SIEMENS

Data sheet 6ES7131-6TF00-0CA0

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SIMATIC ET 200SP, digital input module, DI 8x NAMUR High Feature, suitable for BU type A0, Color code CC01, channel diagnostics

General information	
Product type designation	DI 8xNAMUR HF
HW functional status	from FS21
Firmware version	V2.0 or higher
● FW update possible	Yes
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	V19
● STEP 7 configurable/integrated from version	V5.5 SP3 / -
● PROFIBUS from GSD version/GSD revision	GSD Revision 5
● PROFINET from GSD version/GSD revision	GSDML V2.42
Operating mode	
● DI	Yes
● Counter	Yes
● 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.	70 mA
Encoder supply	
Number of outputs	8
Short-circuit protection	Yes
24 V encoder supply	
● 24 V	No
● Short-circuit protection	No
NAMUR encoder supply	
● 8.2 V	Yes

● Short-circuit protection	Yes
● Output current per channel, max.	8 mA
● Output current per module, max.	64 mA
Power loss	
Power loss, typ.	1.5 W
Address area	
Address space per module	
● Address space per module, max.	1 byte
● Inputs	42 byte; 1 byte + 1 byte for QI information in DI mode; 42 bytes in Counter mode
● Outputs	20 byte; 0 in DI mode; 20 bytes in Counter mode
Hardware configuration	
Automatic encoding	Yes
● Mechanical coding element	Yes
● Type of mechanical coding element	Type A
Submodules	
● Number of configurable submodules, max.	1
Selection of BaseUnit for connection variants	
● 2-wire connection	BU type A0
● 3-wire connection	BU type A0
Digital inputs	
Number of digital inputs	8; NAMUR
Digital inputs, parameterizable	Yes
Sourcing/sinking input	P-reading
Pulse extension	Yes; 0.5 s, 1 s, 2 s
Edge evaluation	Yes; rising edge, falling edge, edge change
Signal change flutter	Yes; 2 to 32 signal changes
Flutter observation window	Yes; 0.5 s, 1 s to 100 s in 1-s steps
Digital input functions, parameterizable	
● Gate start/stop	Yes
● Freely usable digital input	Yes
● Counter	Yes
— Number, max.	4; See manual for details
— Counting frequency, max.	5 kHz
— Counting width	32 bit
— Counting direction up/down	Yes
Input voltage	
● Rated value (DC)	8.2 V
Input current	
for 10 k switched contact	
— for signal "0", min.	0.35 mA
— for signal "0", max.	1.2 mA
— for signal "1", min.	2.1 mA
— for signal "1", max.	7 mA
for unswitched contact	
— for signal "0", max. (permissible quiescent current)	0.5 mA
— for signal "1", typ.	8 mA
for NAMUR encoders	
— for signal "0", min.	0.35 mA
— for signal "0", max.	1.2 mA
— for signal "1", min.	2.1 mA
— for signal "1", max.	7 mA
Input delay (for rated value of input voltage)	
● tolerated changeover time for changeover contacts	300 ms
for standard inputs	
— parameterizable	No
for NAMUR inputs	
— at "0" to "1", max.	20 ms; See manual for details
— at "1" to "0", max.	20 ms; See manual for details

Cable length	
● shielded, max.	200 m; 50 m for Counter mode
Encoder	
Connectable encoders	
● NAMUR encoder/changeover contact according to EN 60947	Yes
● Single contact / changeover contact unconnected	Yes
● Single contact / changeover contact connected with 10 kΩ	Yes
Interrupts/diagnostics/status information	
Diagnostics function	Yes
Alarms	
● Diagnostic alarm	Yes; channel by channel
● Hardware interrupt	Yes; Parameterizable, channels 0 to 7
Diagnoses	
● Diagnostic information readable	Yes
● Monitoring the supply voltage	Yes
— parameterizable	Yes
● Monitoring of encoder power supply	No
● Wire break	Yes; channel by channel
● Short-circuit	Yes; channel by channel
Diagnostics indication LED	
● Monitoring of the supply voltage (PWR-LED)	Yes; green PWR LED
● Channel status display	Yes; green LED
● for channel diagnostics	Yes; red LED
● 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+	Yes
● between the channels and the power supply of the electronics	Yes
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]	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
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 manual
Absolute humidity	
● dew point, min.	-60 °C; suitable for dry room applications
Dimensions	
Width	15 mm
Height	73 mm

Depth	58 mm

Weights

Weight, approx.	32 g

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
IDEA	4	3566
UNSPSC	15	32-15-17-05

Approvals / Certificates

General Product Approval

Miscellaneous | Manufacturer Declaration

General Product Approval

China RoHS

For use in hazardous locations

FM | CCC-Ex | Type Examination Certificate

For use in hazardous locations

Miscellaneous | CCC-Ex

Maritime application

NK / Nippon Kaiji Kyokai | CCS (China Classification Society) | KR (Korean Register of Shipping)

Environment

Environment

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