SIEMENS

Data sheet 6ES7134-4JB51-0AB0

SIMATIC DP, ELECTRONIC MODULE FOR ET 200S, 2/4 AI RTD STANDARD, 15 MM WIDE, 15BIT + SIGN PT100 STD; PT100 KL; NI100 STD; NI100 KL; 150 OHM; 300 OHM; 600 OHM, CYCLE TIME 110 MS/CHANNEL WITH LED SF (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.	30 mA
from backplane bus 3.3 V DC, max.	10 mA
Output voltage	
Power supply to the transmitters	
• 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	
• Voltage	No
• Current	No
• Thermocouple	No
• Resistance thermometer	Yes
• Resistance	Yes
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	
• parameterizable	Yes; for Pt100, Ni100
— 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 bits; 300, 600 ohms: 15 bits, Pt100, Ni100: 16 bits
• 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; 1 x cycle time
• Step: low	Yes; 4 x cycle time
• Step: Medium	Yes; 32 x cycle time
• Step: High	Yes; 64 x cycle time

Encoder	
Connection of signal encoders	
• for resistance measurement with two-wire connection	Yes
• for resistance measurement with three-wire connection	Yes
• for resistance measurement with four-wire connection	Yes

Errors/accuracies	
Linearity error (relative to input range), (+/-)	0.01 %
Temperature error (relative to input range), (+/-)	0.005 %/K
Crosstalk between the inputs, min.	-50 dB
Repeat accuracy in steady state at 25 °C (relative to input area), (+/-)	0.05 %
Operational error limit in overall temperature range	
• Resistance thermometer, relative to input area, (+/-)	0.6 %
Basic error limit (operational limit at 25 °C)	
• Resistance thermometer, relative to input area, (+/-)	0.4 %
Interference voltage suppression for f = n x (f1 +/- 1 %), f1 = interference frequency	
• Series mode interference (peak value of interference < rated value of input range), min.	70 dB
• Common mode interference (USS < 2.5 V) , min.	90 dB

Isochronous mode	
Isochronous operation (application synchronized up to terminal)	No
Diagnostic messages	
• Wire-break	Yes
• Group error	Yes
• Overflow/underflow	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	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 tested with	500 V DC

Dimensions	
Width	15 mm
Height	81 mm
Depth	52 mm

Weights	
Weight, approx.	40 g

last modified: 20.07.2015