

Overview (continued)Overview of digital output modules

Digital output	PU	Article No.	CC code	BU type
DQ 16 x 24 V DC/0.5 A BA	1	6ES7132-6BH00-0AA0	CC00	A0
DQ 16 x 24 V DC/0.5 A BA	10	6ES7132-6BH00-2AA0	CC00	A0
DQ 16 x 24 V DC/0.5 A ST	1	6ES7132-6BH01-0BA0	CC00	A0
DQ 16 x 24 V DC/0.5 A ST	10	6ES7132-6BH01-2BA0	CC00	A0
DQ 8 x 24 V DC/0.5 A SNK BA	1	6ES7132-6BF61-0AA0	CC01	A0
DQ 8 x 24 V DC/0.5 A BA	1	6ES7132-6BF01-0AA0	CC02	A0
DQ 8 x 24 V DC/0.5 A BA	10	6ES7132-6BF01-2AA0	CC02	A0
DQ 8 x 24 V DC/0.5 A ST	1	6ES7132-6BF01-0BA0	CC02	A0
DQ 8 x 24 V DC/0.5 A ST	10	6ES7132-6BF01-2BA0	CC02	A0
DQ 8 x 24 V DC/0.5 A HF	1	6ES7132-6BF00-0CA0	CC02	A0
DQ 4 x 24 V DC/2 A ST	1	6ES7132-6BD20-0BA0	CC02	A0
DQ 4 x 24 V DC/2 A ST	10	6ES7132-6BD20-2BA0	CC02	A0
DQ 4 x 24 V DC/2 A HF	1	6ES7132-6BD20-0CA0	CC02	A0
DQ 4 x 24 V DC/2 A HS	1	6ES7132-6BD20-0DA0	CC02	A0
With three operating modes: • Fast isochronous DQ with valve control • Pulse width modulation • Oversampling				
DQ 4 x 24 ... 230 V AC/2 A ST	1	6ES7132-6FD00-0BB1	CC41	B0, B1
DQ 4 x 24 ... 230 V AC/2 A ST	10	6ES7132-6FD00-2BB1	CC41	B0, B1
DQ 4 x 24 ... 230 V AC/2 A HF	1	6ES7132-6FD00-0CU0	CC20	U0
With two operating modes: • DQ • PC: Power control via phase angle, half-wave or full-wave control				
RQ 4 x 24 V UC/2 A CO ST	1	6ES7132-6GD51-0BA0	--	A0
RQ 4 x 120 V DC-230 V AC/ 5 A NO ST	1	6ES7132-6HD01-0BB1	--	B0, B1
RQ 4 x 120 V DC-230 V AC/ 5 A NO ST	10	6ES7132-6HD01-2BB1	--	B0, B1
RQ MA 4 x 120 V DC ... 230 V AC/ 5 A NO ST	1	6ES7132-6MD00-0BB1	--	B0, B1

Overview of BaseUnits

BaseUnit	PU	Article No.	CC codes for process terminals	CC codes for AUX terminals
BU type A0 • New load group (light) • 16 process terminals • With 10 AUX terminals	1	6ES7193-6BP20-0DA0	CC01 to CC05	CC71 to CC73
BU type A0 • New load group (light) • 16 process terminals • With 10 AUX terminals	10	6ES7193-6BP20-2DA0	CC01 to CC05	CC71 to CC73
BU type A0 • New load group (light) • 16 process terminals • Without AUX terminals	1	6ES7193-6BP00-0DA0	CC01 to CC05	--
BU type A0 • New load group (light) • 16 process terminals • Without AUX terminals	10	6ES7193-6BP00-2DA0	CC01 to CC05	--
BU type A0 • Forwarding of load group (dark) • 16 process terminals • With 10 AUX terminals	1	6ES7193-6BP20-0BA0	CC01 to CC05	CC71 to CC73

Overview (continued)

