SIEMENS

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 identification plate	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 / header	
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

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● 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 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
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	

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● 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)

Standards, approvals, certificates

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

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

Dimensions

Width	15 mm
Height	73 mm
Depth	58 mm

Weights

Weight, approx.	30 g

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