

SIEMENS

Product data sheet

6ES7144-6KD00-0AB0


SIMATIC DP, ET 200ECO PN,
8 AI (4 U/I + 4 RTD/TC);
8XM12, 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.	110 mA
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Encoder supply

Number of outputs	4
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24 V encoder supply

Short-circuit protection	Yes ; Electronic at 1.4 A
Output current, max.	1 A

Power losses	
Power loss, typ.	2.8 W
Analog inputs	
Number of analog inputs	8
Number of analog inputs for voltage/current measurement	4
Number of analog inputs for resistance/resistance thermometer measurement	4
permissible input voltage for voltage input (destruction limit), max.	28.8 V permanent, 35 V for max. 500 ms
Input ranges (rated values), voltages	
0 to +10 V	Yes
1 to 5 V	Yes
-10 V to +10 V	Yes
-80 mV to +80 mV	Yes
Input ranges (rated values), currents	
0 to 20 mA	Yes
-20 to +20 mA	Yes
4 to 20 mA	Yes
Input ranges (rated values), thermoelements	
Type E	Yes
Type J	Yes
Type K	Yes
Type N	Yes
Input ranges (rated values), resistance thermometers	
Ni 100	Yes
Ni 1000	Yes
Ni 120	Yes
Ni 200	Yes
Ni 500	Yes
Pt 100	Yes
Pt 1000	Yes
Pt 200	Yes
Pt 500	Yes

Input ranges (rated values), resistors	
0 to 150 ohms	Yes
0 to 300 ohms	Yes
0 to 600 ohms	Yes
0 to 3000 ohms	Yes
Thermocouple (TC)	
Temperature compensation	
Parameterizable	Yes
internal temperature compensation	Yes
external temperature compensation with compensations socket	Yes
Cable length	
Cable length, shielded, max.	30 m
Analog value creation	
Analog value display	SIMATIC S7 format
Measurement principle	integrating
Integrations and conversion time/ resolution per channel	
Resolution (incl. overrange)	15 bits + sign
Integration time, parameterizable	Yes
Integration time, ms	2/16.67/20/100 ms
Interference voltage suppression for interference frequency f1 in Hz	500 / 60 / 50 / 10 Hz
Conversion time (per channel)	4/19/22/102 ms
Smoothing of measured values	
Parameterizable	Yes
Step: None	Yes ; 1 x cycle time
Step: low	Yes ; 4 x cycle time
Step: Medium	Yes ; 16 x cycle time
Step: High	Yes ; 64 x cycle time
Encoder	
Number of connectable encoders, max.	8
Connection of signal encoders	
for voltage measurement	Yes
for current measurement as 2-wire transducer	Yes

for current measurement as 4-wire transducer	Yes
for resistance measurement with 2-conductor connection	Yes
for resistance measurement with 3-conductor connection	Yes
for resistance measurement with 4-conductor connection	Yes
Errors/accuracies	
Linearity error (relative to input area)	+/- 0,01 %
Temperature error (relative to input area)	U: 0.0035%/°C; I: 0.006%/°C; RTD: 0.0005%/°C; TC: 0.0035%/°C
Crosstalk between the inputs, min.	85 dB
Repeat accuracy in settled status at 25 °C (relative to input area)	+/- 0,008 %
Interference voltage suppression for $f = n \times (f_l \pm 1\%)$, f_l = interference frequency	
Series mode interference (peak value of interference < rated value of input range), min.	46 dB
Common mode interference, min.	70 dB
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	
Alarms	
Diagnostic alarm	Yes
Diagnostic messages	
Diagnostic functions	Yes
Diagnostic information readable	Yes
Monitoring the supply voltage	Yes ; Green "ON" LED
Short circuit encoder supply	Yes ; per module
Group error	Yes ; Red/yellow "SF/MT" LED
Overflow/underflow	Yes
Galvanic isolation	
between the load voltages	Yes
between load voltage and all other switching components	No
between Ethernet and electronics	Yes
Galvanic isolation analog inputs	
between the channels	No
Permissible potential difference	
between inputs and MANA (UCM)	10 Vpp AC
Isolation	
tested with	
24 V DC circuits	500 V
Interface	1500 V ; According to IEEE 802.3
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 19, 2012