

Siemens
EcoTech



SIMATIC ET 200clean, DI 16x24 V DC, 8x M12, double assignment, input type 3 (IEC 61131), sink input (PNP, sinking input), input delay 0.05...20 ms, channel diagnostics for: open circuit at input, encoder power supply short-circuit, 0.25 ms isochronous mode, MSI, MRP, S2 redundancy, I&M0...4, multi-fieldbus, PN IO, Ethernet IP, Modbus TCP, degree of protection IP69K

General information	
HW functional status	FS01
Firmware version	V1.1.x
<ul style="list-style-type: none"> FW update possible 	Yes
Vendor identification (VendorID)	002AH
Device identifier (DeviceID)	031AH
Manufacturer ID according to ODVA (VendorID)	04E3H
Device ID according to ODVA (Product code)	0FB7H
Product function	
<ul style="list-style-type: none"> I&M data Isochronous mode IRT Prioritized startup 	Yes; I&M0 to I&M3 Yes Yes Yes
Engineering with	
<ul style="list-style-type: none"> STEP 7 TIA Portal configurable/integrated from version PROFINET from GSD version/GSD revision Multi Fieldbus Configuration Tool (MFCT) 	STEP 7 V19 or higher with HSP 0414 GSDML V2.4.x V1.5.x or higher
Operating mode	
<ul style="list-style-type: none"> DI Counter MSI 	Yes No Yes
Supply voltage	
power supply according to NEC Class 2 required	No
Load voltage 1L+	
<ul style="list-style-type: none"> Rated value (DC) permissible range, lower limit (DC) permissible range, upper limit (DC) Reverse polarity protection 	24 V 20.4 V 28.8 V Yes; Against destruction; encoder power supply outputs applied with reversed polarity
Input current	
Current consumption (rated value)	85 mA; without load
from load voltage 1L+ (unswitched voltage)	12 A; Maximum value
from load voltage 2L+, max.	12 A; Maximum value
Encoder supply	
Number of outputs	8
24 V encoder supply	

<ul style="list-style-type: none"> • Short-circuit protection • Output current, max. 	Yes; Group-by-group for 2 channels, electronic 100 mA; per output
Power loss	
Power loss, typ.	5.5 W
Address area	
Address space per module	
<ul style="list-style-type: none"> • Inputs 	2 byte; + 2 bytes for QI information
Hardware configuration	
Submodules	
<ul style="list-style-type: none"> • Number of configurable submodules, max. 	2
Digital inputs	
Number of digital inputs	16
Digital inputs, parameterizable	Yes
Sourcing/sinking input	P-reading
Input characteristic curve in accordance with IEC 61131, type 3	Yes
Number of simultaneously controllable inputs	
all mounting positions	
— up to 55 °C, max.	16
Input voltage	
<ul style="list-style-type: none"> • Rated value (DC) • for signal "0" • for signal "1" 	24 V -30 to +5 V +11 to +30V
Input current	
<ul style="list-style-type: none"> • for signal "1", typ. 	2.4 mA
Input delay (for rated value of input voltage)	
for standard inputs	
— parameterizable	Yes; 0.05 / 0.1 / 0.4 / 0.8 / 1.6 / 3.2 / 12.8 / 20 ms
Cable length	
<ul style="list-style-type: none"> • unshielded, max. 	30 m
Encoder	
Connectable encoders	
<ul style="list-style-type: none"> • 2-wire sensor — permissible quiescent current (2-wire sensor), max. 	Yes 1.5 mA
Interfaces	
Number of PROFINET interfaces	1
1. Interface	
Interface type	PROFINET with 100 Mbit/s full duplex (100BASE-TX)
Interface types	
<ul style="list-style-type: none"> • M12 port • Number of ports • integrated switch 	Yes; 2x M12, 4-pin, D-coded 2 Yes
Protocols	
<ul style="list-style-type: none"> • PROFINET IO Device • Open IE communication 	Yes Yes
PROFINET IO Device	
Services	
— IRT	Yes; 250 µs to 4 ms in 125 µs frame
— Prioritized startup	Yes
— Shared device	Yes
Interface types	
M12 port	
<ul style="list-style-type: none"> • Autonegotiation • Autocrossing • Transmission rate, max. 	Yes Yes 100 Mbit/s
Protocols	
Supports protocol for PROFINET IO	Yes
PROFIsafe	No
EtherNet/IP	Yes

