

SIPLUS S7-1200 SM 1221 16DI, with conformal coating based on 6ES7221-1BH32-0XB0 . 16 DI, 24 V DC, Sink/Source



Figure similar

General information	
Product type designation	SM 1221, DI 16x24 V DC
Supply voltage	
Rated value (DC)	Yes
<ul style="list-style-type: none"> • 24 V DC 	Yes
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.	130 mA
Digital inputs	
<ul style="list-style-type: none"> • from load voltage L+ (without load), max. 	4 mA; per channel
Output voltage	
Power supply to the transmitters	Yes
<ul style="list-style-type: none"> • present 	Yes
Power loss	
Power loss, typ.	2.5 W

Digital inputs	
Number of digital inputs	16
<ul style="list-style-type: none"> • in groups of 	4
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	
<ul style="list-style-type: none"> • Type of input voltage 	DC
<ul style="list-style-type: none"> • Rated value (DC) 	24 V
<ul style="list-style-type: none"> • for signal "0" 	5 V DC at 1 mA
<ul style="list-style-type: none"> • for signal "1" 	15 V DC at 2.5 mA
Input current	
<ul style="list-style-type: none"> • for signal "0", max. (permissible quiescent current) 	1 mA
<ul style="list-style-type: none"> • for signal "1", min. 	2.5 mA
<ul style="list-style-type: none"> • 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	
<ul style="list-style-type: none"> • shielded, max. 	500 m
<ul style="list-style-type: none"> • unshielded, max. 	300 m
Interrupts/diagnostics/status information	
Alarms	Yes
Diagnostic functions	Yes
Alarms	
<ul style="list-style-type: none"> • Diagnostic alarm 	Yes
Diagnostic messages	
<ul style="list-style-type: none"> • Monitoring the supply voltage 	Yes
Diagnostics indication LED	
<ul style="list-style-type: none"> • for status of the inputs 	Yes
<ul style="list-style-type: none"> • for maintenance 	Yes

Potential separation	
Potential separation digital inputs	
<ul style="list-style-type: none"> • between the channels, in groups of 	4
Degree and class of protection	
Degree of protection acc. to EN 60529	
<ul style="list-style-type: none"> • IP20 	Yes
Standards, approvals, certificates	
CE mark	
	Yes
Ambient conditions	
Free fall	
<ul style="list-style-type: none"> • Fall height, max. 	0.3 m; five times, in product package
Ambient temperature during operation	
<ul style="list-style-type: none"> • min. 	-20 °C; = Tmin; Startup @ 0 °C
<ul style="list-style-type: none"> • max. 	60 °C; = Tmax
Ambient temperature during storage/transportation	
<ul style="list-style-type: none"> • min. 	-40 °C
<ul style="list-style-type: none"> • max. 	70 °C
Altitude during operation relating to sea level	
<ul style="list-style-type: none"> • Installation altitude above sea level, max. 	5 000 m
<ul style="list-style-type: none"> • 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)
Relative humidity	
<ul style="list-style-type: none"> • With condensation, tested in accordance with IEC 60068-2-38, max. 	100 %; RH incl. condensation/frost (no commissioning under condensation conditions)
Resistance	
Coolants and lubricants	
<ul style="list-style-type: none"> — Resistant to commercially available coolants and lubricants 	Yes
Use in stationary industrial systems	
<ul style="list-style-type: none"> — 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
<ul style="list-style-type: none"> — 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); *
<ul style="list-style-type: none"> — to mechanically active substances according to EN 60721-3-3 	Yes; Class 3S4 incl. sand, dust, *
Use on ships/at sea	
<ul style="list-style-type: none"> — to biologically active substances according to EN 60721-3-6 	Yes; Class 6B2 mold and fungal spores (excluding fauna); Class 6B3 on request
<ul style="list-style-type: none"> — 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; *

Remark

— Note regarding classification of environmental conditions acc. to EN 60721

* The supplied plug covers must remain in place over the unused interfaces during operation!

Connection method

required front connector

Yes

Mechanics/material

Enclosure material (front)

- Plastic

Yes

Dimensions

Width

45 mm

Height

100 mm

Depth

75 mm

Weights

Weight, approx.

210 g

last modified:

07/16/2018