

# SIEMENS

## Product data sheet

**6ES7145-6HD00-0AB0**


SIMATIC DP, ET 200ECO PN, 4 AO U/I;  
4 X M12, DEGREE OF PROTECTION IP67

General information	
Vendor identification (VendorID)	002AH
Device identifier (DeviceID)	0306H
Supply voltage	
24 V DC	Yes
permissible range, lower limit (DC)	20.4 V
permissible range, upper limit (DC)	28.8 V
Reverse polarity protection	Yes
Input current	
Current consumption, typ.	280 mA
Encoder supply	
Number of outputs	4
24 V encoder supply	
Short-circuit protection	Yes ; Electronic at 1.4 A
Output current, max.	1 A

Power losses	
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 to 5 V	Yes
-10 to +10 V	Yes
Output ranges, current	
0 to 20 mA	Yes
-20 to +20 mA	Yes
4 to 20 mA	Yes
Connection of actuators	
for voltage output 2-conductor connection	Yes
for current output 2-conductor connection	Yes
Load impedance (in rated range of output)	
with voltage outputs, min.	1 k $\Omega$
with voltage outputs, capacitive load, max.	1 $\mu$ F
with current outputs, max.	600 $\Omega$
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	
Cable length, shielded, max.	30 m
Analog value creation	
Analog value display	SIMATIC S7 format
Measurement principle	Resistor network
Integrations and conversion time/ resolution per channel	
Resolution (incl. overrange)	15 bits + 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 (based on output area, bandwidth 0 to 50 kHz)	U: $\pm 0.6$ mVrms; I: $\pm 0.4$ nArms
Linearity error (relative to output area)	+/- 0,02 %
Temperature error (relative to output area)	U: 0.001%/°C; I: 0.0025%/°C
Crosstalk between the outputs, min.	70 dB
Repeat accuracy in settled status at 25 °C (relative to output area)	+/- 0,008 %
Interfaces	
Transmission procedure	100BASE-TX
Transmission rate, max.	100 Mbit/s
Supports protocol for PROFINET IO	
Number of PROFINET interfaces	2
Autocrossing	Yes
Automatic detection of transmission speed	Yes
Integrated switch	Yes
PROFINET IO Device	
IRT with the option "high flexibility" supported	Yes
Prioritized startup supported	Yes
Protocols	
Supports protocol for PROFINET IO	Yes
Protocols (Ethernet)	
SNMP	Yes
DCP	Yes
LLDP	Yes
ping	Yes
arp	Yes
Interrupts/diagnostics/status information	
Status indicator	Yes
Substitute values connectable	Yes

Alarms	
Diagnostic alarm	Yes
Diagnostic messages	
Diagnostic functions	Yes
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
Galvanic isolation	
between the load voltages	Yes
between load voltage and all other switching components	No
between Ethernet and electronics	Yes
Galvanic isolation analog outputs	
between the channels	No
Permissible potential difference	
between M internally and the outputs	10 Vpp AC
Degree and class of protection	
IP65	Yes
IP66	Yes
IP67	Yes
Connection method	
M12	Yes
Dimensions	
Width	60 mm
Height	175 mm
Depth	49 mm
Weight	
Weight	930 g
Status	Jul 17, 2012