



SIMATIC ET 200AL, DI 8x 24 V DC, 8XM8, Degree of protection IP67

General information	
Product type designation	DI 8x24VDC
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> </ul>	STEP 7 V13 SP1 or higher
<ul style="list-style-type: none"> <li>STEP 7 configurable/integrated from version</li> </ul>	From V5.5 SP4 Hotfix 3
<ul style="list-style-type: none"> <li>PROFIBUS from GSD version/GSD revision</li> </ul>	GSD as of Revision 5
<ul style="list-style-type: none"> <li>PROFINET from GSD version/GSD revision</li> </ul>	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> </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
<ul style="list-style-type: none"> <li>Reverse polarity protection</li> </ul>	Yes; Against destruction; encoder power supply outputs applied with reversed polarity
Input current	
Current consumption (rated value)	25 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
24 V encoder supply	
<ul style="list-style-type: none"> <li>Short-circuit protection</li> </ul>	Yes; per module, electronic
<ul style="list-style-type: none"> <li>Output current, max.</li> </ul>	0.7 A; Total current of all encoders
Power loss	
Power loss, typ.	1.9 W
Digital inputs	
Number of digital inputs	8
Input characteristic curve in accordance with IEC 61131, type 3	Yes
Number of simultaneously controllable inputs	
all mounting positions	
— up to 55 °C, max.	8
Input voltage	
<ul style="list-style-type: none"> <li>Rated value (DC)</li> </ul>	24 V

<ul style="list-style-type: none"> <li>• for signal "0"</li> <li>• for signal "1"</li> </ul>	-30 to +5 V +11 to +30V
<b>Input current</b>	
<ul style="list-style-type: none"> <li>• for signal "1", typ.</li> </ul>	3.2 mA
<b>Input delay (for rated value of input voltage)</b>	
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
<b>Cable length</b>	
<ul style="list-style-type: none"> <li>• unshielded, max.</li> </ul>	30 m
<b>Encoder</b>	
<b>Connectable encoders</b>	
<ul style="list-style-type: none"> <li>• 2-wire sensor</li> <li>— permissible quiescent current (2-wire sensor), max.</li> </ul>	Yes 1.5 mA
<b>Interrupts/diagnostics/status information</b>	
<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; Sensor supply to M; module by module
<b>Diagnostics indication LED</b>	
<ul style="list-style-type: none"> <li>• Channel status display</li> <li>• for module diagnostics</li> </ul>	Yes; green LED Yes; green/red 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 backplane bus</li> <li>• between the channels and the power supply of the electronics</li> </ul>	No Yes 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>	
<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	M8, 3-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	30 mm
Height	159 mm
Depth	40 mm
<b>Weights</b>	
Weight, approx.	145 g
<b>last modified:</b>	3/7/2022 