



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	
<ul style="list-style-type: none"> FW update possible 	No
Color code for module-specific color-coded label	CC00
Product function	
<ul style="list-style-type: none"> I&M data 	Yes; I&M0 to I&M3
<ul style="list-style-type: none"> Isochronous mode 	No
Engineering with	
<ul style="list-style-type: none"> STEP 7 TIA Portal configurable/integrated from version 	STEP 7 V18 or higher; MicroWin V3.0 or higher; Configuration in ES via GSDML;
<ul style="list-style-type: none"> PROFINET from GSD version/GSD revision 	GSDML V2.45
Operating mode	
<ul style="list-style-type: none"> DQ 	Yes
<ul style="list-style-type: none"> DQ with energy-saving function 	No
<ul style="list-style-type: none"> PWM 	No
<ul style="list-style-type: none"> Cam control (switching at comparison values) 	No
<ul style="list-style-type: none"> Oversampling 	No
<ul style="list-style-type: none"> 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	
<ul style="list-style-type: none"> 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 mm ² ; follow detailed information in System manual of ET 200BL	
• Conductor cross-section, max.	2.5 mm ² ; 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		
	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
Approvals / Certificates		
General Product Approval		



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last modified:

11/17/2025