



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
Current-sourcing	Yes
output type acc. to IEC 61131, type 2	Yes
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)

<ul style="list-style-type: none"> • for signal "1" permissible range, max. • for signal "0" residual current, max. 	2 A; with inductive load to IEC 60947-5-1, DC-13 / AC-15 0.5 mA
Switching frequency	
<ul style="list-style-type: none"> • with resistive load, max. • with inductive load, max. • on lamp load, max. 	100 Hz 0.1 Hz; 0.25 Hz at 25 °C 1 Hz
Total current of the outputs	
<ul style="list-style-type: none"> • Current per module, max. 	8 A
Cable length	
<ul style="list-style-type: none"> • unshielded, max. 	30 m
IO-Link	
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
Connection of IO-Link devices	
<ul style="list-style-type: none"> • Port type A 	Yes
Interrupts/diagnostics/status information	
Substitute values connectable	Yes; channel by channel, parameterizable
Alarms	
<ul style="list-style-type: none"> • Diagnostic alarm 	Yes; Parameterizable
Diagnoses	
<ul style="list-style-type: none"> • Short-circuit 	Yes; Outputs to ground; module by module
Diagnostics indication LED	
<ul style="list-style-type: none"> • Channel status display • for module diagnostics • For load voltage monitoring 	Yes; green LED Yes; green/red LED Yes; green LED
Potential separation	
between the load voltages	Yes
Potential separation channels	
<ul style="list-style-type: none"> • between the channels • between the channels and the power supply of the electronics 	No Yes
Isolation	
Isolation tested with	707 V DC (type test)
Degree and class of protection	
IP degree of protection	IP65/67
Standards, approvals, certificates	
Suitable for safety-related tripping of standard modules	Yes; from FS01
Highest safety class achievable for safety-related tripping of standard modules	
<ul style="list-style-type: none"> • Performance level according to ISO 13849-1 • Category according to ISO 13849-1 • SIL acc. to IEC 62061 • remark on safety-oriented shutdown 	PL d Cat. 3 SIL 2 https://support.industry.siemens.com/cs/de/en/view/39198632
Ambient conditions	
Ambient temperature during operation	
<ul style="list-style-type: none"> • min. • max. 	-30 °C 55 °C
connection method	
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
Dimensions	
Width	45 mm
Height	159 mm
Depth	45 mm
Weights	

Weight, approx. 168 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
IDEA	4	3566
UNSPSC	15	32-15-17-05

Approvals / Certificates

General Product Approval

[Miscellaneous](#)

[Manufacturer Declaration](#)



Functional Safety Maritime application



[NK / Nippon Kaiji Kyokai](#)

Maritime application



[CCS \(China Classification Society\)](#)



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