SIEMENS

Data sheet 6AG1134-4NB51-2AB0

SIPLUS ET 200S EM 2AI RTD HF based on 6ES7134-4NB51-0AB0 with conformal coating, -25…+60 °C,

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
Power loss	
Power loss, typ.	0.6 W
Address area	
Address space per module	
● Address space per module, max.	4 byte
Analog inputs	
Number of analog inputs	2
permissible input voltage for voltage input (destruction limit), max.	9 V
Constant measurement current for resistance-type transmitter, typ.	1.25 mA
Cycle time (all channels) max.	Number of active channels per module x basic conversion time
Technical unit for temperature measurement adjustable	Yes
Input ranges (rated values), resistance thermometer	
● Cu 10	Yes
— Input resistance (Cu 10)	10 MΩ
● Ni 100	Yes
— Input resistance (Ni 100)	10 MΩ
● Ni 1000	Yes
— Input resistance (Ni 1000)	10 MΩ
● Ni 120	Yes
— Input resistance (Ni 120)	10 MΩ
● Ni 200	Yes
— Input resistance (Ni 200)	10 MΩ
● Ni 500	Yes
— Input resistance (Ni 500)	10 MΩ
● Pt 100	Yes
— Input resistance (Pt 100)	10 MΩ
● Pt 1000	Yes

— Input resistance (Pt 1000)	10 MΩ
● Pt 200	Yes
— Input resistance (Pt 200)	10 MΩ
● Pt 500	Yes
— Input resistance (Pt 500)	10 MΩ
Input ranges (rated values), resistors	
● 0 to 150 ohms	Yes
— Input resistance (0 to 150 ohms)	10 MΩ
● 0 to 300 ohms	Yes
— Input resistance (0 to 300 ohms)	10 MΩ
● 0 to 600 ohms	Yes
— Input resistance (0 to 600 ohms)	10 MΩ
● 0 to 3000 ohms	Yes
— Input resistance (0 to 3000 ohms)	10 MΩ
Thermocouple (TC)	
Temperature compensation	
— internal temperature compensation	Yes
Characteristic linearization	
● parameterizable	Yes; for Ptxxx, Nixxx
— for resistance thermometer	Ptxxx, Nixxx
Cable length	
● shielded, max.	200 m
Analog value generation for the inputs	
Measurement principle	integrating (Sigma-Delta)
Integration and conversion time/resolution per channel	
● Resolution with overrange (bit including sign), max.	16 bit; for Pt100, Ni100, Ni120, Pt200, Ni200, Pt500, Ni500, Pt1000, Ni1000, Cu10: 15 bit + sign; for 150, 300, 600, 3 000 ohms: 15 bit; for PTC: 1 bit
● Integration time (ms)	16,7 / 20 ms
● Interference voltage suppression for interference frequency f1 in Hz	50 / 60 Hz
● Conversion time (per channel)	Basic conversion time incl. integration time: 50 / 60 ms; additional conversion time for diagnostics of wire break test: 5 / 5 ms; additional conversion time for line compensation with 3-wire connection: 50 / 60 ms
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	Yes; 32x cycle time
● Step: High	Yes; 64x cycle time
Encoder	
Connection of signal encoders	
● for resistance measurement with two-wire connection	Yes
● for resistance measurement with three-wire connection	Yes; internal compensation of the line resistances
● for resistance measurement with four-wire connection	Yes
Errors/accuracies	
Operational error limit in overall temperature range	
● Resistance thermometer, relative to input range, (+/-)	Resistance-type transmitter: ±0.1 %; Pt100, Pt200, Pt500, Pt1000 standard: ±1.0 K; Pt100, Pt200, Pt500, Pt1000 climate: ±0.25 K; Ni100, Ni120, Ni200, Ni500, Ni1000 standard and climate: ±0.4 K; Cu10 ±1.5 K
Basic error limit (operational limit at 25 °C)	
● Resistance thermometer, relative to input range, (+/-)	Resistance-type transmitter: ±0.05 %; Pt100, Pt200, Pt500, Pt1000 standard: ±0.6 K; Pt100, Pt200, Pt500, Pt1000 climate: ±0.13 K; Ni100, Ni120, Ni200, Ni500, Ni1000 standard and climate: ±0.2 K; Cu10 ±1 K
Interrupts/diagnostics/status information	
Diagnoses	
● Wire break	Yes
● Group error	Yes
● Overflow/Underflow	Yes
Diagnostics indication LED	
● Group error SF (red)	Yes
Parameter	

