



SIPLUS ET200S EM 2 AE I HF -25 ... +70 DEGREES C
WITH CONFORMAL COATING BASED ON 6ES7134-
4MB02-0AB0 . ELECTRONIC MODULE,
15 MM WIDE,
CYCLE TIME PER MODULE: 0.5MS, +/-20MA;
15 BIT + SIGN, 4 .. 20MA;
15 BIT,
OPERATIONAL LIMITS +/-0.1% WITH LED SF (GROUP
FAULT)

Supply voltage	
Load voltage L+	
Rated value (DC)	24 V
Reverse polarity protection	Yes
Input current	
from load voltage L+ (without load), max.	48 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.	1.2 W
Address area	
Address space per module	
Address space per module, max.	4 byte
Analog inputs	
Number of analog inputs	2

permissible input current for current input (destruction limit), max.	50 mA
Cycle time (all channels) max.	0.5 ms ; 0.5 ms for 2 channels without noise suppression, 18 / 21 ms per channel with noise suppression
Input ranges	
Voltage	No
Current	Yes
Thermocouple	No
Resistance thermometer	No
Resistance	No
Input ranges (rated values), currents	
-20 to +20 mA	Yes
4 to 20 mA	Yes
Cable length	
Cable length, shielded, max.	200 m
Analog value generation	
Measurement principle	Sigma Delta
Integration and conversion time/resolution per channel	
Resolution with overrange (bit including sign), max.	16 bit ; as required
Integration time, parameterizable	Yes
Interference voltage suppression for interference frequency f1 in Hz	60 / 50 Hz / no
Conversion time (per channel)	0.04 ms ; Without noise suppression 17/20 ms per channel with error
Smoothing of measured values	
parameterizable	Yes ; In 4 stages: 1 x, 4 x, 16 x, 32 x cycle time
Step: None	Yes ; 1 x
Step: Low	Yes ; 4 x
Step: Medium	Yes ; 16 x
Step: High	Yes ; 32 x
Encoder	
Connection of signal encoders	
Burden of 2-wire transmitter, max.	750 Ω
Errors/accuracies	
Linearity error (relative to input range), (+/-)	0.03 %
Temperature error (relative to input range), (+/-)	0.03 %/K
Crosstalk between the inputs, min.	-100 dB
Repeat accuracy in steady state at 25 °C (relative to input area), (+/-)	0.01 %
Operational error limit in overall temperature range	
Current, relative to input area, (+/-)	0.1 % ; 0.2% without interference frequency suppression

Basic error limit (operational limit at 25 °C)	
Current, relative to input area, (+/-)	0.05 % ; 0.1% without interference frequency suppression
Interference voltage suppression for $f = n \times (f_1 \pm 1 \%)$, f_1 = interference frequency	
Series mode interference (peak value of interference < rated value of input range), min.	90 dB
Common mode interference (USS < 2.5 V) , min.	100 dB
Isochronous mode	
Isochronous mode (application synchronized up to terminal)	Yes
Interrupts/diagnostics/status information	
Alarms	
Hardware interrupt	Yes
Diagnostic messages	
Diagnostic functions	Yes
Wire-break	Yes ; Measuring range 4 to 20 mA only
Group error	Yes
Overflow/underflow	Yes
Diagnostics indication LED	
Group error SF (red)	Yes
Parameter	
Remark	12 bytes, 4 bytes in compatibility mode
Diagnostics wire break	Disable / enable
Measurement type/range	deactivated / +/-20 mA / 4 to 20 mA
Group diagnostics	Disable / enable
Overflow/underflow	Disable / enable
Galvanic isolation	
Galvanic isolation analog inputs	
between the channels	No ; however, increased permissible potential difference between the inputs.
between the channels and the backplane bus	Yes
between the channels and the load voltage L+	Yes
Standards, approvals, certificates	
CE mark	Yes
Ambient conditions	
Extended ambient conditions	
relative to ambient temperature-atmospheric pressure-installation altitude	Tmin ... Tmax at 1080 hPa ... 795 hPa (-1000 m ... +2000 m) // Tmin ... (Tmax - 10K) at 795 hPa ... 658 hPa (+2000 m ... +3500 m) // Tmin ... (Tmax - 20K) at 658 hPa ... 540 hPa (+3500 m ... +5000 m)
Relative humidity	
with condensation, maximum	100 % ; Relative humidity, incl. condensation / frost permitted (no commissioning under condensation conditions)

Resistance	
to biologically active substances/conformity with EN 60721-3-3	Yes ; Class 3B2 mold, fungus and dry rot spores (with the exception of fauna). The supplied connector covers must remain on the unused interfaces during operation!
to chemically active substances/conformity with EN 60721-3-3	Yes ; Class 3C4 incl. salt spray according to EN 60068-2-52 (degree of severity 3). The supplied connector covers must remain on the unused interfaces during operation!
to mechanically active substances/conformity with EN 60721-3-3	Yes ; Class 3S4 incl. sand, dust. The supplied connector covers must remain on the unused interfaces during operation!
Mechanical and climatic conditions during operation	
Climatic conditions in operation	
Temperature	
min.	-25 °C ; = Tmin
max.	70 °C ; = Tmax
Dimensions	
Width	15 mm
Module width, max.	15 mm
Height	81 mm
Depth	52 mm
Weights	
Weight, approx.	45 g
Status	Jul 23, 2014