

SIMATIC DP, Electronics module for ET 200S, 2/4 AI RTD Standard, 15 mm width, 15 bit+sign Pt100 STD; Pt100 KL; NI100 STD; NI100 KL; 150 ohm; 300 ohm; 600 ohm; Cycle time 110 ms/channel with SF LED (group fault)



General information	
Product function	
• Isochronous mode	No
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.	30 mA
from backplane bus 3.3 V DC, max.	10 mA
Output voltage	
Power supply to the transmitters	
• present	Yes
Power loss	
Power loss, typ.	0.6 W
Address area	
Address space per module	

- Address space per module, max. 8 byte

Analog inputs

Number of analog inputs	4; 2 for 3 or 4-wire connection
permissible input voltage for voltage input (destruction limit), max.	9 V
Constant measurement current for resistance-type transmitter, typ.	1.67 mA
Cycle time (all channels) max.	Number of active channels per module x basic conversion time
Technical unit for temperature measurement adjustable	No

Input ranges (rated values), resistance thermometer

- Ni 100
 - Input resistance (Ni 100) 2 000 kΩ
- Pt 100
 - Input resistance (Pt 100) 2 000 kΩ

Input ranges (rated values), resistors

- 0 to 150 ohms
 - Input resistance (0 to 150 ohms) 2 000 kΩ
- 0 to 300 ohms
 - Input resistance (0 to 300 ohms) 2 000 kΩ
- 0 to 600 ohms
 - Input resistance (0 to 600 ohms) 2 000 kΩ

Characteristic linearization

- parameterizable
 - for resistance thermometer Pt100 (standard, climatic range), Ni100 (standard, climatic range)

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.	16 bit; 150 ohms: 14 bit; 300, 600 ohms: 15 bit, Pt100, Ni100: 16 bit
• Integration time, parameterizable	Yes
• Integration time (ms)	16,7 / 20 ms
• Interference voltage suppression for interference frequency f1 in Hz	50 / 60 Hz
• Conversion time (per channel)	66 / 80 ms; additional conversion time for diagnostic wire break test
Smoothing of measured values	
• parameterizable	Yes; In four stages by means of digital filtering
• Step: None	Yes; 1x cycle time
• Step: low	Yes; 4x cycle time

- Step: Medium
- Step: High

Yes; 32x cycle time

Yes; 64x cycle time

Encoder

Connection of signal encoders

- for resistance measurement with two-wire connection
- for resistance measurement with three-wire connection
- for resistance measurement with four-wire connection

Yes

Yes

Yes

Errors/accuracies

Operational error limit in overall temperature range

- Resistance thermometer, relative to input range, (+/-)

0.6 %

Basic error limit (operational limit at 25 °C)

- Resistance thermometer, relative to input range, (+/-)

0.4 %

Interrupts/diagnostics/status information

Diagnoses

- Wire-break
- Group error
- Overflow/underflow

Yes

Yes

Yes

Diagnostics indication LED

- Group error SF (red)

Yes

Parameter

Diagnostics wire break

Disable / enable

Measurement type/range

deactivated/150 ohms/; 300 ohms/600 ohms/ Pt100 climatic/ Pt100 standard; Ni100 standard / Ni100 climatic, 2, 3 or 4-wire

Group diagnostics

Disable / enable

Overflow/underflow

Disable / enable

Potential separation

Potential separation analog inputs

- between the channels
- between the channels and backplane bus
- Between the channels and load voltage L+

No

Yes

Yes

Isolation

Isolation tested with

500 V DC

Dimensions

Width

15 mm

Height

81 mm

Depth	52 mm
Weights	
Weight, approx.	40 g
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