

SIMATIC ET 200 distributed I/O

ET 200SP

Interface modules without CPU
IM 155-6

Ordering data	Article No.	Article No.
Interface module Standard - IM 155-6PN ST, with server module and installed BusAdapter BA 2xRJ45 - IM 155-6PN ST, with server module, without BusAdapter	6ES7155-6AA00-0BN0 6ES7155-6AU00-0BN0	6ES7132-6HD00-0BB0 6ES7132-6GD50-0BA0
Interface module High Feature - IM 155-6DP HF, with server module, with multi-hot-swap, incl. PROFIBUS connector - IM 155-6PN HF, incl. server module, without BusAdapter	6ES7155-6BA00-0CN0 6ES7155-6AU00-0CN0	6ES7136-6DB00-0CA0 6ES7136-6RA00-0BF0
Accessories		
Digital input modules Digital input module DI 8x24 V DC Standard, BU type A0, color code CC01 Digital input module DI 16x24 V DC Standard, BU type A0, color code CC00 Digital input module DI 8x24 V DC High Feature, BU type A0, color code CC01, channel-specific diagnostics, isochronous mode, shared input (MSI) Digital input module DI 8x24 V DC Source Input, Basic, BU type A0, color code CC02 Digital input module DI 8xNAMUR High Feature, BU type A0, color code CC01 Digital input module DI 4x120 V AC-230 V AC Standard, BU type B1, color code CC41 Fail-safe digital input module F-DI 8x24 V DC High Feature, BU type A0, color code CC01, SIL3/Cat.4/PLe	6ES7131-6BF00-0BA0 6ES7131-6BH00-0BA0 6ES7131-6BF00-0CA0 6ES7131-6BF60-0AA0 6ES7131-6TF00-0CA0 6ES7131-6FD00-0BB1 6ES7136-6BA00-0CA0	6ES7132-6HD00-0BA1 6ES7134-6GD00-0BA1 6ES7134-6JD00-0CA1 6ES7134-6HB00-0DA1 6ES7134-6JF00-0CA1 6ES7134-6HB00-0CA1 6ES7134-6PA00-0BD0
Digital output modules Digital output module DQ 4x24 V DC/2 A Standard, BU type A0, color code CC02 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) Digital output module DQ 4x24 V AC-230 V AC/2 A Standard for BU type B1, color code CC41 Digital output module DQ 8x24 V DC/0.5 A Standard, BU type A0, color code CC02 Digital output module DQ 8x24 V DC/0.5 A High Feature, BU type A0, color code CC02 Digital output module DQ 8x24 V DC/0.5 A Sink output, Basic, BU type A0, color code CC01 Digital output module DQ 16x24 V DC/0.5 A Standard, BU type A0, color code CC00	6ES7132-6BD20-0BA0 6ES7132-6BD20-0CA0 6ES7132-6FD00-0BB1 6ES7132-6BF00-0BA0 6ES7132-6BF00-0CA0 6ES7132-6BF60-0AA0 6ES7132-6BH00-0BA0	6ES7132-6HD00-0BA1 6ES7135-6HB00-0DA1 6ES7135-6HB00-0CA1
	Relay module RQ NO 4x120 V DC - 230 V AC/5 A Standard, normally-open, BU type B0, color code CC00 Signal relay module RQ CO 4x24 V UC/2 A Standard, changeover contact, BU type A0, color code CC00 Fail-safe digital output module F-DQ 4x24 V DC High Feature, BU type A0, color code CC01, SIL3/Cat.4/PLe 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	
	Analog input modules Analog input module AI 4xU/I 2-wire Standard, BU type A0 or A1, color code CC03, 16 bit, $\pm 0.3\%$ Analog input module AI 4xI 2-/4-wire Standard, BU type A0 or A1, color code CC03, 16 bit, $\pm 0.3\%$ Analog input module AI 4xRTD/TC 2-, 3-, 4-wire High Feature, BU type A0 or A1, color code CC00, 16 bit, $\pm 0.1\%$, scalable measuring range Analog input module AI 2xU/I 2-/4-wire High Speed, BU type A0 or A1, color code CC00, 16 bit, $\pm 0.3\%$, isochronous mode above 250 μ s, oversampling above 50 μ s Analog input module AI 8xRTD/TC 2-wire High Feature, BU type A0 or A1, color code CC00, 16 bit, $\pm 0.1\%$, scalable measuring range Analog input module AI 2xU/I 2-/4-wire High Feature, BU type A0 or A1, color code CC05, 16 bit, $\pm 0.1\%$, independent channel isolation, isochronous mode above 1 ms Analog input module AI Energy Meter Standard, BU type D0, color code CC00	
	Analog output modules Analog output module AQ 4xU/I Standard, BU type A0 or A1, color code CC00, 16 bit, $\pm 0.3\%$ Analog output module AQ 2xU/I High Speed, BU type A0 or A1, color code CC00, 16 bit, $\pm 0.3\%$ Analog output module AQ 2xU/I High Feature, BU type A0 or A1, color code CC00, 16 bit, $\pm 0.1\%$	

SIMATIC ET 200 distributed I/O

ET 200SP

Fail-safe I/O modules

Digital F input modules

Ordering data

Article No.

Article No.

Digital F input modules

F-DI 8x24 V DC High Feature,
BU type A0, color code CC01

6ES7136-6BA00-0CA0

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

Accessories

S7 Distributed Safety programming tool V5.4

Task: Configuration software for
configuring fail-safe user programs
for SIMATIC S7-300F, S7-400 F,
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
documentation¹⁾;
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, ET200SP,
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
documentation¹⁾;
email address required for delivery

6ES7833-1FA13-0YH5

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 CC01,
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

6ES7193-6CP01-2MA0

6ES7193-6CP71-2AA0

6ES7193-6CP72-2AA0

6ES7193-6CP73-2AA0

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

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	
General information	
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
Supply voltage	
Type of supply voltage	24 V DC
Rated value (DC)	24 V
Reverse polarity protection	Yes
Digital outputs	
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
Interrupts/diagnostics/status information	
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
Galvanic isolation	
Electrical isolation channels	
• between the channels and the backplane bus	Yes
Isolation	
Isolation checked with	707 V DC (type test)
Standards, approvals, certificates	
Suitable for safety functions	Yes
Highest safety class achievable in safety mode	
• Performance level according to EN ISO 13849-1:2008	PL e
• 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
Ambient conditions	
Operating temperature	
• horizontal installation, min.	0 °C
• horizontal installation, max.	60 °C
• vertical installation, min.	0 °C
• vertical installation, max.	50 °C
Dimensions	
Width	15 mm
Weights	
Weight, approx.	57 g