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Data sheet 6ES7521-1BH10-0AA0

Siemens EcoTech

SIMATIC S7-1500 Digital input module, DI 16x24 V DC BA, 16 channels in groups of 16, input delay typ. 3.2 ms, input type 3 (IEC 61131); Delivery incl. front connector Push-in



General information	
Product type designation	DI 16 x 24 V DC BA
HW functional status	from FS01
Firmware version	V1.0.0
● FW update possible	Yes
Product function	
● I&M data	Yes; I&M0 to I&M3
● Isochronous mode	No
● Prioritized startup	Yes
Engineering with	
● STEP 7 TIA Portal configurable/integrated from version	V13 / V13
● STEP 7 configurable/integrated from version	V5.5 SP3 / -
● PROFIBUS from GSD version/GSD revision	V1.0 / V5.1
● PROFINET from GSD version/GSD revision	V2.3 / -
Operating mode	
● DI	Yes
● Counter	No
● Oversampling	No
● MSI	Yes
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
Power	
Power consumption from the backplane bus	1.05 W
Power loss	
Power loss, typ.	1.8 W
Address area	
Address space per module	
● Inputs	2 byte; typical, maximum 16 bytes, see manual for details
● Outputs	0 byte
Digital inputs	
Number of digital inputs	16
Digital inputs, parameterizable	No
Sourcing/sinking input	P-reading

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Input characteristic curve in accordance with IEC 61131, type 3	Yes
Pulse extension	No
Edge evaluation	No
Signal change flutter	No
Flutter observation window	No
Number of simultaneously controllable inputs	
● Number of simultaneously controllable inputs	16
Digital input functions, parameterizable	
● Freely usable digital input	Yes
● Counter	No
● Digital input with oversampling	No
Input voltage	
● Rated value (DC)	24 V
● for signal "0"	-30 to +5 V
● for signal "1"	+11 to +30V
Input current	
● for signal "1", typ.	2.7 mA
Input delay (for rated value of input voltage)	
for standard inputs	
— parameterizable	No
— at "0" to "1", min.	3 ms
— at "0" to "1", max.	4 ms
— at "1" to "0", min.	3 ms
— at "1" to "0", max.	4 ms
for interrupt inputs	
— Parameterizable	No
for technological functions	
— 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), max.	1.5 mA
Interrupts/diagnostics/status information	
Diagnostics function	No
Alarms	
● Diagnostic alarm	No
● Hardware interrupt	No
Diagnoses	
● Monitoring the supply voltage	No
● Wire break	No
● Short-circuit	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	No
Potential separation	
Potential separation channels	
● between the channels	No
● between the channels, in groups of	16
● between the channels and backplane bus	Yes
Isolation	
Isolation tested with	707 V DC (type test)
Standards, approvals, certificates	

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Siemens Eco Profile (SEP)	Siemens EcoTech
Suitable for safety functions	No
Ecological footprint	
● environmental product declaration	Yes
Global warming potential	
— global warming potential, (total) [CO2 eq]	18.9 kg
— global warming potential, (during production) [CO2 eq]	12.1 kg
— global warming potential, (during operation) [CO2 eq]	7.66 kg
— global warming potential, (after end of life cycle) [CO2 eq]	-1.02 kg
Security	
signed firmware update	Yes; Firmware V3.0.0 or higher
securely removing data	No
data integrity	Yes; Firmware V3.0.0 or higher
Ambient conditions	
Ambient temperature during operation	
● horizontal installation, min.	-30 °C; from FS04
● horizontal installation, max.	60 °C
● vertical installation, min.	-30 °C; from FS04
● vertical installation, max.	40 °C
Altitude during operation relating to sea level	
● Installation altitude above sea level, max.	5 000 m; Restrictions for installation altitudes > 2 000 m, see manual
Absolute humidity	
● dew point, min.	-60 °C; suitable for dry room applications
Dimensions	
Width	25 mm
Height	147 mm
Depth	129 mm
Weights	
Weight, approx.	230 g
Other	
Note:	Supplied incl. 40-pole push-in front connectors

Classifications

	Version	Classification
eClass	16	27-24-22-04
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

Miscellaneous

EG-Konf.

Manufacturer Declaration

UL

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General Product Approval				For use in hazardous locations	
RCM	EAC	China RoHS	Manufacturer Declaration	FM	UL

For use in hazardous locations					
FM	CCC-Ex	IECEx	ATEX	Type Examination Certificate	Miscellaneous

For use in hazardous locations	Maritime application				
CCC-Ex	ABS	BUREAU VERITAS	DNV	LRS	NK / Nippon Kaiji Kyokai

Maritime application				Environment	
RINA	RMRS	CCS (China Classification Society)	KR (Korean Register of Shipping)	EPD	Siemens EcoTech

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