection module 6ES7 194-4CB50-0AA0 to be ordered separately   | 1  | <b>6ES7141-4BH00-0AA0</b> |              | 1                 | 1 unit    | 250 |
| <b>4 DO digital output modules</b><br>24 V DC, 2 A, with module diagnostics, including bus module connection module to be ordered separately  | 1  | <b>6ES7142-4BD00-0AA0</b> |              | 1                 | 1 unit    | 250 |
| <b>4 DO High Feature digital output modules</b><br>24 V DC, 2 A, with channel diagnostics, including bus module connection module to be ordered separately  | 1  | <b>6ES7142-4BD00-0AB0</b> |              | 1                 | 1 unit    | 250 |
| <b>8 DO digital output modules</b><br>24 V DC, 0.5 A, with module diagnostics, including bus module connection module to be ordered separately  | 1  | <b>6ES7142-4BF00-0AA0</b> |              | 1                 | 1 unit    | 250 |
| <b>4 DI/4 DO digital input and output modules</b><br>24 V DC, 0.5 A, with module diagnostics, including bus module connection module to be ordered separately                                       | 1  | <b>6ES7143-4BF50-0AA0</b> |              | 1                 | 1 unit    | 250 |
| <b>4 DI/4 DO digital input and output modules</b><br>24 V DC, 0.5 A, with module diagnostics, including bus module connection module to be ordered separately                                       | 1  | <b>6ES7143-4BF00-0AA0</b> |              | 1                 | 1 unit    | 250 |
| <b>Accessories</b>  |    |                           |              |                   |           |     |
| <b>CM IO 4 x M12 connection modules</b><br>4 M12 sockets for connection of digital or analog sensors or actuators to ET 200pro  | 1  | <b>6ES7194-4CA00-0AA0</b> |              | 1                 | 1 unit    | 250 |
| <b>CM IO 4 x M12 Invers connection modules</b><br>4 M12 sockets for connection of digital actuators to ET 200pro (4 DO and 4 DO HF); 2 x M12 with single assignment, 2 x M12 with double assignment | 1  | <b>6ES7194-4CA50-0AA0</b> |              | 1                 | 1 unit    | 250 |
| <b>CM IO 4 x M12 P connection modules</b><br>4 M12 sockets for connection of digital sensors or actuators to ET 200pro; plastic version   | 1  | <b>6ES7194-4CA10-0AA0</b> |              | 1                 | 1 unit    | 250 |
| <b>CM IO 8 x M12 connection modules</b><br>8 M12 sockets for connection of digital sensors or actuators to ET 200pro  | 1  | <b>6ES7194-4CB00-0AA0</b> |              | 1                 | 1 unit    | 250 |
| <b>CM IO 8 x M12 P connection modules</b><br>8 M12 sockets for connection of digital sensors or actuators to ET 200pro; plastic version   | 1  | <b>6ES7194-4CB10-0AA0</b> |              | 1                 | 1 unit    | 250 |
| <b>CM IO 8 x M12D connection modules</b><br>8 M12 sockets for connection of digital sensors or actuators to ET 200pro   | 1  | <b>6ES7194-4CB50-0AA0</b> |              | 1                 | 1 unit    | 250 |
| <b>CM IO 8 x M8 connection modules</b><br>8 M8 sockets for connection of digital sensors or actuators to ET 200pro  | 1  | <b>6ES7194-4EB00-0AA0</b> |              | 1                 | 1 unit    | 250 |
| <b>CM IO 2 x M12 connection modules</b><br>2 M12 8-pole sockets; to be used with: EM 8DI 24 V DC and 8 DO 24 V DC/0.5 A   | 1  | <b>6ES7194-4FB00-0AA0</b> |              | 1                 | 1 unit    | 250 |
| <b>CM IO 1 x M23 connection modules</b><br>1 M23 socket, to be used with: EM 8 DI 24 V DC and 8 DO 24 V DC/0.5 A  | 1  | <b>6ES7194-4FA00-0AA0</b> |              | 1                 | 1 unit    | 250 |
| <b>Module labeling plates</b><br>For color coding of CM IOs in the colors white, red, blue and green; pack of 100   | 1  | <b>6ES7194-4HA00-0AA0</b> |              | 1                 | 500 units | 250 |
| <b>M12 sealing caps</b><br>For protection of unused M12 terminals on ET 200pro  | ▶  | <b>3RX9802-0AA00</b>      |              | 100               | 10 units  | 42C |
| <b>Labels</b><br>20 x 7, pastel turquoise, pack of 340  | 20 | <b>3RT1900-1SB20</b>      |              | 100               | 340 units | 41B |
| <b>M12 Y-shaped coupler plugs</b><br>For double connection of sensors with a single cable, 5-pole; cannot be used for F-DI4/8   | 1  | <b>6ES7194-1KA01-0XA0</b> |              | 1                 | 1 unit    | 250 |
| <b>M12 Y-cables</b><br>For double connection of I/Os with a single cable to ET 200, 5-pole  | 1  | <b>6ES7194-6KA00-0XA0</b> |              | 1                 | 1 unit    | 250 |
| <b>M8 sealing caps</b><br>For IP67 modules  | 2  | <b>3RK1901-1PN00</b>      |              | 100               | 10 units  | 42C |

## Motor Starters for Use in the Field, High Degree of Protection

### ET 200pro Motor Starters

#### ET 200pro – I/O modules

| Version  | SD | Article No.               | Price per PU | PU (UNIT, SET, M) | PS*       | PG  |
|--|----|---------------------------|--------------|-------------------|-----------|-----|
|  | d  |                           |              |                   |           |     |
| <b>Analog expansion modules</b>  |    |                           |              |                   |           |     |
| <b>4AI U analog input modules</b><br>High Feature, ±10 V; ±5 V; 0 ... 10 V; 1 ... 5 V, channel diagnostics, including bus module. Connection module to be ordered separately   | 1  | <b>6ES7144-4FF01-0AB0</b> |              | 1                 | 1 unit    | 250 |
| <b>4AI I analog input modules</b><br>High Feature, ±20 mA; 0 ... 20 mA; 4 ... 20 mA, channel diagnostics, including bus module. Connection module to be ordered separately   | 1  | <b>6ES7144-4GF01-0AB0</b> |              | 1                 | 1 unit    | 250 |
| <b>4AI RTD analog input modules</b><br>High Feature; resistors: 150, 300, 600 and 3 000 Ohm; thermistor: Pt100, 200, 500, 1 000, Ni100, 120, 200, 500 and 1 000; channel diagnostics, including bus module. Connection module must be ordered separately | 1  | <b>6ES7144-4JF00-0AB0</b> |              | 1                 | 1 unit    | 250 |
| <b>4AI TC analog input modules</b><br>High Feature; thermocouples: Types B, E, J, K, L, N, R, S, T; voltage measurement: ±80 mV; channel diagnostics, including bus module. Connection module must be ordered separately                                 | 1  | <b>6ES7144-4PF00-0AB0</b> |              | 1                 | 1 unit    | 250 |
| <b>4AO U analog output modules</b><br>High Feature, ±10 V; 0 ... 10 V; 1 ... 5 V, channel diagnostics, including bus module. Connection module to be ordered separately  | 1  | <b>6ES7145-4FF00-0AB0</b> |              | 1                 | 1 unit    | 250 |
| <b>4AO I analog output modules</b><br>High Feature, ±20 mA; 0 ... 20 mA; 4 ... 20 mA, channel diagnostics, including bus module. Connection module to be ordered separately  | 1  | <b>6ES7145-4GF00-0AB0</b> |              | 1                 | 1 unit    | 250 |
| <b>Accessories</b>   |    |                           |              |                   |           |     |
| <b>CM IO 4 x M12 connection modules</b><br>4 M12 sockets for connection of digital or analog sensors or actuators to ET 200pro   | 1  | <b>6ES7194-4CA00-0AA0</b> |              | 1                 | 1 unit    | 250 |
| <b>M12 compensation plugs</b><br>With integrated Pt100 for reference point compensation when connecting thermocouples  | 1  | <b>6ES7194-4AB00-0AA0</b> |              | 1                 | 1 unit    | 250 |
| <b>Module labeling plates</b><br>For color coding of CM IOs in the colors white, red, blue and green; pack of 100  | 1  | <b>6ES7194-4HA00-0AA0</b> |              | 1                 | 500 units | 250 |
| <b>M12 sealing caps</b><br>For protection of unused M12 terminals on ET 200pro   | ▶  | <b>3RX9802-0AA00</b>      |              | 100               | 10 units  | 42C |
| <b>IO-Link master modules</b>  |    |                           |              |                   |           |     |
| <b>4 IO-LINK HF solid-state modules</b><br>4 IO-Link ports acc. to IO Link specification V1.1, Port Class B; High Feature, channel diagnostics, including bus module connection module to be ordered separately  | 1  | <b>6ES7147-4JD00-0AB0</b> |              | 1                 | 1 unit    | 250 |
| <b>Accessories</b>   |    |                           |              |                   |           |     |
| <b>CM IO-Link 4 x M12 P connection modules</b><br>4 M12 sockets for connection of IO-Link devices to ET 200pro 4 IO-LINK HF solid-state module   | 1  | <b>6ES7194-4CA20-0AA0</b> |              | 1                 | 1 unit    | 250 |
| <b>Module labeling plates</b><br>For color coding of CM IOs in the colors white, red, blue and green; pack of 100  | 1  | <b>6ES7194-4HA00-0AA0</b> |              | 1                 | 500 units | 250 |
| <b>M12 sealing caps</b><br>For protection of unused M12 terminals on ET 200pro   | ▶  | <b>3RX9802-0AA00</b>      |              | 100               | 10 units  | 42C |
| <b>Fail-safe digital expansion modules</b>   |    |                           |              |                   |           |     |
| <b>8/16 F-DI PROFIsafe fail-safe digital input modules</b><br>24 V DC, including bus module. Connection module must be ordered separately  | 1  | <b>6ES7148-4FA00-0AB0</b> |              | 1                 | 1 unit    | 241 |
| <b>4/8 F-DI, 4 F-DO 2 A fail-safe digital input/output modules</b><br>24 V DC, including bus module. Connection module must be ordered separately  | 1  | <b>6ES7148-4FC00-0AB0</b> |              | 1                 | 1 unit    | 241 |
| <b>F-Switch PROFIsafe fail-safe solid-state modules</b><br>Three fail-safe PP-switching outputs for safe switching of the backplane busbars (2L+, F0, F1); two fail-safe digital inputs, 45 mm; usable up to SIL 3 (IEC 61508)                           | 1  | <b>6ES7148-4FS00-0AB0</b> |              | 1                 | 1 unit    | 241 |
| <b>Accessories</b>   |    |                           |              |                   |           |     |
| <b>Connection modules</b><br>For F-Switch PROFIsafe fail-safe solid-state modules  | 1  | <b>6ES7194-4DA00-0AA0</b> |              | 1                 | 1 unit    | 241 |
| <b>Connection modules</b><br>For the 4/8 F-DI/4 F-DO, 24 V DC/2 A fail-safe solid-state modules  | 1  | <b>6ES7194-4DC00-0AA0</b> |              | 1                 | 1 unit    | 241 |
| <b>Connection modules</b><br>For the 8/16 F-DI, 24 V DC fail-safe solid-state modules  | 1  | <b>6ES7194-4DD00-0AA0</b> |              | 1                 | 1 unit    | 241 |
| <b>PROFIBUS DP IM 154-2 interface modules</b><br>Including terminal module   | 1  | <b>6ES7154-2AA01-0AB0</b> |              | 1                 | 1 unit    | 250 |
| <b>PROFINET IM154-4 PN interface modules</b><br>Including terminal module  | 1  | <b>6ES7154-4AB10-0AB0</b> |              | 1                 | 1 unit    | 250 |
| <b>M12 sealing caps</b><br>For protection of unused M12 terminals on ET 200pro   | ▶  | <b>3RX9802-0AA00</b>      |              | 100               | 10 units  | 42C |

