



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 V18 or higher with HSP0432; 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)	24 V
• for signal "0"	30 V to -5 V (reference potential is L+)
• for signal "1"	-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	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	
• shielded, max.	1 000 m
• unshielded, max.	200 m

Encoder

Connectable encoders	
• 2-wire sensor	Yes
— permissible quiescent current (2-wire sensor), max.	1.5 mA

Interrupts/diagnostics/status information

Diagnostics function	Yes
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Alarms	
• Diagnostic alarm	Yes

Diagnoses	
• Diagnostic information readable	Yes
• Monitoring the supply voltage	Yes
— parameterizable	Yes
• Monitoring of encoder power supply	No
• Wire-break	No
• Short-circuit	No
• Short-circuit to M	No
• Short-circuit to L+	No
• Group error	No

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 load voltage L+	No

Isolation

Isolation tested with	707 V DC (type test)
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Standards, approvals, certificates

Suitable for safety functions	No
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Ambient conditions

Ambient temperature during operation	
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- 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	9	EC001599
ETIM	8	EC001599
ETIM	7	EC001599

Approvals / Certificates

General Product Approval

For use in hazardous locations

[Manufacturer Declaration](#)

[Miscellaneous](#)



[CCC-Ex](#)

For use in hazardous locations

[EM](#)



[Miscellaneous](#)

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