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

General information	
Product type designation	DI 16x24VDC 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 identification plate	CC00
Product function	
I&M data	Yes; I&M0 to I&M3
 Isochronous mode 	No
Engineering with	
 STEP 7 TIA Portal configurable/integrated from version 	V14
 STEP 7 configurable/integrated from version 	V5.5 SP3
 PCS 7 configurable/integrated from version 	V8.1 SP1
 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.	90 mA
Encoder supply	
24 V encoder supply	
• 24 V	No
Power loss	
Power loss, typ.	1.7 W
Address area	
Address space per module	
• Inputs	2 byte; + 2 bytes for QI information
Hardware configuration	
Automatic encoding	Yes
Mechanical coding element	Yes
Type of mechanical coding element	Type A

Selection of BaseUnit for connection variants	
1-wire connection	PILItung AO
	BU type A0 - Potential distributor module
• 2-wire connection	BU type A0 + Potential distributor module
3-wire connection	BU type A0 + Potential distributor module
4-wire connection Digital in parts	BU type A0 + Potential distributor module
Digital inputs	40
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	041/
Rated value (DC)	24 V
• for signal "0"	-30 to +5 V
• for signal "1"	+11 to +30V
Input current	
• 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 μ s, 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.	600 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
Alarms	
Diagnostic alarm	Yes
Diagnoses	
 Diagnostic information readable 	Yes
 Monitoring the supply voltage 	Yes
— parameterizable	Yes
 Monitoring of encoder power supply 	No
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
Short-circuit	No
0	
Group error	Yes
Diagnostics indication LED	
Diagnostics indication LED • Monitoring of the supply voltage (PWR-LED)	Yes; green PWR LED
Diagnostics indication LED	
Diagnostics indication LED • Monitoring of the supply voltage (PWR-LED)	Yes; green PWR LED
Diagnostics indication LED Monitoring of the supply voltage (PWR-LED) Channel status display	Yes; green PWR LED Yes; green LED
Diagnostics indication LED	Yes; green PWR LED Yes; green LED 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
Diagnostics indication LED • Monitoring of the supply voltage (PWR-LED) • Channel status display • for channel diagnostics • for module diagnostics Potential separation	Yes; green PWR LED Yes; green LED No
Diagnostics indication LED • Monitoring of the supply voltage (PWR-LED) • Channel status display • for channel diagnostics • for module diagnostics Potential separation Potential separation channels	Yes; green PWR LED Yes; green LED No Yes; green/red DIAG LED
Diagnostics indication LED • Monitoring of the supply voltage (PWR-LED) • Channel status display • for channel diagnostics • for module diagnostics Potential separation Potential separation channels • between the channels • between the channels and backplane bus • between the channels and the power supply of the	Yes; green PWR LED Yes; green LED No Yes; green/red DIAG LED
Diagnostics indication LED • Monitoring of the supply voltage (PWR-LED) • Channel status display • for channel diagnostics • for module diagnostics Potential separation Potential separation channels • between the channels • between the channels and backplane bus • between the channels and the power supply of the electronics	Yes; green PWR LED Yes; green LED No Yes; green/red DIAG LED No Yes
Diagnostics indication LED • Monitoring of the supply voltage (PWR-LED) • Channel status display • for channel diagnostics • for module diagnostics Potential separation Potential separation channels • between the channels • between the channels and backplane bus • between the channels and the power supply of the	Yes; green PWR LED Yes; green LED No Yes; green/red DIAG LED No Yes
Diagnostics indication LED • Monitoring of the supply voltage (PWR-LED) • Channel status display • for channel diagnostics • for module diagnostics Potential separation Potential separation channels • between the channels • between the channels and backplane bus • between the channels and the power supply of the electronics	Yes; green PWR LED Yes; green LED No Yes; green/red DIAG LED No Yes
Diagnostics indication LED • Monitoring of the supply voltage (PWR-LED) • Channel status display • for channel diagnostics • for module diagnostics Potential separation Potential separation channels • between the channels • between the channels and backplane bus • between the channels and the power supply of the electronics Isolation	Yes; green PWR LED Yes; green LED No Yes; green/red DIAG LED No Yes No
Diagnostics indication LED • Monitoring of the supply voltage (PWR-LED) • Channel status display • for channel diagnostics • for module diagnostics Potential 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; green PWR LED Yes; green LED No Yes; green/red DIAG LED No Yes No
Diagnostics indication LED • Monitoring of the supply voltage (PWR-LED) • Channel status display • for channel diagnostics • for module diagnostics Potential 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 Standards, approvals, certificates	Yes; green PWR LED Yes; green LED No Yes; green/red DIAG LED No Yes No 707 V DC (type test)

-30 °C; < 0 °C as of FS02
60 °C
-30 °C; < 0 °C as of FS02
50 °C
5 000 m; Restrictions for installation altitudes > 2 000 m, see manual
15 mm
73 mm
58 mm
28 g

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