



SIMATIC DP, ELECTRONIC MODULE FOR ET 200S, 2 AO I HIGH SPEED 15 MM WIDE, +/-20 mA; 16 BIT, 4 . .20 mA; 16 BIT CYCLE TIME 0.1 MS WITH LED SF (GROUP FAULT)

Figure similar

### Supply voltage

#### Load voltage L+

- |                               |      |
|-------------------------------|------|
| • Rated value (DC)            | 24 V |
| • Reverse polarity protection | Yes  |

### Input current

- |   |                   |
|---|-------------------|
| from load voltage L+ (without load), max. | 150 mA; With load |
| from backplane bus 3.3 V DC, max.         | 10 mA             |

### Power losses

- |                  |                |
|------------------|----------------|
| Power loss, max. | 2.4 W; Typical |
|------------------|----------------|

### Address area

#### Address space per module

- |                                  |        |
|----------------------------------|--------|
| • Address space per module, max. | 4 byte |
|----------------------------------|--------|

### Analog outputs

- |                                       |             |
|---------------------------------------|-------------|
| Number of analog outputs              | 2           |
| Current output, no-load voltage, max. | 18 V        |
| Cycle time (all channels) max.        | 250 $\mu$ s |

#### Output ranges, current

- |                    |     |
|--------------------|-----|
| • -20 mA to +20 mA | Yes |
| • 4 mA to 20 mA    | Yes |

#### Connection of actuators

- |  |     |
|--|-----|
| • for current output two-wire connection | Yes |
|--|-----|

#### Load impedance (in rated range of output)

- |                              |              |
|------------------------------|--------------|
| • with current outputs, max. | 500 $\Omega$ |
|------------------------------|--------------|

• with current outputs, inductive load, max.	1 mH; for TWA 100µs
<b>Destruction limits against externally applied voltages and currents</b>	
• Current, max.	15 mA; Max. 15 V / 5 hours (higher voltages not permissible even briefly)
<b>Cable length</b>	
• shielded, max.	200 m; Max. 20 m for TWA 100 µs

<b>Analog value creation</b>	
<b>Integration and conversion time/resolution per channel</b>	
• Resolution with overrange (bit including sign), max.	16 bit
<b>Settling time</b>	
• for resistive load	0.05 ms
• for capacitive load	0.05 ms; at a load of up to 500 ohms/100 nF and a max. cable length of 20 m
• for inductive load	0.05 ms

<b>Errors/accuracies</b>	
Output ripple (based on output area, bandwidth 0 to 50 kHz), (+/-)	0.02 %
Linearity error (relative to output range), (+/-)	0.03 %; with resistive load
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 area), (+/-)	0.03 %
<b>Operational limit in overall temperature range</b>	
• Current, relative to output area, (+/-)	0.2 %; Specified value applies to loads from 200 to 350 Ohm, deviating operational limits for loads up to 200 Ohm and from 350 to 500 Ohm with up to 0.4%
<b>Basic error limit (operational limit at 25 °C)</b>	
• Current, relative to output area, (+/-)	0.1 %; Specified value applies for loads from 200 to 350 ohms, deviating basic error limits for loads up to 200 ohms and from 350 to 500 ohms with up to 0.3%

<b>Isochronous mode</b>	
Isochronous operation (application synchronized up to terminal)	Yes

<b>Interrupts/diagnostics/status information</b>	
Substitute values connectable	Yes
<b>Diagnostic messages</b>	
• Diagnostic functions	Yes
• Diagnostic information readable	Yes
• Wire break	Yes
• Group error	Yes
<b>Diagnostics indication LED</b>	
• Group error SF (red)	Yes

Parameter	
Remark	7 byte
Output type/range	deactivated / +/-20 mA / 4 to 20 mA
Diagnosis: wire break	Disable / enable
Group diagnostics	Disable / enable
Behavior on CPU/Master STOP	Output current and de-energized/substitute a value/keep last value

Galvanic isolation	
Galvanic isolation analog outputs	
• Galvanic isolation analog outputs	Yes
• between the channels	No
• between the channels and the backplane bus	Yes
• between the channels and the load voltage L+	Yes

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

Isolation	
Isolation checked with	500 V DC

Dimensions	
Width	15 mm
Height	81 mm
Depth	52 mm

Weights	
Weight, approx.	45 g

**last modified:** 12.03.2015