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Data sheet 6DL1131-6TH00-0PH1



SIMATIC ET 200SP HA, digital input module, DI 16XNAMUR HA, suitable for terminal block H1, M1, color code CC01, channel diagnostics

General information	
Product type designation	DI 16xNAMUR HA
Firmware version	V1.0
● FW update possible	Yes
Color code for module-specific color identification plate	CC01
Product function	
● I&M data	Yes; I&M0 to I&M3
Engineering with	
● STEP 7 TIA Portal configurable/integrated from version	V16
● STEP 7 configurable/integrated from version	V5.6
● PCS 7 configurable/integrated from version	V9.0
● PCS neo can be configured/integrated from version	V3.0
● PROFINET from GSD version/GSD revision	GSDML V2.3
Operating mode	
● DI	Yes
● Counter	No
Redundancy	
● Redundancy capability	Yes; With TB type M1
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)	95 mA
Current consumption, max.	115 mA
Encoder supply	
Number of outputs	16
Output voltage, min.	8.1 V
Short-circuit protection	Yes
Power	
Power consumption from the backplane bus	74 mW
Power loss	
Power loss, typ.	2.4 W
Address area	
Address space per module	
● Address space per module, max.	2 byte; + 2 bytes for QI information
Digital inputs	
Number of digital inputs	16; NAMUR
Digital inputs, parameterizable	Yes

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Pulse extension	Yes; 0.5 s, 1 s, 2 s
Time stamping	Yes; Resolution 10 ms
Time stamp (with precision of 1 ms)	No
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
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.	6.4 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.	6.4 mA
Input delay (for rated value of input voltage)	
● tolerated changeover time for changeover contacts	300 ms
for NAMUR inputs	
— at "0" to "1", max.	17 ms
— at "1" to "0", max.	25 ms
Cable length	
● shielded, max.	600 m
● unshielded, max.	200 m
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
● 2-wire sensor	Yes; Acc. to NAMUR
— permissible quiescent current (2-wire sensor), max.	1.2 mA
Interrupts/diagnostics/status information	
Alarms	
● Diagnostic alarm	Yes; channel by channel
● Hardware interrupt	Yes; Parameterizable, channels 0 to 15, rising/falling edge
Diagnoses	
● Diagnostic information readable	Yes
● Monitoring the supply voltage	Yes
— parameterizable	Yes
● Monitoring of encoder power supply	Yes
● Wire-break	Yes
● Short-circuit	Yes
● Group error	Yes
● Changeover contact error	Yes
Diagnostics indication LED	
● MAINT LED	Yes; Yellow 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

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● between the channels and backplane bus	Yes
● Between the channels and load voltage L+	Yes
Isolation	
Isolation tested with	1 500 V DC/1 min, type test
Ambient conditions	
Ambient temperature during operation	
● horizontal installation, min.	-40 °C
● horizontal installation, max.	70 °C
● vertical installation, min.	-40 °C
● vertical installation, max.	60 °C
Dimensions	
Width	22.5 mm
Height	115 mm
Depth	138 mm
Weights	
Weight, approx.	153 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

Approvals / Certificates

General Product Approval

CE EG-Konf. | Miscellaneous | UKCA | China RoHS | UL | KC

General Product Approval | **For use in hazardous locations**

RCM | EAC | IECEx | Declaration of Conformity | CCC | UL

For use in hazardous locations | **Maritime application**

ATEX | IECEx | Miscellaneous | ABS | Bureau Veritas | DNV

Maritime application | **Environment**

Lloyd's Register LRS | NK / Nippon Kaiji Kyokai | RINA | CCS (China Classification Society) | Siemens EcoTech | EPD

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