



SIPLUS S7-1500 F-DI 16x24 V DC based on 6ES7526-1BH00-0AB0 with conformal coating, -30...+60 °C, F digital input module, 35 mm overall width; up to PL E (ISO13849-1)/ SIL 3 (IEC 61508)

General information	
Product type designation	F-DI 16x24VDC
Firmware version	
<ul style="list-style-type: none"> FW update possible 	Yes
based on	6ES7526-1BH00-0AB0
Product function	
<ul style="list-style-type: none"> I&M data 	Yes; I&M0 to I&M3
Engineering with	
<ul style="list-style-type: none"> STEP 7 TIA Portal configurable/integrated from version 	see entry ID: 109746275
Operating mode	
<ul style="list-style-type: none"> DI MSI 	Yes No
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 (rated value)	50 mA; without load
Current consumption, max.	60 mA; without load
Encoder supply	
Number of outputs	4
Short-circuit protection	Yes; Electronic (response threshold 0.7 A to 1.8 A)
24 V encoder supply	
<ul style="list-style-type: none"> 24 V Short-circuit protection Output current, max. 	Yes; min. L+ (-1.5 V) Yes 300 mA; Max. 100 mA when mounted vertically
Power	
Power consumption from the backplane bus	0.9 W
Power loss	
Power loss, typ.	4.6 W
Address area	
Address space per module	
<ul style="list-style-type: none"> Inputs Outputs 	9 byte; S7-300/400F CPU, 8 byte 5 byte; S7-300/400F CPU, 4 byte
Hardware configuration	
Automatic encoding	Yes
<ul style="list-style-type: none"> Electronic coding element type F 	Yes
Digital inputs	
Number of digital inputs	16

Source/sink input	Yes; P-reading
Input characteristic curve in accordance with IEC 61131, type 1	Yes
Input voltage	
<ul style="list-style-type: none"> • Rated value (DC) • for signal "0" • for signal "1" 	24 V -30 to +5 V +15 to +30 V
Input current	
<ul style="list-style-type: none"> • for signal "1", typ. 	3.7 mA
Input delay (for rated value of input voltage)	
for standard inputs	
<ul style="list-style-type: none"> — parameterizable — at "0" to "1", min. — at "0" to "1", max. — at "1" to "0", min. — at "1" to "0", max. 	Yes 0.4 ms 20 ms 0.4 ms 20 ms
Cable length	
<ul style="list-style-type: none"> • shielded, max. • unshielded, max. 	1 000 m 500 m
Interrupts/diagnostics/status information	
Diagnostics function	Yes
Alarms	
<ul style="list-style-type: none"> • Diagnostic alarm • Hardware interrupt 	Yes No
Diagnoses	
<ul style="list-style-type: none"> • Monitoring the supply voltage • Wire-break • Short-circuit • Group error 	Yes No Yes Yes
Diagnostics indication LED	
<ul style="list-style-type: none"> • RUN LED • ERROR LED • Channel status display • for channel diagnostics • for module diagnostics 	Yes; green LED Yes; red LED Yes; green LED Yes; red LED Yes; red LED
Potential separation	
Potential separation channels	
<ul style="list-style-type: none"> • between the channels and backplane bus 	Yes
Isolation	
Isolation tested with	707 V DC (type test)
Standards, approvals, certificates	
Suitable for safety functions	Yes
Highest safety class achievable in safety mode	
<ul style="list-style-type: none"> • Performance level according to ISO 13849-1 • SIL acc. to IEC 61508 	PLe SIL 3
Probability of failure (for service life of 20 years and repair time of 100 hours)	
<ul style="list-style-type: none"> — Low demand mode: PFDavg in accordance with SIL3 — High demand/continuous mode: PFH in accordance with SIL3 	< 5.00E-05 < 1.00E-09 1/h
Ambient conditions	
Ambient temperature during operation	
<ul style="list-style-type: none"> • horizontal installation, min. • horizontal installation, max. • vertical installation, min. • vertical installation, max. 	-30 °C; = Tmin (incl. condensation/frost) 60 °C; = Tmax -30 °C; = Tmin 40 °C; = Tmax
Altitude during operation relating to sea level	
<ul style="list-style-type: none"> • Installation altitude above sea level, max. 	5 000 m; Restrictions for installation altitudes > 2 000 m, see manual
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		
— 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; *	
Usage in industrial process technology		
— Against chemically active substances acc. to EN 60654-4	Yes; Class 3 (excluding trichlorethylene)	
— Environmental conditions for process, measuring and control systems acc. to ANSI/ISA-71.04	Yes; Level GX group A/B (excluding trichlorethylene; harmful gas concentrations up to the limits of EN 60721-3-3 class 3C4 permissible); level LC3 (salt spray) and level LB3 (oil)	
Remark		
— 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		
<ul style="list-style-type: none"> • Coatings for printed circuit board assemblies acc. to EN 61086 • Protection against fouling acc. to EN 60664-3 • Military testing according to MIL-I-46058C, Amendment 7 • Qualification and Performance of Electrical Insulating Compound for Printed Board Assemblies according to IPC-CC-830A 	<p>Yes; Class 2 for high reliability</p> <p>Yes; Type 1 protection</p> <p>Yes; Discoloration of coating possible during service life</p> <p>Yes; Conformal coating, Class A</p>	
Dimensions		
Width	35 mm	
Height	147 mm	
Depth	129 mm	
Weights		
Weight, approx.	280 g	
Classifications		
	Version	Classification
eClass	14	27-24-22-04
eClass	12	27-24-22-04
eClass	9.1	27-24-22-04
eClass	9	27-24-22-04
eClass	8	27-24-22-04
eClass	7.1	27-24-22-04
eClass	6	27-24-22-04
ETIM	10	EC001419
ETIM	9	EC001419
ETIM	8	EC001419
ETIM	7	EC001419
IDEA	4	3566
UNSPSC	15	32-15-17-05
Approvals / Certificates		
General Product Approval	EMV	



EG-Konf.

[Manufacturer Declaration](#)



[China RoHS](#)



UL



RCM

For use in hazardous locations

Functional Safety

Maritime application



IECEX



ATEX

[TUEV](#)



ABS



DNV



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