SIEMENS

Data sheet

6ES7134-4JB51-0AB0



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 / header		
supply voltage of the transmitters / header		
• present	Yes	
 short-circuit proof 	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	Yes; Standard/climate	
— Input resistance (Ni 100)	2 000 kΩ	
• Pt 100	Yes; Standard/climate	
— Input resistance (Pt 100)	2 000 kΩ	
Input ranges (rated values), resistors		
• 0 to 150 ohms	Yes	
— Input resistance (0 to 150 ohms)	2 000 kΩ	
• 0 to 300 ohms	Yes	
— Input resistance (0 to 300 ohms)	2 000 kΩ	
• 0 to 600 ohms	Yes	
— Input resistance (0 to 600 ohms)	2 000 kΩ	
Characteristic linearization		

Cable length - shelded, max shelded, max.	parameterizable	Yes; for Pt100, Ni100
- shielded, max. Analog value generation for the Inputs Measurement principle - Resolution with overange (bit Including sign), max Integration time, parameterizable - Integration time (ms) - Integration time, parameterizable - Integration time (ms) - Integration t	•	
** shielded, max. Analog value generation for the inputs Measurement principle Integration and conversion time/resolution per channel ** Resolution with overlange (bit including sign), max. ** Integration time, parameterizable ** Integration time (parameterizable ** Integration time, parameterizable ** Integration time, paramet		Titoo (otanadia, olimatio tango), tittoo (otanadia, olimatio tango)
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Measurement principle integrating integrating integrating integrating integration and conversion time/resolution with overrance (bit including sign), max. I helagration time, parameterizable 1 helagration time, parameterizable 1 helagration time, parameterizable 50 / 80 Hz frequency or 1 hz 1 hz 2 hz 2 hz 2 hz 2 hz 2 hz 2 hz		
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		integrating
Resolution with overange (bit induding sign), max. Integration time, parameterzable Integration time (ms) Integration time (ms) Interference vottage suppression for interference frequency fill intz Conversion firm (gre channel) Interference vottage suppression for interference frequency fill intz Conversion firm (gre channel) Interference vottage suppression for interference frequency fill intz Conversion firm (gre channel) Interference vottage suppression for interference frequency fill intz Conversion firm (gre channel) Interference vottage suppression for interference frequency fill interference vottage suppression firm for diagnostic wire break test Stopp the vottages by means of digital filtering Ves; 1x cycle time Step: Nend Ves; 1x cycle time Step: Nend Ves; 4x cycle time Step: Nend Ves; 4x cycle time Step: Nend Ves; 4x cycle time Ves; 64x cycle time Fincoter Connection of signal encoders For resistance measurement with two-wire connection For resistance measurement with three-wire connection For resistance measurement with two-wire connection For resistance measurement with fore-wire connection For resistance measurement		
Integration time (ms)	•	16 bit; 150 ohms: 14 bit; 300, 600 ohms: 15 bit, Pt100, Ni100: 16 bit
Interference voltage suppression for interference frequency fin in tz Conversion time (per channel)	 Integration time, parameterizable 	Yes
fequency f1 in ftz Conversion time (per channel) Smoothing of measured values parameterizable Step: None Step: None Step: None Step: None Step: Medium Step: High Yes; 4x cycle time Yes; 52x cycle time Yes; 54x cycle time Yes; 64x cycle time Floodor Connection of signal encoders For resistance measurement with two-wire connection For resistance measurement with twe-wire connection For resistance measurement with four-wire connection Yes Poperational error limit in overall temperature range Resistance thermoneter, relative to input range, (+/-) Basic error limit (operational limit at 25 °C) Resistance thermoneter, relative to input range, (+/-) Basic error limit (operational limit at 25 °C) Resistance thermoneter, relative to input range, (+/-) Noterrupt-fiding-notific-status information Diagnoses Wire-break Group error Ves Group error Powerflow/underflow Yes Diagnostics indication LED Group error SF (red) Parameter Diagnostics wire break Diasble / enable Control asparation Potential separation Potential separation and backplane bus between the channels and load voltage L+ Yes Potential separation Solved the Step time Solved t	Integration time (ms)	16,7 / 20 ms
Smoothing of measured values • parameterizable • Step: None • Step: None • Step: Ibw • Step: Medium • Step: High • Step:		50 / 60 Hz
parameterizable Step: None Step:	Conversion time (per channel)	66 / 80 ms; additional conversion time for diagnostic wire break test
Step: None Step: low Step: low Step: low Step: Medium Step: High Pes: 34x cycle time Step: High Pes: 34x cycle time Pes: 34x cycle time Pes: 44x cycle time Pes: 54x cycle time Perioder Connection of signal encoders for resistance measurement with two-wire connection for resistance measurement with two-wire connection for resistance measurement with four-wire connection Pes: 64x cycle time Find a signal encoders For resistance measurement with two-wire connection For resistance measurement with four-wire connection Pes: 64x cycle time Find a signal encoders For resistance measurement with two-wire connection Pes: 64x cycle time Pes:	Smoothing of measured values	
Step: low Step: Medium Step: Medium Step: High Pes; 32x cycle time Pes; 32x cycle tim	 parameterizable 	Yes; In four stages by means of digital filtering