Modbus TCP	Yes
Redundancy mode	
<ul style="list-style-type: none"> ● PROFINET system redundancy (S2) <ul style="list-style-type: none"> — on S7-1500R/H — on S7-400H ● PROFINET system redundancy (R1) ● H-Sync forwarding 	<ul style="list-style-type: none"> Yes Yes Yes No Yes
Media redundancy	
<ul style="list-style-type: none"> — MRP — MRPD 	<ul style="list-style-type: none"> Yes No
EtherNet/IP	
Services	
<ul style="list-style-type: none"> — CIP Implicit Messaging — CIP Explicit Messaging — CIP Safety — Shared device — Number of scanners with shared device, max. 	<ul style="list-style-type: none"> Yes Yes No Yes; 2x EtherNet/IP Scanner 2
Updating times	
<ul style="list-style-type: none"> — Requested Packet Interval (RPI) 	2 ms
Redundancy mode	
<ul style="list-style-type: none"> — DLR (Device Level Ring) 	No
Address area	
<ul style="list-style-type: none"> — Address space per module, max. — LargeForwardOpen (Class3) 	<ul style="list-style-type: none"> 20 byte No
Modbus TCP	
Services	
<ul style="list-style-type: none"> — read coils (code=1) — read discrete inputs (code=2) — Read Holding Registers (Code=3) — write single coil (code=5) — write multiple coils (code=15) — Write Multiple Registers (Code=16) — Parameter change by master — Modbus TCP Security Protocol 	<ul style="list-style-type: none"> Yes Yes Yes Yes Yes Yes No No
Address space per station	
<ul style="list-style-type: none"> — Address space per station, max. — Access-consistent address space 	<ul style="list-style-type: none"> 20 byte 2 byte
Updating time	
<ul style="list-style-type: none"> — I/O request interval 	2 ms
Connections	
<ul style="list-style-type: none"> — number of connections per device 	12
Open IE communication	
<ul style="list-style-type: none"> ● TCP/IP ● SNMP ● LLDP ● ARP 	<ul style="list-style-type: none"> Yes; (only EtherNet/IP or Modbus TCP) Yes Yes Yes
Isochronous mode	
Equidistance	Yes
shortest clock pulse	250 µs
max. cycle	4 ms
Jitter, max.	10 µs
Interrupts/diagnostics/status information	
Alarms	
<ul style="list-style-type: none"> ● Diagnostic alarm ● Maintenance interrupt ● Hardware interrupt 	<ul style="list-style-type: none"> Yes; Parameterizable Yes; Parameterizable Yes; Parameterizable
Diagnoses	
<ul style="list-style-type: none"> ● Diagnostic information readable ● Monitoring the supply voltage 	<ul style="list-style-type: none"> Yes Yes

— parameterizable	Yes
• Wire break	Yes; DI, input current < 0.3 mA, per channel
• Short-circuit encoder supply	Yes; Per channel group
Diagnostics indication LED	
• RUN LED	Yes; green LED
• ERROR LED	Yes; red LED
• MAINT LED	Yes; Yellow LED
• NS LED	Yes; green/red LED
• MS LED	Yes; green/red LED
• IO LED	Yes; red/green/yellow LEDs
• Channel status display	Yes; green LED
• for channel diagnostics	Yes; red LED
• Connection display LINK TX/RX	Yes; green LED, only link
Potential separation	
between the load voltages	Yes
between Ethernet and electronics	Yes
Potential separation channels	
• between the channels	No
• between the channels and the power supply of the electronics	No
Isolation	
tested with	
• 24 V DC circuits	707 V DC (type test)
• Test voltage for interface, rms value [Vrms]	1 500 V; According to IEEE 802.3
Degree and class of protection	
IP degree of protection	IP65/67/69K
Standards, approvals, certificates	
Siemens Eco Profile (SEP)	Siemens EcoTech
Suitable for safety-related tripping of standard modules	Yes; from FS01
Ecological footprint	
• environmental product declaration	Yes
Global warming potential	
— global warming potential, (total) [CO2 eq]	63.3 kg
— global warming potential, (during production) [CO2 eq]	8.27 kg
— global warming potential, (during operation) [CO2 eq]	55.3 kg
— global warming potential, (after end of life cycle) [CO2 eq]	-0.397 kg
Highest safety class achievable for safety-related tripping of standard modules	
• Performance level according to ISO 13849-1	PL d
• Category according to ISO 13849-1	Cat. 3
• SIL acc. to IEC 62061	SIL 2
• remark on safety-oriented shutdown	https://support.industry.siemens.com/cs/de/en/view/39198632
Security	
signed firmware update	Yes
safely removing data	Yes
Ambient conditions	
Ambient temperature during operation	
• min.	-30 °C
• max.	55 °C
Altitude during operation relating to sea level	
• Ambient air temperature-barometric pressure-altitude	Up to max. 5 000 m, at installation height > 2 000 m additional restrictions
Absolute humidity	
• dew point, min.	-60 °C; suitable for dry room applications
Connection method	
Design of electrical connection	4/5-pin M12 circular connectors
Design of electrical connection for the inputs and outputs	M12, 5-pin, A-coded
Design of electrical connection for supply voltage	M12, 4-pin, L-coded
Mechanics/material	

Material	housing: PBT; seal: MVQ (silicone); bushing / metal parts: 1.4404 (stainless steel)
Dimensions	
Width	80 mm
Height	205 mm
Depth	54 mm
Weights	
Weight, approx.	260 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	10	EC001599
ETIM	9	EC001599
ETIM	8	EC001599
ETIM	7	EC001599

Approvals / Certificates

General Product Approval



[Miscellaneous](#)



[China RoHS](#)

General Product Approval **EMV** **Maritime application**



Maritime application **Food, Pharmaceutical, Medical**

[NK / Nippon Kaiji Kyokai](#)



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

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

[Miscellaneous](#)

[Special Test Certificate](#)

Environment **Industrial Communication**



[PROFINET](#)

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