Potential distribution module	PU	Article No.	CC codes for process terminals
PotDis TB Type BR-W, 18x internally jumpered terminals, without connection to P1, P2 or AUX, (total current max. 10 A)	1	6ES7193-6TP00-0TP0	CC10 to CC13
PotDis TB Type P1-R, 18x P1 potential, (total current max. 10 A)	1	6ES7193-6TP00-0TP1	CC10, CC12
PotDis TB Type P2-B, 18x P2 potential, (total current max. 10 A)	1	6ES7193-6TP00-0TP2	CC10, CC13
PotDis TB Type n.c.-G, 18x n.c. (not connected) terminals, without reference to P1, P2 or AUX	1	6ES7193-6TP00-0TN0	CC10

Technical specifications

Article number	6ES7132-6BH00-0AA0	6ES7132-6BH01-0BA0	6ES7132-6BF61-0AA0	6ES7132-6BF01-0AA0	6ES7132-6BF01-0BA0
	ET 200SP, DQ 16x24VDC/ 0.5A BA, PU 1	ET 200SP, DQ 16x 24V DC/ 0.5A ST, PU 1	ET 200SP, DQ 8x 24VDC/ 0.5A SINK BA, PU 1	ET 200SP, DQ 8x 24V DC/ 0.5A Basic, PU 1	ET 200SP, DQ 8x 24V DC/ 0.5A ST, PU 1
General information					
Product type designation	DQ 16x 24 V DC/ 0.5 A BA, PU 1	DQ 16x24VDC/ 0.5A ST	DQ 8x 24 V DC/ 0.5 A SNK BA, PU 1	DQ 8x24 VDC/ 0.5 A BA	DQ 8x24VDC/ 0.5A ST, PU 1
Product function					
• I&M data	Yes; I&M0 to I&M3	Yes; I&M0 to I&M3	Yes; I&M0 to I&M3	Yes; I&M0 to I&M3	Yes; I&M0 to I&M3
Engineering with					
• STEP 7 TIA Portal configurable/ integrated as of version	V14	V14	V14	V14	V14
• STEP 7 configurable/integrated as of version	STEP 7 V5.5 or higher	V5.5 SP3	V5.5 SP3	V5.5 SP3	V5.5 SP3 or higher
• PCS 7 configurable/integrated as of version		V8.1 SP1			V8.1 SP1
• PROFIBUS as of GSD version/ GSD revision	One GSD file each, Revision 3 and 5 and higher	One GSD file each, Revision 3 and 5 and higher	One GSD file each, Revision 3 and 5 and higher	One GSD file each, Revision 3 and 5 and higher	One GSD file each, Revision 3 and 5 and higher
• PROFINET as of GSD version/ GSD revision	GSDML V2.3	GSDML V2.3	GSDML V2.3	GSDML V2.3	GSDML V2.3
Operating mode					
• DQ	Yes	Yes	Yes	Yes	Yes
• DQ with energy-saving function	No	No	No	No	No
• PWM	No	No	No	No	No
• Oversampling	No	No	No	No	No
• MSO	No	No	No	No	No
Supply voltage					
Type of supply voltage	DC	DC	DC	DC	DC
Rated value (DC)	24 V	24 V	24 V	24 V	24 V
Reverse polarity protection	Yes	Yes		Yes	Yes
Digital outputs					
Type of digital output	Source output (PNP, current-sourcing)	Source output (PNP, current-sourcing)	Sink output (NPN, M switching)	Source output (PNP, current-sourcing)	Source output (PNP, current-sourcing)
Number of digital outputs	16	16	8	8	8
Current-sinking	No	No	Yes		
Current-sourcing	Yes	Yes		Yes	Yes
Digital outputs, parameterizable	Yes	Yes	Yes	Yes	Yes
Short-circuit protection	Yes	Yes	Yes	Yes; per channel, electronic	Yes
Open-circuit detection	No	Yes			
Limitation of inductive shutdown voltage to	Typ. L+ (-53 V)	Typ. L+ (-50 V)	Typ. 47 V	Typ. L+ (-50 V)	Typ. L+ (-50 V)
Controlling a digital input	Yes	Yes	Yes	Yes	Yes

