



Figure similar

SIPLUS ET200S EM 2AI HF -25 ... +60 DEGREES C WITH CONFORMAL COATING BASED ON 6ES7134-4LB02-0AB0 . 2 AI U HIGH FEATURE FOR ET 200S, 15 MM WIDE, CYCLE TIME PER MODULE: 0.5MS, +/-10V; 15 BI + SIGN, +/-5V;15BIT+SIGN, 1..5V; 15BIT, 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.	55 mA
from backplane bus 3.3 V DC, max.	10 mA
Output voltage	
Power supply to the transmitters	
• present	No
Power losses	
Power loss, typ.	0.85 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.	35 V; 35 V continuous; 75 V for max. 1 ms
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	Yes

• Current	No
• Thermocouple	No
• Resistance thermometer	No
• Resistance	No
<b>Input ranges (rated values), voltages</b>	
• 1 V to 5 V	Yes
• Input resistance (1 V to 5 V)	800 kΩ
• -10 V to +10 V	Yes
• Input resistance (-10 V to +10 V)	800 kΩ
• -5 V to +5 V	Yes
• Input resistance (-5 V to +5 V)	800 kΩ
<b>Cable length</b>	
• shielded, max.	200 m

## Analog value creation

<b>Integration and conversion time/resolution per channel</b>	
• Resolution with overrange (bit including sign), max.	16 bit; 0 to 5 V: 15 bits, +/-10 V: 16 bits, +/-5 V: 16 bits
• 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
<b>Smoothing of measured values</b>	
• 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

<b>Connection of signal encoders</b>	
• for voltage measurement	Yes

## Errors/accuracies

Linearity error (relative to input range), (+/-)	0.01 %
Temperature error (relative to input range), (+/-)	0.003 %/K
Crosstalk between the inputs, min.	-100 dB
Repeat accuracy in steady state at 25 °C (relative to input area), (+/-)	0.01 %
<b>Operational limit in overall temperature range</b>	
• Voltage, relative to input area, (+/-)	0.15 %; 0,25% without interference frequency suppression
<b>Basic error limit (operational limit at 25 °C)</b>	
• Voltage, relative to input area, (+/-)	0.05 %; 0.1% without interference frequency suppression

<b>Interference voltage suppression for <math>f = n \times (f_1 \pm 1 \%)</math>, <math>f_1</math> = interference frequency</b>	
<ul style="list-style-type: none"> <li>Series mode interference (peak value of interference &lt; rated value of input range), min.</li> </ul>	90 dB
<ul style="list-style-type: none"> <li>common mode voltage (USS &lt; 2.5 V) , min.</li> </ul>	100 dB
<b>Isochronous mode</b>	
Isochronous operation (application synchronized up to terminal)	Yes
<b>Interrupts/diagnostics/status information</b>	
<b>Alarms</b>	
<ul style="list-style-type: none"> <li>Hardware interrupt</li> </ul>	Yes
<b>Diagnostic messages</b>	
<ul style="list-style-type: none"> <li>Diagnostic functions</li> </ul>	Yes
<ul style="list-style-type: none"> <li>Wire break</li> </ul>	Yes; Measuring range 1 to 5 V only
<ul style="list-style-type: none"> <li>Group error</li> </ul>	Yes
<ul style="list-style-type: none"> <li>Overflow/underflow</li> </ul>	Yes
<b>Diagnostics indication LED</b>	
<ul style="list-style-type: none"> <li>Group error SF (red)</li> </ul>	Yes
<b>Parameter</b>	
Remark	12 bytes, 4 bytes in compatibility mode
Measurement type/range	deactivated / +/-5 V / 1 to 5 V / +/-10 V
Group diagnostics	Disable / enable
Overflow/underflow	Disable / enable
<b>Galvanic isolation</b>	
<b>Galvanic isolation analog inputs</b>	
<ul style="list-style-type: none"> <li>between the channels</li> </ul>	No; however, increased permissible potential difference between the inputs.
<ul style="list-style-type: none"> <li>between the channels and the backplane bus</li> </ul>	Yes
<ul style="list-style-type: none"> <li>between the channels and the load voltage L+</li> </ul>	Yes
<b>Permissible potential difference</b>	
between the inputs (UCM)	140V DC/100V AC
<b>Isolation</b>	
Isolation checked with	500 V DC
<b>Standards, approvals, certificates</b>	
CE mark	Yes
<b>Ambient conditions</b>	
<b>Ambient temperature in operation</b>	
<ul style="list-style-type: none"> <li>Min.</li> </ul>	-25 °C; = Tmin
<ul style="list-style-type: none"> <li>max.</li> </ul>	60 °C; = Tmax
<b>Extended ambient conditions</b>	

- 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, max.

100 %; Relative humidity, incl. condensation / frost permitted (no commissioning under condensation conditions)

#### Resistance

- against biologically active substances / conformity with EN 60721-3-3
- against chemically active substances / conformity with EN 60721-3-3
- against mechanically 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 in corrosive atmospheres!

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!

Yes; Class 3S4 incl. sand, dust. The supplied connector covers must remain on the unused interfaces during operation!

#### Dimensions

Width	15 mm
Height	81 mm
Depth	52 mm

#### Weights

Weight, approx.	45 g
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**last modified:** 12.03.2015