

SIMATIC ET 200SP, Digital input module, DI 8x 24V DC Standard, type 3 (IEC 61131), sink input, (PNP, P-reading), Packing unit: 10 pieces, 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 / -
<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
<ul style="list-style-type: none"> <li>Oversampling</li> </ul>	No
<ul style="list-style-type: none"> <li>MSI</li> </ul>	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
Encoder supply	
Number of outputs	8
Output voltage encoder supply, min.	19.2 V
Short-circuit protection	Yes; per module

<b>24 V encoder supply</b>	
• 24 V	Yes
• Short-circuit protection	Yes
• Output current, max.	700 mA; Total current of all encoders
<b>Power loss</b>	
Power loss, typ.	1 W; 24 V, 8 inputs supplied via encoder supply
<b>Address area</b>	
Address space per module	
• Inputs	1 byte; + 1 byte for QI information
<b>Hardware configuration</b>	
Automatic encoding	Yes
• Mechanical coding element	Yes
<b>Submodules</b>	
• Number of configurable submodules, max.	4
<b>Selection of BaseUnit for connection variants</b>	
• 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
<b>Digital inputs</b>	
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
<b>Input voltage</b>	
• Type of input voltage	DC
• Rated value (DC)	24 V
• for signal "0"	-30 to +5V
• for signal "1"	+11 to +30V
<b>Input current</b>	
• for signal "1", typ.	2.5 mA
<b>Input delay (for rated value of input voltage)</b>	
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
<b>Cable length</b>	

- 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 No
- for module diagnostics Yes; green/red DIAG LED

## Potential separation

### Potential separation channels

- between the channels No
- between the channels and backplane bus Yes
- between the channels and the power supply of the electronics No

## Isolation

Isolation tested with 707 V DC (type test)

## Ambient conditions

### Ambient temperature during operation

- horizontal installation, min. 0 °C
- horizontal installation, max. 60 °C

- vertical installation, min. 0 °C
- vertical installation, max. 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
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**last modified:** 02/20/2018