I/O systems

SIMATIC ET 200 systems for the control cabinet

SIMATIC ET 200SP

I/O modules > Digital output modules

Technical specifications (continued)

Article number	6ES7132-6BH00-0AA0 ET 200SP, DQ 16x24VDC/ 0.5A BA, PU 1	6ES7132-6BH01-0BA0 ET 200SP, DQ 16x 24V DC/ 0.5A ST, PU 1	6ES7132-6BF61-0AA0 ET 200SP, DQ 8x 24VDC/ 0.5A SINK BA, PU 1	6ES7132-6BF01-0AA0 ET 200SP, DQ 8x 24V DC/ 0.5A Basic, PU 1	6ES7132-6BF01-0BA0 ET 200SP, DQ 8x 24V DC/ 0.5A ST, PU 1
Switching capacity of the outputs					
• with resistive load, max.	0.5 A	0.5 A	0.5 A	0.5 A	0.5 A
• on lamp load, max.	5 W	5 W	5 W	5 W	5 W
Load resistance range					
• lower limit	48 Ω	48 Ω	48 Ω	48 Ω	48 Ω
• upper limit	100 kΩ	12 kΩ	3 400 Ω	100 kΩ	12 kΩ
Output voltage					
• Type of output voltage			DC	DC	DC
• for signal "1", min.					L+ (-0.8 V)
Output current					
• for signal "1" rated value	0.5 A	0.5 A	0.5 A	0.5 A	0.5 A
• for signal "0" residual current, max.	30 μA	0.1 mA	5 μA	10 μA	0.1 mA
Output delay with resistive load					
• "0" to "1", typ.	80 μs; at rated load	50 μs			
• "0" to "1", max.	150 μs; at rated load		300 μs	100 μs; at rated load	50 μs; at rated load
• "1" to "0", typ.	100 μs; at rated load	100 μs			
• "1" to "0", max.	200 μs; at rated load		600 μs	150 μs; at rated load	100 μs; at rated load
Parallel switching of two outputs					
• for uprating	No	No	No	No	No
• for redundant control of a load	Yes	Yes	Yes	Yes	Yes
Switching frequency					
• with resistive load, max.	100 Hz	100 Hz	100 Hz	100 Hz	100 Hz
• with inductive load, max.	2 Hz	2 Hz	0.5 Hz	2 Hz	2 Hz
• on lamp load, max.	10 Hz	10 Hz	10 Hz	10 Hz	10 Hz
Total current of the outputs					
• Current per channel, max.	0.5 A	0.5 A	0.5 A	0.5 A	0.5 A
• Current per module, max.	8 A	8 A	4 A	4 A	4 A
Total current of the outputs (per module)					
horizontal installation					
- up to 30 °C, max.		8 A		4 A	4 A
- up to 40 °C, max.		8 A		4 A	4 A
- up to 50 °C, max.		6 A		4 A	4 A
- up to 60 °C, max.	8 A	4 A	4 A	4 A	4 A
vertical installation					
- up to 30 °C, max.		8 A; in all other mounting positions		4 A; in all other mounting positions	4 A; in all other mounting positions
- up to 40 °C, max.		6 A; in all other mounting positions		4 A; in all other mounting positions	4 A; in all other mounting positions
- up to 50 °C, max.	8 A	4 A; in all other mounting positions	4 A; in all other mounting positions	4 A; in all other mounting positions	4 A; in all other mounting positions
Cable length					
• shielded, max.	1 000 m	1 000 m	1 000 m	1 000 m	1 000 m
• unshielded, max.	600 m	600 m	600 m	600 m	600 m
Isochronous mode					
Isochronous operation (application synchronized up to terminal)	No	No	No	No	No
Interrupts/diagnostics/status information					
Diagnostics function	Yes	Yes	Yes	Yes	Yes
Substitute values connectable	Yes	Yes	Yes	Yes	Yes
Alarms					
• Diagnostic alarm	Yes	Yes	Yes	Yes	Yes

