



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
HW functional status	From FS02
Firmware version	V0.0
• FW update possible	No
usable BaseUnits	BU type A0
Color code for module-specific color-coded label	CC01
Product function	
• I&M data	Yes; I&M0 to I&M3
• Isochronous mode	No
• suitable for operation on PROFINET R1 IMs	Yes
Engineering with	
• STEP 7 TIA Portal configurable/integrated from version	V14
• STEP 7 configurable/integrated from version	V5.5 SP3 or higher
• PCS 7 configurable/integrated from version	V8.1 SP1
• PCS neo can be configured/integrated from version	V3.1
• PROFIBUS from GSD version/GSD revision	One GSD file each, Revision 3 and 5 and higher
• 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
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

<ul style="list-style-type: none"> <li>• Short-circuit protection</li> <li>• Output current, max.</li> <li>• Output current per channel, max.</li> <li>• Output current per module, max.</li> </ul>	Yes 700 mA 700 mA 700 mA
<b>Power loss</b>	
Power loss, typ.	1 W; 24 V, 8 inputs supplied via encoder supply
<b>Address area</b>	
Address space per module	
<ul style="list-style-type: none"> <li>• Inputs</li> </ul>	1 byte; + 1 byte for QI information
<b>Hardware configuration</b>	
Automatic encoding	Yes
<ul style="list-style-type: none"> <li>• Mechanical coding element</li> <li>• Type of mechanical coding element</li> </ul>	Yes Type A
<b>Selection of BaseUnit for connection variants</b>	
<ul style="list-style-type: none"> <li>• 1-wire connection</li> <li>• 2-wire connection</li> <li>• 3-wire connection</li> <li>• 4-wire connection</li> </ul>	BU type A0 BU type A0 BU type A0 with AUX terminals or potential distributor module BU type A0 + Potential distributor module
<b>Digital inputs</b>	
Number of digital inputs	8
Digital inputs, parameterizable	Yes
Sourcing/sinking input	P-reading
Input characteristic curve in accordance with IEC 61131, type 3	Yes
<b>Input voltage</b>	
<ul style="list-style-type: none"> <li>• Rated value (DC)</li> <li>• for signal "0"</li> <li>• for signal "1"</li> </ul>	24 V -30 to +5 V +11 to +30V
<b>Input current</b>	
<ul style="list-style-type: none"> <li>• for signal "1", typ.</li> </ul>	2.5 mA
<b>Input delay (for rated value of input voltage)</b>	
for standard inputs	
<ul style="list-style-type: none"> <li>— parameterizable</li> <li>— at "0" to "1", min.</li> <li>— at "0" to "1", max.</li> <li>— at "1" to "0", min.</li> <li>— at "1" to "0", max.</li> </ul>	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
<b>Cable length</b>	
<ul style="list-style-type: none"> <li>• shielded, max.</li> <li>• unshielded, max.</li> </ul>	1 000 m 600 m
<b>Encoder</b>	
<b>Connectable encoders</b>	
<ul style="list-style-type: none"> <li>• 2-wire sensor</li> <li>— permissible quiescent current (2-wire sensor), max.</li> </ul>	Yes 1.5 mA
<b>Interrupts/diagnostics/status information</b>	
Diagnostics function	Yes
<b>Alarms</b>	
<ul style="list-style-type: none"> <li>• Diagnostic alarm</li> </ul>	Yes
<b>Diagnoses</b>	
<ul style="list-style-type: none"> <li>• Diagnostic information readable</li> <li>• Monitoring the supply voltage</li> <li>— parameterizable</li> <li>• Monitoring of encoder power supply</li> <li>• Wire break</li> <li>• Short-circuit</li> </ul>	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
<b>Diagnostics indication LED</b>	
<ul style="list-style-type: none"> <li>• Monitoring of the supply voltage (PWR-LED)</li> <li>• Channel status display</li> </ul>	Yes; green PWR LED Yes; green LED

• for channel diagnostics	No	
• for module diagnostics	Yes; green/red DIAG LED	
<b>Potential separation</b>		
Potential separation channels		
• between the channels	No	
• between the channels and backplane bus	Yes	
• between the channels and the power supply of the electronics	No	
<b>Isolation</b>		
Isolation tested with	707 V DC (type test)	
<b>Standards, approvals, certificates</b>		
Suitable for safety functions	No	
<b>Ecological footprint</b>		
• environmental product declaration	Yes	
<b>Global warming potential</b>		
— global warming potential, (total) [CO2 eq]	15.9 kg	
— global warming potential, (during production) [CO2 eq]	3.69 kg	
— global warming potential, (during operation) [CO2 eq]	12.7 kg	
— global warming potential, (after end of life cycle) [CO2 eq]	-0.495 kg	
<b>Ambient conditions</b>		
Ambient temperature during operation		
• horizontal installation, min.	-30 °C; < 0 °C as of FS02	
• horizontal installation, max.	60 °C	
• vertical installation, min.	-30 °C; < 0 °C as of FS02	
• 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 manual	
Absolute humidity		
• dew point, min.	-60 °C; suitable for dry room applications	
<b>Dimensions</b>		
Width	15 mm	
Height	73 mm	
Depth	58 mm	
<b>Weights</b>		
Weight, approx.	28 g	
<b>Classifications</b>		
	<b>Version</b>	<b>Classification</b>
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
IDEA	4	3566
UNSPSC	15	32-15-17-05
<b>Approvals / Certificates</b>		
<b>General Product Approval</b>		

[Miscellaneous](#)

[Manufacturer Declaration](#)



General Product Approval

For use in hazardous locations



[China RoHS](#)



For use in hazardous locations

[FM](#)

[CCC-Ex](#)



[Type Examination Certificate](#)



IECEX

[Miscellaneous](#)

For use in hazardous locations

Maritime application

[CCC-Ex](#)



[NK / Nippon Kaiji Kyokai](#)

Maritime application

Environment



[CCS \(China Classification Society\)](#)

[KR \(Korean Register of Shipping\)](#)



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