



SIPLUS ET 200SP DI 8x24VDC HF -40...+70°C with conformal coating based on 6ES7131-6BF00-0CA0 . digital input module, DI 8x 24 V DC High Feature, suitable for BU type A0, Color code CC01, channel diagnostics

General information	
Product type designation	DI 8x24 V DC HF
Firmware version	V2.0
<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
<ul style="list-style-type: none"> <li>Isochronous mode</li> </ul>	Yes
Engineering with	
<ul style="list-style-type: none"> <li>PROFIBUS from GSD version/GSD revision</li> </ul>	GSD Revision 5
<ul style="list-style-type: none"> <li>PROFINET from GSD version/GSD revision</li> </ul>	GSDML V2.3
Operating mode	
<ul style="list-style-type: none"> <li>DI</li> </ul>	Yes
<ul style="list-style-type: none"> <li>Counter</li> </ul>	No
<ul style="list-style-type: none"> <li>Oversampling</li> </ul>	No
<ul style="list-style-type: none"> <li>MSI</li> </ul>	Yes
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
Encoder supply	
24 V encoder supply	
<ul style="list-style-type: none"> <li>24 V</li> </ul>	Yes
<ul style="list-style-type: none"> <li>Short-circuit protection</li> </ul>	Yes; per channel, electronic
<ul style="list-style-type: none"> <li>Output current, max.</li> </ul>	700 mA; Per channel
Power loss	
Power loss, typ.	1.5 W
Address area	
Address space per module	
<ul style="list-style-type: none"> <li>Address space per module, max.</li> </ul>	8 byte; 2 channels per submodule + QI information
Hardware configuration	
Submodules	
<ul style="list-style-type: none"> <li>Number of configurable submodules, max.</li> </ul>	4
Selection of BaseUnit for connection variants	
<ul style="list-style-type: none"> <li>1-wire connection</li> </ul>	BU type A0

<ul style="list-style-type: none"> <li>• 2-wire connection</li> <li>• 3-wire connection</li> <li>• 4-wire connection</li> </ul>	BU type A0 BU type A0 with AUX terminals BU type A0 + external terminals
<b>Digital inputs</b>	
Number of digital inputs	8
Source/sink input	P-reading
Input characteristic curve in accordance with IEC 61131, type 1	Yes
Input characteristic curve in accordance with IEC 61131, type 2	No
Input characteristic curve in accordance with IEC 61131, type 3	Yes
Pulse extension	Yes; Pulse duration from 4 $\mu$ s
<ul style="list-style-type: none"> <li>• Length</li> </ul>	2 s; 50 ms, 100 ms, 200 ms, 500 ms, 1 s, 2 s
Edge evaluation	Yes; rising edge, falling edge, edge change
<b>Input voltage</b>	
<ul style="list-style-type: none"> <li>• Rated value (DC)</li> <li>• for signal "0"</li> <li>• for signal "1"</li> </ul>	24 V -30 to +5 V +11 to +30V
<b>Input current</b>	
<ul style="list-style-type: none"> <li>• for signal "1", typ.</li> </ul>	2.5 mA
<b>Input delay (for rated value of input voltage)</b>	
for standard inputs	
<ul style="list-style-type: none"> <li>— parameterizable</li> </ul>	Yes; 0.05 / 0.1 / 0.4 / 0.8 / 1.6 / 3.2 / 12.8 / 20 ms (in each case + delay of 30 to 500 $\mu$ s, depending on line length)
for interrupt inputs	
<ul style="list-style-type: none"> <li>— parameterizable</li> </ul>	Yes
for technological functions	
<ul style="list-style-type: none"> <li>— parameterizable</li> </ul>	No
<b>Cable length</b>	
<ul style="list-style-type: none"> <li>• shielded, max.</li> <li>• unshielded, max.</li> </ul>	1 000 m 600 m
<b>Encoder</b>	
Connectable encoders	
<ul style="list-style-type: none"> <li>• 2-wire sensor</li> <li>— permissible quiescent current (2-wire sensor), max.</li> </ul>	Yes 1.5 mA
<b>Isochronous mode</b>	
Filtering and processing time (TCI), min.	420 $\mu$ s
Bus cycle time (TDP), min.	500 $\mu$ s
Jitter, max.	8 $\mu$ s
<b>Interrupts/diagnostics/status information</b>	
Diagnostics function	Yes
<b>Alarms</b>	
<ul style="list-style-type: none"> <li>• Diagnostic alarm</li> <li>• Hardware interrupt</li> </ul>	Yes; channel by channel Yes; Parameterizable, channels 0 to 7
<b>Diagnoses</b>	
<ul style="list-style-type: none"> <li>• Diagnostic information readable</li> <li>• Monitoring the supply voltage</li> <li>— parameterizable</li> <li>• Monitoring of encoder power supply</li> <li>• Wire-break</li> <li>• Short-circuit</li> </ul>	Yes Yes Yes Yes; channel by channel Yes; channel by channel Yes; channel by channel
<b>Diagnostics indication LED</b>	
<ul style="list-style-type: none"> <li>• Monitoring of the supply voltage (PWR-LED)</li> <li>• Channel status display</li> <li>• for channel diagnostics</li> <li>• for module diagnostics</li> </ul>	Yes; green PWR LED Yes; green LED Yes; red LED Yes; green/red DIAG LED
<b>Potential separation</b>	

