

SIMATIC DP, ET 200ECO PN, 8 AI 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; against destruction |
| Input current   |                          |
| Current consumption, typ.   | 110 mA                   |
| Power loss  |                          |
| Power loss, typ.  | 2.8 W                    |
| Analog inputs   |                          |
| Number of analog inputs   | 8                        |
| <ul style="list-style-type: none"> <li>For resistance/resistance thermometer measurement</li> </ul> | 8                        |
| Input ranges (rated values), voltages   |                          |
| <ul style="list-style-type: none"> <li>-80 mV to +80 mV</li> </ul>                                  | Yes                      |

| Input ranges (rated values), thermocouples                             |                       |
|--|-----------------------|
| • Type E   | Yes                   |
| • Type J   | Yes                   |
| • Type K   | Yes                   |
| • 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 Pt100                         | Yes                   |
| — external temperature compensation with compensations socket          | Yes                   |
| — dynamic reference temperature value                                  | Yes                   |
| — for definable comparison point temperature                           | 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            |
| <b>Smoothing of measured values</b>   |                                 |
| • 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             |
| <b>Encoder</b>  |                                 |
| Number of connectable encoders, max.  | 8                               |
| <b>Connection of signal encoders</b>  |                                 |
| • for resistance measurement with two-wire connection   | Yes                             |
| • for resistance measurement with three-wire connection   | Yes                             |
| • for resistance measurement with four-wire connection  | Yes                             |
| <b>Errors/accuracies</b>  |                                 |
| Linearity error (relative to input range), (+/-)  | 0.01 %                          |
| Temperature error (relative to input range), (+/-)  | 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 %                         |
| <b>Interference voltage suppression for <math>f = n \times (f_1 \pm 1 \%)</math>, <math>f_1</math> = interference frequency</b> |                                 |
| • Series mode interference (peak value of interference < rated value of input range), min.                                      | 46 dB                           |
| • Common mode interference, min.  | 70 dB                           |
| <b>Interfaces</b>   |                                 |
| Transmission procedure  | 100BASE-TX                      |
| Number of PROFINET interfaces   | 1                               |
| <b>1. Interface</b>   |                                 |
| <b>Interface types</b>  |                                 |
| • integrated switch   | Yes                             |
| <b>Interface types</b>  |                                 |
| <b>M12 port</b>   |                                 |
| • Autonegotiation   | Yes                             |
| • Autocrossing  | Yes                             |
| • Transmission rate, max.   | 100 Mbit/s                      |
| <b>Protocols</b>  |                                 |
| Supports protocol for PROFINET IO   | Yes                             |
| PROFINET CBA  | No                              |
| PROFIsafe   | No                              |

|   |  |
|---|--|
| <b>PROFINET IO Device</b>                               |  |
| <b>Services</b>   |  |
| — Prioritized startup                                   | Yes  |
| <b>Redundancy mode</b>                                  |  |
| <b>Media redundancy</b>                                 |  |
| — MRP   | Yes  |
| <b>Open IE communication</b>                            |  |
| • TCP/IP  | No   |
| • SNMP  | Yes  |
| • DCP   | Yes  |
| • LLDP  | Yes  |
| • ping  | Yes  |
| • ARP   | Yes  |
| <b>Interrupts/diagnostics/status information</b>        |  |
| Diagnostics function                                    | Yes  |
| <b>Alarms</b>   |  |
| • Diagnostic alarm                                      | Yes  |
| <b>Diagnostic messages</b>                              |  |
| • Diagnostic information readable                       | Yes  |
| • Monitoring the supply voltage                         | Yes; green "ON" LED  |
| • Group error   | Yes; Red/yellow "SF/MT" LED  |
| • Overflow/underflow                                    | Yes  |
| <b>Potential separation</b>                             |  |
| between the load voltages                               | Yes  |
| between load voltage and all other switching components | No   |
| between Ethernet and electronics                        | Yes  |
| <b>Potential separation channels</b>                    |  |
| • between the channels                                  | No   |
| <b>Permissible potential difference</b>                 |  |
| Between the inputs and MANA (UCM)                       | 10 Vpp AC  |
| <b>Isolation</b>  |  |
| 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                                   |
| <b>Degree and class of protection</b>                   |  |
| IP degree of protection                                 | IP65/67  |
| <b>Standards, approvals, certificates</b>               |  |
| 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

|                                 |                                 |
|---------------------------------|---------------------------------|
| 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 |
|-----------------|-------|

|                       |            |
|-----------------------|------------|
| <b>last modified:</b> | 04/10/2020 |
|-----------------------|------------|