Remark	7 byte
Diagnostics wire break	Disable / enable
Group diagnostics	Disable / enable
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+	Yes
Isolation	
Isolation tested with	500 V DC
Standards, approvals, certificates	
CE mark	Yes
Ambient conditions	
Ambient temperature during operation	
● min.	-25 °C; = Tmin
● max.	60 °C; = Tmax
Altitude during operation relating to sea level	
● Installation altitude above sea level, max.	5 000 m
● Ambient air temperature-barometric pressure-altitude	Tmin ... Tmax at 1 140 hPa ... 795 hPa (-1 000 m ... +2 000 m) // Tmin ... (Tmax - 10 K) at 795 hPa ... 658 hPa (+2 000 m ... +3 500 m) // Tmin ... (Tmax -20 K) at 658 hPa ... 540 hPa (+3 500 m ... +5 000 m)
Relative humidity	
● With condensation, tested in accordance with IEC 60068-2-38, max.	100 %; RH incl. condensation/frost permitted (no commissioning in bedewed state)
Resistance	
Use in stationary industrial systems	
— to biologically active substances according to EN 60721-3-3	Yes; Class 3B2 mold, fungus and dry rot spores (with the exception of fauna); Class 3B3 on request
— to chemically active substances according to EN 60721-3-3	Yes; Class 3C4 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); *
— to mechanically active substances according to EN 60721-3-3	Yes; Class 3S4 incl. sand, dust, *
Use on ships/at sea	
— to biologically active substances according to EN 60721-3-6	Yes; Class 6B2 mold and fungal spores (excluding fauna); Class 6B3 on request
— to chemically active substances according to EN 60721-3-6	Yes; Class 6C3 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); *
— to mechanically active substances according to EN 60721-3-6	Yes; Class 6S3 incl. sand, dust; *
Usage in industrial process technology	
— Against chemically active substances acc. to EN 60654-4	Yes; Class 3 (excluding trichlorethylene)
— Environmental conditions for process, measuring and control systems acc. to ANSI/ISA-71.04	Yes; Level GX group A/B (excluding trichlorethylene; harmful gas concentrations up to the limits of EN 60721-3-3 class 3C4 permissible); level LC3 (salt spray) and level LB3 (oil)
Remark	
— Note regarding classification of environmental conditions acc. to EN 60721, EN 60654-4 and ANSI/ISA-71.04	* The supplied plug covers must remain in place over the unused interfaces during operation!
Dimensions	
Width	15 mm
Height	81 mm
Depth	52 mm
Weights	
Weight, approx.	40 g
Classifications	

	Version	Classification
eClass	14	27-24-26-01
eClass	12	27-24-26-01
eClass	9.1	27-24-26-01
eClass	9	27-24-26-01

eClass	8	27-24-26-01
eClass	7.1	27-24-26-01
eClass	6	27-24-26-01
ETIM	10	EC001596
ETIM	9	EC001596
ETIM	8	EC001596
ETIM	7	EC001596
IDEA	4	3562
UNSPSC	15	32-15-17-05

Approvals / Certificates

General Product Approval

Manufacturer Declaration

China RoHS

Metrological Approval

General Product Approval	EMV	For use in hazardous locations			
					CCC-Ex

last modified: 5/13/2024