



SIMATIC DP, ET 200ECO PN, 8 AI (4 U/I+4 RTD/TC); 8x M12, Degree of protection IP67

Figure similar

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.	110 mA
Encoder supply	
Number of outputs	4
24 V encoder supply	
<ul style="list-style-type: none"> Short-circuit protection 	Yes; Electronic at 1.4 A
<ul style="list-style-type: none"> Output current, max. 	1 A
Power loss	
Power loss, typ.	2.8 W
Analog inputs	
Number of analog inputs	8
<ul style="list-style-type: none"> For voltage/current measurement 	4
<ul style="list-style-type: none"> 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	
<ul style="list-style-type: none"> 0 to +10 V 	Yes
<ul style="list-style-type: none"> 1 V to 5 V 	Yes
<ul style="list-style-type: none"> -10 V to +10 V 	Yes
<ul style="list-style-type: none"> -80 mV to +80 mV 	Yes
Input ranges (rated values), currents	
<ul style="list-style-type: none"> 0 to 20 mA 	Yes
<ul style="list-style-type: none"> -20 mA to +20 mA 	Yes
<ul style="list-style-type: none"> 4 mA to 20 mA 	Yes
Input ranges (rated values), thermocouples	
<ul style="list-style-type: none"> Type E 	Yes
<ul style="list-style-type: none"> Type J 	Yes
<ul style="list-style-type: none"> Type K 	Yes
<ul style="list-style-type: none"> Type N 	Yes
Input ranges (rated values), resistance thermometer	

• 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	
• shielded, max.	30 m
Analog value generation for the inputs	
Analog value display	SIMATIC S7 format
Measurement principle	integrating
Integration and conversion time/resolution per channel	
• Resolution with overrange (bit including sign), max.	16 bit
• 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; 1x cycle time
• Step: low	Yes; 4x cycle time
• Step: Medium	Yes; 16x cycle time
• Step: High	Yes; 64x 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 two-wire connection	Yes
• for resistance measurement with three-wire connection	Yes
• for resistance measurement with four-wire connection	Yes
Errors/accuracies	
Linearity error (relative to input range), (+/-)	0.01 %
Temperature error (relative to input range), (+/-)	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 steady state at 25 °C (relative to input range), (+/-)	0.008 %
Interference voltage suppression for $f = n \times (f1 \pm 1 \%)$, $f1 =$ 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
Number of PROFINET interfaces	1
1. Interface	
Interface types	
<ul style="list-style-type: none"> • M12 port • integrated switch 	<p>Yes</p> <p>Yes</p>
Interface types	
M12 port	
<ul style="list-style-type: none"> • Autonegotiation • Autocrossing • Transmission rate, max. 	<p>Yes</p> <p>Yes</p> <p>100 Mbit/s</p>
Protocols	
Supports protocol for PROFINET IO	Yes
PROFINET CBA	No
PROFIsafe	No
PROFINET IO Device	
Services	
<ul style="list-style-type: none"> — IRT with the option "high flexibility" — Prioritized startup 	<p>Yes</p> <p>Yes</p>
Redundancy mode	
Media redundancy	
<ul style="list-style-type: none"> — MRP 	Yes
Open IE communication	
<ul style="list-style-type: none"> • TCP/IP • SNMP • DCP • LLDP • ping • ARP 	<p>No</p> <p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p>
Interrupts/diagnostics/status information	
Diagnostics function	Yes
Alarms	
<ul style="list-style-type: none"> • Diagnostic alarm 	Yes
Diagnoses	
<ul style="list-style-type: none"> • Diagnostic information readable • Monitoring the supply voltage • Short-circuit encoder supply • Group error • Overflow/underflow 	<p>Yes</p> <p>Yes; green "ON" LED</p> <p>Yes; per module</p> <p>Yes; Red/yellow "SF/MT" LED</p> <p>Yes</p>
Potential separation	
between the load voltages	Yes
between load voltage and all other switching components	No
between Ethernet and electronics	Yes
Potential separation channels	
<ul style="list-style-type: none"> • between the channels 	No
Permissible potential difference	
Between the inputs and MANA (UCM)	10 Vpp AC
Isolation	
tested with	
<ul style="list-style-type: none"> • 24 V DC circuits • Test voltage for interface, rms value [Vrms] 	<p>707 V DC (type test)</p> <p>1 500 V; According to IEEE 802.3</p>
Degree and class of protection	
IP degree of protection	IP65/67
Standards, approvals, certificates	
Suitable for applications according to AMS 2750	Yes; Declaration of Conformity, see online support entry 109757262
Suitable for applications according to CQI-9	Yes; Based on AMS 2750 E
connection method / header	
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
last modified:	9/27/2021 