SIEMENS

Data sheet



SIPLUS S7-1500 DI 16x230V AC BA based on 6ES7521-1FH00-0AA0 with conformal coating, -40...+70 °C, digital input module, 16 channels in groups of 4; input delay 20 ms; input type 1 (IEC 61131)

Figure similar

General information		
Product type designation	DI 16x230VAC BA	
Product function		
• I&M data	Yes; I&M0 to I&M3	
 Isochronous mode 	No	
Fast startup	Yes; 500 ms	
Power		
Power available from the backplane bus	1 W	
Power loss		
Power loss, typ.	4.9 W	
Digital inputs		
Number of digital inputs	16; > +60 °C, number of simultaneously controllable inputs max. 8	
Input characteristic curve in accordance with IEC 61131,	Yes	
type 1		
Input voltage	220 \/, 420/220 \/ AC /47 \ = to C2 \ =\	
Rated value (AC)	230 V; 120/230 V AC (47 Hz to 63 Hz)	
• for signal "0"	OV AC to 40V AC	
• for signal "1"	79V AC to 264V AC	
Input current		
• for signal "1", typ.	11 mA; At 230 V AC/50 Hz and 6.5 mA at 120 V AC/50 Hz	
Input delay (for rated value of input voltage)		
for standard inputs		
— parameterizable	No	
— at "0" to "1", max.	25 ms	
— at "1" to "0", max.	25 ms	
for interrupt inputs		
— parameterizable	No	
Cable length		
shielded, max.	1 000 m	
• unshielded, max.	600 m	
Encoder		
Connectable encoders		
• 2-wire sensor	Yes	
 permissible quiescent current (2-wire sensor), 	2 mA	
max.		
Interrupts/diagnostics/status information		
Alarms		
 Diagnostic alarm 	No	
Hardware interrupt	No	
Diagnoses		

 Monitoring the supply voltage 	No	
Wire-break	No	
Short-circuit	No	
Fuse blown	No	
Diagnostics indication LED		
• RUN LED	Yes; green LED	
• ERROR LED	Yes; red LED	
 Monitoring of the supply voltage (PWR-LED) 	No	
 Channel status display 	Yes; green LED	
 for channel diagnostics 	No	
for module diagnostics	Yes; red LED	
Potential separation		
Potential separation channels		
between the channels	No	
 between the channels, in groups of 	4	
 between the channels and backplane bus 	Yes	
Permissible potential difference		
between different circuits	250 V AC between the channels and the backplane bus; 500 V AC	
between different circuits	between the channels	
Isolation		
Isolation tested with	2 500 V DC	
	2 000 V DO	
Standards, approvals, certificates		
Suitable for safety functions	No	
Ambient conditions		
Ambient temperature during operation		
 horizontal installation, min. 	-40 °C; = Tmin (incl. condensation/frost)	
 horizontal installation, max. 	70 °C; = Tmax; > +60 °C number of simultaneously controllable inputs	
	max. 8	
 vertical installation, min. 	-40 °C; = Tmin	
vertical installation, max.	40 °C; = Tmax	
Altitude during operation relating to sea level		
 Installation altitude above sea level, max. 	2 000 m	
Ambient air temperature-barometric pressure-	Tmin Tmax at 1 140 hPa 795 hPa (-1 000 m +2 000 m)	
altitude		
Relative humidity	400 0/- DILing I garden estimation (for at /or a comparing in its incident conden	
 With condensation, tested in accordance with IEC 60068-2-38, max. 	100 %; RH incl. condensation/frost (no commissioning under condensation conditions)	
Resistance	Condensation Conditions)	
Coolants and lubricants		
Resistant to commercially available coolants	Yes; Incl. diesel and oil droplets in the air	
and lubricants	res, mor dieser and on dropieto in the an	
Use in stationary industrial systems		
to biologically active substances according to	Yes; Class 3B2 mold, fungus and dry rot spores (with the exception of	
EN 60721-3-3	fauna); Class 3B3 on request	
— to chemically active substances according to	Yes; Class 3C4 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52	
EN 60721-3-3	(severity degree 3); *	
— to mechanically active substances according to	Yes; Class 3S4 incl. sand, dust, *	
EN 60721-3-3		
Use on ships/at sea	Vac: Class 6R2 mold and fungal spores (avaluding forms): Class 6R2 an	
 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	Yes; Class 6C3 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52	
EN 60721-3-6	(severity degree 3); *	
— to mechanically active substances according to	Yes; Class 6S3 incl. sand, dust; *	
EN 60721-3-6		
Usage in industrial process technology		
 Against chemically active substances acc. to EN 60654-4 	Yes; Class 3 (excluding trichlorethylene)	
— Environmental conditions for process,	Yes; Level GX group A/B (excluding trichlorethylene; harmful gas	
measuring and control systems acc. to ANSI/ISA-	concentrations up to the limits of EN 60721-3-3 class 3C4 permissible);	
71.04	level LC3 (salt spray) and level LB3 (oil)	
Remark Note regarding elassification of environmental	* The cumplied plug covers must remain in place over the unused	
 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!	
Conformal coating		

 \bullet Coatings for printed circuit board assemblies acc. to EN 61086 Yes; Class 2 for high reliability • Protection against fouling acc. to EN 60664-3 • Military testing according to MIL-I-46058C, Amendment 7

Yes; Type 1 protection

Yes; Discoloration of coating possible during service life

Yes; Conformal coating, Class A

• Qualification and Performance of Electrical Insulating Compound for Printed Board Assemblies according to IPC-CC-830A

Width 35 mm Height 147 mm Depth 129 mm

Weights

200 g Weight, approx.

1/16/2021 last modified: