



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	
<ul style="list-style-type: none"> • Isochronous mode 	No
Supply voltage	
Load voltage L+	
<ul style="list-style-type: none"> • Rated value (DC) • Reverse polarity protection 	24 V; From power module Yes
Input current	
from load voltage L+ (without load), max.	30 mA
from backplane bus 3.3 V DC, max.	10 mA
output voltage / header	
supply voltage of the transmitters / header	
<ul style="list-style-type: none"> • present • short-circuit proof 	Yes Yes
Power loss	
Power loss, typ.	0.6 W
Address area	
Address space per module	
<ul style="list-style-type: none"> • 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	
<ul style="list-style-type: none"> • Ni 100 <ul style="list-style-type: none"> — Input resistance (Ni 100) • Pt 100 <ul style="list-style-type: none"> — Input resistance (Pt 100) 	Yes; Standard/climate 2 000 kΩ Yes; Standard/climate 2 000 kΩ
Input ranges (rated values), resistors	
<ul style="list-style-type: none"> • 0 to 150 ohms <ul style="list-style-type: none"> — Input resistance (0 to 150 ohms) • 0 to 300 ohms <ul style="list-style-type: none"> — Input resistance (0 to 300 ohms) • 0 to 600 ohms <ul style="list-style-type: none"> — Input resistance (0 to 600 ohms) 	Yes 2 000 kΩ Yes 2 000 kΩ Yes 2 000 kΩ
Characteristic linearization	

<ul style="list-style-type: none"> parameterizable — for resistance thermometer 	Yes; for Pt100, Ni100 Pt100 (standard, climatic range), Ni100 (standard, climatic range)
Cable length	
<ul style="list-style-type: none"> shielded, max. 	200 m
Analog value generation for the inputs	
Measurement principle	integrating
Integration and conversion time/resolution per channel	
<ul style="list-style-type: none"> Resolution with overrange (bit including sign), max. Integration time, parameterizable Integration time (ms) Interference voltage suppression for interference frequency f1 in Hz Conversion time (per channel) 	16 bit; 150 ohms: 14 bit; 300, 600 ohms: 15 bit, Pt100, Ni100: 16 bit Yes 16,7 / 20 ms 50 / 60 Hz 66 / 80 ms; additional conversion time for diagnostic wire break test
Smoothing of measured values	
<ul style="list-style-type: none"> parameterizable Step: None Step: low Step: Medium Step: High 	Yes; In four stages by means of digital filtering Yes; 1x cycle time Yes; 4x cycle time Yes; 32x cycle time Yes; 64x cycle time
Encoder	
Connection of signal encoders	
<ul style="list-style-type: none"> 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	
<ul style="list-style-type: none"> Resistance thermometer, relative to input range, (+/-) 	0.6 %
Basic error limit (operational limit at 25 °C)	
<ul style="list-style-type: none"> Resistance thermometer, relative to input range, (+/-) 	0.4 %
Interrupts/diagnostics/status information	
Diagnoses	
<ul style="list-style-type: none"> Wire-break Group error Overflow/underflow 	Yes Yes Yes
Diagnostics indication LED	
<ul style="list-style-type: none"> Group error SF (red) 	Yes
Parameter	
Diagnostics wire break	Disable / enable
Group diagnostics	Disable / enable
Overflow/underflow	Disable / enable
Potential separation	
Potential separation analog inputs	
<ul style="list-style-type: none"> 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
last modified:	4/1/2022 