## Motor Starters for Use in the Field, High Degree of Protection

### ET 200pro Motor Starters

#### ET 200pro – I/O modules

| Version   | SD | Article No.               | Price per PU | PU (UNIT, SET, M) | PS*      | PG  |
|---|----|---------------------------|--------------|-------------------|----------|-----|
| d   |    |                           |              |                   |          |     |
| <b>PM-E power modules</b>   |    |                           |              |                   |          |     |
| <b>PM-E power modules 24 V DC</b><br>For resupply and group formation of the 24 V DC load voltage for solid-state modules within an ET 200pro station                               | 1  | <b>6ES7148-4CA00-0AA0</b> |              | 1                 | 1 unit   | 250 |
| <b>Accessories</b>  |    |                           |              |                   |          |     |
| <b>CM PM-E ECOFAST connection modules</b><br>For resupply of 24 V load voltage, 1 ECOFAST Cu connection   | 1  | <b>6ES7194-4BA00-0AA0</b> |              | 1                 | 1 unit   | 250 |
| <b>CM PM-E Direct connection modules</b><br>For resupply of 24 V load voltage, up to 2 M20 screwed cable bushings   | 1  | <b>6ES7194-4BC00-0AA0</b> |              | 1                 | 1 unit   | 250 |
| <b>CM PM-E 7/8" connection modules</b><br>For resupply of 24 V load voltage, 1 x 7/8"   | 1  | <b>6ES7194-4BD00-0AA0</b> |              | 1                 | 1 unit   | 250 |
| <b>CM PM-E PP connection modules</b><br>For resupply of 24 V load voltage, 2 x push-pull, with spare fuse   | 1  | <b>6ES7194-4BE00-0AA0</b> |              | 1                 | 1 unit   | 250 |
| <b>Spare fuses</b><br>12.5 A quick-response, for interface and power modules, pack of 10  | 1  | <b>6ES7194-4HB00-0AA0</b> |              | 1                 | 10 units | 250 |
| <b>PROFIBUS ECOFAST hybrid cables – copper</b><br>Trailing cables (PUR sheath) with two copper conductors, shielded, for PROFIBUS DP and four copper cores with 1.5 mm <sup>2</sup> |    |                           |              |                   |          |     |
| • <u>Non-assembled</u>  |    |                           |              |                   |          |     |
| - 50 m  | 1  | <b>6XV1830-7AN50</b>      |              | 1                 | 1 unit   | 5K2 |
| - 100 m   | 1  | <b>6XV1830-7AT10</b>      |              | 1                 | 1 unit   | 5K2 |
| • <u>Preassembled with ECOFAST plug and socket, fixed length</u>  |    |                           |              |                   |          |     |
| - 1.5 m   | 1  | <b>6XV1830-7BH15</b>      |              | 1                 | 1 unit   | 5K2 |
| - 3 m   | 1  | <b>6XV1830-7BH30</b>      |              | 1                 | 1 unit   | 5K2 |
| - 5 m   | 1  | <b>6XV1830-7BH50</b>      |              | 1                 | 1 unit   | 5K2 |
| - 10 m  | 1  | <b>6XV1830-7BN10</b>      |              | 1                 | 1 unit   | 5K2 |
| - 15 m  | 1  | <b>6XV1830-7BN15</b>      |              | 1                 | 1 unit   | 5K2 |
| - 20 m  | 1  | <b>6XV1830-7BN20</b>      |              | 1                 | 1 unit   | 5K2 |
| <b>PROFIBUS ECOFAST hybrid cables GP</b><br>Trailing cables with 4 x Cu and 2 x Cu, shielded with UL approval   |    |                           |              |                   |          |     |
| • <u>Preassembled with ECOFAST plug and socket</u>  |    |                           |              |                   |          |     |
| - 1.5 m   | 1  | <b>6XV1860-3PH15</b>      |              | 1                 | 1 unit   | 5K2 |
| - 3 m   | 1  | <b>6XV1860-3PH30</b>      |              | 1                 | 1 unit   | 5K2 |
| - 5 m   | 1  | <b>6XV1860-3PH50</b>      |              | 1                 | 1 unit   | 5K2 |
| - 10 m  | 1  | <b>6XV1860-3PN10</b>      |              | 1                 | 1 unit   | 5K2 |
| - 15 m  | 1  | <b>6XV1860-3PN15</b>      |              | 1                 | 1 unit   | 5K2 |
| - 20 m  | 1  | <b>6XV1860-3PN20</b>      |              | 1                 | 1 unit   | 5K2 |
| <b>ECOFAST plug connectors, can be preassembled</b><br>Sockets; Order unit 5 units  | 1  | <b>6GK1905-0CB00</b>      |              | 1                 | 5 units  | 5K2 |
| <b>PROFIBUS ECOFAST hybrid plugs, angular</b><br>With 2 x Cu shielded and 4 x Cu 1.5 mm <sup>2</sup> ;<br>5 units; with installation instructions; female insert                    | 1  | <b>6GK1905-0CD00</b>      |              | 1                 | 5 units  | 5K2 |
| <b>Push-pull connectors</b><br>For 1L+/ 2L+, non-assembled  | 1  | <b>6GK1907-0AB10-6AA0</b> |              | 1                 | 1 unit   | 5K2 |
| <b>Covers for push-pull sockets</b><br>5 units  | 1  | <b>6ES7194-4JA50-0AA0</b> |              | 1                 | 5 units  | 250 |
| <b>Accessories for CM PM-E Direct</b>   |    |                           |              |                   |          |     |
| <b>Power cables</b><br>5-core, 5 x 1.5 mm <sup>2</sup> , trailing, sold by the meter, minimum order quantity 20 m, maximum order quantity 1 000 m                                   | 1  | <b>6XV1830-8AH10</b>      |              | 1                 | 1 M      | 5K2 |
| <b>Accessories for CM PM-E 7/8"</b>   |    |                           |              |                   |          |     |
| <b>7/8" connecting cables for power supply</b><br>5-core, 5 x 1.5 mm <sup>2</sup> , trailing, preassembled with two 7/8" plugs, 5-pole  |    |                           |              |                   |          |     |
| • Length 1.5 m  | 1  | <b>6XV1822-5BH15</b>      |              | 1                 | 1 unit   | 5K1 |
| • Length 2.0 m  | 1  | <b>6XV1822-5BH20</b>      |              | 1                 | 1 unit   | 5K1 |
| • Length 3.0 m  | 1  | <b>6XV1822-5BH30</b>      |              | 1                 | 1 unit   | 5K1 |
| • Length 5.0 m  | 1  | <b>6XV1822-5BH50</b>      |              | 1                 | 1 unit   | 5K1 |
| • Length 10 m   | 1  | <b>6XV1822-5BN10</b>      |              | 1                 | 1 unit   | 5K1 |
| • Length 15 m   | 1  | <b>6XV1822-5BN15</b>      |              | 1                 | 1 unit   | 5K1 |
| <b>7/8" connectors</b><br>With axial cable feeder   |    |                           |              |                   |          |     |
| • With female insert, pack of 5   | 1  | <b>6GK1905-0FB00</b>      |              | 1                 | 5 units  | 5K2 |

## Motor Starters for Use in the Field, High Degree of Protection

### ET 200pro Motor Starters

#### ET 200pro – I/O modules

| Version  | SD | Article No.                   | Price per PU | PU (UNIT, SET, M) | PS*      | PG  |
|--|----|-------------------------------|--------------|-------------------|----------|-----|
|  | d  |                               |              |                   |          |     |
| <b>PM-O power module outputs</b>   |    |                               |              |                   |          |     |
| <b>PM-O power modules 2 x 24 V DC</b><br>For tapping the 24 V load voltage 2L+ and the solid-state/sensor supply voltage 1L+ within an ET 200pro station                   | 1  | <b>6ES7148-4CA60-0AA0</b>     |              | 1                 | 1 unit   | 250 |
| <b>Accessories</b>   |    |                               |              |                   |          |     |
| <b>CM PM-O PP connection modules</b><br>For tapping 24 V load voltage and solid-state/sensor supply voltage, 2 x push-pull plug-in connectors                              | 1  | <b>6ES7194-4BH00-0AA0</b>     |              | 1                 | 1 unit   | 250 |
| <b>Push-pull connectors</b><br>For 1L+/2L+, non-assembled  | 1  | <b>6GK1907-0AB10-6AA0</b>     |              | 1                 | 1 unit   | 5K2 |
| <b>Covers for push-pull sockets</b><br>5 units   | 1  | <b>6ES7194-4JA50-0AA0</b>     |              | 1                 | 5 units  | 250 |
| <b>ET 200pro pneumatic interfaces</b>  |    |                               |              |                   |          |     |
| <b>EM 148-P pneumatic interfaces</b>   |    |                               |              |                   |          |     |
| • DO 16 x P/CPV 10 for direct connection of the FESTO valve terminals CPV 10 16 DO x P   | 1  | <b>6ES7148-4EA00-0AA0</b>     |              | 1                 | 1 unit   | 250 |
| • DO 16 x P/CPV 14 for direct connection of the FESTO valve terminals CPV 14 16 DO x P   | 1  | <b>6ES7148-4EB00-0AA0</b>     |              | 1                 | 1 unit   | 250 |
| • FESTO CPV 10 valve terminals   |    | to be purchased through FESTO |              |                   |          |     |
| • FESTO CPV 14 valve terminals   |    | see page 16/16                |              |                   |          |     |
| <b>RF170C</b>  |    |                               |              |                   |          |     |
| <b>SIMATIC RF170C communication modules</b><br>For connection to the distributed ET 200pro I/O system  | 1  | <b>6GT2002-0HD01</b>          |              | 1                 | 1 unit   | 572 |
| <b>Accessories</b>   |    |                               |              |                   |          |     |
| <b>Connection blocks for SIMATIC RF170C</b><br>For connecting 2 readers or other RS422/RS232 devices through M12 plug-in connectors  | 1  | <b>6GT2002-1HD01</b>          |              | 1                 | 1 unit   | 572 |
| <b>Reader cables for SIMATIC RF200/RF300/RF600/MV440</b><br>Or MOBY D extension cable and SIMATIC RF200/RF300/RF600/MV400, material PUR, CMG approval, trailing            |    |                               |              |                   |          |     |
| • 2 m, straight connector  | 1  | <b>6GT2891-4FH20</b>          |              | 1                 | 1 unit   | 572 |
| • 5 m, straight connector  | 1  | <b>6GT2891-4FH50</b>          |              | 1                 | 1 unit   | 572 |
| • 10 m, straight connector   | 1  | <b>6GT2891-4FN10</b>          |              | 1                 | 1 unit   | 572 |
| • 20 m, straight connector   | 1  | <b>6GT2891-4FN20</b>          |              | 1                 | 1 unit   | 572 |
| • 50 m, straight connector   | 1  | <b>6GT2891-4FN50</b>          |              | 1                 | 1 unit   | 572 |
| • 2 m, connector angular at the reader   | 1  | <b>6GT2891-4JH20</b>          |              | 1                 | 1 unit   | 572 |
| • 5 m, connector angular at the reader   | 1  | <b>6GT2891-4JH50</b>          |              | 1                 | 1 unit   | 572 |
| • 10 m, connector angular at the reader  | 1  | <b>6GT2891-4JN10</b>          |              | 1                 | 1 unit   | 572 |
| <b>Reader cables for MOBY D</b><br>Material PUR, CMG approval, trailing, 2 m   | 1  | <b>6GT2691-4FH20</b>          |              | 1                 | 1 unit   | 572 |
| <b>Reader cables for MV300 handheld readers</b>  |    |                               |              |                   |          |     |
| • Coiled cable with useful length of 1.6 m ... 4 m for MV320, material PUR   | 1  | <b>6GT2191-0BH50</b>          |              | 1                 | 1 unit   | 572 |
| • Coiled cable with useful length of 1.6 m ... 4 m for MV340, material PUR   | 1  | <b>6GT2191-0AH50</b>          |              | 1                 | 1 unit   | 572 |
| <b>Plug for connecting other RS422/RS232 devices</b><br>M12 8-pole male connector, screw contacts for cores up to 0.5 mm <sup>2</sup><br>order quantity: 1 pack of 5 units | 1  | <b>6GT2090-0BE00</b>          |              | 1                 | 5 units  | 572 |
| <b>M12 sealing caps for unused reader connections</b><br>Minimum order quantity 10 units, price per 100 units  | ▶  | <b>3RX9802-0AA00</b>          |              | 100               | 10 units | 42C |
| <b>DVD "RFID Systems Software &amp; Documentation"</b>   | 5  | <b>6GT2080-2AA20</b>          |              | 1                 | 1 unit   | 572 |

# Motor Starters for Use in the Field, High Degree of Protection

## ET 200pro Motor Starters

Power supplies

### Selection and ordering data

| Version   | SD | Article No.   | Price per PU | PU (UNIT, SET, M) | PS*      | PG  |
|---|----|---|--------------|-------------------|----------|-----|
|   | d  |   |              |                   |          |     |
| <b>Three-phase, 24 V DC (ET 200pro PS, IP67)</b>  |    |   |              |                   |          |     |
| <b>SIMATIC ET 200pro PS</b><br>Stabilized power supply in the construction and design of the distributed I/O system, with the option of looping the power to other modules; with degree of protection IP67;<br>Input: 400 ... 480 V 3 AC<br>Output: 24 V DC/8 A | 1  | <b>6ES7148-4PC00-0HA0</b>   |              | 1                 | 1 unit   | 589 |
| <b>Accessories</b>  |    |   |              |                   |          |     |
| <b>Power connection plugs</b>   |    |   |              |                   |          |     |
| For connection to the distributed I/O system  |    |   |              |                   |          |     |
| • for X1 (6 mm <sup>2</sup> )   | 5  | <b>3RK1911-2BE30</b>  |              | 1                 | 1 unit   | 42D |
| • for X2 (4 mm <sup>2</sup> )   | 5  | <b>3RK1911-2BF10</b>  |              | 1                 | 1 unit   | 42D |
| <b>National Fire Protection Association (NFPA) compatibility</b>  |    |   |              |                   |          |     |
| These devices are only certified for installation in industrial machines in accordance with the "Electrical Standard for Industrial Machinery" (NFPA79).  |    |   |              |                   |          |     |
| • For X1 SIMATIC ET 200pro PS<br>61 88 201 1003.xx (AWG10)  |    | to be purchased through Harting<br><a href="#">see page 16/16</a> |              |                   |          |     |
| • For X1 SITOP PSU300P<br>61 88 201 1000.xx / 61 88 201 1002.xx (AWG14)   |    |   |              |                   |          |     |
| • For X2 SIMATIC ET 200pro PS<br>61 88 202 1010.xx (AWG10)*<br>dummy cap included for X2  |    |   |              |                   |          |     |
| • For X3<br>Phoenix-Contact SAC-5P-M12-M12FS<br>dummy cap included for X3   |    |   |              |                   |          |     |
| <b>Sealing caps</b>   |    |   |              |                   |          |     |
| For 9-pole power socket connectors  |    |   |              |                   |          |     |
| • X2 (pack of 1)  | 5  | <b>3RK1902-0CK00</b>  |              | 1                 | 1 unit   | 42D |
| • X2 (pack of 10)   | 5  | <b>3RK1902-0CJ00</b>  |              | 1                 | 10 units | 42D |

