

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

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	

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
safely 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](#)



General Product Approval	For use in hazardous locations
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[China RoHS](#)

[Manufacturer Declaration](#)

[FM](#)



[FM](#)

For use in hazardous locations

[CCC-Ex](#)



[Type Examination Certificate](#)

[Miscellaneous](#)

[CCC-Ex](#)

Maritime application



[NK / Nippon Kaiji Kyokai](#)



Maritime application	Environment
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[CCS \(China Classification Society\)](#)

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



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