Step: Medium Step: High Yes; 32x cycle time Step: High Yes; 64x cycle time Connection of signal encoders • for resistance measurement with two-wire connection • for resistance measurement with four-wire connection • for resistance measurement with four-wire connection • for resistance measurement with four-wire connection **Errors/accuracies Operational error limit in overall temperature range • Resistance thermometer, relative to input range, (+/-) Basic error limit (operational limit at 25 °C) • Resistance thermometer, relative to input range, (+/-) **Disgnoses • Wire-break • Group error • Overflow/underflow Diagnoses • Wire-break • Group error • Overflow/underflow Diagnostics indication LED • Group error SF (red) • Group error SF (red) **Parameter Diagnostics wire break Croup diagnostics Disable / enable Overflow/underflow Disable / enable Overflow/underflow Disable / enable Overflow/underflow Disable / enable **Potential separation Potential separation analog inputs • between the channels • Detween the channels • Detween the channels and load voltage L+ Yes Basicion Isolation tested with Dimensions Width 15 mm Height Bit mm Depth Weights	Step: None	Yes; 1x cycle time
• Step: High Frooder Connection of signal encoders • for resistance measurement with two-wire connection • for resistance measurement with free-wire connection • for resistance measurement with four-wire connection • for resistance measurement with four-wire connection • for resistance measurement with four-wire connection Frood-forcuracies Operational error limit in overall temperature range • Resistance thermometer, relative to input range, (+/-) • Resistance thermometer, relative to input range, (+/-) • Resistance thermometer, relative to input range, (+/-) Interrupts/diagnostics/status information Diagnoses • Wire-break • Group error • Overflow/underflow Diagnostics indication LED • Group error SF (red) Parameter Diagnostics wire break Group diagnostics Overflow/underflow Diagnostics wire break Croup diagnostics Overflow/underflow Diagnostics wire break Diagnostics break Diagnostics break Diagnostics break Overflow/underflow Diagnostics break Food diagnostics Overflow/underflow Diagnostics break Diagnostics break Diagnostics break Food diagnostics Overflow/underflow Diagnostics break Food diagnostics Food diagnostics diagnosti	Step: low	Yes; 4x cycle time
Encoder Connection of signal encoders • for resistance measurement with two-wire connection • for resistance measurement with four-wire connection Errors/accuracies Operational error limit in overall temperature range • Resistance thermometer, relative to input range, (+/-) • Resist	Step: Medium	Yes; 32x cycle time
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 • for resistance thermometer, relative to input range, (*/-) • A % Interrupts/diagnostics/status Information Diagnoses • Wire-break • Group error • Overflow/underflow • Yes Diagnostics indication LED • Group error SF (red) • Yes Parameter Diagnostics wire break Disable / enable Group diagnostics Disable / enable Overflow/underflow Disable / enable Potential separation analog inputs • Detential separation analog inputs • Disable / enable Disable / enable	Step: High	Yes; 64x cycle time
for resistance measurement with two-wire connection for resistance measurement with three-wire connection for resistance measurement with four-wire connection for resistance measurement with four-wire connection For resistance measurement with four-wire connection For resistance thermometer, relative to input range, (+/-) O.4 %	Encoder	
• for resistance measurement with three-wire connection • for resistance measurement with four-wire connection • for resistance measurement with four-wire connection Petrors/faccuractes Operational error limit in overall temperature range • Resistance thermometer, relative to input range, (+/-) Basic error limit (operational limit at 25 °C) • Resistance thermometer, relative to input range, (+/-) Interrupts/faignestics/status information Diagnoses • Wire-break • Yes • Group error • Veridow/underflow Diagnostics indication LED • Group error SF (red) Parameter Diagnostics wire break Group diagnostics Disable / enable Group diagnostics Disable / enable Overflow/underflow Disable / enable Potential separation Potential separation analog inputs • between the channels and backplane bus • between the channels and load voltage L+ Yes Isolation Isolation tested with 500 V DC Dimensions Width 15 mm Height Depth 52 mm Wordphts	Connection of signal encoders	
• for resistance measurement with four-wire connection Errors/accuracies Operational error limit in overall temperature range • Resistance thermometer, relative to input range, (+/-) Basic error limit (operational limit at 25 °C) • Resistance thermometer, relative to input range, (+/-) Interrupts/diagnostlcs/status information Diagnoses • Wire-break Yes • Group error Yes • Overflow/underflow Yes Diagnostics indication LED • Group error SF (red) Yes Parameter Diagnostics wire break Disable / enable Group diagnostics Disable / enable Overflow/underflow Disable / enable Potential separation Potential separation Potential separation Potential separation analog inputs • between the channels and backplane bus Yes • Between the channels and load voltage L+ Yes Isolation Isolation tested with 500 V DC Dimensions Width 15 mm Height 81 mm Depth 52 mm Woights	 for resistance measurement with two-wire connection 	Yes