# Motor Starters for Use in the Field, High Degree of Protection

## ET 200pro Motor Starters

### SIMATIC ET 200pro FC-2 frequency converters

#### Selection and ordering data

| Version  | SD | Article No.  | Price per PU | PU (UNIT, SET, M) | PS*    | PG  |
|--|----|--|--------------|-------------------|--------|-----|
| <b>SIMATIC ET 200pro FC-2 frequency converters</b>   |    |  |              |                   |        |     |
| <b>SIMATIC ET 200pro FC-2 frequency converters</b><br>With integrated safety function STO (Safe Torque Off),<br>380 ... 480 V 3 AC, ±10%, 47 ... 63 Hz<br><u>Overload:</u> 150%, 60 s; 200%, 3 s<br><u>Power rating:</u> 1.1 kW (0 ... +55 °C), 1.5 kW (0 ... +45 °C)  | 3  | <b>6SL3514-1KE13-5AE0</b>  |              | 1                 | 1 unit | 337 |
| <b>Accessories for SIMATIC ET 200pro FC-2 frequency converters</b>   |    |  |              |                   |        |     |
| <b>Backplane bus modules for accommodating the frequency converter<sup>1)</sup></b>  | 3  | <b>6SL3260-2TA00-0AA0</b>  |              | 1                 | 1 unit | 337 |
| <b>Connecting cables preassembled at one end</b><br>Power connection cable, open at one end, for HAN Q4/2, angled, 4 × 4 mm <sup>2</sup>   |    |  |              |                   |        |     |
| • Length 1.5 m   | 5  | <b>3RK1911-0DB13</b>   |              | 1                 | 1 unit | 42D |
| • Length 5 m   | 5  | <b>3RK1911-0DB33</b>   |              | 1                 | 1 unit | 42D |
| <b>Connector set for incoming power supply, HAN Q4/2</b>   |    |  |              |                   |        |     |
| • 2.5 mm <sup>2</sup>  | 5  | <b>3RK1911-2BE50</b>   |              | 1                 | 1 unit | 42D |
| • 4.0 mm <sup>2</sup>  | 5  | <b>3RK1911-2BE10</b>   |              | 1                 | 1 unit | 42D |
| • 6.0 mm <sup>2</sup>  | 5  | <b>3RK1911-2BE30</b>   |              | 1                 | 1 unit | 42D |
| <b>Motor cables preassembled at one end</b><br>For motors with brake and temperature sensor with HAN Q8 connector, shielded<br><u>Cross-section 1.5 mm<sup>2</sup></u>   |    |  |              |                   |        |     |
| • Length 1.5 m   |    | <b>ZKT: 70020501000150</b><br><b>HTG: 61 88 201 0288</b>   |              |                   |        |     |
| • Length 3 m   |    | <b>ZKT: 70020501000300</b><br><b>HTG: 61 88 201 0289</b>   |              |                   |        |     |
| • Length 5 m   |    | <b>ZKT: 70020501000500</b><br><b>HTG: 61 88 201 0290</b>   |              |                   |        |     |
| • Length 10 m  |    | <b>ZKT: 70020501001000</b><br><b>HTG: 61 88 201 0299</b>   |              |                   |        |     |
| <b>Frequency converter plugs</b><br>For motor cable, shielded, HAN Q8<br><u>Cross-section 1.5 mm<sup>2</sup></u>   |    |  |              |                   |        |     |
|  |    | <b>ZKT:10032001</b><br><b>HTG: 61 83 401 0131</b><br>ZKT: Available from KnorrTec,<br><a href="#">see page 16/16</a><br>HTG: Available from Harting,<br><a href="#">See page 16/16</a> |              |                   |        |     |
| <b>Power jumper plugs</b><br>For 400 V power loop-through connection to the following 400 V modules  | 2  | <b>3RK1922-2BQ00</b>   |              | 1                 | 1 unit | 42D |
| <b>IOP-2 Handheld</b><br>For use with SINAMICS G120, SINAMICS G120C, SINAMICS G120P,<br>SINAMICS G110D, SINAMICS G120D, SINAMICS G110M and<br>SIMATIC ET 200pro FC-2<br>Included in the scope of supply:<br>• Intelligent Operator Panel IOP-2<br>• Handheld enclosure<br>• Batteries (4 × AA)<br>• Charger (international)<br>• RS 232 connecting cable (length 3 m, only for use in combination with<br>SINAMICS G120, SINAMICS G120C and SINAMICS G120P <sup>2)</sup> )<br>• USB cable (length 1 m) | 3  | <b>6SL3255-0AA00-4HA1</b>  |              | 1                 | 1 unit | 343 |
| <b>RS 232 interface cable</b><br>With optical interface for connection of the SIMATIC ET 200pro FC-2<br>frequency converter to the IOP-2 Handheld (length 2.5 m) <sup>2)</sup>   | 5  | <b>3RK1922-2BP00</b>   |              | 1                 | 1 unit | 42D |
| <b>PC inverter connection kit 2</b><br>(mini USB interface cable for communication with a PC)<br>For controlling and commissioning an inverter directly from a PC over a point-to-point<br>link if the appropriate software (STARTER commissioning tool <sup>3)</sup> V4.4 plus SSP<br>(SINAMICS Support Package) or higher is installed (length 3 m)  | 3  | <b>6SL3255-0AA00-2CA0</b>  |              | 1                 | 1 unit | 343 |
| <b>SINAMICS memory card (SD card)</b><br>For the SIMATIC ET 200pro FC-2 parameter settings<br>If required there is space on the memory card for the complete parameterization of<br>the frequency converter. During servicing, the plant is immediately ready for use again<br>after replacing the frequency converter and inserting the memory card.  | 5  | <b>6SL3054-4AG00-2AA0</b>  |              | 1                 | 1 unit | 753 |

<sup>1)</sup> Absolutely essential for operation of the converter.

<sup>2)</sup> For use in combination with SINAMICS G110D, SINAMICS G120D,  
SINAMICS G110M or SIMATIC ET 200pro FC-2, the RS 232 connecting  
cable with optical interface is required (Article No.: 3RK1922-2BP00).  
The cable must be ordered separately.

<sup>3)</sup> The STARTER commissioning tool is available online at  
[www.siemens.com/starter](http://www.siemens.com/starter).

## Motor Starters for Use in the Field, High Degree of Protection

### ET 200pro Motor Starters

ET 200pro add-on products

#### Selection and ordering data

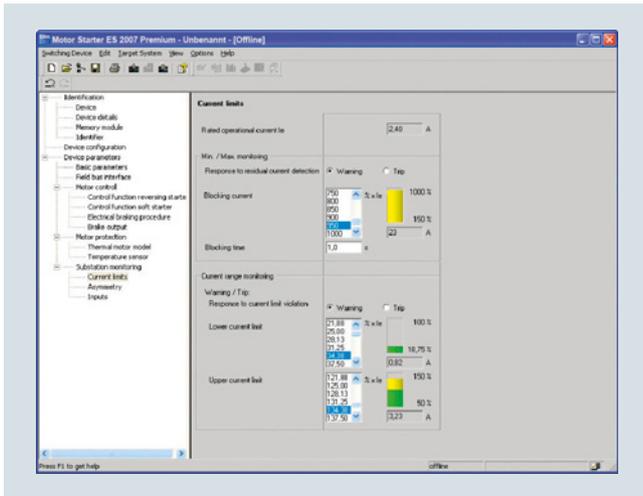
| Version  | SD | Article No.            | Price per PU | PU (UNIT, SET, M) | PS*    | PG  |
|--|----|------------------------|--------------|-------------------|--------|-----|
|  | d  |                        |              |                   |        |     |
| <b>EtherNet/IP interface modules</b>   |    |                        |              |                   |        |     |
| <b>SIMATIC ET 200pro interface modules for EtherNet/IP</b>   | 1  | <b>ZNX:EIP200PRO</b>   |              | 1                 | 1 unit | 250 |
| Including:   |    |                        |              |                   |        |     |
| <ul style="list-style-type: none"> <li>• Bus termination module for ET 200pro</li> <li>• Companion disk with the manuals and configuration tool</li> </ul> |    |                        |              |                   |        |     |
| <b>Accessories</b>   |    |                        |              |                   |        |     |
| <b>Connection modules for EtherNet/IP</b>  | 1  | <b>ZNX:EIP200PROC1</b> |              | 1                 | 1 unit | 250 |
| For connection of the interface module to EtherNet/IP  |    |                        |              |                   |        |     |

# Motor Starters for Use in the Field, High Degree of Protection

## ET 200pro Software

### Motor Starter ES

#### Overview



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

#### More information

Homepage, see [www.siemens.com/sirius-engineering](http://www.siemens.com/sirius-engineering)

Industry Mall, see [www.siemens.com/product?3ZS1](http://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 is used for the start up, parameterization, diagnostics, documentation and preventive maintenance of SIMATIC ET 200S, ET 200pro, ECOFAST and M200D motor starters.

The software program is available in three versions which differ in their user-friendliness, scope of functions and price.

For detailed information on the Motor Starter ES software, see [page 14/10](#).

# Motor Starters for Use in the Field, High Degree of Protection

## SIRIUS M200D Motor Starters

General data

### Overview



SIRIUS M200D AS-i Basic motor starter with manual local operation

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:

| M200D AS-i Basic                                     | M200D AS-i Standard | M200D PROFIBUS | M200D PROFINET |
|--|---------------------|----------------|----------------|
| Motor control with AS-i communication                |                     | PROFIBUS       | PROFINET       |
| Mechanical or electronic switching                   | ✓                   | ✓              | ✓              |
| Electronic switching with soft starter functionality | --                  | ✓              | ✓              |

✓ Function available

-- Function not available

### More information

Homepage, see [www.siemens.com/motorstarter](http://www.siemens.com/motorstarter)

Industry Mall, see [www.siemens.com/product?M200D](http://www.siemens.com/product?M200D)

TIA Selection Tool Cloud (TST Cloud), see [https://mall.industry.siemens.com/spice/TSTWeb/?kmat=MS\\_M200D](https://mall.industry.siemens.com/spice/TSTWeb/?kmat=MS_M200D)

### Basic functionality

The versions of the M200D motor starter are equipped with the following properties and functions:

- 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 fail-safe 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 (ordering options)

### Article No. scheme

| Product versions                                  |                            | Article number |   |   |   |   |   |   |   |   |   |   |   |   |   |                             |
|---|----------------------------|----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------------------------|
| Motor starters                                    |                            | 3              | R | K | 1 | 3 | 5 | 6 | K | S | 4 | 1 | 3 | A | A | 0                           |
| Type  | AS-i Basic                 | 1              |   |   |   |   |   |   |   |   |   |   |   | A |   |                             |
|   | AS-i Standard              | 2              |   |   |   |   |   |   |   |   |   |   |   | A |   |                             |
|   | PROFIBUS/PROFINET          | 9              |   |   |   |   |   |   |   |   |   |   |   | D |   |                             |
| Setting range for rated operational current $I_A$ | 0.15 ... 2 A               |                |   |   |   |   |   |   | K |   |   |   |   |   |   |                             |
|   | 1.5 ... 9 A                |                |   |   |   |   |   |   | N |   |   |   |   |   |   |                             |
|   | 1.5 ... 12 A               |                |   |   |   |   |   |   | L |   |   |   |   |   |   |                             |
| Starter version                                   | Electromechanical starters |                |   |   |   |   |   |   |   |   | 4 |   |   |   |   | with integrated contactor   |
|   | Electronic starters        |                |   |   |   |   |   |   |   |   | 7 |   |   |   |   | with thyristors             |
| Product function                                  | Direct-on-line starters    |                |   |   |   |   |   |   |   |   |   |   |   | 0 |   |                             |
|   | Reversing starters         |                |   |   |   |   |   |   |   |   |   |   |   | 1 |   |                             |
|   | Direct-on-line starters    |                |   |   |   |   |   |   |   |   |   |   |   | 2 |   | with manual local operation |
|   | Reversing starters         |                |   |   |   |   |   |   |   |   |   |   |   | 3 |   | with manual local operation |
| Brake actuation                                   | None                       |                |   |   |   |   |   |   |   |   |   |   |   |   |   | 0                           |
|   | 230/400 V AC               |                |   |   |   |   |   |   |   |   |   |   |   |   |   | 3                           |
|   | 180 V DC                   |                |   |   |   |   |   |   |   |   |   |   |   |   |   | 5                           |
| Example   |                            | 3              | R | K | 1 | 3 | 5 | 6 | K | S | 4 | 1 | 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 ensure 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 packing 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 inverters 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](#).

For more information, [see page 1/7](#).

# Motor Starters for Use in the Field, High Degree of Protection

## SIRIUS M200D Motor Starters

### M200D Motor Starters for AS-Interface

General data

#### 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/7A5 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 have identical enclosure dimensions for easier 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.

# Motor Starters for Use in the Field, High Degree of Protection

## SIRIUS M200D Motor Starters

### M200D Motor Starters for AS-Interface

#### General data



**SIRIUS M200D**  
AS-i Basic

**SIRIUS M200D**  
AS-i Standard

#### Device functions (firmware features)

##### Slave on the bus

|  |                        |                        |
|--|------------------------|------------------------|
| Fieldbus                                     | ✓ AS-i                 |                        |
| Slave type                                   | ✓ A/B acc. to Spec 2.1 | ✓ A/B acc. to Spec 3.0 |
| Profile                                      | ✓ 7.A.E                | ✓ 7.A.E & 7.A.5        |
| Number of assigned AS-i addresses on the bus | ✓ 1                    | ✓ 2                    |
| Number of stations per AS-i master           | ✓ Max. 62 devices      | ✓ Max. 31 devices      |
| AS-i master profile                          | ✓ M3 and higher        | ✓ M4 and higher        |

##### Parameter assignment

|   |    |    |
|---|----|----|
| DIP switches                                | ✓  | -- |
| Potentiometer 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<sup>1)</sup> (acyclic)

|                      |    |   |
|----------------------|----|---|
| Parameter assignment | -- | ✓ |
| Diagnostics          | -- | ✓ |
| Measured values      | -- | ✓ |
| Statistics           | -- | ✓ |
| Commands             | -- | ✓ |

##### Inputs

|                                 |  |   |
|---------------------------------|--|---|
| Number                          | ✓ 4  |   |
| • Of these in the process image | ✓ 2 through AS-i   | ✓ 4 through AS-i  |
| Input action                    | ✓ For permanently assigned functions, <a href="#">see manual</a> | ✓ Parameterizable: flexible   |
| Quick stop                      | ✓ Permanent function: latching, edge-triggered                   | ✓ Parameterizable function: latching (edge-triggered), non-latching (level-triggered) |

##### Outputs

|               |   |   |
|---------------|---|---|
| Number        | ✓ 1   |   |
| Output action | ✓ Permanent function: assigned with group fault | ✓ Parameterizable: For function, <a href="#">see manual</a> |

##### 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 |

✓ Function available

-- Function not available

<sup>1)</sup> 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



**SIRIUS M200D**  
**AS-i Basic**

**SIRIUS M200D**  
**AS-i Standard**

#### Device functions (firmware features) (continued)

##### Device function

|                                      |  |  |
|--------------------------------------|--|--|
| Repair switch                        | ✓  |  |
| Current limit monitoring bottom      | --   | ✓ Parameterizable  |
| Current limit monitoring top         | --   | ✓ Parameterizable  |
| Zero current detection               | ✓ Permanent function: disconnection, less than 18.75% of the rated operational current $I_e$   | ✓ Parameterizable  |
| Blocking current                     | ✓ Permanent function: starting up of the motor: Tripping limit up to 800% of the rated operational current $I_e$ for 10 s<br>Active operation: Threshold for tripping "blocking current" up to 400% of the rated operational current $I_e$ | ✓ Parameterizable  |
| Unbalance                            | ✓ Permanent function: up to 30% of the rated operational current $I_e$ (only mechanical MS)  | ✓ Parameterizable  |
| Load type                            | ✓ Permanent function: Three-phase  | ✓ Parameterizable: single-phase and three-phase                          |
| Shutdown class                       | ✓ Parameterizable using DIP switches: CLASS 10/deactivated   | Parameterizable using Motor Starter ES, data record: CLASS 5, 10, 15, 20 |
| Protection against voltage failure   | ✓  | ✓ Parameterizable: activated/deactivated                                 |
| <b>Soft starter control function</b> |  |  |
| 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.

