

Siemens
EcoTech



SIMATIC ET 200SP, digital output module DQ 4x 24...230V AC/2A HF packaging unit: 1 piece, two alternative modes: DQ and power control, fits to BU-Type U0, color code CC20, channel diagnosis

General information	
Product type designation	DQ 4x24 ... 230 V AC/2 A HF
HW functional status	From FS03
Firmware version	
• FW update possible	Yes
usable BaseUnits	BU type U0
Color code for module-specific color-coded label	CC20
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	GSD as of Revision 5
• PROFINET from GSD version/GSD revision	GSDML V2.3
Operating mode	
• DQ	Yes
• DQ with energy-saving function	Yes
• PWM	No
• Oversampling	No
• MSO	No
• Phase control	Yes; Control area: 8.5 ... 100% of the phase angle
• Trailing-edge phase	No
• Half-wave	Yes
• Full-wave	Yes
Supply voltage	
Rated value (AC)	230 V; 47 ... 63 Hz, max. rate of change of frequency 1 mHz/s
permissible range, lower limit (AC)	20.4 V
permissible range, upper limit (AC)	264 V
Input current	
Current consumption (rated value)	8 mA; without load
Output voltage	
Rated value (AC)	230 V; 24V AC to 230V AC
Power loss	
Power loss, typ.	9 W; Active power, load voltage 230 V, all outputs loaded with 2 A, 50 Hz
Address area	

Address space per module	
• Inputs	+ 1 byte for QI information
• Outputs	8 byte
Hardware configuration	
Automatic encoding	Yes
• Mechanical coding element	Yes
• Type of mechanical coding element	type C
Selection of BaseUnit for connection variants	
• 1-wire connection	BU type U0
• 2-wire connection	BU type U0
• 3-wire connection	BU type U0 + Potential distributor module
Digital outputs	
Type of digital output	Triac
Number of digital outputs	4
Current-sinking	No
Current-sourcing	Yes
Digital outputs, parameterizable	Yes
Short-circuit protection	No; external fusing necessary
Open-circuit detection	Yes; channel by channel
• Response threshold, typ.	1 mA; 40 V AC or more
Overload protection	No; A miniature fuse with 10 tripping current and tripping characteristic "quick response" must be provided in the module supply
Controlling a digital input	Yes
Switching capacity of the outputs	
• with resistive load, max.	2 A; Max. 4 A, see additional description in manual
• with inductive load, max.	2 A
• on lamp load, max.	100 W; Tungsten rating in accordance with UL; for thermistors with higher power ratings, see the notes in the manual
Output voltage	
• for signal "1", min.	20.4 V
Output current	
• for signal "1" rated value	2 A
• for signal "1" permissible range, min.	10 mA
• for signal "1" permissible range, max.	4 A; note derating data in the manual
• for signal "0" residual current, max.	3 mA
Output delay with resistive load	
• "0" to "1", max.	40 ms; 2 AC cycles
• "1" to "0", max.	20 ms; 1 AC cycle
Parallel switching of two outputs	
• for logic links	No
• for uprating	No
• for redundant control of a load	Yes
Switching frequency	
• with resistive load, max.	10 Hz; Applies to DQ mode; limited by line frequency in PC mode
• with inductive load (acc. to IEC 60947-5-1, AC15), max.	10 Hz; Applies to DQ mode; limited by line frequency in PC mode
• on lamp load, max.	1 Hz; Applies to DQ mode; limited by line frequency in PC mode
Total current of the outputs	
• Current per channel, max.	2 A; Max. 4 A, see additional description in manual
• 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. • unshielded, max.	1 000 m 600 m		
Interrupts/diagnostics/status information			
Diagnostics function	Yes		
Substitute values connectable	Yes		
Alarms			
• Diagnostic alarm	Yes		
Diagnoses			
• Diagnostic information readable • Monitoring the supply voltage • Wire-break • Short-circuit • Group error	Yes Yes Yes; channel by channel No Yes		
Diagnostics indication LED			
• Monitoring of the supply voltage (PWR-LED) • Channel status display • for channel diagnostics • for module diagnostics	Yes; green PWR LED Yes; green LED Yes; red Fn LED Yes; green/red DIAG LED		
Potential separation			
Potential separation channels			
• between the channels • between the channels and backplane bus • between the channels and the power supply of the electronics	No Yes No		
Isolation			
Isolation tested with	2 545 V DC/2 s (routine test)		
Standards, approvals, certificates			
Suitable for safety functions	No		
Ecological footprint			
• environmental product declaration	Yes		
Global warming potential			
— global warming potential, (total) [CO2 eq] — global warming potential, (during production) [CO2 eq] — global warming potential, (during operation) [CO2 eq] — global warming potential, (after end of life cycle) [CO2 eq]	13.9 kg 5.53 kg 8.71 kg -0.359 kg		
Ambient conditions			
Ambient temperature during operation			
• horizontal installation, min. • horizontal installation, max. • vertical installation, min. • vertical installation, max.	-30 °C 60 °C -30 °C 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	20 mm		
Height	73 mm		
Depth	58 mm		
Weights			
Weight, approx.	50 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](#)



General Product Approval For use in hazardous locations Maritime application



Maritime application



Maritime application Environment



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