<b>Potential separation channels</b>	
<ul style="list-style-type: none"> <li>• between the channels</li> <li>• between the channels and backplane bus</li> <li>• between the channels and the power supply of the electronics</li> </ul>	<p>No</p> <p>Yes</p> <p>No</p>
<b>Isolation</b>	
Isolation tested with	707 V DC (type test)
<b>Standards, approvals, certificates</b>	
Suitable for safety functions	No
<b>Ambient conditions</b>	
<b>Ambient temperature during operation</b>	
<ul style="list-style-type: none"> <li>• horizontal installation, min.</li> <li>• horizontal installation, max.</li> </ul>	<p>-40 °C; = Tmin (incl. condensation/frost)</p> <p>70 °C; = Tmax; &gt; +60 °C encoder supply output current max. 350 mA per channel</p>
<b>Altitude during operation relating to sea level</b>	
<ul style="list-style-type: none"> <li>• Installation altitude above sea level, max.</li> <li>• Ambient air temperature-barometric pressure-altitude</li> </ul>	<p>5 000 m</p> <p>Tmin ... Tmax at 1 140 hPa ... 795 hPa (-1 000 m ... +2 000 m) // Tmin ... (Tmax - 10 K) at 795 hPa ... 658 hPa (+2 000 m ... +3 500 m) // Tmin ... (Tmax -20 K) at 658 hPa ... 540 hPa (+3 500 m ... +5 000 m)</p>
<b>Relative humidity</b>	
<ul style="list-style-type: none"> <li>• With condensation, tested in accordance with IEC 60068-2-38, max.</li> </ul>	100 %; RH incl. condensation / frost (no commissioning in bedewed state), horizontal installation
<b>Resistance</b>	
<b>Coolants and lubricants</b>	
— Resistant to commercially available coolants and lubricants	Yes; Incl. diesel and oil droplets in the air
<b>Use in stationary industrial systems</b>	
— to biologically active substances according to EN 60721-3-3	Yes; Class 3B2 mold, fungus and dry rot spores (with the exception of fauna); Class 3B3 on request
— to chemically active substances according to EN 60721-3-3	Yes; Class 3C4 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); *
— to mechanically active substances according to EN 60721-3-3	Yes; Class 3S4 incl. sand, dust, *
— Against mechanical environmental conditions acc. to EN 60721-3-3	Yes; Class 3M8 using the SIPLUS Mounting Kit ET 200SP (6AG1193-6AA00-0AA0)
<b>Use on ships/at sea</b>	
— to biologically active substances according to EN 60721-3-6	Yes; Class 6B2 mold and fungal spores (excluding fauna); Class 6B3 on request
— to chemically active substances according to EN 60721-3-6	Yes; Class 6C3 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); *
— to mechanically active substances according to EN 60721-3-6	Yes; Class 6S3 incl. sand, dust; *
— Against mechanical environmental conditions acc. to EN 60721-3-6	Yes; Class 6M4 using the SIPLUS Mounting Kit ET 200SP (6AG1193-6AA00-0AA0)
<b>Usage in industrial process technology</b>	
— Against chemically active substances acc. to EN 60654-4	Yes; Class 3 (excluding trichlorethylene)
— Environmental conditions for process, measuring and control systems acc. to ANSI/ISA-71.04	Yes; Level GX group A/B (excluding trichlorethylene; harmful gas concentrations up to the limits of EN 60721-3-3 class 3C4 permissible); level LC3 (salt spray) and level LB3 (oil)
<b>Remark</b>	
— Note regarding classification of environmental conditions acc. to EN 60721, EN 60654-4 and ANSI/ISA-71.04	* The supplied plug covers must remain in place over the unused interfaces during operation!
<b>Conformal coating</b>	
<ul style="list-style-type: none"> <li>• Coatings for printed circuit board assemblies acc. to EN 61086</li> <li>• Protection against fouling acc. to EN 60664-3</li> <li>• Military testing according to MIL-I-46058C, Amendment 7</li> <li>• Qualification and Performance of Electrical Insulating Compound for Printed Board Assemblies according to IPC-CC-830A</li> </ul>	<p>Yes; Class 2 for high reliability</p> <p>Yes; Type 1 protection</p> <p>Yes; Discoloration of coating possible during service life</p> <p>Yes; Conformal coating, Class A</p>

Dimensions	
Width	15 mm
Height	73 mm
Depth	58 mm

  

Weights	
Weight, approx.	28 g

**last modified:** 1/17/2021 