

SIMATIC ET 200SP, digital output module, DQ 16x 24VDC/0.5A Basic, Pack quantity: 1 unit, suitable for BU type A0, Color code CC00, Module diagnostics



General information	
Product type designation	DQ 16x 24 V DC/0.5 A BA, PU 1
Firmware version	V0.0
<ul style="list-style-type: none"> FW update possible 	No
usable BaseUnits	BU type A0
Color code for module-specific color identification plate	CC00
Product function	
<ul style="list-style-type: none"> I&M data 	Yes; I&M0 to I&M3
Engineering with	
<ul style="list-style-type: none"> STEP 7 TIA Portal configurable/integrated as of version 	V14
<ul style="list-style-type: none"> STEP 7 configurable/integrated as of version 	STEP 7 V5.5 or higher
<ul style="list-style-type: none"> PROFIBUS as of GSD version/GSD revision 	One GSD file each, Revision 3 and 5 and higher
<ul style="list-style-type: none"> PROFINET as of GSD version/GSD revision 	GSDML V2.3
Operating mode	
<ul style="list-style-type: none"> DQ 	Yes
<ul style="list-style-type: none"> DQ with energy-saving function 	No
<ul style="list-style-type: none"> PWM 	No

- Oversampling
- MSO

No

No

Supply voltage

Rated value (DC)	24 V
permissible range, lower limit (DC)	19.2 V
permissible range, upper limit (DC)	28.8 V
Reverse polarity protection	Yes

Input current

Current consumption, max.	55 mA; without load
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Output voltage

Rated value (DC)	24 V
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Power loss

Power loss, typ.	1 W
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Address area

Address space per module	
<ul style="list-style-type: none"> • Outputs 	2 byte

Hardware configuration

Automatic encoding	Yes
<ul style="list-style-type: none"> • Mechanical coding element 	Yes

Selection of BaseUnit for connection variants

<ul style="list-style-type: none"> • 1-wire connection 	BU type A0
<ul style="list-style-type: none"> • 2-wire connection 	BU type A0 + Potential isolation module
<ul style="list-style-type: none"> • 3-wire connection 	BU type A0 + Potential isolation module
<ul style="list-style-type: none"> • 4-wire connection 	BU type A0 + Potential isolation module

Digital outputs

Type of digital output	Source output (PNP, current-sourcing)
Number of digital outputs	16
Current-sinking	No
Current-sourcing	Yes
Short-circuit protection	Yes
<ul style="list-style-type: none"> • Response threshold, typ. 	1.4 A; 0.7 to 1.9 A
Open-circuit detection	No
Limitation of inductive shutdown voltage to	Typ. L+ (-53 V)
Controlling a digital input	Yes

Switching capacity of the outputs

<ul style="list-style-type: none"> • with resistive load, max. 	0.5 A
<ul style="list-style-type: none"> • on lamp load, max. 	5 W

Load resistance range

<ul style="list-style-type: none"> • lower limit 	48 Ω
<ul style="list-style-type: none"> • upper limit 	100 kΩ

Output current	
• for signal "1" rated value	0.5 A
• for signal "0" residual current, max.	30 µA
Output delay with resistive load	
• "0" to "1", typ.	80 µs; at rated load
• "0" to "1", max.	150 µs; at rated load
• "1" to "0", typ.	100 µs; at rated load
• "1" to "0", max.	200 µs; at rated load
Parallel switching of two outputs	
• for uprating	No
• for redundant control of a load	Yes
Switching frequency	
• with resistive load, max.	100 Hz
• with inductive load, max.	2 Hz
• on lamp load, max.	10 Hz
Total current of the outputs	
• Current per channel, max.	0.5 A
• Current per module, max.	8 A
Total current of the outputs (per module)	
horizontal installation	
— up to 60 °C, max.	8 A
vertical installation	
— up to 50 °C, max.	8 A
Cable length	
• shielded, max.	1 000 m
• unshielded, max.	600 m
Isochronous mode	
Isochronous operation (application synchronized up to terminal)	No
Interrupts/diagnostics/status information	
Diagnostics function	Yes
Substitute values connectable	Yes
Alarms	
• Diagnostic alarm	Yes
Diagnostic messages	
• Monitoring the supply voltage	Yes
• Wire-break	No
• Short-circuit	No
• Group error	Yes
Diagnostics indication LED	
• Monitoring of the supply voltage (PWR-LED)	Yes; green PWR LED

- Channel status display
- for channel diagnostics
- for module diagnostics

Yes; Green LED
No
Yes; green/red DIAG LED

Potential separation

Potential separation channels

- between the channels
- between the channels and backplane bus

No
Yes

Isolation

Isolation tested with 707 V DC (type test)

Ambient conditions

Ambient temperature during operation

- horizontal installation, min.
- horizontal installation, max.
- vertical installation, min.
- vertical installation, max.

0 °C
60 °C
0 °C
50 °C

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

Dimensions

Width 15 mm
Height 73 mm
Depth 58 mm

Weights

Weight, approx. 30 g

last modified: 07/17/2018