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Data sheet 6ES7131-7RF00-0AB0



SIMATIC, electronic module, for ET200iSP, 8 DI NAMUR, Ex ib (ia Ga) IIC T4 Gb, Ex ib [ia IIIC Da] IIC T4 Gb, Ex ib [ia] I Mb

General information	
Product type designation	8DI NAMUR
HW functional status	12
Firmware version	V1.1.1
CiR - Configuration in RUN	
Reparameterization possible in RUN	Yes
Installation type/mounting	
Rack mounting	No
Front mounting	Yes
Rail mounting	Yes
Wall mounting/direct mounting	No
Supply voltage	
Type of supply voltage	DC
permissible range, lower limit (DC)	20.4 V
permissible range, upper limit (DC)	28.8 V
Input current	
Current consumption, typ.	80 mA
from load voltage (power bus), max.	90 mA
Power loss	
Power loss, typ.	1.1 W
Hardware configuration	
Fieldbus connection via separate transceiver	Yes
Digital inputs	
Number of digital inputs	8
Digital input functions, parameterizable	
● Counter	
— Number, max.	2; normal and periodic count function
— Counting frequency, max.	5 kHz; with a cable length of 20 m: 5 kHz; with a cable length of 100 m: 1 kHz; with a cable length of 200 m: 500 Hz
Input voltage	
● Type of input voltage	DC
Input current	
● for signal "0", max. (permissible quiescent current)	1.2 mA
● for signal "1", min.	2.1 mA
Input delay (for rated value of input voltage)	
● Delay time for signal change, min.	2.8 ms
● Delay time for signal change, max.	3.5 ms
for standard inputs	
— at "0" to "1", min.	2.8 ms

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— at "0" to "1", max.	3.5 ms
— at "1" to "0", min.	2.8 ms
— at "1" to "0", max.	3.5 ms
Cable length	
● shielded, max.	500 m
Encoder	
Number of connectable encoders, max.	8
Connectable encoders	
● NAMUR encoder	Yes
Interfaces	
Number of PROFINET interfaces	0
Number of RS 485 interfaces	0
Protocols	
Supports protocol for PROFINET IO	No
PROFIsafe	No
PROFIBUS	No
Interrupts/diagnostics/status information	
Diagnostics function	Yes
Alarms	
● Diagnostic alarm	Yes; Parameterizable
● Hardware interrupt	No
Diagnoses	
● Diagnostic information readable	Yes
● Wire break	Yes; I load < 0.2 mA with NAMUR encoders/encoders and NAMUR changeover contact/encoders to DIN 19234
● Short-circuit	Yes; R load < 150 ohms with NAMUR sensor/sensor and NAMUR changeover contact/sensor to DIN 19234
Diagnostics indication LED	
● Group error SF (red)	Yes
● Status indicator digital input (green)	Yes
Integrated Functions	
Frequency measurement	Yes; (Gate time) 50 ms; 200 ms; 1 s
● Number of frequency meters	2
Ex(i) characteristics	
Module for Ex(i) protection	Yes; for more Co/Lo combinations, see certificate IECEx KEM 05.0010
maximum values for connecting terminals for gas group IIC	
● Uo (no-load voltage), max.	9.6 V
● Io (short-circuit current), max.	16 mA
● Po (power output), max.	38 mW
● Co (permissible external capacity), max.	3.6 µF
● Lo (permissible external inductivity), max.	110 mH
Potential separation	
Potential separation digital inputs	
● between the channels	No
● between the channels and backplane bus	Yes
Permissible potential difference	
between different circuits	60 V DC/30 V AC
Degree and class of protection	
IP degree of protection	IP30
Standards, approvals, certificates	
CE mark	CE 0344
UKCA mark	DEKRA 21UKEX0084 Importer UK: Siemens plc Manchester M20 2UR
cULus	LISTED E334384
FM approval	CLASSIFIED 3025852
Suitable for safety functions	No
INMETRO certificate	UL-BR 12.0068
reference designation according to IEC 81346-2 (2009)	K
Use in hazardous areas	
● ATEX marking	II 2 G (1) G Ex ib [ia Ga] IIC T4 Gb II 2 G (1) D Ex ib [ia IIIC Da] IIC T4 Gb I M2

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	Ex ib [ia] I Mb
● ATEX certificate	KEMA 04 ATEX 1248
● IECEx	IECEx KEM 05.0010
● CCC Ex	2020322310002637
● EAC Ex	PB Ex ib [ia] I Mb 1Ex ib [ia Ga] IIC T4 Gb [Ex ia Da] IIIC
● FM marking	Class I, Zone 1 AEx ib [ia] IIC T4 Ex ib IIC T4 NI, Class I, DIV.2, GP. A,B,C,D T4 AIS, Class I, DIV.1, GP. A,B,C,D T4 DIP Class II, III, GP. E,F,G
● Explosion protection category for gas	ATEX gas explosion protection, Zone 1
● Explosion protection category for dust	ATEX dust explosion protection, Zone 21 always install in corresponding enclosure
● associated equipment (Ex ia)	Yes
● associated equipment (Ex ib)	Yes
Marine approval	
● Germanischer Lloyd (GL)	Yes
● American Bureau of Shipping (ABS)	Yes
● Bureau Veritas (BV)	Yes
● Det Norske Veritas (DNV)	Yes
Connection method	
Design of electrical connection	Screw/spring-type terminal
Dimensions	
Width	30 mm
Height	129 mm
Depth	136.5 mm
Weights	
Weight, approx.	255 g

Classifications

	Version	Classification
eClass	16	27-24-26-04
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 | China RoHS

General Product Approval	For use in hazardous locations			
Manufacturer Declaration	ATEX	IECEx	FM	IECEx	Miscellaneous

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For use in hazardous locations					Maritime application
CCC	CCC-Ex	UL	INMETRO	Miscellaneous	ABS

Maritime application					
BUREAU VERITAS	DNV	LRS	NK / Nippon Kaiji Kyokai	PRS	CCS (China Classification Society)

Maritime application	Environment
KR (Korean Register of Shipping)	EPD

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