

SIMATIC DP, Electronics module f. ET200S, 2 AO U, 15 mm width, +/-10V; 13 bit+sign, 1..5 V; 12 bit, Cycle time less than 1 ms with SF LED (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, max.	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.	1.5 ms

<b>Output ranges, voltage</b>	
• 1 V to 5 V	Yes
• -10 V to +10 V	Yes
<b>Connection of actuators</b>	
• for voltage output two-wire connection	Yes; Without compensation of the line resistances
• for voltage output four-wire connection	Yes
<b>Load impedance (in rated range of output)</b>	
• with voltage outputs, min.	1 k $\Omega$
• with voltage outputs, capacitive load, max.	1 $\mu$ F
<b>Destruction limits against externally applied voltages and currents</b>	
• Voltages at the outputs towards MANA	15 V; max. 15 V continuous; 75 V for max. 1 s (mark to space ratio 1:20)
• Current, max.	50 mA; DC
<b>Cable length</b>	
• shielded, max.	200 m
<b>Analog value generation for the outputs</b>	
<b>Integration and conversion time/resolution per channel</b>	
• Resolution with overrange (bit including sign), max.	14 bit; 1 to 5 V: 12 bit, $\pm$ 10 V: 13 bit + sign
<b>Settling time</b>	
• for resistive load	0.1 ms
• for capacitive load	0.5 ms
• for inductive load	0.5 ms
<b>Errors/accuracies</b>	
Output ripple (relative to output range, bandwidth 0 to 50 kHz), (+/-)	0.02 %
Linearity error (relative to output range), (+/-)	0.02 %
Temperature error (relative to output range), (+/-)	0.01 %/K
Crosstalk between the outputs, min.	-40 dB
Repeat accuracy in steady state at 25 °C (relative to output range), (+/-)	0.05 %
<b>Operational error limit in overall temperature range</b>	
• Voltage, relative to output range, (+/-)	0.4 %
<b>Basic error limit (operational limit at 25 °C)</b>	
• Voltage, relative to output range, (+/-)	0.2 %
<b>Isochronous mode</b>	
Isochronous operation (application synchronized up to terminal)	No
<b>Interrupts/diagnostics/status information</b>	
Substitute values connectable	Yes; 0 to 65535 (range of values must be within the rated range)
<b>Diagnostic messages</b>	
• Diagnostic information readable	Yes

• Short-circuit	Yes
• Group error	Yes
<b>Diagnostics indication LED</b>	
• Group error SF (red)	Yes

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

<b>Potential separation</b>	
<b>Potential separation analog outputs</b>	
• between the channels	No
• between the channels and backplane bus	Yes
• Between the channels and load voltage L+	Yes

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

<b>Isolation</b>	
Isolation tested with	500 V DC

<b>Dimensions</b>	
Width	15 mm
Height	81 mm
Depth	52 mm

<b>Weights</b>	
Weight, approx.	40 g

**last modified:** 05/09/2019