## SIEMENS

## Data sheet

## 6ES7131-6BH01-0BA0



SIMATIC ET 200SP, Digital input module, DI 16x 24V DC Standard, type 3 (IEC 61131), sink input, (PNP, P-reading), Packing unit: 1 Piece, fits to BU-type A0, Colour Code CC00, input delay time 0,05..20ms, diagnostics wire break, diagnostics supply voltage

DI 16x24VDC ST
From FS02
V0.0
No
BU type A0
CC00
Yes; I&M0 to I&M3
No
V14
V5.5 SP3
V8.1 SP1
One GSD file each, Revision 3 and 5 and higher
GSDML V2.3
Yes
No
No
No
24 V
19.2 V
28.8 V
Yes
90 mA
No
1.7 W
2 byte; + 2 bytes for QI information
Yes
Yes
Туре А

Selection of BaseUnit for connection variants	
election of BaseUnit for connection variants     e 1-wire connection	BU type A0
• 2-wire connection	BU type A0 + Potential distributor module
• 3-wire connection	BU type A0 + Potential distributor module
4-wire connection	BU type A0 + Potential distributor module
Digital inputs	
Number of digital inputs	16
Digital inputs, parameterizable	Yes
Source/sink input	P-reading
Input characteristic curve in accordance with IEC 61131, type 3	Yes
Input voltage	
Rated value (DC)	24 V
• for signal "0"	-30 to +5 V
• for signal "1"	+11 to +30V
Input current	
<ul> <li>for signal "1", typ.</li> </ul>	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)
— 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	20110
shielded, max.	1 000 m
• unshielded, max.	600 m
Encoder	
Connectable encoders	
• 2-wire sensor	Yes
	1.5 mA
<ul> <li>permissible quiescent current (2-wire sensor), max.</li> </ul>	1.5 IIIA
Interrupto/diagnactica/status information	
Interrupts/diagnostics/status information	
Interrupts/diagnostics/status information Diagnostics function Alarms	Yes
Diagnostics function	Yes
Diagnostics function Alarms	
Diagnostics function Alarms • Diagnostic alarm	
Diagnostics function Alarms • Diagnostic alarm Diagnoses	Yes
Diagnostics function Alarms • Diagnostic alarm Diagnoses • Diagnostic information readable	Yes
Diagnostics function Alarms • Diagnostic alarm Diagnoses • Diagnostic information readable • Monitoring the supply voltage — parameterizable	Yes Yes Yes
Diagnostics function Alarms • Diagnostic alarm Diagnoses • Diagnostic information readable • Monitoring the supply voltage	Yes Yes Yes No
Diagnostics function Alarms • Diagnostic alarm Diagnoses • Diagnostic information readable • Monitoring the supply voltage — parameterizable • Monitoring of encoder power supply	Yes Yes Yes
Diagnostics function Alarms • Diagnostic alarm Diagnoses • Diagnostic information readable • Monitoring the supply voltage — parameterizable • Monitoring of encoder power supply	Yes Yes Yes No Yes; Module-by-module, optional protective circuit for preventing wire-break
Diagnostics function Alarms • Diagnostic alarm Diagnoses • Diagnostic information readable • Monitoring the supply voltage — parameterizable • Monitoring of encoder power supply • Wire-break	Yes Yes Yes Yes No Yes; Module-by-module, optional protective circuit for preventing wire-break diagnostics in the case of simple encoder contacts: 25 kOhm to 45 kOhm
Diagnostics function Alarms • Diagnostic alarm Diagnoses • Diagnostic information readable • Monitoring the supply voltage — parameterizable • Monitoring of encoder power supply • Wire-break • Short-circuit	Yes Yes Yes Yes No Yes; Module-by-module, optional protective circuit for preventing wire-break diagnostics in the case of simple encoder contacts: 25 kOhm to 45 kOhm No
Diagnostics function Alarms • Diagnostic alarm Diagnoses • Diagnostic information readable • Monitoring the supply voltage — parameterizable • Monitoring of encoder power supply • Wire-break • Short-circuit • Group error	Yes Yes Yes Yes No Yes; Module-by-module, optional protective circuit for preventing wire-break diagnostics in the case of simple encoder contacts: 25 kOhm to 45 kOhm No
Diagnostics function Alarms • Diagnostic alarm Diagnoses • Diagnostic information readable • Monitoring the supply voltage — parameterizable • Monitoring of encoder power supply • Wire-break • Short-circuit • Group error Diagnostics indication LED	Yes Yes Yes No Yes; Module-by-module, optional protective circuit for preventing wire-break diagnostics in the case of simple encoder contacts: 25 kOhm to 45 kOhm No Yes
Diagnostics function Alarms • Diagnostic alarm Diagnoses • Diagnostic information readable • Monitoring the supply voltage — parameterizable • Monitoring of encoder power supply • Wire-break • Short-circuit • Group error Diagnostics indication LED • Monitoring of the supply voltage (PWR-LED)	Yes Yes Yes Yes No Yes; Module-by-module, optional protective circuit for preventing wire-break diagnostics in the case of simple encoder contacts: 25 kOhm to 45 kOhm No Yes Yes
Diagnostics function         Alarms         • Diagnostic alarm         Diagnoses         • Diagnostic information readable         • Monitoring the supply voltage         — parameterizable         • Monitoring of encoder power supply         • Wire-break         • Short-circuit         • Group error         Diagnostics indication LED         • Monitoring of the supply voltage (PWR-LED)         • Channel status display	Yes Yes Yes Yes No Yes; Module-by-module, optional protective circuit for preventing wire-break diagnostics in the case of simple encoder contacts: 25 kOhm to 45 kOhm No Yes Yes; green PWR LED Yes; green LED
