



SIMATIC ET 200BL, digital output module, DQ 16x24 V DC/0.5 A, output characteristic according to IEC 61131 source output (PNP,sourcing output) packing unit: 1 unit, color code CC00

General information	
Product type designation	DQ 16x24VDC/0.5A
HW functional status	from FS01
Firmware version	
• FW update possible	No
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	STEP 7 V18 or higher; MicroWin V3.0 or higher; Configuration in ES via GSDML;
• PROFINET from GSD version/GSD revision	GSDML V2.45
Operating mode	
• DQ	Yes
• DQ with energy-saving function	No
• PWM	No
• Cam control (switching at comparison values)	No
• Oversampling	No
• MSO	No
Supply voltage	
Rated value (DC)	24 V
permissible range, lower limit (DC)	20.4 V
permissible range, upper limit (DC)	28.8 V
Reverse polarity protection	Yes
external protection for power supply lines	Yes; 24 V DC/10 A miniature circuit breaker with type B or C tripping characteristic
Input current	
Current consumption (rated value)	55 mA
Current consumption, max.	8.1 A; with 8 A output to load
Output voltage	
Rated value (DC)	24 V
Current carrying capacity	
For P1 and P2 bus, max.	10 A
Power loss	
Power loss, typ.	1 W; rated voltage, 50 % load, 50 % active channels
Address area	
Address space per module	
• Address space per module, max.	2 byte

• Outputs	2 byte
Hardware configuration	
Automatic encoding	No
• Mechanical coding element	No
Formation of potential groups	
• support of potential groups	No
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
output type acc. to IEC 61131, type 0.5	Yes
Short-circuit protection	Yes; per channel, electronic
• Response threshold, typ.	1.45 A; 0.7 to 1.7 A
Limitation of inductive shutdown voltage to	typ. (L+) -52 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 "1" permissible range, max.	0.5 A
• for signal "0" residual current, max.	5 μA
Output delay with resistive load	
• "0" to "1", max.	100 μs
• "1" to "0", max.	300 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.	0.5 A
• Current per module, 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	No
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	
between backplane bus and supply voltage	Yes

Potential separation digital outputs																																					
• between the channels	No																																				
• between the channels and backplane bus	Yes																																				
• between the channels and the power supply of the electronics	No																																				
Isolation																																					
Isolation tested with	500 V AC/707 V DC, type test																																				
Standards, approvals, certificates																																					
Suitable for safety functions	No																																				
Ecological footprint																																					
• environmental product declaration	Yes																																				
Global warming potential																																					
— global warming potential, (total) [CO2 eq]	28.7 kg																																				
— global warming potential, (during production) [CO2 eq]	4.87 kg																																				
— global warming potential, (during operation) [CO2 eq]	24.5 kg																																				
— global warming potential, (after end of life cycle) [CO2 eq]	-0.623 kg																																				
Use in hazardous areas																																					
• EAC Ex	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 ET 200BL system manual																																				
Connection method																																					
Terminals																																					
• Conductor cross-section, min.	0.14 mm²; follow detailed information in System manual of ET 200BL																																				
• Conductor cross-section, max.	2.5 mm²; follow detailed information in System manual of ET 200BL																																				
• Number of process terminals to I/O module	16																																				
• Number of terminals with connection to P1 and P2 bus	0																																				
Dimensions																																					
Width	15 mm																																				
Height	117 mm																																				
Depth	74 mm																																				
Weights																																					
Weight, approx.	80 g																																				
Classifications																																					
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