SIEMENS

Data sheet 6ES7145-6HD00-0AB0



*** spare part *** SIMATIC DP, ET 200eco PN, 4 AO U/I; 4xM12, degree of protection IP67

General information	
Vendor identification (VendorID)	002AH
Device identifier (DeviceID)	0306H
Supply voltage	
Rated value (DC)	24 V
Reverse polarity protection	Yes
power supply according to NEC Class 2 required	Yes
Input current	
Current consumption, typ.	280 mA
Actuator supply	
Number of outputs	4
Short-circuit protection	Yes; Electronic at 1.4 A
Output current	
● nominal	1 A; Maximum
Power loss	
Power loss, typ.	5.5 W
Analog outputs	
Number of analog outputs	4
Voltage output, short-circuit protection	Yes
Voltage output, short-circuit current, max.	30 mA
Current output, no-load voltage, max.	20 V
Output ranges, voltage	
● 0 to 10 V	Yes
● 1 V to 5 V	Yes
● -10 V to +10 V	Yes
Output ranges, current	
● 0 to 20 mA	Yes
● -20 mA to +20 mA	Yes
● 4 mA to 20 mA	Yes
Connection of actuators	
● for voltage output two-wire connection	Yes
● for current output two-wire connection	Yes
Load impedance (in rated range of output)	
● with voltage outputs, min.	1 kΩ
● with voltage outputs, capacitive load, max.	1 µF
● with current outputs, max.	600 Ω
● with current outputs, inductive load, max.	1 mH
Destruction limits against externally applied voltages and currents	
● Voltages at the outputs towards MANA	28.8 V permanent, 35 V for max. 500 ms

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Cable length	
● shielded, max.	30 m
Analog value generation for the outputs	
Analog value display	SIMATIC S7 format
Conversion principle	Resistor network
Integration and conversion time/resolution per channel	
● Resolution with overrange (bit including sign), max.	16 bit
● Conversion time (per channel)	1 ms
Settling time	
● for resistive load	2 ms
● for capacitive load	1.8 ms
● for inductive load	2 ms
Errors/accuracies	
Output ripple (relative to output range, bandwidth 0 to 50 kHz), (+/-)	U: ±0.6 mVrms; I: ±0.4 nArms
Linearity error (relative to output range), (+/-)	0.02 %
Temperature error (relative to output range), (+/-)	U: 0.001%/°C; I: 0.0025%/°C
Crosstalk between the outputs, min.	70 dB
Repeat accuracy in steady state at 25 °C (relative to output range), (+/-)	0.008 %
Interfaces	
Transmission procedure	100BASE-TX
Number of PROFINET interfaces	1
1. Interface	
Interface types	
● M12 port	Yes
● integrated switch	Yes
PROFINET IO Device	
Services	
— IRT with the option "high flexibility"	Yes
— Prioritized startup	Yes
Interface types	
M12 port	
● Autonegotiation	Yes
● Autocrossing	Yes
● Transmission rate, max.	100 Mbit/s
Protocols	
Supports protocol for PROFINET IO	Yes
PROFINET CBA	No
PROFIsafe	No
Redundancy mode	
Media redundancy	
— MRP	Yes
Open IE communication	
● TCP/IP	No
● SNMP	Yes
● DCP	Yes
● LLDP	Yes
● ping	Yes
● ARP	Yes
Interrupts/diagnostics/status information	
Diagnostics function	Yes
Substitute values connectable	Yes
Alarms	
● Diagnostic alarm	Yes
Diagnoses	
● Diagnostic information readable	Yes
● Monitoring the supply voltage	Yes; green "ON" LED
● Wire break	Yes; Channel-by-channel with current output

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● short-circuit	Yes; Channel-by-channel with voltage output
● Group error	Yes; Red/yellow "SF/MT" LED
Potential separation	
between the load voltages	Yes
between load voltage and all other switching components	No
between Ethernet and electronics	Yes
Potential separation channels	
● between the channels	No
Permissible potential difference	
between M internally and the outputs	10 Vpp AC
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
Standards, approvals, certificates	
Use in hazardous areas	
● Explosion protection category for gas	ATEX gas explosion protection, Zone 2
● Explosion protection category for dust	ATEX dust explosion protection, Zone 22
Connection method	
Design of electrical connection	4/5-pin M12 circular connectors
Dimensions	
Width	60 mm
Height	175 mm
Depth	49 mm
Weights	
Weight, approx.	930 g

Classifications

	Version	Classification
eClass	16	27-24-26-01
eClass	14	27-24-26-01
eClass	12	27-24-26-01
eClass	9.1	27-24-26-01
eClass	9	27-24-26-01
eClass	8	27-24-26-01
eClass	7.1	27-24-26-01
eClass	6	27-24-26-01
ETIM	10	EC001596
ETIM	9	EC001596
ETIM	8	EC001596
ETIM	7	EC001596
IDEA	4	3562
UNSPSC	15	32-15-17-05

Approvals / Certificates

General Product Approval

Miscellaneous

Manufacturer Declaration

General Product Approval	EMV	For use in hazardous locations

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Metrological Approval

China RoHS

For use in hazardous locations					Maritime application
	CCC-Ex		Miscellaneous	CCC-Ex	

Maritime application					
			NK / Nippon Kaiji Kyokai		CCS (China Classification Society)

Maritime application	Industrial Communication
KR (Korean Register of Shipping)	PROFINET

last modified: 10/23/2025

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