



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)

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	
• STEP 7 TIA Portal configurable/integrated from version	SIMATIC Safety V17 with HSP 0360 or higher
• STEP 7 configurable/integrated from version	as 6ES7136-6BA00-0CA0
• 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	
Rated value (DC)	24 V
for signal "0"	-30 to +5 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 "1" to "0", min.	0.4 ms
— at "1" to "0", max.	20 ms
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	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	
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 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	
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
last modified:	5/20/2022 