

SIMATIC ET 200SP, digital output module, DQ 4x 24VDC/2A High Feature, suitable for BU type A0, Color code CC02, channel diagnostics



General information	
Product type designation	ET 200SP, DQ 4x 24 V DC/2 A HF, PU 1
HW functional status	From FS06
Firmware version	
• FW update possible	Yes
usable BaseUnits	BU type A0
Color code for module-specific color identification plate	CC02
Product function	
• I&M data	Yes; I&M0 to I&M3
Engineering with	
• STEP 7 TIA Portal configurable/integrated as of version	V13 SP1 / -
• STEP 7 configurable/integrated as of version	V5.5 / -
• PROFIBUS as of GSD version/GSD revision	GSD Revision 5
• PROFINET as of GSD version/GSD revision	GSDML V2.3
Operating mode	
• DQ	Yes
• DQ with energy-saving function	No

- PWM No
- Oversampling No
- MSO Yes

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

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"> • Address space per module, max. 	4 byte; 2 channels per submodule + QI information

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 • 2-wire connection • 3-wire connection • 4-wire connection 	BU type A0 BU type A0 BU type A0 with AUX terminals or potential distributor module BU type A0 + Potential isolation module

Digital outputs

Type of digital output	Source output (PNP, current-sourcing)
Number of digital outputs	4
Current-sinking	No
Current-sourcing	Yes
Digital outputs, parameterizable	Yes
Short-circuit protection	Yes
<ul style="list-style-type: none"> • Response threshold, typ. 	2.8 to 5.2 A
Limitation of inductive shutdown voltage to	L+ -(37 to 41V)
Controlling a digital input	Yes; Minimum current consumption 7 mA

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 3 400 Ω

Output current

• for signal "1" rated value	2 A
• for signal "0" residual current, max.	0.1 mA
Output delay with resistive load	
• "0" to "1", typ.	50 µs
• "1" to "0", typ.	100 µs
Parallel switching of two outputs	
• for uprating	No
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.	2 A
• Current per module, max.	8 A
Total current of the outputs (per module)	
horizontal installation	
— up to 40 °C, max.	8 A
— up to 50 °C, max.	6 A
— up to 60 °C, max.	4 A
vertical installation	
— up to 30 °C, max.	8 A
— up to 40 °C, max.	6 A
— up to 50 °C, max.	4 A
Cable length	
• shielded, max.	1 000 m
• unshielded, max.	600 m
Isochronous mode	
Isochronous operation (application synchronized up to terminal)	Yes
Bus cycle time (TDP), min.	500 µs
Jitter, max.	8 µs
Interrupts/diagnostics/status information	
Diagnostics function	Yes
Substitute values connectable	Yes
Alarms	
• Diagnostic alarm	Yes
Diagnostic messages	
• Monitoring the supply voltage	Yes
• Wire-break	Yes; channel by channel
• Short-circuit	Yes; channel by channel
• 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	Yes; Red LED
• 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	Yes; From FS02
Highest safety class achievable in safety mode	
• Performance level according to ISO 13849-1	PL d
• SIL acc. to IEC 61508	SIL 2

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.	2 000 m; On request: Installation altitudes greater than 2 000 m

Dimensions	
Width	15 mm
Height	73 mm
Depth	58 mm

Weights	
Weight, approx.	30 g
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