

SIPLUS S7-1200 SM 1223 16 DI/16 DQ -25...+70 °C with conformal coating based on 6ES7223-1BL32-0XB0 . Digital input/output 16 DI/16 DQ, 16 DI 24 V DC, Sink/Source, 16 DQ, transistor 0.5 A



Figure similar

General information	
Product type designation	SM 1223, DI 16x24 V DC, DQ 16x24 V DC
Supply voltage	
Rated value (DC)	Yes
<ul style="list-style-type: none"> <li>24 V DC</li> </ul>	
permissible range, lower limit (DC)	20.4 V
permissible range, upper limit (DC)	28.8 V
Input current	
from backplane bus 5 V DC, max.	185 mA
Digital inputs	
<ul style="list-style-type: none"> <li>from load voltage L+ (without load), max.</li> </ul>	4 mA; per channel
Output voltage	
Power supply to the transmitters	Yes
<ul style="list-style-type: none"> <li>present</li> </ul>	
Power loss	
Power loss, typ.	4.5 W

Digital inputs	
Number of digital inputs	16
• in groups of	2
Input characteristic curve in accordance with IEC 61131, type 1	Yes
Number of simultaneously controllable inputs	
all mounting positions	
— up to 40 °C, max.	16
horizontal installation	
— up to 40 °C, max.	16
— up to 50 °C, max.	16
vertical installation	
— up to 40 °C, max.	16
Input voltage	
• Type of input voltage	DC
• Rated value (DC)	24 V
• for signal "0"	5 V DC at 1 mA
• for signal "1"	15 V DC at 2.5 mA
Input current	
• for signal "0", max. (permissible quiescent current)	1 mA
• for signal "1", min.	2.5 mA
• for signal "1", typ.	4 mA
Input delay (for rated value of input voltage)	
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
for interrupt inputs	
— parameterizable	Yes
Cable length	
• shielded, max.	500 m
• unshielded, max.	300 m
Digital outputs	
Number of digital outputs	16
• in groups of	1
Short-circuit protection	No; to be provided externally
Limitation of inductive shutdown voltage to	L+ (-48 V)
Switching capacity of the outputs	
• with resistive load, max.	0.5 A
• on lamp load, max.	5 W
Output voltage	
• Rated value (DC)	24 V

• for signal "0", max.	0.1 V; with 10 kOhm load
• for signal "1", min.	20 V DC
<b>Output current</b>	
• for signal "1" permissible range, max.	0.5 A
• for signal "0" residual current, max.	10 µA
<b>Output delay with resistive load</b>	
• "0" to "1", max.	50 µs
• "1" to "0", max.	200 µs
<b>Total current of the outputs (per group)</b>	
horizontal installation	
— up to 50 °C, max.	8 A; Current per mass
<b>Relay outputs</b>	
<b>Switching capacity of contacts</b>	
— with inductive load, max.	0.5 A
— on lamp load, max.	5 W
— with resistive load, max.	0.5 A
<b>Cable length</b>	
• shielded, max.	500 m
• unshielded, max.	150 m
<b>Interrupts/diagnostics/status information</b>	
Alarms	Yes
Diagnostic functions	Yes
<b>Alarms</b>	
• Diagnostic alarm	Yes
<b>Diagnostics indication LED</b>	
• for status of the inputs	Yes
• for status of the outputs	Yes
• for maintenance	Yes
<b>Potential separation</b>	
<b>Potential separation digital inputs</b>	
• between the channels, in groups of	2
<b>Potential separation digital outputs</b>	
• between the channels, in groups of	1
• between the channels and backplane bus	500 V AC
<b>Degree and class of protection</b>	
Degree of protection acc. to EN 60529	
• IP20	Yes
<b>Standards, approvals, certificates</b>	
CE mark	Yes
<b>Ambient conditions</b>	

<b>Free fall</b>	
• Fall height, max.	0.3 m; five times, in product package
<b>Ambient temperature during operation</b>	
• min.	-40 °C; = Tmin; Startup @ -25 °C
• max.	70 °C; = Tmax; Tmax > +60 °C number of simultaneously activated outputs 8, inputs 8 (no adjacent points) for horizontal mounting position
<b>Ambient temperature during storage/transportation</b>	
• min.	-40 °C
• max.	70 °C
<b>Altitude during operation relating to sea level</b>	
• Installation altitude above sea level, max.	5 000 m
• Ambient air temperature-barometric pressure-altitude	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)
<b>Relative humidity</b>	
• With condensation, tested in accordance with IEC 60068-2-38, max.	100 %; RH incl. condensation/frost (no commissioning under condensation conditions)
<b>Resistance</b>	
<b>Coolants and lubricants</b>	
— Resistant to commercially available coolants and lubricants	Yes
<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, *
<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; *
<b>from supply voltage 1L+</b>	
— Note regarding classification of environmental conditions acc. to EN 60721	* The supplied plug covers must remain in place over the unused interfaces during operation!
<b>Connection method</b>	
required front connector	Yes
<b>Mechanics/material</b>	
Enclosure material (front)	

• Plastic

Yes

### Dimensions

Width	70 mm
Height	100 mm
Depth	75 mm

### Weights

Weight, approx. 310 g

**last modified:** 05/18/2018