Technical specifications (continued)

Article number	6ES7132-6BH00-0AA0 ET 200SP, DQ 16x24VDC/ 0.5A BA, PU 1	6ES7132-6BH01-0BA0 ET 200SP, DQ 16x 24V DC/ 0.5A ST, PU 1	6ES7132-6BF61-0AA0 ET 200SP, DQ 8x 24VDC/ 0.5A SINK BA, PU 1	6ES7132-6BF01-0AA0 ET 200SP, DQ 8x 24V DC/ 0.5A Basic, PU 1	6ES7132-6BF01-0BA0 ET 200SP, DQ 8x 24V DC/ 0.5A ST, PU 1
Diagnostic messages					
• Monitoring the supply voltage	Yes	Yes	Yes	Yes	Yes
• Wire-break	No	Yes; Module-wise	No	No	Yes; Module-wise
• Short-circuit	No		No	No	
• Short-circuit to M		Yes; Module-wise			Yes; Module-wise
• Short-circuit to L+		Yes; Module-wise			Yes; Module-wise
• Group error	Yes		Yes		
Diagnostics indication LED					
• Monitoring of the supply voltage (PWR-LED)	Yes; green PWR LED	Yes; green PWR LED	Yes; green PWR LED	Yes; green PWR LED	Yes; green PWR LED
• Channel status display	Yes; Green LED	Yes; Green LED	Yes; Green LED	Yes; Green LED	Yes; Green LED
• for channel diagnostics	No	No	No	No	No
• for module diagnostics	Yes; green/red DIAG LED	Yes; green/red DIAG LED	Yes; green/red DIAG LED	Yes; green/red DIAG LED	Yes; green/red DIAG LED
Potential separation					
Potential separation channels					
• between the channels and backplane bus	Yes	Yes	Yes	Yes	Yes
Isolation					
Isolation tested with	707 V DC (type test)	707 V DC (type test)	707 V DC (type test)	707 V DC (type test)	707 V DC (type test)
Standards, approvals, certificates					
Suitable for safety functions	No	No	No	No	No
Suitable for safety-oriented group deactivation		Yes		Yes	Yes
Ambient conditions					
Ambient temperature during operation					
• horizontal installation, min.	0 °C	0 °C	0 °C	0 °C	0 °C
• horizontal installation, max.	60 °C	60 °C	60 °C	60 °C	60 °C
• vertical installation, min.	0 °C	0 °C; in all other mounting positions	0 °C; in all other mounting positions	0 °C; in all other mounting positions	0 °C; in all other mounting positions
• vertical installation, max.	50 °C	50 °C; in all other mounting positions	50 °C; in all other mounting positions	50 °C; in all other mounting positions	50 °C; in all other mounting positions
Altitude during operation relating to sea level					
• Ambient air temperature-barometric pressure-altitude	On request: Ambient temperatures lower than 0 °C (without condensation) and/or installation altitudes greater than 2 000 m	On request: Ambient temperatures lower than 0 °C (without condensation) and/or installation altitudes greater than 2 000 m	On request: Ambient temperatures lower than 0 °C (without condensation) and/or installation altitudes greater than 2 000 m	On request: Ambient temperatures lower than 0 °C (without condensation) and/or installation altitudes greater than 2 000 m	On request: Ambient temperatures lower than 0 °C (without condensation) and/or installation altitudes greater than 2 000 m
Dimensions					
Width	15 mm	15 mm	15 mm	15 mm	15 mm
Height	73 mm	73 mm	73 mm	73 mm	73 mm
Depth	58 mm	58 mm	58 mm	58 mm	58 mm
Weights					
Weight, approx.	30 g	30 g	30 g	30 g	30 g

I/O systems

SIMATIC ET 200 systems for the control cabinet
SIMATIC ET 200SP

I/O modules > Digital output modules

Technical specifications (continued)

