SIEMENS

Data sheet

6ES7136-6BA01-0CA0



SIMATIC DP, electronic module for ET 200SP, F-DI 8x 24 V DC HF, 15 mm width, up to PLe (ISO 13849-1)/ SIL3 (IEC 61508)

Figure similar

General information	
Product type designation	F-DI 8x24VDC HF
Firmware version	
 FW update possible 	Yes
usable BaseUnits	BU type A0
Color code for module-specific color identification plate	CC01
Product function	
● I&M data	Yes; I&M0 to I&M3
Engineering with	
 PROFINET from GSD version/GSD revision 	GSDML V2.35
CiR - Configuration in RUN	
Reparameterization possible in RUN	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
power supply according to NEC Class 2 required	No
Input current	
Current consumption, max.	40 mA; without load
Encoder supply	
Number of outputs	8
24 V encoder supply	
• 24 V	Yes; min. L+ (-1.5 V)
 Short-circuit protection 	Yes; Electronic (response threshold 0.7 A to 1.8 A)
 Output current per channel, max. 	300 mA
Output current per module, max.	800 mA; Total current of all encoders
Power loss	
Power loss, typ.	2 W
Address area	
Address space per module	
• Inputs	7 byte; S7-300/400F CPU, 6 byte
 Outputs 	5 byte; S7-300/400F CPU, 4 byte
Hardware configuration	
Automatic encoding	Yes
 Electronic coding element type F 	Yes
Digital inputs	

Number of digital inputs Source/sink input Input characteristic curve in accordance with IEC 61131, type 1 Input voltage Rated value (DC) for signal "0" for signal "1" Input current 8 Yes; P-reading Yes Yes	
Input characteristic curve in accordance with IEC 61131, type 1 Input voltage • Rated value (DC) • for signal "0" • for signal "1" +15 to +30 V	
type 1 Input voltage • Rated value (DC) • for signal "0" • for signal "1" 24 V -30 to +5 V +15 to +30 V	
Input voltage	
 Rated value (DC) for signal "0" for signal "1" 24 V -30 to +5 V +15 to +30 V 	
● for signal "0" -30 to +5 V ● for signal "1" +15 to +30 V	
● for signal "1" +15 to +30 V	
input current	
• for signal "1", typ. 3.7 mA	
Input delay (for rated value of input voltage)	
for standard inputs	
— parameterizable Yes	
— at "0" to "1", min. 0.4 ms	
— at "0" to "1", max. 20 ms	
— at 0 to 1, max. 20 ms — at "1" to "0", min. 0.4 ms	
— at 1 to 0, min. — at "1" to "0", max. 20 ms	
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for technological functions	
— parameterizable No	
Cable length	
• shielded, max. 1 000 m	
• unshielded, max. 500 m	
Interrupts/diagnostics/status information	
Diagnostics function Yes	
Alarms	
Diagnostic alarm Yes	
Hardware interrupt No	
Diagnostics indication LED	
• RUN LED Yes; green LED	
• ERROR LED Yes; red 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 the power supply of the electronics 	
Isolation	
Isolation tested with 707 V DC (type test)	
Standards, approvals, certificates	
Suitable for safety functions Yes	
Highest safety class achievable in safety mode	
Performance level according to ISO 13849-1 PLe	
• Category according to ISO 13849-1 Cat. 4	
• SIL acc. to IEC 61508 SIL 3	
Probability of failure (for service life of 20 years and repair time of 100 hours)	
— Low demand mode: PFDavg in accordance < 2.00E-05	
with SIL3 — High demand/continuous mode: PFH in < 1.00E-09 1/h	
accordance with SIL3	
Ambient conditions	
Ambient temperature during operation	
• horizontal installation, min. 0 °C	
 horizontal installation, max. 60 °C 	
• vertical installation, min. 0 °C	
• vertical installation, max. 50 °C	
Altitude during operation relating to sea level	

• Installation altitude above sea level, max.	4 000 m; restrictions for installation altitudes > 2 000 m, see ET 200SP system manual
Dimensions	
Width	15 mm
Height	73 mm
Depth	58 mm
Weights	
Weight, approx.	29 g
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