#### **Use of 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](#).

For more information, see [page 1/7](#).

#### Technical specifications

##### More information

Manuals for SIRIUS M200D:

- AS-i Basic, see <https://support.industry.siemens.com/cs/ww/en/view/35016496>
  - AS-i Standard, see <https://support.industry.siemens.com/cs/ww/en/view/38722160>
- FAQs, see <https://support.industry.siemens.com/cs/ww/en/ps/16324/faq>

##### Note 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 on the subject of Industrial Security, see [www.siemens.com/industrialsecurity](http://www.siemens.com/industrialsecurity).

# Motor Starters for Use in the Field, High Degree of Protection

## SIRIUS M200D Motor Starters

### M200D Motor Starters for AS-Interface

#### General data

| Type  | M200D motor starters |  |   |   |   |
|---|----------------------|--|---|---|---|
|   |                      | AS-i Basic electromechanical switching<br>DStE/RSStE | AS-i Basic electronic switching<br>sDStE/sRSStE | AS-i Standard electromechanical switching<br>DStE/RSStE | AS-i Standard electronic switching<br>sDStE/sRSStE    |
| <b>Technology designation<sup>1)</sup></b>                                    |                      |  |   |   |   |
| <b>Mechanics and environment</b>  |                      |  |   |   |   |
| <b>Mounting dimensions (W x H x D)</b>  | mm                   | 294 x 215 x 159                                      |   |   |   |
| <b>Permissible ambient temperature</b>  |                      |  |   |   |   |
| • During operation  | °C                   | -25 ... +55  |   |   |   |
| • During storage  | °C                   | -40 ... +70  |   |   |   |
| <b>Weight</b>   | g                    | 2 880/3 130  | 3 220/3 420                                     | 2 880/3 130   | 3 220/3 420   |
| <b>Permissible mounting position</b>  |                      | Vertical, horizontal, lying                          |   |   |   |
| <b>Vibration resistance acc. to IEC 60068 Part 2-6</b>                        | g                    | 2  |   |   |   |
| <b>Shock resistance</b>   |                      |  |   |   |   |
| • 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                                      |   |   |   |
| <b>Degree of protection acc. to IEC 529</b>                                   |                      | IP65   |   |   |   |
| <b>Installation altitude</b>  |                      |  |   |   |   |
| • Up to 1 000 m   |                      | No derating  |   |   |   |
| • Up to 2 000 m   |                      | 1% per 100 m   |   |   |   |
| <b>Cooling</b>  |                      | Convection   |   |   |   |
| <b>Protection class IEC 536 (VDE 0106-1)</b>                                  |                      | 1  |   |   |   |
| <b>Electrical specifications</b>  |                      |  |   |   |   |
| <b>Control circuit</b>  |                      |  |   |   |   |
| <b>Operating voltage <math>U_{AS-i}</math></b>                                | V DC                 | 26.5 ... 31.6  |   |   |   |
| <b>Supply voltage <math>U_{aux}</math></b>                                    | V DC                 | 20.4 ... 28.8  |   |   |   |
| <b>Power consumption from AS-i (incl. 200 mA sensor supply)</b>               | mA                   | < 300  |   |   |   |
| <b>Current consumption from <math>U_{aux}</math> (without digital output)</b> |                      |  |   |   |   |
| • Max.  | mA                   | 155  | 15 (direct-on-line)/<br>175 (reversing)         | 155   | 15 (direct-on-line)/<br>175 (reversing)               |
| • Typ.  | mA                   | 75   | 10 (direct-on-line)/<br>75 (reversing)          | 75  | 10 (direct-on-line)/<br>75 (reversing)                |
| <b>Main circuit</b>   |                      |  |   |   |   |
| <b>Maximum power of three-phase motors at 400 V AC</b>                        | kW                   | 5.5  | 4   | 5.5   | 5.5   |
| <b>Rated operational voltage <math>U_e</math></b>                             |                      |  |   |   |   |
| • Approval acc. to EN 60947-1   | V AC                 | 400 (50/60 Hz)                                       |   | 600 (50/60 Hz)  | 480 (50/60 Hz)  |
| • Approval acc. to UL and CSA   | V AC                 | 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                                   | --  |
| • Rated operational current range for soft starting                           | A                    | --   |   |   | 0.15 ... 2/1.5 ... 12                                 |
| • Rated operational current range for direct-on-line starting                 | A                    | --   | 0.15 ... 2/1.5 ... 9                            | --  | 0.15 ... 2/1.5 ... 9                                  |
| <b>Rated operational current for starters <math>I_e</math> at 400 V AC</b>    |                      |  |   |   |   |
| • 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<br>9 for direct-on-line starting |
| <b>Mechanical endurance of contactor</b>                                      | Operating cycles     | 30 million   | --  | 30 million  | --  |
| <b>Trip class</b>   |                      | CLASS 10   |   | CLASS 5, 10, 15, 20                                     |   |
| <b>Type of coordination acc. to IEC 60947-4-1</b>                             |                      | 1 (2 for device version 2A)                          | 1   | 1 (2 for device version 2A)                             | 1   |
| <b>Permissible switching frequency</b>  |                      | See manual   |   | See manual  |   |
| <b>Rated ultimate short-circuit breaking capacity <math>I_q</math></b>        |                      |  |   |   |   |
| • At 400 V AC   | kA                   | 50   |   | 50  | 20 <sup>2)</sup>                                      |
| • At 500 V AC   | kA                   | 50 <sup>2)</sup>                                     | 20 <sup>2)</sup>                                | 50  | 20 <sup>2)</sup>                                      |
| <b>Short-circuit protection</b>   |                      |  |   |   |   |
| • At $I_{emax} = 2$ A   |                      | integrated, 2 x 13 $I_e = 26$ A                      |   |   |   |
| • At $I_{emax} = 9/12$ A  |                      | integrated, 2 x 13 $I_e = 208$ A                     |   |   |   |
| <b>Brake actuation (option)</b>   |                      |  |   |   |   |
| <b>Operational voltage</b>  | V                    | 230/400 AC or 180 DC                                 |   |   |   |
| <b>Uninterrupted current</b>  | A                    | < 0.5 at 230/400 V AC<br>< 0.8 at 180 V DC           |   |   |   |
| <b>Short-circuit protection</b>   |                      | Yes, 1 A melting fuse                                |   |   |   |

<sup>1)</sup> 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.

<sup>2)</sup> Only systems with grounded neutral point permitted.

# Motor Starters for Use in the Field, High Degree of Protection

## SIRIUS M200D Motor Starters

### M200D Motor Starters for AS-Interface

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

**Selection and ordering data**


M200D AS-i Basic without manual local operation



M200D AS-i Basic with manual local operation

| Version | SD | Article No. | Price per PU | PU (UNIT, SET, M) | PS* | PG |
|---------|----|-------------|--------------|-------------------|-----|----|
|         | d  |             |              |                   |     |    |

**Electromechanical starters (with integrated contactor)**

|   |    |                           |  |   |                  |      |
|---|----|---------------------------|--|---|------------------|------|
|   | 15 | <b>3RK1315-6□S41-□AA□</b> |  | 1 | 1 unit           | 42D  |
| <b>Rated operational current setting range/A</b>      |    |                           |  |   | Additional price |      |
| • 0.15 ... 2  |    |                           |  |   | None             |      |
| • 1.5 ... 12  |    |                           |  |   | ✓                |      |
| <b>Direct-on-line starters/reversing starters</b>     |    |                           |  |   |                  |      |
| • Direct-on-line starters                             |    |                           |  |   | None             |      |
| • Reversing starters                                  |    |                           |  |   | ✓                |      |
| • Direct-on-line starters with manual local operation |    |                           |  |   | ✓                |      |
| • Reversing starters with manual local operation      |    |                           |  |   | ✓                |      |
| <b>Brake actuation</b>                                |    |                           |  |   |                  |      |
| • Without brake actuation                             |    |                           |  |   | 0                | None |
| • Brake actuation (230/400 V AC)                      |    |                           |  |   | 3                | ✓    |
| • Brake actuation (180 V DC)                          |    |                           |  |   | 5                | ✓    |

**Electronic starters (with thyristors)**

|   |    |                           |  |   |                  |      |
|---|----|---------------------------|--|---|------------------|------|
|   | 15 | <b>3RK1315-6□S71-□AA□</b> |  | 1 | 1 unit           | 42D  |
| <b>Rated operational current setting range/A</b>      |    |                           |  |   | Additional price |      |
| • 0.15 ... 2  |    |                           |  |   | None             |      |
| • 1.5 ... 9   |    |                           |  |   | ✓                |      |
| <b>Direct-on-line starters/reversing starters</b>     |    |                           |  |   |                  |      |
| • Direct-on-line starters                             |    |                           |  |   | None             |      |
| • Reversing starters                                  |    |                           |  |   | ✓                |      |
| • Direct-on-line starters with manual local operation |    |                           |  |   | ✓                |      |
| • Reversing starters with manual local operation      |    |                           |  |   | ✓                |      |
| <b>Brake actuation</b>                                |    |                           |  |   |                  |      |
| • Without brake actuation                             |    |                           |  |   | 0                | None |
| • Brake actuation (230/400 V AC)                      |    |                           |  |   | 3                | ✓    |
| • Brake actuation (180 V DC)                          |    |                           |  |   | 5                | ✓    |

# 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



M200D AS-i Standard without manual local operation



M200D AS-i Standard with manual local operation

| Version | SD | Article No. | Price per PU | PU (UNIT, SET, M) | PS* | PG |
|---------|----|-------------|--------------|-------------------|-----|----|
|         | d  |             |              |                   |     |    |

#### Electromechanical starters (with integrated contactor)

15 **3RK1325-6□S41-□AA□** 1 1 unit 42D

##### 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)

| Additional price |
|------------------|
| None             |
| ✓                |
| None             |
| ✓                |
| ✓                |
| ✓                |
| None             |
| ✓                |
| ✓                |

#### Electronic starters (with thyristors)

15 **3RK1325-6□S71-□AA□** 1 1 unit 42D

##### 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)

| Additional price |
|------------------|
| None             |
| ✓                |
| None             |
| ✓                |
| ✓                |
| ✓                |
| None             |
| ✓                |
| ✓                |

# Motor Starters for Use in the Field, High Degree of Protection

## SIRIUS M200D Motor Starters

### M200D Motor Starters for PROFIBUS/PROFINET

General data

#### 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 "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



M200D motor starter module for PROFIBUS/PROFINET (without communication module)



M200D communication module for PROFIBUS



M200D communication module for PROFINET

## 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 device diagnostics) 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 PROFlenergy**

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 PROFlenergy.

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

<sup>1)</sup> 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.

# Motor Starters for Use in the Field, High Degree of Protection

## SIRIUS M200D Motor Starters

### M200D Motor Starters for PROFIBUS/PROFINET

#### General data

#### Switching off during dead times

PROFenergy 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.

PROFenergy enables consumption data to be read off from the devices in a unified form. This is recorded during operation and can be displayed on a control panel, for example, or sent to overlying energy management software packages. This ensures that the measured variables are in a uniform manufacturer-independent form and structure that is available to the user for further processing. These PROFenergy functions thus provide the basis for active load and energy management during operation.

#### PROFenergy 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 PROFenergy. These are called commands, because they trigger a reaction in the M200D motor starter.



**SIRIUS M200D  
PROFIBUS**

**SIRIUS M200D  
PROFINET**

| Device functions (firmware features)     |  |  |
|--|--|--|
|  | SIRIUS M200D<br>PROFIBUS   | SIRIUS M200D<br>PROFINET                                     |
| <b>Slave on the bus</b>                  |  |  |
| Fieldbus                                 | ✓ PROFIBUS to M12  | ✓ PROFINET to M12  |
| Adjustable number of stations            | ✓ 1 ... 125  | ✓ 1 ... 128 with CPU 315, CPU 317<br>1 ... 1256 with CPU 319 |
| <b>Parameter assignment</b>              |  |  |
| DIP switches                             | ✓ For address setting and terminating resistor   | --   |
| Motor Starter ES                         | ✓ Through bus, optical interface   |  |
| PROFIBUS/PROFINET data records           | ✓  |  |
| From STEP 7/HW Config                    | ✓  |  |
| <b>Diagnostics</b>                       |  |  |
| Acyclic through data records             | ✓  |  |
| Diagnostic interrupt support             | ✓  |  |
| <b>Process image</b>                     |  |  |
| Process image                            | ✓ 2 bytes PAE/ 2 bytes PAA   |  |
| <b>Data channels</b>                     |  |  |
| Local optical interface (manual local)   | ✓  |  |
| Motor Starter ES through local interface | ✓  |  |
| Using Motor Starter ES through bus       | ✓  |  |
| <b>Data records (acyclic)</b>            |  |  |
| Parameter assignment                     | ✓ 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   | ✓ Using data records 0xAFF0 ... 0xAFF3                       |
| <b>Inputs</b>                            |  |  |
| Number                                   | ✓ 4  |  |
| • Of these in the process image          | ✓ 4  |  |
| Input action                             | ✓ Parameterizable: Flexibly assignable action, <a href="#">see manual</a>                              |  |
| Quick stop                               | ✓ Parameterizable: latching, non-latching  |  |

✓ Function available

-- Function not available

## 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) (continued)

##### Outputs

|                                 |   |
|---------------------------------|---|
| Number                          | ✓ 2   |
| • Of these in the process image | ✓ 2   |
| Output action                   | ✓ Parameterizable: Flexibly assignable action, <a href="#">see manual</a> |

##### 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 PROFlenergy 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 PROFlenergy

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 CO<sub>2</sub> emissions. By the careful use of valuable resources, the manufacturer-independent PROFlenergy 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.

