SIEMENS

Data sheet 6ES7521-7EH00-0AB0

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
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
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	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

Miscellaneous

General Product Approval			For use in hazardous locations		
RCM	China RoHS	Miscellaneous	ATEX	IECEx	FM

For use in hazardous locations			Functional Saftey	
CCC	IECEx	Type Examination Certificate	TUEV	Type Examination Certificate
ATEX				

Maritime application					
ABS	BUREAU VERITAS	DNV	LRS	NK / Nippon Kaiji Kyokai	RINA

Maritime application	Environment	Industrial Communication
CCS (China Classification Society)	EPD	PROFIsafe

last modified: 5/7/2026