Article number	6ES7132-6FD00-0CU0	6ES7132-6GD51-0BA0	6ES7132-6HD01-0BB1	6ES7132-6MD00-0BB1
	ET 200SP, DQ 4x24V...230VAC/ 2A HF, PU 1	ET 200SP, RQ CO 4x 24V DC/ 2A ST, PU 1	ET 200SP, RQ NO 4x 120VDC...230VAC/ 5A, PU 1	ET 200SP, RQ NO-MA 4x120VDC...230VAC/5A ST
Ambient conditions				
Ambient temperature during operation				
- horizontal installation, min. - horizontal installation, max. - vertical installation, min. - vertical installation, max.			0 °C 60 °C 0 °C; in all other mounting positions 50 °C; in all other mounting positions	
Altitude during operation relating to sea level				
Ambient air temperature-barometric pressure-altitude		On request: Ambient temperatures lower than 0 °C (without condensation) and/or installation altitudes greater than 2 000 m	On request: Ambient temperatures lower than 0 °C (without condensation) and/or installation altitudes greater than 2 000 m	
Dimensions				
Width	20 mm	15 mm	20 mm	20 mm
Height	73 mm	73 mm	73 mm	73 mm
Depth	58 mm	58 mm	58 mm	58 mm
Weights				
Weight, approx.	50 g	30 g	40 g	45 g

Ordering data

Article No.

Article No.

Digital output modules

Type of delivery:
Apart from the standard type of delivery in an individual package, selected I/O modules and BaseUnits are also available in a pack of 10 units. The pack of 10 units enables the amount of waste to be reduced considerably, as well as saving the time of unpacking individual modules.

The number of modules required is the number of modules ordered. The type of packaging is chosen by selecting the article number. Packs of 10 can therefore only be ordered in integer multiples of 10.

Digital output module
DQ 16x24 V DC/0.5 A Basic,
BU type A0, color code CC00

- PU: 1 unit
- PU: 10 units

Digital output module
DQ 16x24 V DC/0.5 A Standard,
BU type A0, color code CC00

- PU: 1 unit
- PU: 10 units

Digital output module
DQ 8x24 V DC/0.5 A Sink Output,
Basic, BU type A0,
color code CC01

- PU: 1 unit

Digital output module
DQ 8x24 V DC/0.5 A Basic,
BU type A0,
color code CC02

- PU: 1 unit
- PU: 10 units

6ES7132-6BH00-0AA0
6ES7132-6BH00-2AA0

6ES7132-6BH01-0BA0
6ES7132-6BH01-2BA0

6ES7132-6BF61-0AA0

6ES7132-6BF01-0AA0
6ES7132-6BF01-2AA0

Digital output module
DQ 8x24 V DC/0.5 A Standard,
BU type A0,
color code CC02

- PU: 1 unit
- PU: 10 units

Digital output module
DQ 8x24 V DC/0.5A High Feature,
BU type A0,
color code CC02

- PU: 1 unit

Digital output module
DQ 4x24 V DC/2 A Standard,
BU type A0,
color code CC02

- PU: 1 unit
- PU: 10 units

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)

- PU: 1 unit

Digital output module
DQ 4x24 V DC/2 A High Speed,
BU type A0, color code CC02,
3 operating modes
(fast isochronous DQ with valve control, pulse width modulation, oversampling)

- PU: 1 unit

Digital output module
DQ 4x24 V AC ... 230 V AC/
2 A Standard for BU type B1,
color code CC41

- PU: 1 unit
- PU: 10 units

6ES7132-6BF01-0BA0
6ES7132-6BF01-2BA0

6ES7132-6BF00-0CA0

6ES7132-6BD20-0BA0
6ES7132-6BD20-2BA0

6ES7132-6BD20-0CA0

6ES7132-6BD20-0DA0

6ES7132-6FD00-0BB1
6ES7132-6FD00-2BB1