



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	8
Source/sink input	Yes; P-reading
Input characteristic curve in accordance with IEC 61131, type 1	Yes
Input voltage	
<ul style="list-style-type: none"> Rated value (DC) for signal "0" for signal "1" 	24 V -30 to +5 V +15 to +30 V
Input current	
<ul style="list-style-type: none"> 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 "1" to "0", min.	0.4 ms
— at "1" to "0", max.	20 ms
for technological functions	
— parameterizable	No
Cable length	
<ul style="list-style-type: none"> shielded, max. unshielded, max. 	1 000 m 500 m
Interrupts/diagnostics/status information	
Diagnostics function	Yes
Alarms	
<ul style="list-style-type: none"> Diagnostic alarm Hardware interrupt 	Yes No
Diagnostics indication LED	
<ul style="list-style-type: none"> RUN LED ERROR LED Monitoring of the supply voltage (PWR-LED) Channel status display for channel diagnostics for module diagnostics 	Yes; green LED Yes; red LED Yes; green PWR LED Yes; green LED Yes; red LED Yes; green/red DIAG LED
Potential separation	
Potential separation channels	
<ul style="list-style-type: none"> between the channels between the channels and backplane bus between the channels and the power supply of the electronics 	No Yes No
Isolation	
Isolation tested with	707 V DC (type test)
Standards, approvals, certificates	
Suitable for safety functions	Yes
Highest safety class achievable in safety mode	
<ul style="list-style-type: none"> Performance level according to ISO 13849-1 Category according to ISO 13849-1 SIL acc. to IEC 61508 	PLe Cat. 4 SIL 3
Probability of failure (for service life of 20 years and repair time of 100 hours)	
— Low demand mode: PFDavg in accordance with SIL3	< 2.00E-05
— High demand/continuous mode: PFH in accordance with SIL3	< 1.00E-09 1/h
Ambient conditions	
Ambient temperature during operation	
<ul style="list-style-type: none"> horizontal installation, min. horizontal installation, max. vertical installation, min. vertical installation, max. 	0 °C 60 °C 0 °C 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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last modified:

1/13/2022 