Diagnostics function         Alarms         • Diagnostic alarm         Diagnoses         • Diagnostic information readable         • Monitoring the supply voltage         — parameterizable         • Monitoring of encoder power supply         • Wire-break         • Short-circuit         • Group error         Diagnostics indication LED         • Monitoring of the supply voltage (PWR-LED)         • Channel status display         • for channel diagnostics	Yes Yes Yes Yes No Yes; Module-by-module, optional protective circuit for preventing wire-break diagnostics in the case of simple encoder contacts: 25 kOhm to 45 kOhm No Yes Yes; green PWR LED Yes; green LED No
Diagnostics function Alarms • Diagnostic alarm Diagnoses • Diagnostic information readable • Monitoring the supply voltage — parameterizable • Monitoring of encoder power supply • Wire-break • Short-circuit • Group error Diagnostics indication LED • Monitoring of the supply voltage (PWR-LED) • Channel status display • for channel diagnostics • for module diagnostics	Yes Yes Yes Yes No Yes; Module-by-module, optional protective circuit for preventing wire-break diagnostics in the case of simple encoder contacts: 25 kOhm to 45 kOhm No Yes Yes; green PWR LED Yes; green LED No
Diagnostics function         Alarms         • Diagnostic alarm         Diagnoses         • Diagnostic information readable         • Monitoring the supply voltage         — parameterizable         • Monitoring of encoder power supply         • Wire-break         • Short-circuit         • Group error         Diagnostics indication LED         • Monitoring of the supply voltage (PWR-LED)         • Channel status display         • for channel diagnostics         • for module diagnostics	Yes Yes Yes Yes No Yes; Module-by-module, optional protective circuit for preventing wire-break diagnostics in the case of simple encoder contacts: 25 kOhm to 45 kOhm No Yes Yes; green PWR LED Yes; green LED No
Diagnostics function         Alarms         • Diagnostic alarm         Diagnoses         • Diagnostic information readable         • Monitoring the supply voltage         — parameterizable         • Monitoring of encoder power supply         • Wire-break         • Short-circuit         • Group error         Diagnostics indication LED         • Monitoring of the supply voltage (PWR-LED)         • Channel status display         • for channel diagnostics         • for module diagnostics         • for module diagnostics         • for channel diagnostics         • for module diagnostics	Yes Yes Yes No Yes; Module-by-module, optional protective circuit for preventing wire-break diagnostics in the case of simple encoder contacts: 25 kOhm to 45 kOhm No Yes Yes; green PWR LED Yes; green LED No Yes; green/red DIAG LED
Diagnostics function         Alarms         • Diagnostic alarm         Diagnoses         • Diagnostic information readable         • Monitoring the supply voltage         — parameterizable         • Monitoring of encoder power supply         • Wire-break         • Short-circuit         • Group error         Diagnostics indication LED         • Monitoring of the supply voltage (PWR-LED)         • Channel status display         • for channel diagnostics         • for module diagnostics         • for module diagnostics         • between the channels         • between the channels         • between the channels and backplane bus	Yes Yes Yes Yes No Yes; Module-by-module, optional protective circuit for preventing wire-break diagnostics in the case of simple encoder contacts: 25 kOhm to 45 kOhm No Yes Yes; green PWR LED Yes; green LED No Yes; green/red DIAG LED
Diagnostics function         Alarms         • Diagnostic alarm         Diagnoses         • Diagnostic information readable         • Monitoring the supply voltage         — parameterizable         • Monitoring of encoder power supply         • Wire-break         • Short-circuit         • Group error         Diagnostics indication LED         • Monitoring of the supply voltage (PWR-LED)         • Channel status display         • for channel diagnostics         • for module diagnostics         • for module diagnostics         • between the channels	Yes Yes Yes Yes No Yes; Module-by-module, optional protective circuit for preventing wire-break diagnostics in the case of simple encoder contacts: 25 kOhm to 45 kOhm No Yes Yes; green PWR LED Yes; green LED No Yes; green LED No Yes; green/red DIAG LED
Diagnostics function         Alarms         • Diagnostic alarm         Diagnoses         • Diagnostic information readable         • Monitoring the supply voltage         — parameterizable         • Monitoring of encoder power supply         • Wire-break         • Short-circuit         • Group error         Diagnostics indication LED         • Monitoring of the supply voltage (PWR-LED)         • Channel status display         • for channel diagnostics         • for module diagnostics         • for module diagnostics         • between the channels         • between the channels         • between the channels and backplane bus         • between the channels and the power supply of the	Yes Yes Yes Yes No Yes; Module-by-module, optional protective circuit for preventing wire-break diagnostics in the case of simple encoder contacts: 25 kOhm to 45 kOhm No Yes Yes; green PWR LED Yes; green LED No Yes; green LED No Yes; green/red DIAG LED
