

SIMATIC DP, ELECTRONIC MODULE FOR ET200S, 2 AO U HIGH SPEED, 15 MM WIDTH, +/-10V, +/-5V, 1.. 5V; 16BIT, CYCLE TIME: 0.1 MS WITH LED SF (GROUP FAULT)



| Supply voltage                              |                         |
|---------------------------------------------|-------------------------|
| Load voltage L+                             |                         |
| • Rated value (DC)                          | 24 V; From power module |
| • Reverse polarity protection               | Yes                     |
| Input current                               |                         |
| from load voltage L+ (without load), max.   | 130 mA                  |
| from backplane bus 3.3 V DC, max.           | 10 mA                   |
| Power loss                                  |                         |
| Power loss, typ.                            | 2.2 W                   |
| Address area                                |                         |
| Address space per module                    |                         |
| • Address space per module, max.            | 4 byte                  |
| Analog outputs                              |                         |
| Number of analog outputs                    | 2                       |
| Voltage output, short-circuit protection    | Yes                     |
| Voltage output, short-circuit current, max. | 25 mA                   |
| Cycle time (all channels) max.              | 0.25 ms                 |

|                                                                            |                                                                           |
|----------------------------------------------------------------------------|---------------------------------------------------------------------------|
| Output ranges, voltage                                                     |                                                                           |
| • 1 V to 5 V                                                               | Yes                                                                       |
| • -5 V to +5 V                                                             | Yes                                                                       |
| • -10 V to +10 V                                                           | Yes                                                                       |
| Connection of actuators                                                    |                                                                           |
| • for voltage output two-wire connection                                   | Yes; Without compensation of the line resistances                         |
| • for voltage output four-wire 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; 0.1 $\mu$ F for Twa=0.1 ms                                     |
| Destruction limits against externally applied voltages and currents        |                                                                           |
| • Voltages at the outputs towards MANA                                     | 15 V; Max. 15 V for max. 5 hours, 75 V for max. 1 s                       |
| • Current, max.                                                            | 30 mA; DC                                                                 |
| Cable length                                                               |                                                                           |
| • shielded, max.                                                           | 200 m; Max. 20 m for TWA 100 $\mu$ s                                      |
| Analog value generation for the outputs                                    |                                                                           |
| Integration and conversion time/resolution per channel                     |                                                                           |
| • Resolution with overrange (bit including sign), max.                     | 16 bit; 1 to 5 V: 14 bits, +/-10 V: 15 bit + sign, +/-5 V: 14 bits + sign |
| Settling time                                                              |                                                                           |
| • for resistive load                                                       | 0.05 ms                                                                   |
| • for capacitive load                                                      | 0.05 ms                                                                   |
| • for inductive load                                                       | 0.05 ms                                                                   |
| Errors/accuracies                                                          |                                                                           |
| Output ripple (relative to output range, bandwidth 0 to 50 kHz), (+/-)     | 0.02 %                                                                    |
| Linearity error (relative to output range), (+/-)                          | 0.03 %                                                                    |
| Temperature error (relative to output range), (+/-)                        | 0.01 %/K                                                                  |
| Crosstalk between the outputs, min.                                        | 60 dB                                                                     |
| Repeat accuracy in steady state at 25 °C (relative to output range), (+/-) | 0.03 %                                                                    |
| Operational error limit in overall temperature range                       |                                                                           |
| • Voltage, relative to output range, (+/-)                                 | 0.2 %                                                                     |
| Basic error limit (operational limit at 25 °C)                             |                                                                           |
| • Voltage, relative to output range, (+/-)                                 | 0.01 %                                                                    |
| Isochronous mode                                                           |                                                                           |
| Isochronous operation (application synchronized up to terminal)            | Yes                                                                       |
| Interrupts/diagnostics/status information                                  |                                                                           |
| Substitute values connectable                                              | Yes; 0 to 65535 (range of values must be within the rated range)          |
| Diagnostic messages                                                        |                                                                           |

|                                   |     |
|-----------------------------------|-----|
| • Diagnostic information readable | Yes |
| • Wire-break                      | No  |
| • Short-circuit                   | Yes |
| • Group error                     | Yes |
| Diagnostics indication LED        |     |
| • Group error SF (red)            | Yes |

| Parameter                   |                                                                    |
|-----------------------------|--------------------------------------------------------------------|
| Remark                      | 7 byte                                                             |
| Diagnostics short-circuit   | Disable / enable                                                   |
| Output type/range           | deactivated / 1 to 5 V / +/- 10 V / +/- 5 V                        |
| Group diagnostics           | Disable / enable                                                   |
| Response to CPU/master STOP | Output current and de-energized/substitute a value/keep last value |

| Potential separation                       |     |
|--------------------------------------------|-----|
| Potential separation analog outputs        |     |
| • between the channels                     | No  |
| • between the channels and backplane bus   | Yes |
| • Between the channels and load voltage L+ | Yes |

| Permissible potential difference     |                 |
|--------------------------------------|-----------------|
| between MANA and M internally (UISO) | 75 V DC/60 V AC |

| Isolation             |          |
|-----------------------|----------|
| Isolation tested with | 500 V DC |

| Dimensions |       |
|------------|-------|
| Width      | 15 mm |
| Height     | 81 mm |
| Depth      | 52 mm |

| Weights         |      |
|-----------------|------|
| Weight, approx. | 40 g |

**last modified:** 03/07/2017 