SIEMENS

Data sheet 6ES7145-6HD00-0AB0

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
Input current	
Current consumption, typ.	280 mA
Actuator supply	
Number of outputs	4
Short-circuit protection	Yes; Electronic at 1.4 A
Output current	
• Rated value	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
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 (incl. overrange)	15 bit + sign
• 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	
• integrated switch	Yes
• M12 port	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
PROFINET IO Device	
Services	
— IRT with the option "high flexibility"	Yes
— Prioritized startup	Yes
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
Diagnostic messages	
• Diagnostic information readable	Yes
• Monitoring the supply voltage	Yes; green "ON" LED
• Wire-break	Yes; Channel-by-channel with current output
• 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
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

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