



SIMATIC ET 200SP, digital input module, DI 8x 24 V DC High Speed, Pack quantity: 1 unit, three alternative operating modes: DI, Oversampling, 4x counters, suitable for BU type A0, Color code CC01

General information	
Product type designation	DI 8x24 V DC HS
HW functional status	from FS04
Firmware version	V1.0.2
• FW update possible	Yes
usable BaseUnits	BU type A0
Color code for module-specific color identification plate	CC01
Product function	
• I&M data	Yes; I&M0 to I&M3
• Isochronous mode	Yes
• suitable for operation on PROFINET R1 IMs	Yes
Engineering with	
• STEP 7 TIA Portal configurable/integrated from version	V13 SP1
• STEP 7 configurable/integrated from version	V5.5 SP3 / -
• PCS 7 configurable/integrated from version	V10.0
• PCS neo can be configured/integrated from version	V3.1.1
• PROFIBUS from GSD version/GSD revision	One GSD file each, Revision 3 and 5 and higher
• PROFINET from GSD version/GSD revision	GSDML V2.3
Operating mode	
• DI	Yes
• Counter	Yes
• Oversampling	Yes
• MSI	No
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
Input current	
Current consumption, max.	70 mA; without sensor supply
Encoder supply	
24 V encoder supply	
• 24 V	Yes
• Short-circuit protection	Yes; per module, electronic
• Output current, max.	700 mA
Power loss	
Power loss, typ.	1.5 W
Address area	
Address space per module	
• Address space per module, max.	45 byte

• Inputs	32 byte; 1 byte + 1 byte for QI information in DI mode; 32 bytes in Oversampling mode; 25 bytes in Counter mode
• Outputs	20 byte; In count mode
Hardware configuration	
Automatic encoding	Yes
• Mechanical coding element	Yes
• Type of mechanical coding element	Type A
Selection of BaseUnit for connection variants	
• 1-wire connection	BU type A0
• 2-wire connection	BU type A0
• 3-wire connection	BU type A0 with AUX terminals or potential distributor module
• 4-wire connection	BU type A0 + Potential distributor module
Digital inputs	
Number of digital inputs	8
Source/sink input	P-reading
Pulse extension	Yes
• Length	2 s; 50 ms, 100 ms, 200 ms, 500 ms, 1 s, 2 s
Digital input functions, parameterizable	
• Gate start/stop	Yes
• Freely usable digital input	Yes
• Counter	Yes
— Number, max.	4
— Counting frequency, max.	10 kHz
— Counting width	32 bit
— Counting direction up/down	Yes
• Digital input with oversampling	Yes
— Number, max.	8
— Values per cycle, max.	32
— Resolution, min.	7.8125 µs
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.	6 mA
Input delay (for rated value of input voltage)	
for standard inputs	
— parameterizable	Yes; none / 0.05 / 0.1 / 0.4 / 0.8 / 1.6 / 3.2 / 12.8 / 20 ms
for interrupt inputs	
— parameterizable	Yes
for technological functions	
— parameterizable	Yes
Cable length	
• shielded, max.	50 m
• unshielded, max.	50 m
Encoder	
Connectable encoders	
• 2-wire sensor	Yes
— permissible quiescent current (2-wire sensor), max.	1.5 mA
Isochronous mode	
Bus cycle time (TDP), min.	125 µs
Jitter, max.	5 µs
Interrupts/diagnostics/status information	
Diagnostics function	Yes
Alarms	
• Diagnostic alarm	Yes
• Hardware interrupt	Yes
Diagnoses	
• Diagnostic information readable	Yes
• Monitoring the supply voltage	Yes
— parameterizable	Yes

• Monitoring of encoder power supply • Wire-break • Short-circuit	Yes; Module-wise No Yes; Module-wise		
Diagnostics indication LED			
• Monitoring of the supply voltage (PWR-LED) • Channel status display • for channel diagnostics • for module diagnostics	Yes; green PWR LED Yes; green LED No Yes; green/red DIAG LED		
Potential separation			
Potential separation channels			
• between the channels • between the channels and backplane bus • between the channels and the power supply of the electronics	No Yes No		
Isolation			
Isolation tested with	707 V DC (type test)		
Standards, approvals, certificates			
Suitable for safety functions	No		
Ecological footprint			
• environmental product declaration	Yes		
Global warming potential			
— global warming potential, (total) [CO2 eq] — global warming potential, (during production) [CO2 eq] — global warming potential, (during operation) [CO2 eq] — global warming potential, (after end of life cycle) [CO2 eq]	15.9 kg 3.69 kg 12.7 kg -0.495 kg		
Ambient conditions			
Ambient temperature during operation			
• horizontal installation, min. • horizontal installation, max. • vertical installation, min. • vertical installation, max.	-30 °C; < 0 °C as of FS04 60 °C -30 °C; < 0 °C as of FS04 50 °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		
Dimensions			
Width	15 mm		
Height	73 mm		
Depth	58 mm		
Weights			
Weight, approx.	28 g		
Classifications			
		Version	Classification
	eClass	14	27-24-26-04
	eClass	12	27-24-26-04
	eClass	9.1	27-24-26-04
	eClass	9	27-24-26-04
	eClass	8	27-24-26-04
	eClass	7.1	27-24-26-04
	eClass	6	27-24-26-04
	ETIM	9	EC001599
	ETIM	8	EC001599
	ETIM	7	EC001599
	IDEA	4	3566
	UNSPSC	15	32-15-17-05
Approvals / Certificates			
General Product Approval			



[Manufacturer Declaration](#)



[KC](#)



For use in hazardous locations



[FM](#)

[CCC-Ex](#)



[Miscellaneous](#)

Marine / Shipping



[NK / Nippon Kaiji Kyokai](#)



Marine / Shipping



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



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