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Data sheet 6ES7521-7EH00-0AB0

Siemens EcoTech



SIMATIC S7-1500, digital input module DI 16x 24...125 V UC HF, 16 channels in groups of 1; input delay 0.05..20 ms; Input type 3 (IEC 61131); Diagnostics, hardware interrupts: Front connector (screw terminals or push-in) to be ordered separately

General information	
Product type designation	DI 16x24 ... 125 V UC HF
HW functional status	from FS01
Firmware version	from 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	V14 / -
● 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	Yes; from V1.1.0; only in DC operation
● Oversampling	No
● MSI	Yes
Supply voltage	
Reverse polarity protection	Yes
Power	
Power consumption from the backplane bus	1.2 W
Power loss	
Power loss, typ.	2.2 W; At 24 V DC; 6.0 W at 125 V AC
Address area	
Address space per module	
● Inputs	2 byte
● Outputs	0 byte
Digital inputs	
Number of digital inputs	16
Digital inputs, parameterizable	Yes
Sourcing/sinking input	Yes
Input characteristic curve in accordance with IEC 61131, type 3	Yes; At 24 V DC
Pulse extension	No
Edge evaluation	No

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Signal change flutter	No
Flutter observation window	No
Number of simultaneously controllable inputs	
● Number of simultaneously controllable inputs	16; see additional description in the manual
Digital input functions, parameterizable	
● Freely usable digital input	Yes
● Counter	Yes; from FS04
— Number, max.	2; Channel 0 and 1
— Counting frequency, max.	6 kHz
— Counting width	32 bit
— Counting direction up/down	Yes; Up
● Digital input with oversampling	No
Input voltage	
● Rated value (DC)	24 V; 48 V, 125 V
● Rated value (AC)	24 V; 48 V, 125 V (50 - 60 Hz)
● for signal "0"	-5 ... +5 V
● for signal "1"	+11 ... +146 V
Input current	
● for signal "1", typ.	3 mA; At 24 V DC
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 parameterizable with DC, 20 ms fixed with AC
— 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
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	Yes
Alarms	
● Diagnostic alarm	Yes
● Hardware interrupt	Yes
Diagnoses	
● Monitoring the supply voltage	No
● Wire break	Yes; To I < 550 µA
● 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	Yes; red LED
● for module diagnostics	Yes; red LED
Potential separation	
Potential separation channels	
● between the channels	Yes
● between the channels, in groups of	1
● between the channels and backplane bus	Yes

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Permissible potential difference	
between different circuits	146 V DC/132 V AC
Isolation	
Isolation tested with	2 000 V DC
Standards, approvals, certificates	
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
safely removing data	No
data integrity	No
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.	Restrictions for installation altitudes > 2 000 m, see manual
Absolute humidity	
● dew point, min.	-60 °C; suitable for dry room applications
Dimensions	
Width	35 mm
Height	147 mm
Depth	129 mm
Weights	
Weight, approx.	240 g

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

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Miscellaneous

Miscellaneous

General Product Approval				EMV	Maritime application
	Confirmation				

Maritime application				other	
				Miscellaneous	Confirmation

Dangerous goods	Environment
Transport Information	Environmental Confirmations

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