

Ordering data	Article No.	Article No.
<b>Interface module Standard</b>		
<ul style="list-style-type: none"> <li>IM 155-6PN ST, with server module and installed BusAdapter BA 2xRJ45</li> </ul>	<b>6ES7155-6AA00-0BN0</b>	Relay module RQ NO 4x120 V DC - 230 V AC/5 A Standard, normally-open, BU type B0, color code CC00
<ul style="list-style-type: none"> <li>IM 155-6PN ST, with server module, without BusAdapter</li> </ul>	<b>6ES7155-6AU00-0BN0</b>	Signal relay module RQ CO 4x24 V UC/2 A Standard, changeover contact, BU type A0, color code CC00
<b>Interface module High Feature</b>		
<ul style="list-style-type: none"> <li>IM 155-6DP HF, with server module, with multi-hot-swap, incl. PROFIBUS connector</li> </ul>	<b>6ES7155-6BA00-0CN0</b>	Fail-safe digital output module F-DQ 4x24 V DC High Feature, BU type A0, color code CC01, SIL3/Cat.4/PLe
<ul style="list-style-type: none"> <li>IM 155-6PN HF, incl. server module, without BusAdapter</li> </ul>	<b>6ES7155-6AU00-0CN0</b>	Fail-safe digital F output module relay 1 F-RQ, BU type F0, relay output (2 NO contacts), total output current 5 A, load voltages 24 V DC and 24...230 V AC; can be used up to SIL3 /Category 4/PLe if controlled via F-DQ
<b>Accessories</b>		
<b>Digital input modules</b>		<b>Analog input modules</b>
Digital input module DI 8x24 V DC Standard, BU type A0, color code CC01	<b>6ES7131-6BF00-0BA0</b>	Analog input module AI 4xU/I 2-wire Standard, BU type A0 or A1, color code CC03, 16 bit, ± 0.3%
Digital input module DI 16x24 V DC Standard, BU type A0, color code CC00	<b>6ES7131-6BH00-0BA0</b>	Analog input module AI 4xI 2-/4-wire Standard, BU type A0 or A1, color code CC03, 16 bit, ± 0.3%
Digital input module DI 8x24 V DC High Feature, BU type A0, color code CC01, channel-specific diagnostics, isochronous mode, shared input (MSI)	<b>6ES7131-6BF00-0CA0</b>	Analog input module AI 4xRTD/TC 2-, 3-, 4-wire High Feature, BU type A0 or A1, color code CC00, 16 bit, ± 0.1%, scalable measuring range
Digital input module DI 8x24 V DC Source Input, Basic, BU type A0, color code CC02	<b>6ES7131-6BF60-0AA0</b>	Analog input module AI 2xU/I 2-/4-wire High Speed, BU type A0 or A1, color code CC00, 16 bit, ± 0.3%, isochronous mode above 250 µs, oversampling above 50 µs
Digital input module DI 8xNAMUR High Feature, BU type A0, color code CC01	<b>6ES7131-6TF00-0CA0</b>	Analog input module AI 8xRTD/TC 2-wire High Feature, BU type A0 or A1, color code CC00, 16 bit, ± 0.1%, scalable measuring range
Digital input module DI 4x120 V AC-230 V AC Standard, BU type B1, color code CC41	<b>6ES7131-6FD00-0BB1</b>	Analog input module AI 2xU/I 2-/4-wire High Feature, BU type A0 or A1, color code CC05, 16 bit, ± 0.1%, independent channel isolation, isochronous mode above 1 ms
Fail-safe digital input module F-DI 8x24 V DC High Feature, BU type A0, color code CC01, SIL3/Cat.4/PLe	<b>6ES7136-6BA00-0CA0</b>	Analog input module AI Energy Meter Standard, BU type D0, color code CC00
<b>Digital output modules</b>		<b>Analog output modules</b>
Digital output module DQ 4x24 V DC/2 A Standard, BU type A0, color code CC02	<b>6ES7132-6BD20-0BA0</b>	Analog output module AQ 4xU/I Standard, BU type A0 or A1, color code CC00, 16 bit, ± 0.3%
Digital output module DQ 4x24 V DC/2 A High Feature, BU type A0, color code CC02, channel-precise diagnostics, isochronous mode, shared output (MSO)	<b>6ES7132-6BD20-0CA0</b>	Analog output module AQ 2xU/I High Speed, BU type A0 or A1, color code CC00, 16 bit, ± 0.3%
Digital output module DQ 4x24 V AC-230 V AC/2 A Standard for BU type B1, color code CC41	<b>6ES7132-6FD00-0BB1</b>	Analog output module AQ 2xU/I High Feature, BU type A0 or A1, color code CC00, 16 bit, ± 0.1%
Digital output module DQ 8x24 V DC/0.5 A Standard, BU type A0, color code CC02	<b>6ES7132-6BF00-0BA0</b>	
Digital output module DQ 8x24 V DC/0.5 A High Feature, BU type A0, color code CC02	<b>6ES7132-6BF00-0CA0</b>	
Digital output module DQ 8x24 V DC/0.5 A Sink output, Basic, BU type A0, color code CC01	<b>6ES7132-6BF60-0AA0</b>	
Digital output module DQ 16x24 V DC/0.5 A Standard, BU type A0, color code CC00	<b>6ES7132-6BH00-0BA0</b>	

