



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	
• I&M data	Yes; I&M0 to I&M3
Engineering with	
• STEP 7 TIA Portal configurable/integrated from version	STEP 7 V13 SP1 or higher
• STEP 7 configurable/integrated from version	V5.5 SP4 Hotfix 7 or higher
• PROFIBUS from GSD version/GSD revision	GSD as of Revision 5
• PROFINET from GSD version/GSD revision	GSDML V2.3.1
Supply voltage	
power supply according to NEC Class 2 required	No
Load voltage 1L+	
• Rated value (DC)	24 V
• permissible range, lower limit (DC)	20.4 V
• permissible range, upper limit (DC)	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
24 V encoder supply	
• 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
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	
• Rated value (DC)	24 V
• for signal "0"	-30 to +5 V
• for signal "1"	+11 to +30V

<b>Input current</b>	
• for signal "1", typ.	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>	
• unshielded, max.	30 m
<b>Encoder</b>	
<b>Connectable encoders</b>	
• 2-wire sensor	Yes
— permissible quiescent current (2-wire sensor), max.	1.5 mA
<b>Interrupts/diagnostics/status information</b>	
<b>Alarms</b>	
• Diagnostic alarm	Yes; Parameterizable
<b>Diagnoses</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
• SIL acc. to IEC 62061	SIL 2
• remark on safety-oriented shutdown	<a href="https://support.industry.siemens.com/cs/de/en/view/39198632">https://support.industry.siemens.com/cs/de/en/view/39198632</a>
<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>	
Weight, approx.	184 g

last modified: 5/22/2024 