# Motor Starters for Use in the Field, High Degree of Protection

## SIRIUS M200D Motor Starters

### M200D Motor Starters for PROFIBUS/PROFINET

## General data

## Technical specifications

## More information

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>

## Note 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 on the subject of Industrial Security, see [www.siemens.com/industrialsecurity](http://www.siemens.com/industrialsecurity).

| Type   | M200D PROFIBUS/PROFINET motor starter modules |  |   |
|--|---|--|---|
|  |   | Electromechanical switching<br>DSte/RSte | Electronic switching<br>sDSSSte/sRSSte              |
| <b>Technology designation<sup>1)</sup></b>                                 |   |  |   |
| <b>Mechanics and environment</b>   |   |  |   |
| <b>Mounting dimensions (W x H x D)</b>                                     |   |  |   |
| • Without communication module   | mm  | 294 x 215 x 159                          |   |
| • With communication module  | mm  | 295 x 215 x 163                          |   |
| <b>Permissible ambient temperature</b>                                     |   |  |   |
| • During operation   | °C  | -25 ... +55                              |   |
| • During storage   | °C  | -40 ... +70                              |   |
| <b>Weight</b>  | g   | 2 820/3 080                              | 3 160/3 360   |
| <b>Permissible mounting position</b>                                       |   | Vertical, horizontal, lying              |   |
| <b>Vibration resistance acc. to IEC 60068 Part 2-6</b>                     | g   | 2  |   |
| <b>Shock resistance</b>  |   |  |   |
| • 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                          |   |
| <b>Degree of protection acc. to IEC 529</b>                                |   | IP65                                     |   |
| <b>Installation altitude</b>   |   |  |   |
| • Up to 1 000 m  |   | No derating                              |   |
| • Up to 2 000 m  |   | 1% per 100 m                             |   |
| <b>Cooling</b>   |   | Convection                               |   |
| <b>Protection class IEC 536 (VDE 0106-1)</b>                               |   | 1  |   |
| <b>Electrical specifications</b>   |   |  |   |
| <b>Main circuit</b>  |   |  |   |
| <b>Maximum power of three-phase motors at 400 V AC</b>                     | kW  | 5.5                                      |   |
| <b>Rated operational voltage <math>U_e</math></b>                          |   |  |   |
| • Approval acc. to EN 60947-1  | V AC  | 400 (50/60 Hz)                           |   |
| • Approval acc. to UL and CSA  | V AC  | 600 (50/60 Hz)                           |   |
| • Rated operational current range  | A   | 0.15 ... 2/1.5 ... 12                    | 480 (50/60 Hz)                                      |
| • Rated operational current range for soft starting                        | A   | --                                       | 0.15 ... 2/1.5 ... 12                               |
| • Rated operational current range for direct-on-line starting              | A   | --                                       | 0.15 ... 2/1.5 ... 9                                |
| <b>Rated operational current for starters <math>I_e</math> at 400 V AC</b> |   |  |   |
| • 400 V at AC-1 / 2 / 3  | A   | 12                                       | --  |
| • 500 V at AC-1 / 2 / 3  | A   | 9  | --  |
| • 400 V at AC-4  | A   | 4  | --  |
| • 400 V at AC-53a  | A   | --                                       | 12 for soft starting, 9 for direct-on-line starting |
| <b>Mechanical endurance of contactor</b>                                   | Operating cycles                              | 30 million                               | --  |
| <b>Trip class</b>  |   | CLASS 5, 10, 15, 20                      |   |
| <b>Permissible switching frequency</b>                                     |   | See manual                               |   |
| <b>Rated ultimate short-circuit breaking capacity <math>I_q</math></b>     |   |  |   |
| • At 400 V AC  | kA  | 50                                       |   |
| • At 500 V AC  | kA  | 50                                       | 20 <sup>2)</sup>                                    |
| <b>Short-circuit protection</b>  |   |  |   |
| • At $I_{e\max} = 2$ A   |   | integrated, 2 x13 $I_e = 26$ A           |   |
| • At $I_{e\max} = 9/12$ A  |   | integrated, 2 x13 $I_e = 208$ A          |   |

<sup>1)</sup> 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.

<sup>2)</sup> Only systems with grounded neutral point permitted.

# Motor Starters for Use in the Field, High Degree of Protection

## SIRIUS M200D Motor Starters

### M200D Motor Starters for PROFIBUS/PROFINET

#### General data

|   |      | Line voltage                             |             |             |             |          |
|---|------|--|-------------|-------------|-------------|----------|
|   |      | 380 V AC                                 | 400 V AC    | 440 V AC    | 480 V AC    | 500 V AC |
| <b>Brake voltage with brake actuation 180 V DC<sup>1)</sup></b> |      |  |             |             |             |          |
| <b>Operational voltage</b>                                      | V    | 230/400 AC or 180 DC                     |             |             |             |          |
| <b>Uninterrupted current</b>                                    | A    | < 0.5 at 230/400 V AC, < 0.8 at 180 V DC |             |             |             |          |
| <b>Short-circuit protection</b>                                 |      | Yes, 1 A melting fuse                    |             |             |             |          |
| <b>Rectified brake voltage</b>                                  | V DC | 171                                      | 180         | 198         | 216         | 225      |
| <b>Recommended brake coil voltage for Siemens motors</b>        | V DC | 170 ... 200                              | 170 ... 200 | 184 ... 218 | 184 ... 218 | --       |

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

| Type   | M200D communication modules |                             |
|--|-----------------------------|-----------------------------|
|  | For PROFIBUS                | For PROFINET                |
| <b>Mechanics and environment</b>                       |                             |                             |
| <b>Mounting dimensions (W x H x D)</b>                 | mm                          | 174 x 139 x 40              |
| <b>Permissible ambient temperature</b>                 |                             |                             |
| • During operation                                     | °C                          | -25 ... +55                 |
| • During storage                                       | °C                          | -40 ... +70                 |
| <b>Weight</b>  | g                           | 300                         |
| <b>Permissible mounting position</b>                   |                             | Vertical, horizontal, lying |
| <b>Vibration resistance acc. to IEC 60068 Part 2-6</b> | g                           | 2                           |
| <b>Shock resistance</b>                                |                             |                             |
| • 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             |
| <b>Degree of protection acc. to IEC 529</b>            |                             | IP65                        |
| <b>Installation altitude</b>                           |                             |                             |
| • Up to 1 000 m  |                             | No derating                 |
| • Up to 2 000 m  |                             | 1% per 100 m                |
| <b>Cooling</b>   |                             | Convection                  |
| <b>Protection class IEC 536 (VDE 0106-1)</b>           |                             | 1                           |
| <b>Electrical specifications</b>                       |                             |                             |
| <b>Control circuit</b>                                 |                             |                             |
| <b>Operational voltage</b>                             |                             |                             |
| • $U_{DC24V-NS}$                                       | V DC                        | 20.4 ... 28.8               |
| • $U_{DC24V-S}$  | V DC                        | 20.4 ... 28.8               |
| <b>Power consumption from</b>                          |                             |                             |
| • $U_{DC24V-NS}$                                       | mA                          | < 300                       |
| • $U_{DC24V-S}$  | mA                          | < 100                       |

# Motor Starters for Use in the Field, High Degree of Protection

## SIRIUS M200D Motor Starters

### M200D Motor Starters for PROFIBUS/PROFINET

Communication modules, motor starter modules

#### Selection and ordering data



M200D motor starter module  
PROFIBUS/PROFINET  
(without communication module)



M200D motor starter  
PROFIBUS



M200D motor starter  
PROFINET

| Version  | SD | Article No.               | Price per PU | PU (UNIT, SET, M) | PS*    | PG  |
|--|----|---------------------------|--------------|-------------------|--------|-----|
| <b>M200D communication modules for PROFIBUS</b>              |    |                           |              |                   |        |     |
| <b>Communication module for PROFIBUS</b>                     |    |                           |              |                   |        |     |
| M12 connection for communication, 7/8" for 24 V power supply | 15 | <b>3RK1305-0AS01-0AA0</b> |              | 1                 | 1 unit | 42D |
| <b>M200D communication modules for PROFINET</b>              |    |                           |              |                   |        |     |
| <b>Communication module for PROFINET</b>                     |    |                           |              |                   |        |     |
| M12 connection for communication, 7/8" for 24 V power supply | 15 | <b>3RK1335-0AS01-0AA0</b> |              | 1                 | 1 unit | 42D |

#### M200D motor starter modules for PROFIBUS/PROFINET

##### Electromechanical starters (with integrated contactor)

|    |                           |   |   |                  |        |     |
|----|---------------------------|---|---|------------------|--------|-----|
| 15 | <b>3RK1395-6□S41-□AD□</b> |   |   | 1                | 1 unit | 42D |
|    | ↑                         | ↑ | ↑ | Additional price |        |     |
|    | K                         | 0 | 0 | None             |        |     |
|    | L                         | 1 | 3 | ✓                |        |     |
|    |                           | 2 |   | None             |        |     |
|    |                           | 3 |   | ✓                |        |     |
|    |                           |   | 0 | None             |        |     |
|    |                           |   | 3 | ✓                |        |     |
|    |                           |   | 5 | ✓                |        |     |

##### 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)

|    |                           |   |   |                  |        |     |
|----|---------------------------|---|---|------------------|--------|-----|
| 15 | <b>3RK1395-6□S71-□AD□</b> |   |   | 1                | 1 unit | 42D |
|    | ↑                         | ↑ | ↑ | Additional price |        |     |
|    | K                         | 0 | 0 | None             |        |     |
|    | L                         | 1 | 3 | ✓                |        |     |
|    |                           | 2 |   | None             |        |     |
|    |                           | 3 |   | ✓                |        |     |
|    |                           |   | 0 | None             |        |     |
|    |                           |   | 3 | ✓                |        |     |
|    |                           |   | 5 | ✓                |        |     |

##### 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)

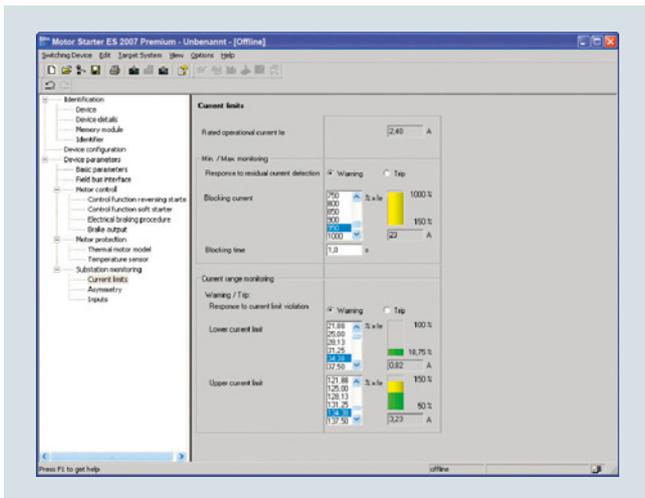
# Motor Starters for Use in the Field, High Degree of Protection

## SIRIUS M200D Motor Starters

### Software

#### Motor Starter ES

#### Overview



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

#### More information

Homepage, see [www.siemens.com/sirius-engineering](http://www.siemens.com/sirius-engineering)

Industry Mall, see [www.siemens.com/product?3ZS1](http://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 is used for the start up, parameterization, diagnostics, documentation and preventive maintenance of SIMATIC ET 200S, ET 200pro, ECOFAST and M200D motor starters.

The software program is available in three versions which differ in their user-friendliness, scope of functions and price.

For detailed information on the Motor Starter ES software, see [page 14/10](#).

