



SIMATIC ET 200SP, digital input module, DI 8x 24V DC standard, Input type 3 (IEC 61131), sink input, (PNP, sink input), Packing unit: 10 units, suitable for BU type A0, color code CC01, Input delay 0.05..20ms; Module diagnostics for: Encoder power supply short circuit, wire break, supply voltage

General information	
Product type designation	DI 8x 24 V DC ST, PU 10
HW functional status	From FS02
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
<ul style="list-style-type: none"> Isochronous mode 	No
Engineering with	
<ul style="list-style-type: none"> STEP 7 TIA Portal configurable/integrated from version 	V14
<ul style="list-style-type: none"> STEP 7 configurable/integrated from version 	V5.5 SP3 / -
<ul style="list-style-type: none"> PCS 7 configurable/integrated from version 	V8.1 SP1
<ul style="list-style-type: none"> PROFIBUS from GSD version/GSD revision 	One GSD file each, Revision 3 and 5 and higher
<ul style="list-style-type: none"> PROFINET from GSD version/GSD revision 	GSDML V2.3
Operating mode	

• DI	Yes
• Counter	No
• Oversampling	No
• MSI	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, 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
• 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
• Type of mechanical coding element	Type A

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 or potential distributor module
• 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"> • Rated value (DC) <ul style="list-style-type: none"> — 24 V DC • for signal "0" • for signal "1" 	24 V Yes -30 to +5 V +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	
<ul style="list-style-type: none"> — parameterizable — at "0" to "1", min. — at "0" to "1", max. — at "1" to "0", min. — at "1" to "0", max. 	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) 0.05 ms 20 ms 0.05 ms 20 ms
Cable length	
<ul style="list-style-type: none"> • shielded, max. • unshielded, max. 	1 000 m 600 m
Encoder	
Connectable encoders	
<ul style="list-style-type: none"> • 2-wire sensor <ul style="list-style-type: none"> — permissible quiescent current (2-wire sensor), max. 	Yes 1.5 mA
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 • Monitoring the supply voltage <ul style="list-style-type: none"> — parameterizable • Monitoring of encoder power supply • Wire-break • Short-circuit 	Yes Yes Yes Yes; Module-by-module, optional protective circuit for preventing wire-break diagnostics in the case of simple encoder contacts: 25 kOhm to 45 kOhm Yes; Module-wise Yes; Module-wise
Diagnostics indication LED	
<ul style="list-style-type: none"> • Monitoring of the supply voltage (PWR-LED) • Channel status display • for channel diagnostics 	Yes; green PWR LED Yes; green LED 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.

-30 °C

60 °C

-30 °C

50 °C

Altitude during operation relating to sea level

- Installation altitude above sea level, max.

5 000 m; Restrictions for installation altitudes > 2 000 m, see manual

Dimensions

Width

15 mm

Height

73 mm

Depth

58 mm

Weights

Weight, approx.

28 g

last modified:

06/11/2020