

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; typical, maximum 20 bytes, see manual for details
• Outputs	0 byte; typical, maximum 16 bytes, see manual for details
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			
<ul style="list-style-type: none">environmental product declaration	Yes		
Global warming potential			
<ul style="list-style-type: none">— global warming potential, (total) [CO2 eq]	18.9 kg		
<ul style="list-style-type: none">— global warming potential, (during production) [CO2 eq]	12.1 kg		
<ul style="list-style-type: none">— global warming potential, (during operation) [CO2 eq]	7.66 kg		
<ul style="list-style-type: none">— global warming potential, (after end of life cycle) [CO2 eq]	-1.02 kg		
Security			
signed firmware update	Yes; Firmware V3.0.0 or higher		
safely removing data	No		
data integrity	Yes; Firmware V3.0.0 or higher		
Ambient conditions			
Ambient temperature during operation			
<ul style="list-style-type: none">horizontal installation, min.	-30 °C; from FS04		
<ul style="list-style-type: none">horizontal installation, max.	60 °C		
<ul style="list-style-type: none">vertical installation, min.	-30 °C; from FS04		
<ul style="list-style-type: none">vertical installation, max.	40 °C		
Altitude during operation relating to sea level			
<ul style="list-style-type: none">Installation altitude above sea level, max.	Restrictions for installation altitudes > 2 000 m, see manual		
Absolute humidity			
<ul style="list-style-type: none">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		
Other			
Note:	please order front connectors (screw-in/push-in) separately		
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](#)



[Manufacturer Declaration](#)



General Product Approval

EMV



[Manufacturer Declaration](#)

[China RoHS](#)



For use in hazardous locations

Maritime application

[FM](#)



[FM](#)



Maritime application



[NK / Nippon Kaiji Kyokai](#)



[CCS \(China Classification Society\)](#)

[KR \(Korean Register of Shipping\)](#)

Environment



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