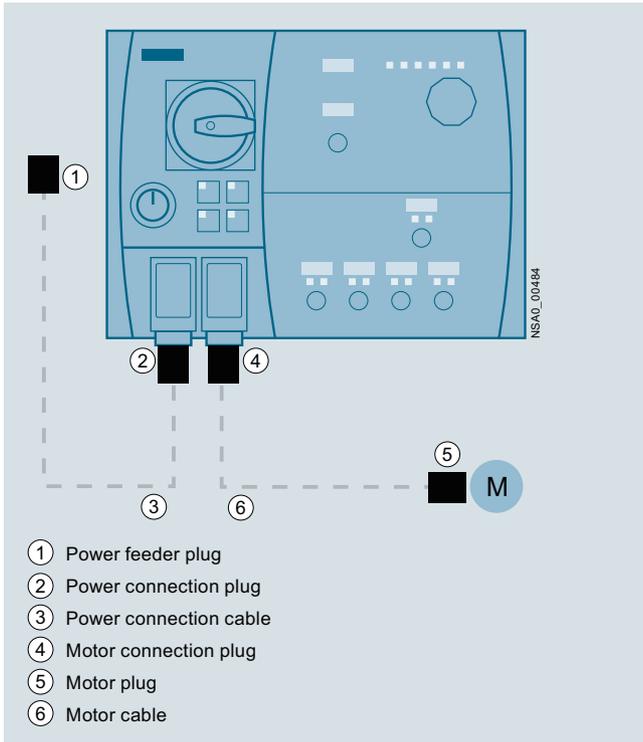
# Motor Starters for Use in the Field, High Degree of Protection

## SIRIUS M200D Motor Starters

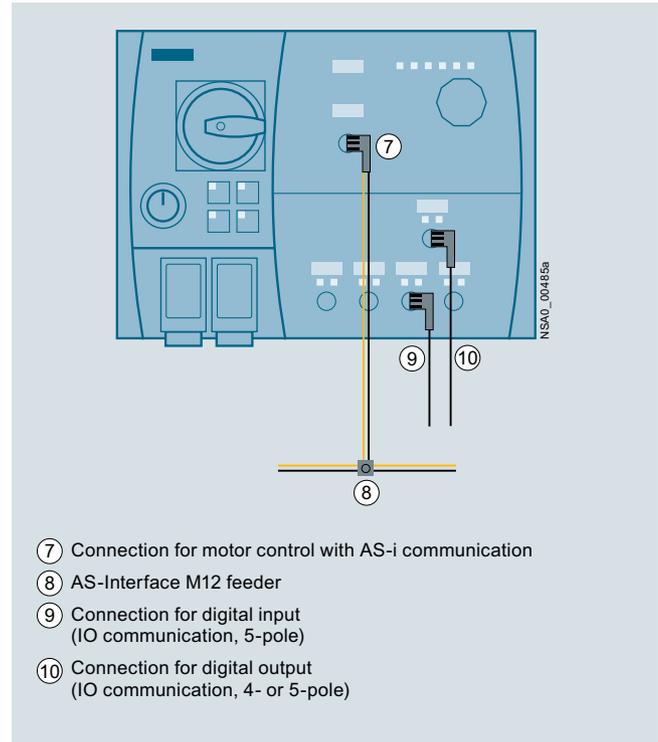
### Accessories

For all M200D motor starters

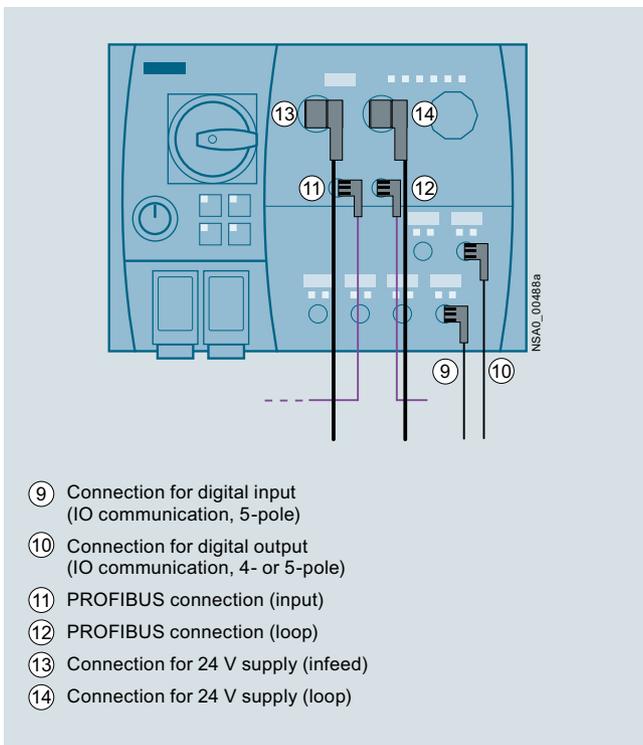
#### Overview



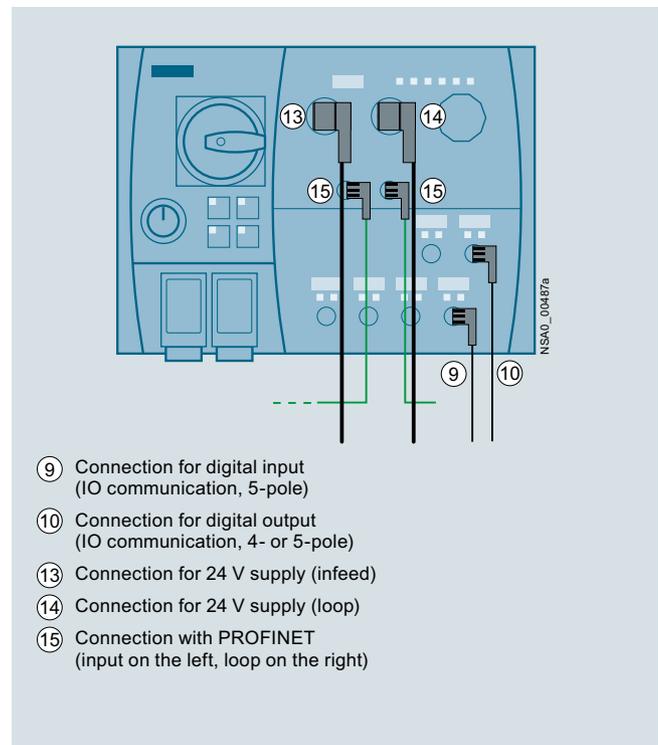
Power and motor connection on the M200D motor starter (in this example: M200D for AS-i)



Communication connection using AS-Interface and digital inputs and outputs



Communication connection using PROFIBUS and digital inputs and outputs



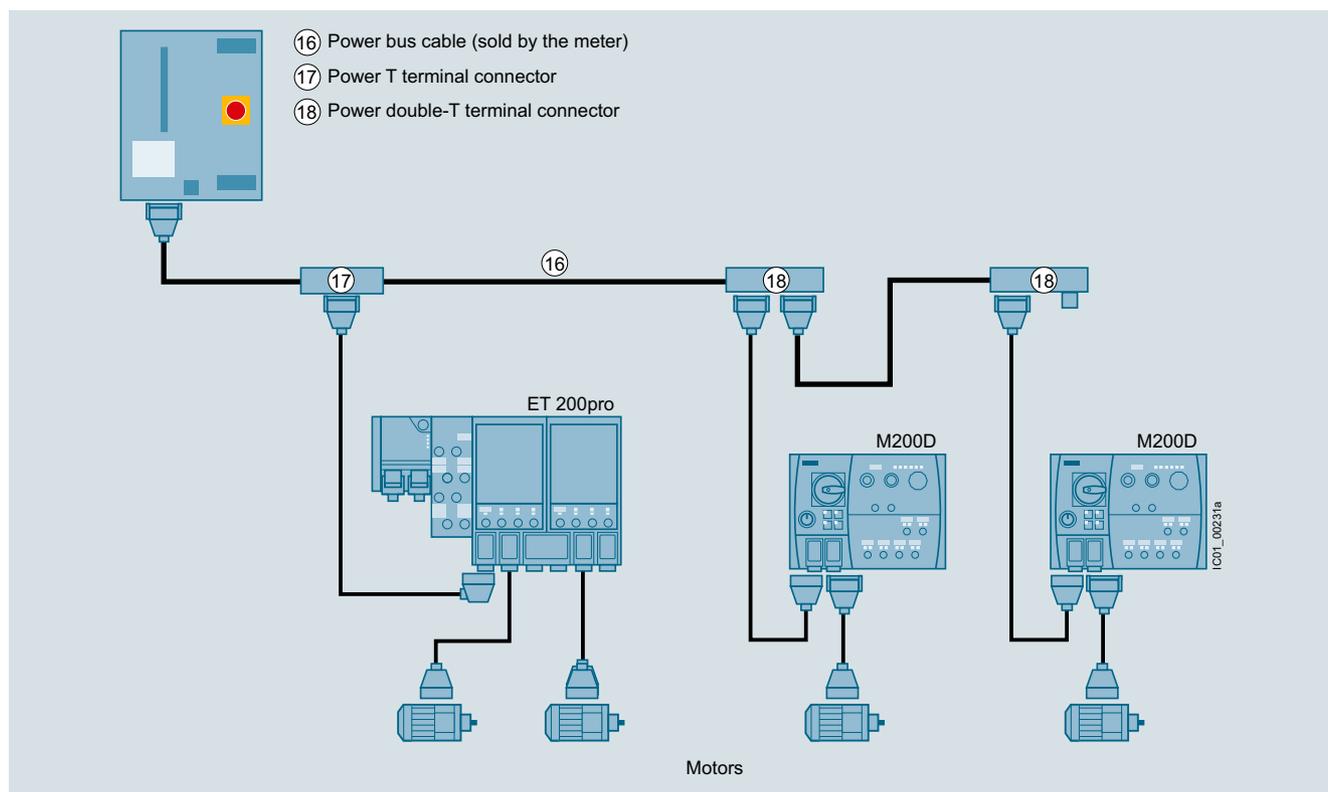
Communication connection using PROFINET and digital inputs and outputs

## 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 unplugged.

# Motor Starters for Use in the Field, High Degree of Protection

## SIRIUS M200D Motor Starters

### Accessories

For all M200D motor starters

#### 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

| Version   | SD | Article No.          | Price per PU | PU (UNIT, SET, M) | PS*    | PG  |
|---|----|----------------------|--------------|-------------------|--------|-----|
| <b>Mountable accessories</b>  |    |                      |              |                   |        |     |
| <b>M200D protective brackets</b>  |    |                      |              |                   |        |     |
|   | 5  | <b>3RK1911-3BA00</b> |              | 1                 | 1 unit | 42D |
| <b>Incoming power supply</b>  |    |                      |              |                   |        |     |
| <b>① Power feeder plugs</b>   |    |                      |              |                   |        |     |
| Connector set for incoming power 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. bushing |    |                      |              |                   |        |     |
| • 5 male contacts, 2.5 mm <sup>2</sup>  | 5  | <b>3RK1911-2BS60</b> |              | 1                 | 1 unit | 42D |
| • 5 male contacts, 4 mm <sup>2</sup>  | 5  | <b>3RK1911-2BS20</b> |              | 1                 | 1 unit | 42D |
| • 5 male contacts, 6 mm <sup>2</sup>  | 5  | <b>3RK1911-2BS40</b> |              | 1                 | 1 unit | 42D |
| <b>② Power connection plugs</b>   |    |                      |              |                   |        |     |
| Connector set for incoming power supply for connection to M200D motor starters, comprising a cable-end connector hood, angular outgoing feeder, female insert for HAN Q4/2, incl. bushing               |    |                      |              |                   |        |     |
| • 5 female contacts, 2.5 mm <sup>2</sup> ,<br>2 female contacts, 0.5 mm <sup>2</sup>  | 5  | <b>3RK1911-2BE50</b> |              | 1                 | 1 unit | 42D |
| • 5 female contacts, 4 mm <sup>2</sup> ,<br>2 female contacts, 0.5 mm <sup>2</sup>  | 5  | <b>3RK1911-2BE10</b> |              | 1                 | 1 unit | 42D |
| • 5 female contacts, 6 mm <sup>2</sup> ,<br>2 female contacts, 0.5 mm <sup>2</sup>  | 5  | <b>3RK1911-2BE30</b> |              | 1                 | 1 unit | 42D |
| <b>② + ③ Power connection cable</b>   |    |                      |              |                   |        |     |
| 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 mm <sup>2</sup>  |    |                      |              |                   |        |     |
| • Length 1.5 m  | 10 | <b>3RK1911-0DC13</b> |              | 1                 | 1 unit | 42D |
| • Length 5.0 m  | 10 | <b>3RK1911-0DC33</b> |              | 1                 | 1 unit | 42D |
| <b>Motor cables</b>   |    |                      |              |                   |        |     |
| <b>④ Motor connection plugs</b>   |    |                      |              |                   |        |     |
| Connector set for motor cable for connection to M200D motor starters, comprising a cable-end connector hood, angular outgoing feeder, pin insert for HAN Q8/0, incl. bushing                            |    |                      |              |                   |        |     |
| • 8 male contacts, 1.5 mm <sup>2</sup>  | 5  | <b>3RK1902-0CE00</b> |              | 1                 | 1 unit | 42D |
| • 6 male contacts, 2.5 mm <sup>2</sup>  | 5  | <b>3RK1902-0CC00</b> |              | 1                 | 1 unit | 42D |
| <b>⑤ Motor plugs</b>  |    |                      |              |                   |        |     |
| 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 bushing                |    |                      |              |                   |        |     |
| • 7 female contacts, 1.5 mm <sup>2</sup>  | 30 | <b>3RK1911-2BM21</b> |              | 1                 | 1 set  | 42D |
| • 7 female contacts, 2.5 mm <sup>2</sup>  | 30 | <b>3RK1911-2BM22</b> |              | 1                 | 1 set  | 42D |
| <b>④ + ⑥ Motor cables, assembled at one end</b>   |    |                      |              |                   |        |     |
| For connection to M200D motor starters, HAN Q8/0, angular, length 5 m   |    |                      |              |                   |        |     |
| • Motor cables for motor without brake, 4 x 1.5 mm <sup>2</sup>   | 15 | <b>3RK1911-0EB31</b> |              | 1                 | 1 unit | 42D |
| • Motor cables for motor without brake with thermistor, 6 x 1.5 mm <sup>2</sup>   | 30 | <b>3RK1911-0EF31</b> |              | 1                 | 1 unit | 42D |
| • Motor cables for motor with brake actuation, braking voltage 400 V AC or 180 V DC, 6 x 1.5 mm <sup>2</sup>  | 30 | <b>3RK1911-0ED31</b> |              | 1                 | 1 unit | 42D |
| • Motor cables for motor with brake actuation, braking voltage 400 V AC or 180 V DC and thermistor, 8 x 1.5 mm <sup>2</sup>   | 30 | <b>3RK1911-0EG31</b> |              | 1                 | 1 unit | 42D |
| • Motor cables for motor with brake actuation, braking voltage 230 V AC, 6 x 1.5 mm <sup>2</sup>  | 30 | <b>3RK1911-0EH31</b> |              | 1                 | 1 unit | 42D |
| • Motor cables for motor with brake actuation, braking voltage 230 V AC and thermistor, 8 x 1.5 mm <sup>2</sup>   | 30 | <b>3RK1911-0EE31</b> |              | 1                 | 1 unit | 42D |

