

SIPLUS S7-1500 DI 16x24 V DC HF -40...+70°C with conformal coating based on 6ES7521-1BH00-0AB0 . Digital "input module ""16 channels in" "groups of 16;"" ""Input delay" "0.05..20ms ""Input type 3 (IEC" "61131);"" ""diagnostics; hardware" "interrupts"""



Figure similar

General information	
HW functional status	E01
Firmware version	V1.0.0
Product function	
• I&M data	Yes; I&M0 to I&M3
Engineering with	
• STEP 7 TIA Portal configurable/integrated as of version	V12 / V12
• STEP 7 configurable/integrated as of version	V5.5 SP3 / -
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
Input current	
Current consumption, max.	20 mA; with 24 V DC supply

Power	
Power available from the backplane bus	1.1 W
Power loss	
Power loss, typ.	2.6 W
Digital inputs	
Number of digital inputs	16
Source/sink input	P-reading
Input characteristic curve in accordance with IEC 61131, type 3	Yes
Input voltage	
Rated value (DC)	24 V
for signal "0"	-30 to +5V
for signal "1"	+11 to +30V
Input current	
for signal "1", typ.	2.5 mA
Input delay (for rated value of input voltage)	
for standard inputs	
— parameterizable	Yes; 0.05 / 0.1 / 0.4 / 1.6 / 3.2 / 12.8 / 20 ms
— at "0" to "1", min.	0.05 ms
— at "0" to "1", max.	20 ms
— at "1" to "0", min.	0.05 ms
— at "1" to "0", max.	20 ms
for interrupt inputs	
— parameterizable	Yes
Cable length	
shielded, max.	1 000 m
unshielded, max.	600 m
Encoder	
Connectable encoders	
2-wire sensor	Yes
— permissible quiescent current (2-wire sensor), max.	1.5 mA
Isochronous mode	
Isochronous operation (application synchronized up to terminal)	Yes
Filtering and processing time (TCI), min.	80 µs; At 50 µs filter time
Bus cycle time (TDP), min.	250 µs
Interrupts/diagnostics/status information	
Diagnostics function	Yes
Alarms	
Diagnostic alarm	Yes

• Hardware interrupt	Yes
Diagnostic messages	
• Monitoring the supply voltage	Yes
• Wire-break	Yes; to I < 350 µA
• 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)	Yes; Green LED
• Channel status display	Yes; Green LED
• for channel diagnostics	Yes; Red LED
• for module diagnostics	Yes; Red LED
Potential separation	
Potential separation channels	
• between the channels	No
• between the channels, in groups of	16
• between the channels and backplane bus	Yes
• between the channels and the power supply of the electronics	No
Permissible potential difference	
between different circuits	75 V DC/60 V AC (base isolation)
Isolation	
Isolation tested with	707 V DC (type test)
Standards, approvals, certificates	
Suitable for safety functions	No
Ambient conditions	
Ambient temperature during operation	
• horizontal installation, min.	-40 °C; = Tmin
• horizontal installation, max.	70 °C; = Tmax
• 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.	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)
Relative humidity	
• 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	
— Resistant to commercially available coolants and lubricants	Yes; Incl. diesel and oil droplets in the air
Use in stationary industrial systems	
— 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, *
Use on ships/at sea	
— 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; *
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!
Conformal coating	
• Coatings for printed circuit board assemblies acc. to EN 61086	Yes; Class 2 for high availability
• Military testing according to MIL-I-46058C, Amendment 7	Yes; Discoloration of coating possible during service life
• Qualification and Performance of Electrical Insulating Compound for Printed Board Assemblies according to IPC-CC-830A	Yes; Conformal coating, Class A
Decentralized operation	
Fast Startup supported	Yes; 500 ms
Dimensions	
Width	35 mm
Height	147 mm
Depth	129 mm
Weights	
Weight, approx.	240 g
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