

SIMATIC ET 200SP, digital input module, DI 8x 24 V DC Standard, suitable for BU type A0, Color code CC01, Module diagnostics



General information	
Product type designation	DI 8x24 VDC ST
Firmware version	V1.1
<ul style="list-style-type: none"> FW update possible 	Yes
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 	V11 SP2 / V13
<ul style="list-style-type: none"> STEP 7 configurable/integrated as of version 	V5.5 SP3 / -
<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 	GSD Revision 5
<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
---------------------------	-------

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
------------------	-----

Address area

Address space per module	
<ul style="list-style-type: none"> • Address space per module, max. 	1 byte; + 1 byte for QI information

Hardware configuration

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 + external terminals

Digital inputs

Number of digital inputs	8
Source/sink input	P-reading
Input characteristic curve in accordance with IEC 61131, type 1	Yes
Input characteristic curve in accordance with IEC 61131, type 2	No
Input characteristic curve in accordance with IEC 61131, type 3	Yes
Pulse extension	No

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)
for interrupt inputs	
— parameterizable	No
for counter/technological functions	
— parameterizable	No
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
— 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
— parameterizable	Yes
<ul style="list-style-type: none"> • Monitoring of encoder power supply 	Yes; Module-wise
<ul style="list-style-type: none"> • Wire-break 	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"> • 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)

Dimensions

Width

15 mm

Height

73 mm

Depth

58 mm

Weights

Weight, approx.

28 g

last modified:

01/29/2018