# Motor Starters for Use in the Field, High Degree of Protection

## SIRIUS M200D Motor Starters

### Accessories

For all M200D motor starters

| Version   | SD | Article No.          | Price per PU | PU (UNIT, SET, M) | PS*      | PG  |
|---|----|----------------------|--------------|-------------------|----------|-----|
| <b>Power bus</b>  |    |                      |              |                   |          |     |
| <b>Ⓣ Power T terminal connectors</b><br>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 mm <sup>2</sup> / 4 mm <sup>2</sup>   | 5  | <b>3RK1911-2BF01</b> |              | 1                 | 1 unit   | 42D |
| • 4 mm <sup>2</sup> / 6 mm <sup>2</sup>   | 5  | <b>3RK1911-2BF02</b> |              | 1                 | 1 unit   | 42D |
| <b>Ⓡ Power double-T terminal connector</b><br>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 mm <sup>2</sup> / 6 mm <sup>2</sup>   | 5  | <b>3RK1911-2BG02</b> |              | 1                 | 1 unit   | 42D |
| <b>Sealing set (comprising 2 seals)</b><br>For power T/power double-T terminal connectors   |    |                      |              |                   |          |     |
| • For power cables with   |    |                      |              |                   |          |     |
| - Ø 10 ... 13 mm  | 5  | <b>3RK1911-5BA00</b> |              | 1                 | 1 unit   | 42D |
| - Ø 13 ... 16 mm  | 5  | <b>3RK1911-5BA10</b> |              | 1                 | 1 unit   | 42D |
| - Ø 16 ... 19 mm  | 5  | <b>3RK1911-5BA20</b> |              | 1                 | 1 unit   | 42D |
| - Ø 19 ... 22 mm  | X  | <b>3RK1911-5BA30</b> |              | 1                 | 1 unit   | 42D |
| • Blanking plugs  | 5  | <b>3RK1911-5BA50</b> |              | 1                 | 1 unit   | 42D |
| <b>Further accessories for power connections</b>  |    |                      |              |                   |          |     |
|   |    |                      |              |                   |          |     |
| <b>Crimping tools for pins/sockets 4 mm<sup>2</sup> and 6 mm<sup>2</sup></b>  | 15 | <b>3RK1902-0CW00</b> |              | 1                 | 1 unit   | 42D |
| <b>Dismantling tools</b>  |    |                      |              |                   |          |     |
| • For male and female contacts for 9-pole HAN Q4/2 inserts  | 15 | <b>3RK1902-0AB00</b> |              | 1                 | 1 unit   | 42D |
| • For male and female contacts for 9-pole HAN Q8 inserts  | 5  | <b>3RK1902-0AJ00</b> |              | 1                 | 1 unit   | 42D |
| <b>Sealing caps</b><br>For 9-pole power socket connectors   |    |                      |              |                   |          |     |
| • 1 unit per pack   | 5  | <b>3RK1902-0CK00</b> |              | 1                 | 1 unit   | 42D |
| • 10 units per pack   | 5  | <b>3RK1902-0CJ00</b> |              | 1                 | 10 units | 42D |
|    |    |                      |              |                   |          |     |
| 3RK1902-0CK00   |    |                      |              |                   |          |     |

3RK1902-0CW00

3RK1902-0CK00

# Motor Starters for Use in the Field, High Degree of Protection

## SIRIUS M200D Motor Starters

### Accessories

For all M200D motor starters

| Version   | SD | Article No.   | Price per PU | PU (UNIT, SET, M)   | PS*         | PG                                     |
|---|----|---|--------------|---|-------------|--|
| <b>Motor control with I/O communication</b>   |    |   |              |   |             |  |
| <br>3RK1902-4BA00-5AA0   |    | <b>M12 plugs, straight</b><br>Screw fixing, 5-pole screw terminals, max. 0.75 mm <sup>2</sup> , A-coded, max. 4 A   | 5            | <b>3RK1902-4BA00-5AA0</b>   | 1           | 1 unit 42D                             |
| <br>3RK1902-4DA00-5AA0   |    | <b>M12 plugs, angular</b><br>Screw fixing, 5-pole screw terminals, max. 0.75 mm <sup>2</sup> , A-coded, max. 4 A  | 5            | <b>3RK1902-4DA00-5AA0</b>   | 1           | 1 unit 42D                             |
| <br>3RK1902-4H...-5AA0   |    | <b>M12 plugs, angular, screw fixing, 5-pole, 5 x 0.34 mm<sup>2</sup>, A-coded, black PUR sheath, max. 4 A</b><br><ul style="list-style-type: none"> <li>• Cable length 1.5 m</li> <li>• Cable length 5 m</li> <li>• Cable length 10 m</li> </ul>                                      | 5<br>5<br>5  | <b>3RK1902-4HB15-5AA0</b><br><b>3RK1902-4HB50-5AA0</b><br><b>3RK1902-4HC01-5AA0</b> | 1<br>1<br>1 | 1 unit 42D<br>1 unit 42D<br>1 unit 42D |
| <br>3RK1902-4PB15-3AA0   |    | <b>Control cable, assembled at both ends</b><br>Straight M12 plug, straight M12 socket, screw fixing, 3-pole, 3 x 0.34 mm <sup>2</sup> , A-coded, black PUR sheath, max. 4 A<br><ul style="list-style-type: none"> <li>• Cable length 1.5 m</li> </ul>                                | 5            | <b>3RK1902-4PB15-3AA0</b>   | 1           | 1 unit 42D                             |
| <b>Further accessories</b>  |    |   |              |   |             |  |
| <br>3RK1922-3BA00       |    | <b>Handheld devices</b><br>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            | <b>3RK1922-3BA00</b>  | 1           | 1 unit 42D                             |
|   |    | <b>RS 232 interface cable</b><br>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            | <b>3RK1922-2BP00</b>  | 1           | 1 unit 42D                             |
|   |    | <b>USB interface cable, 2.5 m</b><br>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            | <b>6SL3555-0PA00-2AA0</b>   | 1           | 1 unit 346                             |
| <br>3RK1901-1KA00      |    | <b>M12 sealing caps</b><br>For sealing unused M12 input or output sockets and M12 female contacts for PROFIBUS and PROFINET communication modules (one set contains ten sealing caps)   | ▶            | <b>3RK1901-1KA00</b>  | 100         | 10 units 42C                           |
| <br>3SU1950-0FB80-0AA0 |    | <b>RONIS SB30 keys</b><br>Replacement key for M200D for "manual local control" ordering option  | ▶            | <b>3SU1950-0FB80-0AA0</b>   | 1           | 1 unit 41J                             |

# 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

| Version | SD | Article No. | Price per PU | PU (UNIT, SET, M) | PS* | PG |
|---------|----|-------------|--------------|-------------------|-----|----|
|         | d  |             |              |                   |     |    |

#### Motor control with AS-i communication



3RK1902-4GB50-4AA0

##### ⑦ Control cables, assembled at one end

M12 plug, angular, screw fixing, 4-pole, 4 x 0.34 mm<sup>2</sup>, A-coded, black PUR sheath, max. 4 A

- Cable length 5 m

5

**3RK1902-4GB50-4AA0**

1

1 unit

42D



3RK1902-4CA00-4AA0

##### ⑦ M12 socket, angled

For screw fixing, 4-pole screw terminals, max. 0.75 mm<sup>2</sup>, A-coded, max. 4 A

5

**3RK1902-4CA00-4AA0**

1

1 unit

42D



3RK1901-2NR21

##### ⑧ AS-Interface M12 feeder **NEW**

| For flat cable          | For           | Cable length | Cable end in feeder |   |                      |   |        |     |
|-------------------------|---------------|--------------|---------------------|---|----------------------|---|--------|-----|
| AS-i / U <sub>aux</sub> | M12 socket    | --           | not available       | 2 | <b>3RK1901-2NR20</b> | 1 | 1 unit | 42C |
|                         | M12 cable box | 1 m          | not available       | 2 | <b>3RK1901-2NR21</b> | 1 | 1 unit | 42C |
|                         |               | 2 m          | not available       | 2 | <b>3RK1901-2NR22</b> | 1 | 1 unit | 42C |



3RK1901-1MN00

##### Cable terminating piece

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

▶

**3RK1901-1MN00**

1

10 units

42C



3RX90...-0AA00

##### AS-Interface profile cable [see also page 2/85](#)

| Material                                    | Color                 | Quantity   |   |                      |   |        |     |
|---|-----------------------|------------|---|----------------------|---|--------|-----|
| Rubber                                      | Yellow (AS-Interface) | 100 m roll | 2 | <b>3RX9010-0AA00</b> | 1 | 1 unit | 42C |
|   |                       | 1 km drum  | 5 | <b>3RX9012-0AA00</b> | 1 | 1 unit | 42C |
|   | Black (24 V DC)       | 100 m roll | 2 | <b>3RX9020-0AA00</b> | 1 | 1 unit | 42C |
|   |                       | 1 km drum  | 5 | <b>3RX9022-0AA00</b> | 1 | 1 unit | 42C |
| TPE   | Yellow (AS-Interface) | 100 m roll | 2 | <b>3RX9013-0AA00</b> | 1 | 1 unit | 42C |
|   |                       | 1 km drum  | 5 | <b>3RX9014-0AA00</b> | 1 | 1 unit | 42C |
|   | Black (24 V DC)       | 100 m roll | 2 | <b>3RX9023-0AA00</b> | 1 | 1 unit | 42C |
|   |                       | 1 km drum  | 5 | <b>3RX9024-0AA00</b> | 1 | 1 unit | 42C |
| TPE special version according to UL Class 2 | Yellow (AS-Interface) | 100 m roll | 5 | <b>3RX9017-0AA00</b> | 1 | 1 unit | 42C |
|   | Black (24 V DC)       | 100 m roll | 5 | <b>3RX9027-0AA00</b> | 1 | 1 unit | 42C |
| PUR   | Yellow (AS-Interface) | 100 m roll | 2 | <b>3RX9015-0AA00</b> | 1 | 1 unit | 42C |
|   |                       | 1 km drum  | 5 | <b>3RX9016-0AA00</b> | 1 | 1 unit | 42C |
|   | Black (24 V DC)       | 100 m roll | 2 | <b>3RX9025-0AA00</b> | 1 | 1 unit | 42C |
|   |                       | 1 km drum  | 5 | <b>3RX9026-0AA00</b> | 1 | 1 unit | 42C |

# Motor Starters for Use in the Field, High Degree of Protection

## SIRIUS M200D Motor Starters

### Accessories

For M200D motor starters for AS-Interface

| Version | SD | Article No. | Price per PU | PU (UNIT, SET, M) | PS* | PG |
|---------|----|-------------|--------------|-------------------|-----|----|
|         | d  |             |              |                   |     |    |

**Further accessories**

3RK1904-2AB02

**AS-Interface addressing unit V3.0**

- 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 type AA batteries (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

2

3RK1904-2AB02

1

1 unit

42C



3RK1902-4PB15-3AA0

**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

5

3RK1902-4PB15-3AA0

1

1 unit

42D

**"SIRIUS M200D Motor Starter" manuals**

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

**Manual - SIRIUS M200D AS-Interface Standard Motor Starter**, see <https://support.industry.siemens.com/cs/ww/en/view/38722160>

# 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

| Version  | SD | Article No.  | Price per PU         | PU (UNIT, SET, M) | PS*    | PG  |
|--|----|--|----------------------|-------------------|--------|-----|
| <b>Motor control with PROFIBUS</b>   |    |  |                      |                   |        |     |
| <br>3RK1902-1DA00   |    | <b>M12 plugs, angular</b><br>For screw fixing, 5-pole screw terminal, max. 0.75 mm <sup>2</sup> , B-coded, no terminating resistor   |                      |                   |        |     |
|  | 5  | <b>3RK1902-1DA00</b>   |                      | 1                 | 1 unit | 42D |
| <br>3RK1902-1BA00   |    | • ① 5 female contacts  |                      |                   |        |     |
|  | 5  | <b>3RK1902-1BA00</b>   |                      | 1                 | 1 unit | 42D |
| <br>3RK1902-1G.   |    | <b>Control cables, assembled at one end</b><br>M12, screw fixing, angular, B-coded, no terminating resistor  |                      |                   |        |     |
|  | 15 | • ① 5 female contacts, 3 m   | <b>3RK1902-1GB30</b> | 1                 | 1 unit | 42D |
|  | 15 | • ① 5 female contacts, 5 m   | <b>3RK1902-1GB50</b> | 1                 | 1 unit | 42D |
|  | 15 | • ① 5 female contacts, 10 m  | <b>3RK1902-1GC10</b> | 1                 | 1 unit | 42D |
| <br>3RK1902-1N.   |    | • ① ② <b>Control cables, assembled at both ends</b><br>M12, screw fixing, angular, pin/socket 5-pole, B-coded, no terminating resistor   |                      |                   |        |     |
|  | 15 | • 3.0 m  | <b>3RK1902-1NB30</b> | 1                 | 1 unit | 42D |
|  | 15 | • 5.0 m  | <b>3RK1902-1NB50</b> | 1                 | 1 unit | 42D |
|  | 15 | • 10.0 m   | <b>3RK1902-1NC10</b> | 1                 | 1 unit | 42D |
| <b>Further accessories</b>   |    |  |                      |                   |        |     |
|  | 1  | <b>PROFIBUS trailing cables</b><br>Max. acceleration 4 m/s <sup>2</sup> , 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 1 000 m | <b>6XV1830-3EH10</b> | 1                 | 1 M    | 5K2 |
|  | 1  | <b>PROFIBUS FC Food bus cables</b><br>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 1 000 m                                 | <b>6XV1830-0GH10</b> | 1                 | 1 M    | 5K2 |
|  | 1  | <b>PROFIBUS FC Robust bus cables</b><br>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 1 000 m      | <b>6XV1830-0JH10</b> | 1                 | 1 M    | 5K2 |
|  | 1  | <b>Power cables</b><br>5-core, 5 x 1.5 mm <sup>2</sup> , trailing, sold by the meter, minimum order quantity 20 m, maximum order quantity 1 000 m  | <b>6XV1830-8AH10</b> | 1                 | 1 M    | 5K2 |
| <b>Connection for 24 V power supply of the M200D PROFIBUS/PROFINET</b>   |    |  |                      |                   |        |     |
| See page 9/65  |    |  |                      |                   |        |     |
| <b>Manual "SIRIUS M200D PROFIBUS/PROFINET Motor Starter"</b>   |    |  |                      |                   |        |     |
| See<br><a href="https://support.industry.siemens.com/cs/ww/en/view/38823402">https://support.industry.siemens.com/cs/ww/en/view/38823402</a> |    |  |                      |                   |        |     |

