



Figure similar

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	
<ul style="list-style-type: none"> <li>FW update possible</li> </ul>	Yes
usable BaseUnits	BU type A0
Color code for module-specific color identification plate	CC01
Product function	
<ul style="list-style-type: none"> <li>I&amp;M data</li> </ul>	Yes; I&M0 to I&M3
Engineering with	
<ul style="list-style-type: none"> <li>STEP 7 TIA Portal configurable/integrated from version</li> <li>STEP 7 configurable/integrated from version</li> <li>PROFINET from GSD version/GSD revision</li> </ul>	SIMATIC Safety V17 with HSP 0360 or higher as 6ES7136-6BA00-0CA0 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	
<ul style="list-style-type: none"> <li>24 V</li> <li>Short-circuit protection</li> <li>Output current per channel, max.</li> <li>Output current per module, max.</li> </ul>	Yes; min. L+ (-1.5 V) Yes; Electronic (response threshold 0.7 A to 1.8 A) 300 mA 800 mA; Total current of all encoders
Power loss	
Power loss, typ.	2 W
Address area	
Address space per module	
<ul style="list-style-type: none"> <li>Inputs</li> <li>Outputs</li> </ul>	7 byte; S7-300/400F CPU, 6 byte 5 byte; S7-300/400F CPU, 4 byte
Hardware configuration	
Automatic encoding	Yes
<ul style="list-style-type: none"> <li>Electronic coding element type F</li> </ul>	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
<b>Input voltage</b>	
<ul style="list-style-type: none"> <li>Rated value (DC)</li> </ul>	24 V
<ul style="list-style-type: none"> <li>for signal "0"</li> </ul>	-30 to +5 V
<ul style="list-style-type: none"> <li>for signal "1"</li> </ul>	+15 to +30 V
<b>Input current</b>	
<ul style="list-style-type: none"> <li>for signal "1", typ.</li> </ul>	3.7 mA
<b>Input delay (for rated value of input voltage)</b>	
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
<b>Cable length</b>	
<ul style="list-style-type: none"> <li>shielded, max.</li> </ul>	1 000 m
<ul style="list-style-type: none"> <li>unshielded, max.</li> </ul>	500 m
<b>Interrupts/diagnostics/status information</b>	
Diagnostics function	Yes
<b>Alarms</b>	
<ul style="list-style-type: none"> <li>Diagnostic alarm</li> </ul>	Yes
<ul style="list-style-type: none"> <li>Hardware interrupt</li> </ul>	No
<b>Diagnostics indication LED</b>	
<ul style="list-style-type: none"> <li>RUN LED</li> </ul>	Yes; green LED
<ul style="list-style-type: none"> <li>ERROR LED</li> </ul>	Yes; red LED
<ul style="list-style-type: none"> <li>Monitoring of the supply voltage (PWR-LED)</li> </ul>	Yes; green PWR LED
<ul style="list-style-type: none"> <li>Channel status display</li> </ul>	Yes; green LED
<ul style="list-style-type: none"> <li>for channel diagnostics</li> </ul>	Yes; red LED
<ul style="list-style-type: none"> <li>for module diagnostics</li> </ul>	Yes; green/red DIAG LED
<b>Potential separation</b>	
Potential separation channels	
<ul style="list-style-type: none"> <li>between the channels</li> </ul>	No
<ul style="list-style-type: none"> <li>between the channels and backplane bus</li> </ul>	Yes
<ul style="list-style-type: none"> <li>between the channels and the power supply of the electronics</li> </ul>	No
<b>Isolation</b>	
Isolation tested with	707 V DC (type test)
<b>Standards, approvals, certificates</b>	
Suitable for safety functions	Yes
Highest safety class achievable in safety mode	
<ul style="list-style-type: none"> <li>Performance level according to ISO 13849-1</li> </ul>	PLe
<ul style="list-style-type: none"> <li>Category according to ISO 13849-1</li> </ul>	Cat. 4
<ul style="list-style-type: none"> <li>SIL acc. to IEC 61508</li> </ul>	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
<b>Ambient conditions</b>	
Ambient temperature during operation	
<ul style="list-style-type: none"> <li>horizontal installation, min.</li> </ul>	0 °C
<ul style="list-style-type: none"> <li>horizontal installation, max.</li> </ul>	60 °C
<ul style="list-style-type: none"> <li>vertical installation, min.</li> </ul>	0 °C
<ul style="list-style-type: none"> <li>vertical installation, max.</li> </ul>	50 °C
Altitude during operation relating to sea level	
<ul style="list-style-type: none"> <li>Installation altitude above sea level, max.</li> </ul>	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:** 8/7/2023 