Errors/accuracies Operational error limit in overall temperature range • Resistance thermometer, relative to input range, (+/-) Interrupts/diagnostics/status information Diagnoses • Wire-break • Group error • Overflow/underflow • Group error Yes • Group error SF (red) • Group error SF (red) • Group error SF (red) • Parameter Diagnostics wire break Group diagnostics Overflow/underflow Disable / enable Overflow/underflow Disable / enable Potential separation Potential separation analog inputs • between the channels and backplane bus • between the channels and backplane bus • Between the channels and load voltage L+ Isolation Isolation tested with 500 V DC Dimensions Width 15 mm Height Depth 52 mm Weights	 for resistance measurement with three-wire connection 	Yes
Operational error limit in overall temperature range Resistance thermometer, relative to input range, (+/-) Basic error limit (poperational limit at 25 °C) Resistance thermometer, relative to input range, (+/-) Resistance thermometer, relative to input range, (+/-) Nesistance thermometer, relative to input range, (+/-) Resistance thermometer, relative to input range, (+/-) Nesistance thermometer, relative to input range, (+/-) Nesistance thermometer, relative to input range, (+/-) Nesistance thermometer, very designed to input range, (+/-) Nesistance thermometer very designed to input range, (+/-) Nesistance very designed to input range, (+/-) Nesistance very designed to input range, (+/-) Nesistance very designed the very designed to input range, (+/-) Nesistance very designed to input range, (+/-) Nesistan	for resistance measurement with four-wire connection	Yes
Resistance thermometer, relative to input range, (+/-) Basic error limit (operational limit at 25 °C) Resistance thermometer, relative to input range, (+/-) Resistance thermometer, relative to input range, (+/-) No.4 % Interrupts/diagnostics/status information Diagnoses Wire-break Yes Group error Overflow/underflow Parameter Diagnostics wire break Group diagnostics wire break Disable / enable Group diagnostics Overflow/underflow Disable / enable Potential separation Potential separation Potential separation analog inputs between the channels between the channels and backplane bus between the channels and load voltage L+ Yes Isolation Isolation tested with Soo V DC Dimensions Width 15 mm Height 31 mm Depth Depth 52 mm Weights	Errors/accuracies	
Basic error limit (operational limit at 25 °C) Resistance thermometer, relative to input range, (+/-) Interrupts/diagnostics/status information Diagnoses Wire-break Group error Overflow/underflow Parameter Diagnostics indication LED Group error SF (red) Parameter Diagnostics wire break Disable / enable Group diagnostics Disable / enable Overflow/underflow Disable / enable Potential separation Potential separation Potential separation analog inputs Eetween the channels and backplane bus Between the channels and load voltage L+ Yes Between the channels and load voltage L+ Yes Isolation Isolation tested with Disable / Enable Disable /	Operational error limit in overall temperature range	
Resistance thermometer, relative to input range, (+/-) Interrupts/diagnostics/status information Diagnoses Wire-break Group error Ves Overflow/underflow Yes Diagnostics indication LED Group error SF (red) Parameter Diagnostics wire break Disable / enable Group diagnostics Overflow/underflow Disable / enable Overflow/underflow Disable / enable Potential separation Potential separation analog inputs between the channels and backplane bus between the channels and load voltage L+ Yes Isolation Isolation Isolation tested with Diepth S2 mm Weights	Resistance thermometer, relative to input range, (+/-)	0.6 %
Interrupts/diagnostics/status information Diagnoses • Wire-break Yes • Group error Yes • Overflow/underflow Yes Diagnostics indication LED • Group error SF (red) Yes Parameter Diagnostics wire break Disable / enable Group diagnostics 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+ Isolation Isolation tested with 500 V DC Dimensions Width 15 mm Height 81 mm Depth 52 mm Weights	Basic error limit (operational limit at 25 °C)	
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Wire-break Group error Yes Group error Ves Overflow/underflow Yes Diagnostics indication LED Group error SF (red) Yes Parameter Diagnostics wire break Group diagnostics Disable / enable 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+ Isolation Isolation Width 15 mm Height 81 mm Depth 52 mm Weights	Interrupts/diagnostics/status information	
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• Group error SF (red) Parameter Diagnostics wire break Group diagnostics Disable / enable Overflow/underflow Disable / enable Potential separation Potential separation analog inputs • between the channels and backplane bus Yes • Between the channels and load voltage L+ Solation Isolation tested with Disable / enable No No Solation Solation Solation Solation Width 15 mm Height B1 mm Depth S2 mm Weights		Yes
Parameter Diagnostics wire break Group diagnostics 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+ Yes Isolation Isolation tested with 500 V DC Dimensions Width 15 mm Height 81 mm Depth 52 mm Weights		
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Overflow/underflow Potential separation Potential separation analog inputs • between the channels • between the channels and backplane bus • Between the channels and load voltage L+ Isolation Isolation tested with Dimensions Width 15 mm Height Betheel 81 mm Depth 52 mm		
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between the channels and backplane bus Between the channels and load voltage L+ Isolation Isolation tested with Dimensions Width Height Bal mm Depth Sal mm Weights Yes Yes Yes Yes 15 mm Hand 15 mm 15		N-
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Weights		
	·	52 mm
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	vveignt, approx.	40 g

last modified:

4/1/2022