



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	DQ 4x DC 24 V/2 A HF
HW functional status	FS20 or higher
Firmware version	V2.0.3
• 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
• Isochronous mode	Yes; 250 µs
Engineering with	
• STEP 7 TIA Portal configurable/integrated from version	V13 SP1 / -
• STEP 7 configurable/integrated from version	V5.5 / -
• PROFIBUS from GSD version/GSD revision	GSD Revision 5
• PROFINET from 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
Input current	
Current consumption (rated value)	28 mA
Current consumption, max.	28 mA
Output voltage	
Rated value (DC)	24 V
Power loss	
Power loss, typ.	1 W
Address area	
Address space per module	
• Address space per module, max.	4 byte; 2 channels per submodule + QI information

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
• 3-wire connection	BU type A0 with AUX terminals or 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	4
Current-sinking	No
Current-sourcing	Yes
Digital outputs, parameterizable	Yes
output type acc. to IEC 61131, type 2	Yes
Short-circuit protection	Yes; Electronic
• 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 μ s
• "1" to "0", typ.	100 μ s
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	
Bus cycle time (TDP), min.	500 μ s
Jitter, max.	8 μ s
Interrupts/diagnostics/status information	
Diagnostics function	Yes
Substitute values connectable	Yes

Alarms			
• Diagnostic alarm		Yes	
Diagnoses			
• Monitoring the supply voltage		Yes	
• Wire-break		Yes; channel by channel	
• Short-circuit to M		Yes; channel by channel	
• Short-circuit to L+		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; see FAQ Entry ID: 39198632	
Ecological footprint			
• environmental product declaration		Yes; type II acc. to ISO 14021	
Global warming potential			
— global warming potential, (total) [CO2 eq]		29.3 kg	
— global warming potential, (during production) [CO2 eq]		4 kg	
— global warming potential, (during operation) [CO2 eq]		25.6 kg	
— global warming potential, (after end of life cycle) [CO2 eq]		0.245 kg	
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; < 0 °C as of FS06	
• horizontal installation, max.		60 °C	
• vertical installation, min.		-30 °C; < 0 °C as of FS06	
• 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	
Classifications			
		Version	Classification
	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



[Miscellaneous](#)
[Manufacturer Declaration](#)
[China RoHS](#)


General Product Approval

For use in hazardous locations

[KC](#)


[FM](#)
[CCC-Ex](#)


For use in hazardous locations

Maritime application


[Type Examination Certificate](#)
[Miscellaneous](#)




Maritime application


[NK / Nippon Kaiji Kyokai](#)


[CCS \(China Classification Society\)](#)


Environment




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