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Data sheet 6ES7138-7FN00-0AB0



SIMATIC DP, fail-safe electronics module for ET200iSP, 8F-DI NAMUR Ex I, up to Category 4 (EN954-1)/ SIL3 (IEC61508)/PLE (ISO13849), 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	8F-DI ExNAMUR
Input current	
Current consumption, typ.	145 mA
from supply voltage L+, max.	150 mA; int. Powerbus
Encoder supply	
Number of outputs	8
Output voltage (DC)	8 V
Power loss	
Power loss, typ.	1.4 W
Address area	
Address space per module	
● Inputs	6 byte
● Outputs	4 byte
Digital inputs	
Number of digital inputs	8
Input current	
● for signal "0", max. (permissible quiescent current)	1.2 mA
● for signal "1", min.	2.1 mA
● for signal "1", typ.	9.5 mA
Input delay (for rated value of input voltage)	
for standard inputs	
— at "0" to "1", min.	0.7 ms
— at "0" to "1", max.	16 ms; Parameterizable
— at "1" to "0", min.	0.7 ms
— at "1" to "0", max.	16 ms; Parameterizable
Cable length	
● shielded, max.	500 m
● unshielded, max.	200 m
Encoder	
Number of connectable encoders, max.	8
Connectable encoders	
● NAMUR encoder	Yes
Interrupts/diagnostics/status information	
Diagnostics function	Yes
Alarms	
● Diagnostic alarm	Yes; Parameterizable
● Hardware interrupt	No
Diagnoses	
● Diagnostic information readable	Yes

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● Wire-break	Yes; NAMUR encoders or single contact with 10 kOhm parallel resistor
● 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
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
Isolation	
Isolation tested with	350 V AC/1 min between the shield and backplane bus connection 350 V AC/1 min between the shield and I/O 2830 V AC/1 min between backplane bus connection and I/O
Standards, approvals, certificates	
CE mark	Yes
Highest safety class achievable in safety mode	
● Performance level according to ISO 13849-1	PLe
● SIL acc. to IEC 61508	SIL 3
Use in hazardous areas	
● ATEX marking	II 2 G (1) GD Ex ib[ia Ga][ia IIIC Da] IIC T4 GB and I M2 Ex ib[ia Ma] I Mb
● ATEX certificate	10 ATEX 0056
Dimensions	
Width	30 mm
Height	129 mm
Depth	136.5 mm
Weights	
Weight, approx.	288 g

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