



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 16x24VDC/0.5A BA
HW functional status	From FS03
Firmware version	V0.0
• FW update possible	No
usable BaseUnits	BU type A0
Color code for module-specific color-coded label	CC00
Product function	
• I&M data	Yes; I&M0 to I&M3
• Isochronous mode	No
Engineering with	
• STEP 7 TIA Portal configurable/integrated from version	V14
• STEP 7 configurable/integrated from version	STEP 7 V5.5 or higher
• PROFIBUS from GSD version/GSD revision	One GSD file each, Revision 3 and 5 and higher
• PROFINET from GSD version/GSD revision	GSDML V2.3
Operating mode	
• DQ	Yes
• DQ with energy-saving function	No
• PWM	No
• Oversampling	No
• MSO	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
Output voltage	
Rated value (DC)	24 V
Power loss	
Power loss, typ.	1 W
Address area	
Address space per module	
• Outputs	2 byte
Hardware configuration	
Automatic encoding	Yes
• Mechanical coding element	Yes
• Type of mechanical coding element	Type A

Selection of BaseUnit for connection variants	
• 1-wire connection	BU type A0
• 2-wire connection	BU type A0 + Potential distributor module
• 3-wire connection	BU type A0 + Potential distributor module
• 4-wire connection	BU type A0 + Potential distributor module
Digital outputs	
Type of digital output	Source output (PNP, current-sourcing)
Number of digital outputs	16
Current-sinking	No
Current-sourcing	Yes
Digital outputs, parameterizable	Yes
Short-circuit protection	Yes
• 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	
• with resistive load, max.	0.5 A
• on lamp load, max.	5 W
Load resistance range	
• lower limit	48 Ω
• upper limit	100 k Ω
Output current	
• for signal "1" rated value	0.5 A
• for signal "0" residual current, max.	30 μ A
Output delay with resistive load	
• "0" to "1", typ.	80 μ s; at rated load
• "0" to "1", max.	150 μ s; at rated load
• "1" to "0", typ.	100 μ s; at rated load
• "1" to "0", max.	200 μ s; 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
Interrupts/diagnostics/status information	
Diagnostics function	Yes
Substitute values connectable	Yes
Alarms	
• Diagnostic alarm	Yes
Diagnoses	
• 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	Yes; green LED
• for channel diagnostics	No
• for module diagnostics	Yes; green/red DIAG LED

Potential separation

Potential separation channels	
• between the channels	No
• between the channels and backplane bus	Yes

Isolation

Isolation tested with	707 V DC (type test)
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Standards, approvals, certificates

Suitable for safety functions	No
Suitable for safety-related tripping of standard modules	No

Ecological footprint

• environmental product declaration	Yes
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Global warming potential

— global warming potential, (total) [CO2 eq]	29.3 kg
— global warming potential, (during production) [CO2 eq]	3.98 kg
— global warming potential, (during operation) [CO2 eq]	25.6 kg
— global warming potential, (after end of life cycle) [CO2 eq]	-0.245 kg

Ambient conditions

Ambient temperature during operation

• horizontal installation, min.	-30 °C
• horizontal installation, max.	60 °C
• vertical installation, min.	-30 °C
• vertical installation, max.	50 °C

Altitude during operation relating to sea level

• Installation altitude above sea level, max.	5 000 m; Restrictions for installation altitudes > 2 000 m, see manual
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Absolute humidity

• dew point, min.	-60 °C; suitable for dry room applications
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Dimensions

Width	15 mm
Height	73 mm
Depth	58 mm

Weights

Weight, approx.	30 g
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Classifications

	Version	Classification
eClass	16	27-24-26-04
eClass	14	27-24-26-04
eClass	12	27-24-26-04
eClass	9.1	27-24-26-04
eClass	9	27-24-26-04
eClass	8	27-24-26-04
eClass	7.1	27-24-26-04
eClass	6	27-24-26-04
ETIM	10	EC001599
ETIM	9	EC001599
ETIM	8	EC001599
ETIM	7	EC001599
IDEA	4	3566
UNSPSC	15	32-15-17-05

Approvals / Certificates

General Product Approval	other	Environment
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