

SIMATIC ET 200SP, Digital input module, DI 8x 24V DC Standard, type 3 (IEC 61131), sink input, (PNP, P-reading), Packing unit: 1 piece, fits to BU-type A0, Colour Code CC01, input delay time 0,05..20ms, module diagnostics for: short-circuit of sensor supply, wire break, supply voltage



General information	
Product type designation	DI 8x24 VDC ST
Firmware version	V0.0
<ul style="list-style-type: none"> <li>FW update possible</li> </ul>	No
usable BaseUnits	BU type A0
Color code for module-specific color identification plate	CC01
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>	V14
<ul style="list-style-type: none"> <li>STEP 7 configurable/integrated as of version</li> </ul>	V5.5 SP3 or higher
<ul style="list-style-type: none"> <li>PCS 7 configurable/integrated as of version</li> </ul>	V8.1 SP1
<ul style="list-style-type: none"> <li>PROFIBUS as of GSD version/GSD revision</li> </ul>	One GSD file each, Revision 3 and 5 and higher
<ul style="list-style-type: none"> <li>PROFINET as of GSD version/GSD revision</li> </ul>	GSDML V2.3
Operating mode	
<ul style="list-style-type: none"> <li>DI</li> </ul>	Yes
<ul style="list-style-type: none"> <li>Counter</li> </ul>	No

- Oversampling
- MSI

No

No

### Supply voltage

Rated value (DC)	24 V
permissible range, lower limit (DC)	19.2 V
permissible range, upper limit (DC)	28.8 V
Reverse polarity protection	Yes

### Input current

Current consumption, max.	50 mA; All channels are supplied from the encoder supply
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### Encoder supply

Number of outputs	8
Output voltage encoder supply, min.	19.2 V
Short-circuit protection	Yes; per module

### 24 V encoder supply

• 24 V	Yes
• Short-circuit protection	Yes
• Output current, max.	700 mA; Total current of all encoders
• Output current per channel, max.	700 mA
• Output current per module, max.	700 mA

### Power loss

Power loss, typ.	1 W; 24 V, 8 inputs supplied via encoder supply
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### Address area

Address space per module	
• Inputs	1 byte; + 1 byte for QI information

### Hardware configuration

Automatic encoding	Yes
• Mechanical coding element	Yes

### Submodules

• Number of configurable submodules, max.	4
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### Selection of BaseUnit for connection variants

• 1-wire connection	BU type A0
• 2-wire connection	BU type A0
• 3-wire connection	BU type A0 with AUX terminals
• 4-wire connection	BU type A0 + Potential isolation module

### Digital inputs

Number of digital inputs	8
Digital inputs, parameterizable	Yes
Source/sink input	P-reading
Input characteristic curve in accordance with IEC 61131, type 3	Yes

Input voltage	
• Type of input voltage	DC
• Rated value (DC)	24 V
• for signal "0"	-30 to +5V
• for signal "1"	+11 to +30V
Input current	
• for signal "1", typ.	2.5 mA
Input delay (for rated value of input voltage)	
for standard inputs	
— parameterizable	Yes; 0.05 / 0.1 / 0.4 / 0.8 / 1.6 / 3.2 / 12.8 / 20 ms (in each case + delay of 30 to 500 µs, depending on line length)
— at "0" to "1", min.	0.05 ms
— at "0" to "1", max.	20 ms
— at "1" to "0", min.	0.05 ms
— at "1" to "0", max.	20 ms
Cable length	
• shielded, max.	1 000 m
• unshielded, max.	600 m
Encoder	
Connectable encoders	
• 2-wire sensor	Yes
— permissible quiescent current (2-wire sensor), max.	1.5 mA
Isochronous mode	
Isochronous operation (application synchronized up to terminal)	No
Interrupts/diagnostics/status information	
Diagnostics function	Yes
Alarms	
• Diagnostic alarm	Yes
Diagnostic messages	
• Diagnostic information readable	Yes
• Monitoring the supply voltage	Yes
— parameterizable	Yes
• Monitoring of encoder power supply	Yes; Module-by-module, optional protective circuit for preventing wire-break diagnostics in the case of simple encoder contacts: 25 kOhm to 45 kOhm
• Wire-break	Yes; Module-wise
• Short-circuit	Yes; Module-wise
Diagnostics indication LED	
• Monitoring of the supply voltage (PWR-LED)	Yes; green PWR LED
• Channel status display	Yes; Green LED

- for channel diagnostics
- for module diagnostics

No  
Yes; green/red DIAG LED

### Potential separation

#### Potential separation channels

- between the channels
- between the channels and backplane bus
- between the channels and the power supply of the electronics

No  
Yes  
No

### Isolation

Isolation tested with

707 V DC (type test)

### Ambient conditions

#### Ambient temperature during operation

- horizontal installation, min.
- horizontal installation, max.
- vertical installation, min.
- vertical installation, max.

0 °C  
60 °C  
0 °C  
50 °C

#### Altitude during operation relating to sea level

- Ambient air temperature-barometric pressure-altitude

On request: Ambient temperatures lower than 0 °C (without condensation) and/or installation altitudes greater than 2 000 m

### Dimensions

Width

15 mm

Height

73 mm

Depth

58 mm

### Weights

Weight, approx.

28 g

**last modified:**

11/05/2018