



SIMATIC S7-300, ANALOG INPUT SM 331,  
OPTICALLY ISOLATED, 8 AI,  
13 BIT RESOLUTION,  
U/I/RESISTANCE/PT100, NI100, NI1000,  
LG-NI1000, PTC / KTY,  
66 MS MODULE UPDATE, 1 X 40 PIN

Input current	
from backplane bus 5 V DC, max.	90 mA
Power loss	
Werkelijk vermogensverlies / typisch	0,4 W
Analog inputs	
Aantal analoge ingangen	8
Number of analog inputs for resistance measurement	8
permissible input voltage for voltage input (destruction limit), max.	30 V
permissible input current for current input (destruction limit), max.	40 mA
Input ranges	
Ingangsgrootte / aan de analoge ingang / spanningssignaal	Ja
Ingangsgrootte / aan de analoge ingang / stroomsignaal	Ja
Uitvoering van de sensor / aan de analoge ingang / wordt ondersteund / thermisch element	Nee
Uitvoering van de sensor / aan de analoge ingang / wordt ondersteund / sensor voor weerstandstemperatuur	Ja
Ingangsgrootte / aan de analoge ingang / signaal met veranderlijke weerstand	Ja
Input ranges (rated values), voltages	
Bereikingangsspanning / aan de analoge ingang / 0 V ... 10 V	Ja

Input resistance (0 to 10 V)	100 k $\Omega$
1 to 5 V	Ja
Input resistance (1 to 5 V)	100 k $\Omega$
1 to 10 V	Nee
-1 V to +1 V	Ja
Input resistance (-1 V to +1 V)	100 k $\Omega$
Bereikingangsspanning / aan de analoge ingang / -10 V ... 10 V	Ja
Input resistance (-10 V to +10 V)	100 k $\Omega$
-2.5 V to +2.5 V	Nee
-250 mV to +250 mV	Nee
-5 V to +5 V	Ja
Input resistance (-5 V to +5 V)	100 k $\Omega$
-50 mV to +50 mV	Ja
Input resistance (-50 mV to +50 mV)	100 k $\Omega$
-500 mV to +500 mV	Ja
Input resistance (-500 mV to +500 mV)	100 k $\Omega$
-80 mV to +80 mV	Nee
<b>Input ranges (rated values), currents</b>	
Bereikingangsstroom / aan de analoge ingang / 0 mA ... 20 mA	Ja
Input resistance (0 to 20 mA)	100 $\Omega$
-10 to +10 mA	Nee
-20 to +20 mA	Ja
Input resistance (-20 to +20 mA)	100 $\Omega$
-3.2 to +3.2 mA	Nee
Bereikingangsstroom / aan de analoge ingang / 4 mA ... 20 mA	Ja
Input resistance (4 to 20 mA)	100 $\Omega$
<b>Input ranges (rated values), thermocouples</b>	
Type B	Nee
Type E	Nee
Type J	Nee
Type K	Nee
Type L	Nee
Type N	Nee
Type R	Nee
Type S	Nee
Type T	Nee
Type U	Nee

Type TXK/TXK(L) acc. GOST	Nee
<b>Input ranges (rated values), resistance thermometers</b>	
Cu 10	Nee
Ni 100	Ja
Input resistance (Ni 100)	100 MΩ
Ni 1000	Ja
Input resistance (Ni 1000)	100 MΩ
LG-Ni 1000	Ja
Input resistance (LG-Ni 1000)	100 MΩ
Ni 120	Nee
Ni 200	Nee
Ni 500	Nee
Pt 100	Ja
Input resistance (Pt 100)	100 MΩ
Pt 1000	Nee
Pt 200	Nee
Pt 500	Nee
<b>Input ranges (rated values), resistors</b>	
0 to 150 Ohm	Nee
0 to 300 Ohm	Nee
0 to 600 Ohm	Ja
Input resistance (0 to 600 Ohm)	100 MΩ
0 to 6000 Ohm	Ja
Input resistance (0 to 6000 Ohm)	100 MΩ
<b>Thermocouple (TC)</b>	
<b>Temperature compensation</b>	
parameterizable	Nee
internal temperature compensation	Nee
external temperature compensation with compensations socket	Nee
<b>Characteristic linearization</b>	
parameterizable	Ja
<b>Cable length</b>	
Cable length, shielded, max.	200 m
<b>Analog value generation</b>	
<b>Integration and conversion time/resolution per channel</b>	
Resolution with overrange (bit including sign), max.	13 bit
Integration time, parameterizable	Ja
<b>Encoder</b>	

Connection of signal encoders	
for current measurement as 2-wire transducer	Ja
for current measurement as 4-wire transducer	Ja
for resistance measurement with two-wire connection	Ja
for resistance measurement with three-wire connection	Ja
for resistance measurement with four-wire connection	Ja
Errors/accuracies	
Operational error limit in overall temperature range	
Voltage, relative to input area, (+/-)	0,6 %
Current, relative to input area, (+/-)	0,5 %
Resistance, relative to input area, (+/-)	0,5 %
Basic error limit (operational limit at 25 °C)	
Voltage, relative to input area, (+/-)	0,4 %
Current, relative to input area, (+/-)	0,3 %
Resistance, relative to input area, (+/-)	0,3 %
Isochronous mode	
Isochronous mode (application synchronized up to terminal)	Nee
Interrupts/diagnostics/status information	
Alarms	
Diagnostic alarm	Nee
Limit value alarm	Nee
Diagnostic messages	
Productfunctie / diagnosefunctie	Nee
Diagnostic information readable	Nee
Diagnostics	Nee
Group error	Nee
Diagnostics indication LED	
Group error SF (red)	Nee
Galvanic isolation	
Galvanic isolation analog inputs	
between the channels	Nee
between the channels and the backplane bus	Ja
Dimensions	
Breedte	40 mm
Hoogte	125 mm
Diepte	117 mm
Weights	
Weight, approx.	250 g

