



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

General information	
Product type designation	DQ 8x24VDC/2A
HW functional status	FS03
Firmware version	V1.0.x
Product function	
<ul style="list-style-type: none"> <li>I&amp;M data</li> </ul>	Yes; I&M0 to I&M3
Engineering with	
<ul style="list-style-type: none"> <li>STEP 7 TIA Portal configurable/integrated from version</li> <li>STEP 7 configurable/integrated from version</li> <li>PROFIBUS from GSD version/GSD revision</li> <li>PROFINET from GSD version/GSD revision</li> </ul>	STEP 7 V13 SP1 or higher  V5.5 SP4 Hotfix 7 or higher GSD as of Revision 5 GSDML V2.3.1
Supply voltage	
power supply according to NEC Class 2 required	No
Load voltage 1L+	
<ul style="list-style-type: none"> <li>Rated value (DC)</li> <li>permissible range, lower limit (DC)</li> <li>permissible range, upper limit (DC)</li> <li>Reverse polarity protection</li> </ul>	24 V 20.4 V 28.8 V Yes; against destruction; load increasing
Load voltage 2L+	
<ul style="list-style-type: none"> <li>Rated value (DC)</li> <li>permissible range, lower limit (DC)</li> <li>permissible range, upper limit (DC)</li> <li>Reverse polarity protection</li> </ul>	24 V 20.4 V 28.8 V 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
Digital outputs	
Number of digital outputs	8
<ul style="list-style-type: none"> <li>in groups of</li> </ul>	4; 2 load groups for 4 outputs each
Short-circuit protection	Yes; per channel, electronic
<ul style="list-style-type: none"> <li>Response threshold, typ.</li> </ul>	2.8 A
Limitation of inductive shutdown voltage to	2L+ (-47 V)
Switching capacity of the outputs	
<ul style="list-style-type: none"> <li>on lamp load, max.</li> </ul>	10 W
Load resistance range	
<ul style="list-style-type: none"> <li>lower limit</li> <li>upper limit</li> </ul>	12 Ω 4 kΩ

<b>Output voltage</b>	
<ul style="list-style-type: none"> <li>for signal "1", min.</li> </ul>	L+ (-0.8 V)
<b>Output current</b>	
<ul style="list-style-type: none"> <li>for signal "1" rated value</li> <li>for signal "1" permissible range, max.</li> <li>for signal "0" residual current, max.</li> </ul>	2 A 2 A; with inductive load to IEC 60947-5-1, DC-13 / AC-15 0.5 mA
<b>Switching frequency</b>	
<ul style="list-style-type: none"> <li>with resistive load, max.</li> <li>with inductive load, max.</li> <li>on lamp load, max.</li> </ul>	100 Hz 0.1 Hz; 0.25 Hz at 25 °C 1 Hz
<b>Total current of the outputs</b>	
<ul style="list-style-type: none"> <li>Current per group, max.</li> </ul>	4 A; For inductive load max. 2 channels per group
<b>Cable length</b>	
<ul style="list-style-type: none"> <li>unshielded, max.</li> </ul>	30 m
<b>Interrupts/diagnostics/status information</b>	
Substitute values connectable	Yes; channel by channel, parameterizable
<b>Alarms</b>	
<ul style="list-style-type: none"> <li>Diagnostic alarm</li> </ul>	Yes; Parameterizable
<b>Diagnoses</b>	
<ul style="list-style-type: none"> <li>Short-circuit</li> </ul>	Yes; Outputs to ground; module by module
<b>Diagnostics indication LED</b>	
<ul style="list-style-type: none"> <li>Channel status display</li> <li>for module diagnostics</li> <li>For load voltage monitoring</li> </ul>	Yes; green LED Yes; green/red LED Yes; green LED
<b>Potential separation</b>	
between the load voltages	Yes
<b>Potential separation channels</b>	
<ul style="list-style-type: none"> <li>between the channels, in groups of</li> <li>between the channels and backplane bus</li> <li>between the channels and the power supply of the electronics</li> </ul>	4 Yes No; 4 channels are non-isolated and 4 channels are isolated from supply voltage 1L+
<b>Isolation</b>	
Isolation tested with	707 V DC (type test)
<b>Degree and class of protection</b>	
IP degree of protection	IP65/67
<b>Standards, approvals, certificates</b>	
Suitable for safety-related tripping of standard modules	Yes; From FS01
<b>Highest safety class achievable for safety-related tripping of standard modules</b>	
<ul style="list-style-type: none"> <li>Performance level according to ISO 13849-1</li> <li>Category according to ISO 13849-1</li> <li>SIL acc. to IEC 62061</li> </ul>	PL d Cat. 3 SIL 2
<b>Ambient conditions</b>	
<b>Ambient temperature during operation</b>	
<ul style="list-style-type: none"> <li>min.</li> <li>max.</li> </ul>	-30 °C 55 °C
<b>connection method / header</b>	
Design of electrical connection for the inputs and outputs	M12, 5-pole
Design of electrical connection for supply voltage	M8, 4-pole
<b>ET-Connection</b>	
<ul style="list-style-type: none"> <li>ET-Connection</li> </ul>	M8, 4-pin, shielded
<b>Dimensions</b>	
Width	45 mm
Height	159 mm
Depth	40 mm
<b>Weights</b>	
Weight, approx.	192 g
<b>last modified:</b>	3/7/2022 