

SIMATIC ET 200AL, DQ 8x 24 V DC/2 A, 8x M12, Degree of protection IP67



General information	
HW functional status	E01
Firmware version	V1.0.x
Product function	
<ul style="list-style-type: none"> I&M data 	Yes; I&M0 to I&M3
Engineering with	
<ul style="list-style-type: none"> STEP 7 TIA Portal configurable/integrated as of version 	STEP 7 V13 SP1 or higher
<ul style="list-style-type: none"> STEP 7 configurable/integrated as of version 	V5.5 SP4 Hotfix 7 or higher
<ul style="list-style-type: none"> PROFIBUS as of GSD version/GSD revision 	GSD as of Revision 5
<ul style="list-style-type: none"> PROFINET as of GSD version/GSD revision 	GSDML V2.3.1
Supply voltage	
Load voltage 1L+	
<ul style="list-style-type: none"> Rated value (DC) 	24 V
<ul style="list-style-type: none"> permissible range, lower limit (DC) 	20.4 V
<ul style="list-style-type: none"> permissible range, upper limit (DC) 	28.8 V
<ul style="list-style-type: none"> Reverse polarity protection 	Yes; against destruction; load increasing
Load voltage 2L+	

• 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; against destruction; load increasing

Input current

Current consumption (rated value)	40 mA; without load
from load voltage 1L+ (unswitched voltage)	4 A; Maximum value
from load voltage 2L+, max.	4 A; Maximum value

Power loss

Power loss, typ.	4 W
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Digital outputs

Number of digital outputs	8
• in groups of	4; 2 load groups for 4 outputs each
Short-circuit protection	Yes; per channel, electronic
• Response threshold, typ.	2.8 A
Limitation of inductive shutdown voltage to	2L+ (-47 V)

Switching capacity of the outputs

• on lamp load, max.	10 W
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Load resistance range

• lower limit	12 Ω
• upper limit	4 k Ω

Output voltage

• for signal "1", min.	L+ (-0.8 V)
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Output current

• for signal "1" rated value	2 A
• for signal "1" permissible range, max.	2 A; with inductive load to IEC 60947-5-1, DC-13 / AC-15
• for signal "0" residual current, max.	0.5 mA

Switching frequency

• with resistive load, max.	100 Hz
• with inductive load, max.	0.1 Hz; 0.25 Hz at 25 °C
• on lamp load, max.	1 Hz

Total current of the outputs

• Current per group, max.	4 A; For inductive load max. 2 channels per group
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Cable length

• unshielded, max.	30 m
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Interrupts/diagnostics/status information

Substitute values connectable	Yes; channel by channel, parameterizable
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Alarms

• Diagnostic alarm	Yes; Parameterizable
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Diagnostic messages

• Short-circuit	Yes; Outputs to ground; module by module
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Diagnostics indication LED	
• Channel status display	Yes; Green LED
• for module diagnostics	Yes; Green/red LED
• For load voltage monitoring	Yes; Green LED

Potential separation

between the load voltages	Yes
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Potential separation channels

• between the channels, in groups of	4
• between the channels and backplane bus	Yes
• between the channels and the power supply of the electronics	No; 4 channels are non-isolated and 4 channels are isolated from supply voltage 1L+

Isolation

Isolation tested with	707 V DC (type test)
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Degree and class of protection

IP degree of protection	IP65/67
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Standards, approvals, certificates

Suitable for safety-related tripping of standard modules	Yes; From FS01
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Highest safety class achievable for safety-related tripping of standard modules

• Performance level according to ISO 13849-1	PL d
• Category according to ISO 13849-1	Cat. 3
• SILCL according to IEC 62061	SILCL 2

Ambient conditions

Ambient temperature during operation

• min.	-25 °C
• max.	55 °C

Connection method

Design of electrical connection for the inputs and outputs	M12, 5-pole
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Design of electrical connection for supply voltage	M8, 4-pole
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ET-Connection

• ET-Connection	M8, 4-pin, shielded
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Dimensions

Width	45 mm
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Height	159 mm
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Depth	40 mm
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Weights

Weight, approx.	192 g
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last modified: 01/19/2019