# SIMATIC ET 200 distributed I/O

## ET 200SP

### Fail-safe I/O modules Digital F output modules

#### Overview

Digital fail-safe output module:  
F-DQ 4x24 V DC High Feature, BU type A0, color code CC01

Other properties:

- 4-channel digital fail-safe output module for the ET 200SP
- Fail-safe 2-channel activation (sink/source output) by actuators
- Actuators can be controlled up to 2 A
- Certified up to SIL 3 (IEC 61508), PL e (ISO 13849)
- Can be plugged into type A0 BaseUnits (BU) with automatic coding
- LED display for error, operation, supply voltage and status
- Clear labeling on front of module
  - Plain text identification of the module type and function class
  - 2D matrix code (order and serial number)
  - Connection diagram
  - Color coding of the module type DI: White
  - Hardware and firmware version
  - Color code CC for module-specific color coding of the potentials at the terminals of the BU
  - Complete article No.
- Optional labeling accessories
  - Labeling strips
  - Reference identification label
- Optional module-specific color identification of the terminals according to the color code CC
- Optional system-integrated shield connection
- The modules support PROFIsafe, both in PROFIBUS, and in PROFINET configurations.
- They can be used with all fail-safe SIMATIC S7 CPUs.

#### Technical specifications

6ES7136-6DB00-0CA0 F-DQ 4x24VDC HF	
<b>General information</b>	
Product function	
• I&M data	Yes; I&M0 to I&M3
Engineering with	
• STEP 7 TIA Portal can be configured/integrated as of version	V12
• STEP 7 can be configured/integrated as of version	V5.5 SP3 / -
• PROFINET as of GSD version/GSD revision	V2.31
<b>Supply voltage</b>	
Type of supply voltage	24 V DC
Rated value (DC)	24 V
Reverse polarity protection	Yes
<b>Digital outputs</b>	
Number of digital outputs	4
Digital outputs, configurable	Yes
Short-circuit protection	Yes
Open-circuit detection	Yes
Overload protection	Yes
Limitation of inductive shutdown voltage to	typ. 2*47V

6ES7136-6DB00-0CA0 F-DQ 4x24VDC HF	
Switching capacity of the outputs	
• with resistive load, max.	2 A
• on lamp load, max.	10 W
Load resistance range	
• lower limit	12 Ω
• upper limit	2 000 Ω
Output voltage	
• Type of output voltage	DC
• for signal "1", min.	24 V; L+ (-0.5 V)
Output current	
• for signal "1" rated value	2 A
• for signal "0" residual current, max.	0.5 mA
Switching frequency	
• with resistive load, max.	30 Hz; Symmetrical
• with inductive load, max.	0.1 Hz; according to IEC 947-5-1, DC-13, symmetrical
• on lamp load, max.	10 Hz; Symmetrical
Aggregate current of the outputs	
• Max. current per channel	2 A; Note derating data in the manual
• Max. current per module	6 A; Note derating data in the manual
Cable length	
• Cable length, shielded, max.	1 000 m
• Cable length unshielded, max.	500 m
<b>Interrupts/diagnostics/ status information</b>	
Substitute values connectable	No
Alarms	
• Diagnostic alarm	Yes
Diagnostics indication LED	
• RUN LED	Yes; Green LED
• ERROR LED	Yes; Red LED
• Monitoring the supply voltage	Yes; green PWR LED
• Channel status display	Yes; Green LED
• for channel diagnostics	Yes; Red LED
• for module diagnostics	Yes; green/red DIAG LED
<b>Galvanic isolation</b>	
Electrical isolation channels	
• between the channels and the backplane bus	Yes
<b>Isolation</b>	
Isolation checked with	707 V DC (type test)
<b>Standards, approvals, certificates</b>	
Suitable for safety functions	Yes
Highest safety class achievable in safety mode	
• Performance level according to EN ISO 13849-1:2008	PLe
• SIL according to IEC 61508:2010	SIL 3
• Low demand (PFD) acc. to SIL3	< 2.00E-05 1/h
• High demand (PFH) acc. to SIL3	< 1.00E-09 1/h
<b>Ambient conditions</b>	
Operating temperature	
• horizontal installation, min.	0 °C
• horizontal installation, max.	60 °C
• vertical installation, min.	0 °C
• vertical installation, max.	50 °C
<b>Dimensions</b>	
Width	15 mm
<b>Weights</b>	
Weight, approx.	57 g