Diagnostics function         Alarms         • Diagnostic alarm         Diagnoses         • Diagnostic information readable         • Monitoring the supply voltage         parameterizable         • Monitoring of encoder power supply         • Wire-break         • Short-circuit         • Group error         Diagnostics indication LED         • Monitoring of the supply voltage (PWR-LED)         • Channel status display         • for channel diagnostics         • for module diagnostics         • for module diagnostics         • between the channels         • between the channels         • between the channels and backplane bus         • between the channels and the power supply of the electronics	Yes Yes Yes Yes No Yes; Module-by-module, optional protective circuit for preventing wire-break diagnostics in the case of simple encoder contacts: 25 kOhm to 45 kOhm No Yes Yes; green PWR LED Yes; green LED No Yes; green LED No Yes; green/red DIAG LED
Diagnostics function         Alarms         • Diagnostic alarm         Diagnoses         • Diagnostic information readable         • Monitoring the supply voltage         parameterizable         • Monitoring of encoder power supply         • Wire-break         • Short-circuit         • Group error         Diagnostics indication LED         • Monitoring of the supply voltage (PWR-LED)         • Channel status display         • for channel diagnostics         • for module diagnostics         • for module diagnostics         • between the channels         • between the channels         • between the channels and backplane bus         • between the channels and the power supply of the electronics	Yes Yes Yes Yes No Yes; Module-by-module, optional protective circuit for preventing wire-break diagnostics in the case of simple encoder contacts: 25 kOhm to 45 kOhm No Yes Yes; green PWR LED Yes; green LED No Yes; green/red DIAG LED No Yes No
Diagnostics function         Alarms         • Diagnostic alarm         Diagnoses         • Diagnostic information readable         • Monitoring the supply voltage         parameterizable         • Monitoring of encoder power supply         • Wire-break         • Short-circuit         • Group error         Diagnostics indication LED         • Monitoring of the supply voltage (PWR-LED)         • Channel status display         • for channel diagnostics         • for module diagnostics         • for module diagnostics         • between the channels         • between the channels         • between the channels and backplane bus         • between the channels and the power supply of the electronics         Isolation         Isolation tested with	Yes Yes Yes Yes No Yes; Module-by-module, optional protective circuit for preventing wire-break diagnostics in the case of simple encoder contacts: 25 kOhm to 45 kOhm No Yes Yes; green PWR LED Yes; green LED No Yes; green/red DIAG LED No Yes No
Diagnostics function         Alarms         • Diagnostic alarm         Diagnoses         • Diagnostic information readable         • Monitoring the supply voltage         — parameterizable         • Monitoring of encoder power supply         • Wire-break         • Short-circuit         • Group error         Diagnostics indication LED         • Monitoring of the supply voltage (PWR-LED)         • Channel status display         • for channel diagnostics         • for module diagnostics         • for module diagnostics         • bottential separation         Potential separation channels         • between the channels         • between the channels and backplane bus         • between the channels and the power supply of the electronics         Isolation         Isolation tested with	Yes Yes Yes No Yes; Module-by-module, optional protective circuit for preventing wire-break diagnostics in the case of simple encoder contacts: 25 kOhm to 45 kOhm No Yes Yes; green PWR LED Yes; green PWR LED Yes; green LED No Yes; green/red DIAG LED No Yes No
Diagnostics function         Alarms         • Diagnostic alarm         Diagnoses         • Diagnostic information readable         • Monitoring the supply voltage         parameterizable         • Monitoring of encoder power supply         • Wire-break         • Short-circuit         • Group error         Diagnostics indication LED         • Monitoring of the supply voltage (PWR-LED)         • Channel status display         • for channel diagnostics         • for module diagnostics         • for module diagnostics         • between the channels         • between the channels         • between the channels and backplane bus         • between the channels and the power supply of the electronics         Isolation         Isolation tested with         Standards, approvals, certificates         Suitable for safety functions	Yes Yes Yes No Yes; Module-by-module, optional protective circuit for preventing wire-break diagnostics in the case of simple encoder contacts: 25 kOhm to 45 kOhm No Yes Yes; green PWR LED Yes; green PWR LED Yes; green LED No Yes; green/red DIAG LED No Yes No

horizontal installation, min.	-30 °C; < 0 °C as of FS02
<ul> <li>horizontal installation, max.</li> </ul>	60 °C
<ul> <li>vertical installation, min.</li> </ul>	-30 °C; < 0 °C as of FS02
<ul> <li>vertical installation, max.</li> </ul>	50 °C
Altitude during operation relating to sea level	
<ul> <li>Installation altitude above sea level, max.</li> </ul>	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:

8/23/2023 🖸