



SIPLUS ET200S EM 2AO U -25 ... +60 DEGREE C BASED ON 6ES7135-4FB01-0AB0

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.	130 mA
from backplane bus 3.3 V DC, max.	10 mA
Power losses	
Power loss, max.	2 W
Address area	
Address space per module	
Address space per module, max.	4 byte
Analog outputs	
Number of analog outputs	2
Voltage output, short-circuit protection	Yes
Voltage output, short-circuit current, max.	25 mA
Cycle time (all channels) max.	1.5 ms
Output ranges, voltage	

1 to 5 V	Yes
-10 to +10 V	Yes
Connection of actuators	
for voltage output 2-conductor connection	Yes ; Without compensation of the line resistances
for voltage output 4-conductor connection	Yes
Load impedance (in rated range of output)	
with voltage outputs, min.	1 kΩ
with voltage outputs, capacitive load, max.	1 μF
Destruction limits against externally applied voltages and currents	
Voltages at the outputs towards MANA	15 V ; max. 15 V continuous; 75 V for max. 1 s (mark to space ratio 1:20)
Current, max.	50 mA ; DC
Cable length	
Cable length, shielded, max.	200 m
Analog value creation	
Integrations and conversion time/ resolution per channel	
Resolution with overrange (bit including sign), max.	14 bit ; 1 to 5 V: 12 bits, +/-10 V: 13 bits + sign
Settling time	
for resistive load	0.1 ms
for capacitive load	0.5 ms
for inductive load	0.5 ms
Errors/accuracies	
Output ripple (based on output area, bandwidth 0 to 50 kHz)	+/- 0,02 %
Linearity error (relative to output area)	+/- 0,02 %
Temperature error (relative to output area)	+/- 0,01 %/K
Repeat accuracy in settled status at 25 °C (relative to output area)	+/- 0,05 %
Operational limit in overall temperature range	
Voltage, relative to output area	+/- 0,4 %
Basic error limit (operational limit at 25 °C)	
Voltage, relative to output area	+/- 0,2 %
Interrupts/diagnostics/status information	
Substitute values connectable	Yes ; 0 to 65535 (range of values must be within the rated range)
Diagnostic messages	
Short circuit	Yes
Group error	Yes
Diagnostics indication LED	
Group error SF (red)	Yes
Parameter	

Remark	7 bytes
Output type/range	deactivated / 1 to 5 V / +/- 10 V
Diagnosis: short circuit	Disable / enable
Group diagnostics	Disable / enable
Behavior on CPU/Master STOP	Output current and de-energized/substitute a value/keep last value
Galvanic isolation	
Galvanic isolation analog outputs	
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)	75 VDC / 60 VAC
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 % ; RH incl. condensation/frost (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 (RH < 75%) 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.	60 °C ; = Tmax
Dimensions	
Width	15 mm
Height	81 mm
Depth	52 mm
Weight	
Weight, approx.	40 g
Status	Jul 22, 2013