# Motor Starters for Use in the Field, High Degree of Protection

## SIRIUS M200D Motor Starters

### Accessories

For M200D motor starters for PROFINET

#### Selection and ordering data

| Version  | SD | Article No.  | Price per PU | PU (UNIT, SET, M)    | PS* | PG         |
|--|----|--|--------------|----------------------|-----|------------|
|  | d  |  |              |                      |     |            |
| <b>Motor control with PROFINET</b>   |    |  |              |                      |     |            |
|  |    | <b>⑮ M12 plugs, angular</b><br>For screw fixing, 4-pole screw terminal, max. 0.75 mm <sup>2</sup> , angular, D-coded <ul style="list-style-type: none"> <li>• 4 male contacts</li> </ul>   | 5            | <b>3RK1902-2DA00</b> | 1   | 1 unit 42D |
| <br>3RK1902-2H. |    | <b>⑮ Control cables, assembled at one end</b><br>M12 for screw fixing, angular, 4-pole, D-coded, <ul style="list-style-type: none"> <li>• 4 male contacts, 3 m</li> <li>• 4 male contacts, 5 m</li> <li>• 4 male contacts, 10 m</li> </ul> | 15           | <b>3RK1902-2HB30</b> | 1   | 1 unit 42D |
|  |    |  | 15           | <b>3RK1902-2HB50</b> | 1   | 1 unit 42D |
|  |    |  | 15           | <b>3RK1902-2HC10</b> | 1   | 1 unit 42D |
| <br>3RK1902-2N. |    | <b>⑮ Control cables, assembled at both ends</b><br>M12 for screw fixing, angular at both ends, 4-pole, D-coded, male contacts at both ends <ul style="list-style-type: none"> <li>• 3 m</li> <li>• 5 m</li> <li>• 10 m</li> </ul>          | 15           | <b>3RK1902-2NB30</b> | 1   | 1 unit 42D |
|  |    |  | 15           | <b>3RK1902-2NB50</b> | 1   | 1 unit 42D |
|  |    |  | 15           | <b>3RK1902-2NC10</b> | 1   | 1 unit 42D |
| <b>Further accessories</b>   |    |  |              |                      |     |            |
|  |    | <b>PROFINET IE FC TP standard cable GP 2 x 2</b><br>Sold by the meter  | 1            | <b>6XV1840-2AH10</b> | 1   | 1 M 5K1    |
|  |    | <b>PROFINET IE FC TP trailing cable 2 x 2</b><br>Sold by the meter   | 1            | <b>6XV1840-3AH10</b> | 1   | 1 M 5K1    |
|  |    | <b>PROFINET IE FC TP trailing cable GP 2 x 2</b><br>Sold by the meter  | 1            | <b>6XV1870-2D</b>    | 1   | 1 M 5K2    |
|  |    | <b>PROFINET IE FC TP torsion cable 2 x 2</b><br>Sold by the meter  | 1            | <b>6XV1870-2F</b>    | 1   | 1 M 5K2    |
|  |    | <b>PROFINET IE FC TP marine cable, 4-core</b><br>Sold by the meter   | 1            | <b>6XV1840-4AH10</b> | 1   | 1 M 5K1    |
|  |    | <b>Power cables</b><br>5-core, 5 x 1.5 mm <sup>2</sup> , trailing, sold by the meter, minimum order quantity 20 m, maximum order quantity 1 000 m  | 1            | <b>6XV1830-8AH10</b> | 1   | 1 M 5K2    |

| Version   | SD | Article No.  | Price per PU | PU (UNIT, SET, M)         | PS* | PG           |
|---|----|--|--------------|---------------------------|-----|--------------|
|   | d  |  |              |                           |     |              |
| <b>Connection for 24 V power supply of the M200D PROFIBUS/PROFINET</b>                                    |    |  |              |                           |     |              |
| <br>3RK1902-3DA00      |    | <b>Plugs</b><br>On M200D, 7/8" for screw fixing, angular, screw terminal, 1.5 mm <sup>2</sup> <ul style="list-style-type: none"> <li>• ⑮ 5 female contacts</li> </ul>  | 5            | <b>3RK1902-3DA00</b>      | 1   | 1 unit 42D   |
|   |    | <ul style="list-style-type: none"> <li>• ⑭ 5 male contacts</li> </ul>  | 5            | <b>3RK1902-3BA00</b>      | 1   | 1 unit 42D   |
| <br>3RK1902-3BA00      |    | <b>⑮ Supply lines, assembled at one end</b><br>7/8" for screw fixing, angular, 1.5 mm <sup>2</sup> <ul style="list-style-type: none"> <li>• 5 female contacts, 3 m</li> <li>• 5 female contacts, 5 m</li> <li>• 5 female contacts, 10 m</li> </ul> | 15           | <b>3RK1902-3GB30</b>      | 1   | 1 unit 42D   |
|   |    |  | 15           | <b>3RK1902-3GB50</b>      | 1   | 1 unit 42D   |
|   |    |  | 15           | <b>3RK1902-3GC10</b>      | 1   | 1 unit 42D   |
| <br>3RK1902-3G.        |    | <b>⑮ ⑭ Supply lines, assembled at both ends</b><br>7/8", for screw fixing, angular at both ends, 5-pole pin/socket, 1.5 mm <sup>2</sup> <ul style="list-style-type: none"> <li>• 3 m</li> <li>• 5 m</li> <li>• 10 m</li> </ul>                     | 15           | <b>3RK1902-3NB30</b>      | 1   | 1 unit 42D   |
|   |    |  | 15           | <b>3RK1902-3NB50</b>      | 1   | 1 unit 42D   |
|   |    |  | 15           | <b>3RK1902-3NC10</b>      | 1   | 1 unit 42D   |
| <br>3RK1902-3N.        |    | <b>7/8" sealing caps</b><br>1 pack = 10 units  | 1            | <b>6ES7194-3JA00-0AA0</b> | 1   | 10 units 250 |
|   |    |  |              |                           |     |              |
| <br>6ES7194-3JA00-0AA0 |    |  |              |                           |     |              |
| <b>Manual "SIRIUS M200D PROFIBUS/PROFINET Motor Starter"</b>  |    |  |              |                           |     |              |
|   |    | See<br><a href="https://support.industry.siemens.com/cs/ww/en/view/38823402">https://support.industry.siemens.com/cs/ww/en/view/38823402</a>   |              |                           |     |              |

## Motor Starters for Use in the Field, High Degree of Protection

### Hybrid fieldbus connections

#### Overview



Hybrid fieldbus connection with two HanBrid sockets



Control cabinet bushing with two M12 sockets

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 bushings:

- Direct connection
- FastConnect connection

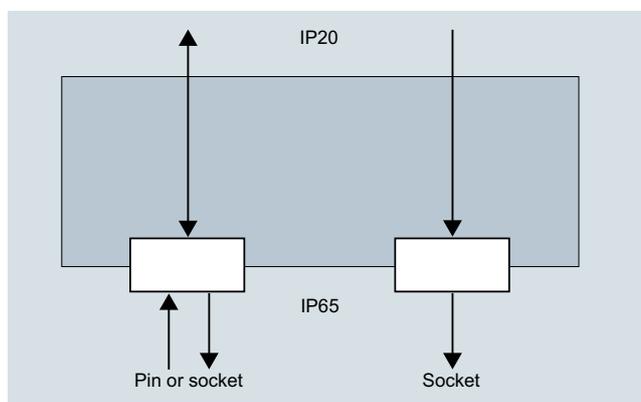
The active bushing with refresher function has 9-pole Sub D sockets for the rear connection.

#### 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

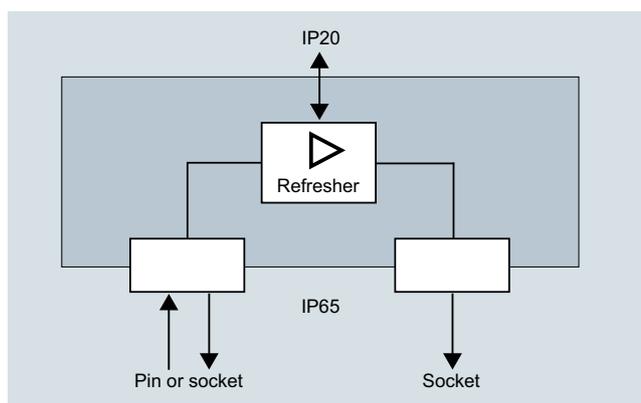
- Bushing from the control cabinet (IP20) into the field (IP65)
- HanBrid plug-in design socket/socket or pin/socket
- Direct connection or FastConnect connection for PROFIBUS at the rear
- Terminal block with spring-type terminals (0.25 to 2.5 mm<sup>2</sup>) for infeeding or forwarding the auxiliary voltages



Hybrid fieldbus connection as passive cabinet bushing

#### Active hybrid fieldbus connections with refresher function

- Bushing 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 spring-type terminals (0.25 to 2.5 mm<sup>2</sup>) for infeeding or forwarding the auxiliary voltages



Hybrid fieldbus connection as active control cabinet bushing with refresher function

# Motor Starters for Use in the Field, High Degree of Protection

## Hybrid fieldbus connections

### Technical specifications

| Type                             | Passive hybrid fieldbus connections |   | Active hybrid fieldbus connections |
|----------------------------------|-------------------------------------|---|------------------------------------|
| <b>Mechanics and environment</b> |                                     |   |                                    |
| <b>Dimensions (W x H x D)</b>    | mm                                  | 93 x 103 x 65   |                                    |
| <b>Cutout (W x H)</b>            | mm                                  | 80 x 90   |                                    |
| <b>Temperature range</b>         | °C                                  | -25 ... +60   |                                    |
| <b>Degree of protection</b>      |                                     | IP20 internal / IP65 on field side                        |                                    |
| <b>Material/enclosure</b>        | mm                                  | Plastic (black PC), flame retardant                       |                                    |
| <b>Electrical specifications</b> |                                     |   |                                    |
| <b>Rated operational voltage</b> | V DC                                | 24, ± 25%   |                                    |
| • 24 V DC not switched (NS)      | V DC                                | 24, ± 25%   |                                    |
| • 24 V DC switched (S)           |                                     |   |                                    |
| <b>Max. rated current</b>        | A                                   | 10  |                                    |
| <b>Power supply</b>              | --                                  | From 24 V DC not switched (NS)                            |                                    |
| <b>Max. power consumption</b>    | mA                                  | 130   |                                    |
| <b>Mains buffering</b>           | ms                                  | > 20  |                                    |
| <b>Baud rate detection</b>       | --                                  | Automatic   |                                    |
| <b>Maximum cascading depth</b>   | --                                  | 9 hybrid fieldbus connections                             |                                    |
| <b>Baud rates</b>                | kbps                                | 9.6/19.2/45.45/93.75/187.5/500/1 500/3 000/6 000 /1 2 000 |                                    |
| <b>Electrical separation</b>     | V DC                                | 500   |                                    |

### Selection and ordering data



Hybrid fieldbus connection on the field side:  
With socket/socket (HanBrid)



With pin/socket (HanBrid)



Control cabinet bushing on the field side  
With socket/socket (M12)

| Link type / function                      | Connection IP65             | Connection IP20 (PROFIBUS)         | SD | Article No.          | Price per PU | PU (UNIT, SET, M) | PS*    | PG  |
|---|-----------------------------|------------------------------------|----|----------------------|--------------|-------------------|--------|-----|
|   |                             |                                    | d  |                      |              |                   |        |     |
| <b>Hybrid fieldbus connections</b>        |                             |                                    |    |                      |              |                   |        |     |
| <b>Passive</b>                            |                             |                                    |    |                      |              |                   |        |     |
| • Cu/Cu, for feeding into the field       | Socket/socket (2 x HanBrid) | Direct connection                  | 5  | <b>3RK1911-1AA22</b> |              | 1                 | 1 unit | 42D |
| • Cu/Cu, for looping through in the field | Pin/socket (2 x HanBrid)    | Direct connection                  | 5  | <b>3RK1911-1AA32</b> |              | 1                 | 1 unit | 42D |
| • Cu/Cu, for feeding into the field       | Socket/socket (2 x HanBrid) | PROFIBUS FastConnect bus connector | 5  | <b>3RK1911-1AF22</b> |              | 1                 | 1 unit | 42D |
| • Cu/Cu, for looping through in the field | Pin/socket (2 x HanBrid)    | PROFIBUS FastConnect bus connector | 5  | <b>3RK1911-1AF32</b> |              | 1                 | 1 unit | 42D |
| <b>Active (refresher)</b>                 |                             |                                    |    |                      |              |                   |        |     |
| • Cu/Cu, for feeding into the field       | Socket/socket (2 x HanBrid) | 9-pole Sub D socket                | 5  | <b>3RK1911-1AJ22</b> |              | 1                 | 1 unit | 42D |
| • Cu/Cu, for looping through in the field | Pin/socket (2 x HanBrid)    | 9-pole Sub D socket                | 5  | <b>3RK1911-1AJ32</b> |              | 1                 | 1 unit | 42D |
| • Cu/Cu, for feeding into the field       | Socket/socket (2 x M12)     | 9-pole Sub D socket                | 5  | <b>3RK1911-1AK22</b> |              | 1                 | 1 unit | 42D |
|   |                             |                                    | d  |                      |              |                   |        |     |
| Version                                   |                             |                                    | SD | Article No.          | Price per PU | PU (UNIT, SET, M) | PS*    | PG  |

### Accessories



6ES7194-1JB10-0XA0

**Sealing caps for HanBrid**  
Protective cover for bus and power supply connection (pack of 10)

1 **6ES7194-1JB10-0XA0** 1 10 units 250

PROFIBUS ECOFAST hybrid cables, [see page 9/20](#).

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

## Motor Starters for Use in the Field, High Degree of Protection

### Notes

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