

SIMATIC S7-1200, DIGITAL I/O SB 1223, 2 DI / 2 DO, 2 DI 24V DC/2 DO 24V DC



Supply voltage	
permissible range, lower limit (DC)	20.4 V
permissible range, upper limit (DC)	28.8 V
Input current	
from backplane bus 5 V DC, typ.	50 mA
Output voltage	
Power supply to the transmitters	
• Supply current, max.	4 mA; per channel
Power losses	
Power loss, typ.	1 W
Digital inputs	
Number of digital inputs	2; Current-sinking
• In groups of	1
Input characteristic curve in accordance with IEC 61131, type 1	Yes
Number of simultaneously controllable inputs	
all mounting positions	
— up to 40 °C, max.	2
Input voltage	
• Type of input voltage	DC
• Rated value (DC)	24 V
• for signal "0"	0 to 5 V
Input current	

<ul style="list-style-type: none"> <li>• for signal "0", max. (permissible quiescent current)</li> </ul>	1 mA
<ul style="list-style-type: none"> <li>• for signal "1", typ.</li> </ul>	0.5 A
<b>Input delay (for rated value of input voltage)</b>	
for standard inputs	
— Parameterizable	Yes; 0.2 ms, 0.4 ms, 0.8 ms, 1.6 ms, 3.2 ms, 6.4 ms and 12.8 ms, selectable in groups of four
— at "0" to "1", max.	2 $\mu$ s
— at "1" to "0", max.	10 $\mu$ s
for interrupt inputs	
— Parameterizable	Yes
for counter/technological functions	
— Parameterizable	Yes
<b>Cable length</b>	
<ul style="list-style-type: none"> <li>• shielded, max.</li> </ul>	500 m
<ul style="list-style-type: none"> <li>• Unshielded, max.</li> </ul>	300 m
<b>Digital outputs</b>	
Number of digital outputs	2; MOSFET, solid-state (current-sinking/current-sourcing)
<ul style="list-style-type: none"> <li>• In groups of</li> </ul>	1
short-circuit protection	No
<b>Switching capacity of the outputs</b>	
<ul style="list-style-type: none"> <li>• with resistive load, max.</li> </ul>	0.5 A
<ul style="list-style-type: none"> <li>• on lamp load, max.</li> </ul>	5 W
<b>Load resistance range</b>	
<ul style="list-style-type: none"> <li>• upper limit</li> </ul>	0.6 $\Omega$
<b>Output 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", max.</li> </ul>	0.1 V; with 10 kOhm load
<ul style="list-style-type: none"> <li>• for signal "1", min.</li> </ul>	20 V
<b>Output current</b>	
<ul style="list-style-type: none"> <li>• for signal "1" rated value</li> </ul>	0.5 A
<ul style="list-style-type: none"> <li>• for signal "0" residual current, max.</li> </ul>	10 $\mu$ A
<b>Cable length</b>	
<ul style="list-style-type: none"> <li>• shielded, max.</li> </ul>	500 m
<ul style="list-style-type: none"> <li>• Unshielded, max.</li> </ul>	150 m
<b>Interrupts/diagnostics/status information</b>	
<b>Alarms</b>	
<ul style="list-style-type: none"> <li>• Alarms</li> </ul>	Yes
<b>Diagnostic messages</b>	
<ul style="list-style-type: none"> <li>• Diagnostic functions</li> </ul>	Yes
<b>Diagnostics indication LED</b>	

• for status of the inputs	Yes
• For status of the outputs	Yes
<b>Degree and class of protection</b>	
Degree of protection to EN 60529	
• IP20	Yes
<b>Standards, approvals, certificates</b>	
Marine approval	
• Germanischer Lloyd (GL)	Yes
<b>Ambient conditions</b>	
Free fall	
• Drop height, max. (in packaging)	0.3 m; five times, in dispatch package
Ambient temperature in operation	
• Permissible temperature range	0 °C to 55 °C horizontal installation, 0 °C to 45 °C vertical installation
• Min.	0 °C
• max.	55 °C
Storage/transport temperature	
• Min.	-40 °C
• max.	70 °C
Air pressure acc. to IEC 60068-2-13	
• Storage/transport, min.	660 hPa
• Storage/transport, max.	1 080 hPa
Relative humidity	
• Permissible range (without condensation) at 25 °C	95 %
<b>Mechanics/material</b>	
Type of housing (front)	
• plastic	Yes
<b>Dimensions</b>	
Width	38 mm
Height	62 mm
Depth	21 mm
<b>Weights</b>	
Weight, approx.	40 g
<b>last modified:</b>	12.03.2015