

SIMATIC DP, ELECTRONIC MODULE FOR ET 200S, 2 AI STAND.  
I-4DMU 15 MM WIDE, +/-20MA; 13 BIT + SIGN,4 .. 20MA; 12 BIT  
FOR 4-WIRE TRANSDUCER CYCLE TIME 65 MS/CHANNEL WITH  
LED SF (GROUP FAULT)



|                                                                       |                                                              |
|-----------------------------------------------------------------------|--------------------------------------------------------------|
| Supply voltage                                                        |                                                              |
| Load voltage L+                                                       |                                                              |
| • Rated value (DC)                                                    | 24 V; From power module                                      |
| Input current                                                         |                                                              |
| from load voltage L+ (without load), max.                             | 30 mA                                                        |
| from backplane bus 3.3 V DC, max.                                     | 10 mA                                                        |
| Power loss                                                            |                                                              |
| Power loss, typ.                                                      | 0.6 W                                                        |
| Address area                                                          |                                                              |
| Address space per module                                              |                                                              |
| • Address space per module, max.                                      | 4 byte                                                       |
| Analog inputs                                                         |                                                              |
| Number of analog inputs                                               | 2                                                            |
| permissible input current for current input (destruction limit), max. | 40 mA                                                        |
| Cycle time (all channels) max.                                        | Number of active channels per module x basic conversion time |
| Input ranges                                                          |                                                              |

|                                                                                                     |                                                   |
|-----------------------------------------------------------------------------------------------------|---------------------------------------------------|
| • Voltage                                                                                           | No                                                |
| • Current                                                                                           | Yes                                               |
| • Thermocouple                                                                                      | No                                                |
| • Resistance thermometer                                                                            | No                                                |
| • Resistance                                                                                        | No                                                |
| Input ranges (rated values), currents                                                               |                                                   |
| • -20 mA to +20 mA                                                                                  | Yes; 50 Ohm                                       |
| • 4 mA to 20 mA                                                                                     | Yes; 50 Ohm                                       |
| Cable length                                                                                        |                                                   |
| • shielded, max.                                                                                    | 200 m                                             |
| Analog value generation for the inputs                                                              |                                                   |
| Measurement principle                                                                               | integrating                                       |
| Integration and conversion time/resolution per channel                                              |                                                   |
| • Resolution with overrange (bit including sign), max.                                              | 14 bit; $\pm 20$ mA: 14 bits, 4 to 20 mA: 13 bits |
| • Integration time (ms)                                                                             | 16,7 / 20 ms                                      |
| • Interference voltage suppression for interference frequency f1 in Hz                              | 50 / 60 Hz                                        |
| • Conversion time (per channel)                                                                     | 65 ms; 55 / 65 ms                                 |
| Smoothing of measured values                                                                        |                                                   |
| • parameterizable                                                                                   | Yes; In four stages by means of digital filtering |
| • Step: None                                                                                        | Yes; 1 x cycle time                               |
| • Step: low                                                                                         | Yes; 4 x cycle time                               |
| • Step: Medium                                                                                      | Yes; 32 x cycle time                              |
| • Step: High                                                                                        | Yes; 64 x cycle time                              |
| Encoder                                                                                             |                                                   |
| Connection of signal encoders                                                                       |                                                   |
| • for current measurement as 2-wire transducer<br>— Burden of 2-wire transmitter, max.              | 750 $\Omega$                                      |
| Errors/accuracies                                                                                   |                                                   |
| Linearity error (relative to input range), (+/-)                                                    | 0.01 %                                            |
| Temperature error (relative to input range), (+/-)                                                  | 0.005 %/K                                         |
| Crosstalk between the inputs, min.                                                                  | -50 dB                                            |
| Repeat accuracy in steady state at 25 °C (relative to input range), (+/-)                           | 0.05 %                                            |
| Operational error limit in overall temperature range                                                |                                                   |
| • Current, relative to input range, (+/-)                                                           | 0.6 %                                             |
| Basic error limit (operational limit at 25 °C)                                                      |                                                   |
| • Current, relative to input range, (+/-)                                                           | 0.4 %                                             |
| Interference voltage suppression for $f = n \times (f_1 \pm 1 \%)$ , $f_1$ = interference frequency |                                                   |

- Series mode interference (peak value of interference < rated value of input range), min.

70 dB

### Isochronous mode

Isochronous operation (application synchronized up to terminal)

No

### Interrupts/diagnostics/status information

#### Diagnostic messages

- Wire-break Yes; Measuring range 4 to 20 mA only
- Group error Yes
- Overflow/underflow Yes

#### Diagnostics indication LED

- Group error SF (red) Yes

### Parameter

|                        |                                                       |
|------------------------|-------------------------------------------------------|
| Remark                 | 4 byte                                                |
| Diagnostics wire break | Disable / enable (only in measuring range 4 to 20 mA) |
| Measurement type/range | deactivated / $\pm 20$ mA / 4 to 20 mA                |
| Group diagnostics      | Disable / enable                                      |
| Overflow/underflow     | Disable / enable                                      |

### Potential separation

#### Potential separation analog inputs

- between the channels No
- between the channels and backplane bus Yes
- Between the channels and load voltage L+ No

### Isolation

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

### Dimensions

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

### Weights

|        |      |
|--------|------|
| Weight | 40 g |
|--------|------|

**last modified:** 11/21/2017