

SIEMENS

Product data sheet

6ES7138-7FN00-0AB0


SIMATIC DP,
FAILSAFE ELECT. SUBMODULE FOR ET200ISP,
8F-DI NAMUR EX I, UP TO SIL3

FH technology	
Module for failsafe applications	Yes
Input current	
from supply voltage L+, max.	150 mA ; (int. power bus)
Encoder supply	
Number of outputs	8
Output voltage	8 V DC
Power losses	
Power loss, typ.	1.4 W
Address area	
Occupied address area	
Outputs	4 byte
Inputs	6 byte
Digital inputs	
Number/binary inputs	8

Number of NAMUR inputs	8
Input voltage	
Type of input voltage	DC
Input current	
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	
Cable length, shielded, max.	500 m
Cable length unshielded, max.	200 m
Encoder	
Number of connectable encoders, max.	8
Connectable encoders	
NAMUR encoder	Yes
NAMUR encoder	
Input current, for signal "0", max.	1.2 mA
Input current, for signal "1", min.	2.1 mA
Interrupts/diagnostics/status information	
Status indicator	Yes
Alarms	
Diagnostic alarm	Yes ; Parameterizable
Hardware interrupt	No
Diagnostic messages	
Diagnostic functions	Yes
Diagnostic information readable	Yes
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
Parameter	
Diagnosis: wire break	channel by channel
Diagnosis: short circuit	channel by channel
Galvanic isolation	
between the channels and backplane bus	Yes
Galvanic isolation digital inputs	
between the channels	No
between the channels and the backplane bus	Yes
Permissible potential difference	
between different circuits	60 V DC/30 V AC
Isolation	
Isolation checked 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	
acc. to IEC 61508	SIL 3
Performance Level in accordance with EN ISO 13849-1	PLe
Use in hazardous areas	
Type of protection acc. to EN 50020 (CENELEC)	II 2 G (1) GD Ex ib[ja Ga][ja IIIC Da] IIC T4 GB and I M2 Ex ib[ja Ma] I Mb
Type of protection acc. to KEMA	10 ATEX 0056
Dimensions	
Width	30 mm
Height	129 mm
Depth	136.5 mm
Weight	
Weight, approx.	288 g
Status	Jul 17, 2012