



SIMATIC ET 200SP, digital input module, DI 16x24 V DC SRC BA, input type 1 (IEC 61131), source input, (NPN, sourcing input), packing unit: 1 unit, suitable for BU type A0, color code CC00, input delay 0.05..20 ms; module diagnostics for: supply voltage

General information	
Product type designation	DI 16x24VDC SRC BA
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	CC00
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 	STEP 7 V19 or higher with HSP0433, integrated as of V21
<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 V2.43
Operating mode	
<ul style="list-style-type: none"> DI 	Yes
<ul style="list-style-type: none"> Counter 	No
<ul style="list-style-type: none"> Oversampling 	No
<ul style="list-style-type: none"> 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 (rated value)	8 mA; rated voltage, all channels active, no load
Current consumption, max.	65 mA; worst case voltage, all channels active, max. load, no derating
Encoder supply	
Short-circuit protection	No
Power loss	
Power loss, typ.	0.8 W; rated voltage, 50 % active channels
Address area	
Address space per module	
<ul style="list-style-type: none"> Address space per module, max. 	2 byte
<ul style="list-style-type: none"> Inputs 	2 byte
Hardware configuration	
Automatic encoding	Yes
<ul style="list-style-type: none"> Mechanical coding element 	Yes
<ul style="list-style-type: none"> Type of mechanical coding element 	Type A
Selection of BaseUnit for connection variants	
<ul style="list-style-type: none"> 1-wire connection 	BU type A0

- 2-wire connection
- 3-wire connection

BU type A0 with AUX terminals or potential distributor module
BU type A0 with AUX terminals or potential distributor module

Digital inputs

Number of digital inputs	16
Digital inputs, parameterizable	Yes
Source/sink input	Sourcing
Input characteristic curve in accordance with IEC 61131, type 1	Yes
Input characteristic curve in accordance with IEC 61131, type 3	Yes

Number of simultaneously controllable inputs

- Number of simultaneously controllable inputs

16

Input voltage

- Rated value (DC)
- for signal "0"
- for signal "1"

24 V
30 V to -5 V (reference potential is L+)
-11 V to -30 V (reference potential is L+)

Input current

- for signal "1", typ.

4 mA

Input delay (for rated value of input voltage)

for standard inputs

- 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 μ s, depending on line length)
0.05 ms
20 ms
0.05 ms
20 ms

Cable length

- shielded, max.
- unshielded, max.

1 000 m
200 m

Encoder

Connectable encoders

- 2-wire sensor
- permissible quiescent current (2-wire sensor), max.

Yes
1.5 mA

Interrupts/diagnostics/status information

Diagnostics function

Yes

Alarms

- Diagnostic alarm

Yes

Diagnoses

- Diagnostic information readable
- Monitoring the supply voltage
 - parameterizable
- Monitoring of encoder power supply
- Wire-break
- Short-circuit
- Short-circuit to M
- Short-circuit to L+
- Group error

Yes
Yes
Yes
No
No
No
No
No
No
No

Diagnostics indication LED

- Monitoring of the supply voltage (PWR-LED)
- Channel status display
- for channel diagnostics
- for module diagnostics

Yes; green PWR LED
Yes; green LED
No
Yes; green/red DIAG LED

Potential separation

Potential separation channels

- between the channels
- between the channels and backplane bus
- Between the channels and load voltage L+

No
Yes
No

Isolation

Isolation tested with

707 V DC (type test)

Standards, approvals, certificates

Suitable for safety functions

No

Ecological footprint

- environmental product declaration

Yes

Global warming potential	
— global warming potential, (total) [CO2 eq]	21 kg
— global warming potential, (during production) [CO2 eq]	4.25 kg
— global warming potential, (during operation) [CO2 eq]	1.75 kg
— global warming potential, (after end of life cycle) [CO2 eq]	-0.743 kg

Ambient conditions

Ambient temperature during operation	
• horizontal installation, min.	-30 °C
• horizontal installation, max.	60 °C
• vertical installation, min.	-30 °C
• vertical installation, max.	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 ET 200SP system manual

Dimensions

Width	15 mm
Height	73 mm
Depth	58 mm

Weights

Weight, approx.	30 g
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Classifications

	Version	Classification
eClass	14	27-24-26-04
eClass	12	27-24-26-04
eClass	9.1	27-24-26-04
eClass	9	27-24-26-04
eClass	8	27-24-26-04
eClass	7.1	27-24-26-04
eClass	6	27-24-26-04
ETIM	10	EC001599
ETIM	9	EC001599
ETIM	8	EC001599
ETIM	7	EC001599

Approvals / Certificates

General Product Approval

[Manufacturer Declaration](#)

[Miscellaneous](#)



[KC](#)



General Product Approval	EMV	For use in hazardous locations
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[KC](#)



[CCC-Ex](#)

[FM](#)



For use in hazardous locations	Environment
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[Miscellaneous](#)

[Type Examination Certificate](#)



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