



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

General information	
Product type designation	IO-Link DQ 8x24VDC/2A
HW functional status	FS01
Firmware version	V1.0.x
Vendor identification (VendorID)	42
Device identifier (DeviceID)	229381
Engineering with	
• IODD file	Yes
Supply voltage	
Load voltage 1L+	
• Rated value (DC)	24 V; Supply from 1Us+ of the IO-Link master
• permissible range, lower limit (DC)	18 V
• permissible range, upper limit (DC)	30 V
• Reverse polarity protection	Yes; against destruction
Load voltage 2L+	
• Rated value (DC)	24 V; Supply via M12 connector L-coded
• 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)	12 mA; without load
from load voltage 2L+, max.	8 A; Maximum value
Power loss	
Power loss, typ.	3.6 W
Digital outputs	
Number of digital outputs	8
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
Load resistance range	
• lower limit	12 Ω
• upper limit	4 kΩ
Output voltage	
• for signal "1", min.	L+ (-0.8 V)
Output current	
• for signal "1" rated value	2 A (45 °C); 1 A (55 °C)
• for signal "1" permissible range, max.	2 A; with inductive load to IEC 60947-5-1, DC-13 / AC-15

<ul style="list-style-type: none"> <li>for signal "0" residual current, max.</li> </ul>	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 module, max.</li> </ul>	8 A
<b>Cable length</b>	
<ul style="list-style-type: none"> <li>unshielded, max.</li> </ul>	30 m
<b>IO-Link</b>	
IO-Link protocol 1.1	Yes
Transmission rate	38.4 kBd (COM2)
Cycle time, min.	2.1 ms
Size of process data, input per module	0 byte
Size of process data, output per module	1 byte
Supported IO-Link profiles	common profile
Cable length unshielded, max.	20 m
<b>Connection of IO-Link devices</b>	
<ul style="list-style-type: none"> <li>Port type A</li> </ul>	Yes
<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</li> <li>between the channels and the power supply of the electronics</li> </ul>	No Yes
<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-pin, A-coded
Type of electrical connection for IO-Link	M12, 5-pin, A-coded
Design of electrical connection for supply voltage	M12, 4-pin, L-coded
<b>Dimensions</b>	
Width	45 mm
Height	159 mm
Depth	45 mm
<b>Weights</b>	
Weight, approx.	168 g

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