

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"> FW update possible 	No
usable BaseUnits	BU type A0
Color code for module-specific color identification plate	CC01
Product function	
<ul style="list-style-type: none"> I&M data 	Yes; I&M0 to I&M3
Engineering with	
<ul style="list-style-type: none"> STEP 7 TIA Portal configurable/integrated as of version 	V14
<ul style="list-style-type: none"> STEP 7 configurable/integrated as of version 	V5.5 SP3 or higher
<ul style="list-style-type: none"> PCS 7 configurable/integrated as of version 	V8.1 SP1
<ul style="list-style-type: none"> PROFIBUS as of GSD version/GSD revision 	One GSD file each, Revision 3 and 5 and higher
<ul style="list-style-type: none"> PROFINET as of GSD version/GSD revision 	GSDML V2.3
Operating mode	
<ul style="list-style-type: none"> DI 	Yes
<ul style="list-style-type: none"> Counter 	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

<ul style="list-style-type: none"> • 24 V 	Yes
<ul style="list-style-type: none"> • Short-circuit protection 	Yes
<ul style="list-style-type: none"> • Output current, max. 	700 mA; Total current of all encoders

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	
<ul style="list-style-type: none"> • Inputs 	1 byte; + 1 byte for QI information

Hardware configuration

Automatic encoding	Yes
<ul style="list-style-type: none"> • Mechanical coding element 	Yes

Submodules

<ul style="list-style-type: none"> • Number of configurable submodules, max. 	4
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Selection of BaseUnit for connection variants

<ul style="list-style-type: none"> • 1-wire connection 	BU type A0
<ul style="list-style-type: none"> • 2-wire connection 	BU type A0
<ul style="list-style-type: none"> • 3-wire connection 	BU type A0 with AUX terminals
<ul style="list-style-type: none"> • 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	
<ul style="list-style-type: none"> • Type of input voltage 	DC

<ul style="list-style-type: none"> Rated value (DC) 	24 V
<ul style="list-style-type: none"> for signal "0" 	-30 to +5V
<ul style="list-style-type: none"> for signal "1" 	+11 to +30V
Input current	
<ul style="list-style-type: none"> 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	
<ul style="list-style-type: none"> shielded, max. 	1 000 m
<ul style="list-style-type: none"> unshielded, max. 	600 m
Encoder	
Connectable encoders	
<ul style="list-style-type: none"> 2-wire sensor 	Yes
<ul style="list-style-type: none"> — 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	
<ul style="list-style-type: none"> Diagnostic alarm 	Yes
Diagnostic messages	
<ul style="list-style-type: none"> Diagnostic information readable 	Yes
<ul style="list-style-type: none"> Monitoring the supply voltage 	Yes
<ul style="list-style-type: none"> — parameterizable 	Yes
<ul style="list-style-type: none"> 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
<ul style="list-style-type: none"> Wire-break 	Yes; Module-wise
<ul style="list-style-type: none"> Short-circuit 	Yes; Module-wise
Diagnostics indication LED	
<ul style="list-style-type: none"> Monitoring of the supply voltage (PWR-LED) 	Yes; green PWR LED
<ul style="list-style-type: none"> Channel status display 	Yes; Green LED
<ul style="list-style-type: none"> for channel diagnostics 	No

- for module diagnostics

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:

06/21/2018