

SIPLUS S7-300 SM331 8AI 40-POLE WITH CONFORMAL COATING BASED ON 6ES7331-7PF11-0AB0 . ANALOG INPUT OPTICALLY ISOLATED, 8 AI THERMOCOUPLE, TYPE B, E, J, K, L, N, R, S, T TXK/TXK(L) ACCORDING GOST 16 BIT, 50 MS, 1 X 40 PIN



Figure similar

Supply voltage	
Load voltage L+	
• Rated value (DC)	24 V
• Reverse polarity protection	Yes
Input current	
from load voltage L+ (without load), max.	240 mA
from backplane bus 5 V DC, max.	100 mA
Power loss	
Power loss, typ.	3 W
Analog inputs	
Number of analog inputs	8
permissible input voltage for voltage input (destruction limit), max.	75 V; 20 V DC permanent, 75 V DC for max. 1 s (duty factor 1:20)
Input ranges	
• Voltage	No
• Current	No
• Thermocouple	Yes
• Resistance thermometer	No

• Resistance	No
Input ranges (rated values), voltages	
• 0 to +10 V	No
• 1 V to 5 V	No
• 1 V to 10 V	No
• -1 V to +1 V	No
• -10 V to +10 V	No
• -2.5 V to +2.5 V	No
• -250 mV to +250 mV	No
• -5 V to +5 V	No
• -50 mV to +50 mV	No
• -500 mV to +500 mV	No
• -80 mV to +80 mV	No
Input ranges (rated values), currents	
• 0 to 20 mA	No
• -10 mA to +10 mA	No
• -20 mA to +20 mA	No
• -3.2 mA to +3.2 mA	No
• 4 mA to 20 mA	No
Input ranges (rated values), thermocouples	
• Type B	Yes
• Type C	Yes
• Type E	Yes
• Type J	Yes
• Type K	Yes
• Type L	Yes
• Type N	Yes
• Type R	Yes
• Type S	Yes
• Type T	Yes
• Type U	Yes
• Type TXK/TXK(L) to GOST	Yes
Input ranges (rated values), resistance thermometer	
• Cu 10	No
• Ni 100	No
• Ni 1000	No
• LG-Ni 1000	No
• Ni 120	No
• Ni 200	No
• Ni 500	No
• Pt 100	No

• Pt 1000	No
• Pt 200	No
• Pt 500	No
Input ranges (rated values), resistors	
• 0 to 150 ohms	No
• 0 to 300 ohms	No
• 0 to 600 ohms	No
• 0 to 6000 ohms	No
Thermocouple (TC)	
Temperature compensation	
— parameterizable	Yes
— internal temperature compensation	Yes
— external temperature compensation with compensations socket	Yes
— external temperature compensation with Pt100	Yes
Characteristic linearization	
• parameterizable	Yes
— for thermocouples	Type B, E, J, K, L, N, R, S, T, U, C
Cable length	
• shielded, max.	100 m
Analog value generation	
Measurement principle	integrating
Integration and conversion time/resolution per channel	
• Resolution with overrange (bit including sign), max.	16 bit; Two's complement
• Integration time, parameterizable	Yes
• Basic conversion time (ms)	Up to 4 channels: 10 ms per module, 5 channels upwards: 190 ms per module
• Interference voltage suppression for interference frequency f1 in Hz	400 / 60 / 50 Hz
Errors/accuracies	
Operational error limit in overall temperature range	
• Voltage, relative to input area, (+/-)	+/- 1 K
Interrupts/diagnostics/status information	
Diagnostic functions	Yes; Parameterizable
Alarms	
• Diagnostic alarm	Yes; Parameterizable per group
• Limit value alarm	Yes; Parameterizable
Diagnostic messages	
• Diagnostic information readable	Yes
Diagnostics indication LED	

• Group error SF (red)	Yes
Potential separation	
Potential separation analog inputs	
• between the channels and backplane bus	Yes
Isolation	
Isolation tested with	500 V DC
Standards, approvals, certificates	
CE mark	Yes
UL approval	Yes; File E239877
RCM (formerly C-TICK)	Yes
KC approval	Yes
EAC (formerly Gost-R)	Yes
EN 50155	No
EN 50121-4	No
Ambient conditions	
Ambient temperature during operation	
• min.	0 °C; = Tmin
• max.	60 °C; = Tmax
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, tested in accordance with IEC 60068-2-38, max.	100 %; RH incl. condensation/frost (no commissioning under condensation conditions)
Resistance	
— against 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!
— against 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!
— against 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!
Connection method	
required front connector	40-pin
Dimensions	
Width	40 mm
Height	125 mm
Depth	120 mm

Weights

Weight, approx.

272 g

last modified:

23.11.2015