# SIMATIC ET 200 distributed I/O

## ET 200SP

### Fail-safe I/O modules Digital F output modules

#### Ordering data

##### Digital F output modules

F-DQ 4x24 V DC High Feature,  
BU type A0, color code CC01

#### Article No.

**6ES7136-6DB00-0CA0**

##### Usable BaseUnits

##### BU15-P16+A0+2D

BU type A0; BaseUnit (light) with  
16 process terminals to the module;  
for starting a new load group  
(max. 10 A)

**6ES7193-6BP00-0DA0**

##### BU15-P16+A0+2B

BU type A0; BaseUnit (dark) with  
16 process terminals to the module;  
for continuing the load group

**6ES7193-6BP00-0BA0**

##### BU15-P16+A10+2D

BU type A0; BaseUnit (light) with  
16 process terminals (1...16) to the  
module and an additional 10 inter-  
nally jumpered AUX terminals  
(1 A to 10 A); for starting a new load  
group (max. 10 A)

**6ES7193-6BP20-0DA0**

##### BU15-P16+A10+2B

BU type A0; BaseUnit (dark) with  
16 process terminals (1...16) to the  
module and an additional 10 inter-  
nally jumpered AUX terminals  
(1 A to 10 A); for continuing the load  
group

**6ES7193-6BP20-0BA0**

##### BU20-P12+A4+0B

BU type B0; BaseUnit (dark) with  
12 process terminals (1...12) to the  
module and an additional 4 inter-  
nally jumpered AUX terminals  
(1 A to 4 A); for continuing the load  
group

**6ES7193-6BP20-0BB0**

##### Accessories

##### S7 Distributed Safety programming tool V5.4

Task: 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  
Requirement: STEP 7 V5.3 SP3 and  
higher

Floating license for 1 user

**6ES7833-1FC02-0YA5**

Floating license for 1 user, license  
key download without software or  
documentation<sup>1)</sup>;  
email address required for delivery

**6ES7833-1FC02-0YH5**

##### STEP 7 Safety Advanced V13

Task:  
Engineering tool for configuring  
fail-safe user programs for  
SIMATIC S7-1500F, S7-300F,  
S7-400F, WinAC RTX F, ET 200SP,  
ET 200S, ET 200M, ET 200iSP,  
ET 200pro, ET 200eco  
Requirement:

STEP 7 Professional V13

Floating license for 1 user

**6ES7833-1FA13-0YA5**

Floating license for 1 user, license  
key download without software or  
documentation<sup>1)</sup>;  
email address required for delivery

**6ES7833-1FA13-0YH5**

#### Article No.

##### Reference identification label

10 sheets of 16 labels

**6ES7193-6LF30-0AW0**

##### Labeling strips

500 labeling strips on roll, light gray,  
for inscription with thermal transfer  
roll printer

**6ES7193-6LR10-0AA0**

500 labeling strips on roll, yellow,  
for inscription with thermal transfer  
roll printer

**6ES7193-6LR10-0AG0**

1000 labeling strips DIN A4, light  
gray, card, for inscription with laser  
printer

**6ES7193-6LA10-0AA0**

1000 labeling strips DIN A4, yellow,  
card, for inscription with laser  
printer

**6ES7193-6LA10-0AG0**

##### BU cover

For covering empty slots (gaps);  
5 units

- 15 mm wide
- 20 mm wide

**6ES7133-6CV15-1AM0**

**6ES7133-6CV20-1AM0**

##### Shield connection

5 shield supports and 5 shield  
terminals

**6ES7193-6SC00-1AM0**

##### Color-coding plates

- Color code CC02,  
module-specific, for 16 push-in  
terminals; for BaseUnit type A0,  
A1; 10 units
- Color code CC71,  
for 10 AUX terminals 1 A to 10 A,  
for BU type A0, yellow/green, with  
push-in terminals; 10 units
- Color code CC72,  
for 10 AUX terminals 1 A to 10 A,  
for BU type A0, red, with push-in  
terminals; 10 units
- Color code CC73,  
for 10 AUX terminals 1 A to 10 A,  
for BU type A0, blue, with push-in  
terminals; 10 units

**6ES7193-6CP02-2MA0**

**6ES7193-6CP71-2AA0**

**6ES7193-6CP72-2AA0**

**6ES7193-6CP73-2AA0**

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