



SIMATIC ET 200AL, IO-Link, DI 16x 24 V DC, 8x M12, Degree of protection IP67

General information	
Product type designation	IO-Link DI 16x24VDC
HW functional status	FS01
Firmware version	V1.0.x
Vendor identification (VendorID)	42
Device identifier (DeviceID)	229380
Engineering with	
<ul style="list-style-type: none"> • IODD file 	Yes
Supply voltage	
Load voltage 1L+	
<ul style="list-style-type: none"> • Rated value (DC) 	24 V; Supply from 1Us+ of the IO-Link master
<ul style="list-style-type: none"> • permissible range, lower limit (DC) 	18 V
<ul style="list-style-type: none"> • permissible range, upper limit (DC) 	30 V
<ul style="list-style-type: none"> • Reverse polarity protection 	Yes; Against destruction; encoder power supply outputs applied with reversed polarity
Input current	
Current consumption (rated value)	20 mA; without load
Encoder supply	
Number of outputs	8; Supply from 1Us+ of the IO-Link master
24 V encoder supply	
<ul style="list-style-type: none"> • Short-circuit protection 	Yes; per module, electronic
<ul style="list-style-type: none"> • Output current, max. 	0.7 A; Total current of all encoders (depending on IO-Link master supply via 1Us+)
Power loss	
Power loss, typ.	2.4 W
Digital inputs	
Number of digital inputs	16
Input characteristic curve in accordance with IEC 61131, type 3	Yes
Number of simultaneously controllable inputs	
all mounting positions	
— up to 55 °C, max.	16
Input voltage	
<ul style="list-style-type: none"> • Rated value (DC) 	24 V
<ul style="list-style-type: none"> • for signal "0" 	-30 to +5 V
<ul style="list-style-type: none"> • for signal "1" 	+11 to +30V
Input current	
<ul style="list-style-type: none"> • for signal "1", typ. 	3 mA
Input delay (for rated value of input voltage)	
for standard inputs	
— at "0" to "1", min.	1.2 ms

— at "0" to "1", max.	4.8 ms	
— at "1" to "0", min.	1.2 ms	
— at "1" to "0", max.	4.8 ms	
Cable length		
• unshielded, max.	30 m	
Encoder		
Connectable encoders		
• 2-wire sensor	Yes	
— permissible quiescent current (2-wire sensor), max.	1.5 mA	
IO-Link		
IO-Link protocol 1.1	Yes	
Transmission rate	38.4 kBd (COM2)	
Cycle time, min.	2.5 ms	
Size of process data, input per module	2 byte	
Size of process data, output per module	0 byte	
Supported IO-Link profiles	common profile	
Cable length unshielded, max.	20 m	
Connection of IO-Link devices		
• Port type A	Yes	
Interrupts/diagnostics/status information		
Alarms		
• Diagnostic alarm	Yes; Parameterizable	
Diagnoses		
• Short-circuit	Yes; Sensor supply to M; module by module	
Diagnostics indication LED		
• Channel status display	Yes; green LED	
• for module diagnostics	Yes; green/red LED	
Potential separation		
Potential separation channels		
• between the channels	No	
• between the channels and the power supply of the electronics	No	
Isolation		
Isolation tested with	707 V DC (type test)	
Degree and class of protection		
IP degree of protection	IP65/67	
Ambient conditions		
Ambient temperature during operation		
• min.	-30 °C	
• max.	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	
Dimensions		
Width	45 mm	
Height	159 mm	
Depth	40 mm	
Weights		
Weight, approx.	155 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	9	EC001599
ETIM	8	EC001599
ETIM	7	EC001599
IDEA	4	3566
UNSPSC	15	32-15-17-05

Approvals / Certificates

General Product Approval **Functional Safety**

[Manufacturer Declaration](#)



Marine / Shipping



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



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