

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



General information	
Product type designation	DI 16x24VDC
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 as of version</li> </ul>	STEP 7 V13 SP1 or higher
<ul style="list-style-type: none"> <li>STEP 7 configurable/integrated as of version</li> </ul>	V5.5 SP4 Hotfix 7 or higher
<ul style="list-style-type: none"> <li>PROFIBUS as of GSD version/GSD revision</li> </ul>	GSD as of Revision 5
<ul style="list-style-type: none"> <li>PROFINET as of GSD version/GSD revision</li> </ul>	GSDML V2.3.1
Supply voltage	
Load voltage 1L+	
<ul style="list-style-type: none"> <li>Rated value (DC)</li> </ul>	24 V
<ul style="list-style-type: none"> <li>permissible range, lower limit (DC)</li> </ul>	20.4 V
<ul style="list-style-type: none"> <li>permissible range, upper limit (DC)</li> </ul>	28.8 V

- Reverse polarity protection

Yes; Against destruction; encoder power supply outputs applied with reversed polarity

### Input current

Current consumption (rated value)	30 mA; without load
from load voltage 1L+ (unswitched voltage)	4 A; Maximum value
from load voltage 2L+, max.	4 A; Maximum value

### Encoder supply

Number of outputs	8
<b>24 V encoder supply</b>	
• Short-circuit protection	Yes; per module, electronic
• Output current, max.	1.4 A; Total current of all encoders

### Power loss

Power loss, typ.	2.7 W
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### 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
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### Input voltage

- Rated value (DC) 24 V
- for signal "0" -30 to +5 V
- for signal "1" +11 to +30V

### Input current

- for signal "1", typ. 3.2 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

### Interrupts/diagnostics/status information

<b>Alarms</b>	
• Diagnostic alarm	Yes; Parameterizable
<b>Diagnostic messages</b>	
• Short-circuit	Yes; Sensor supply to M; module by module
<b>Diagnostics indication LED</b>	
• Channel status display	Yes; green LED
• for module diagnostics	Yes; green/red LED
<b>Potential separation</b>	
between the load voltages	Yes
<b>Potential separation channels</b>	
• between the channels	No
• between the channels and backplane bus	Yes
• between the channels and the power supply of the electronics	No
<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>	
• Performance level according to ISO 13849-1	PL d
• Category according to ISO 13849-1	Cat. 3
• SILCL according to IEC 62061	SILCL 2
<b>Ambient conditions</b>	
<b>Ambient temperature during operation</b>	
• min.	-30 °C
• max.	55 °C
<b>Connection method</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>	
• ET-Connection	M8, 4-pin, shielded
<b>Dimensions</b>	
Width	45 mm
Height	159 mm
Depth	40 mm
<b>Weights</b>	

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Weight, approx.

184 g

**last modified:**

05/06/2020