



SIMATIC S7-1200, RTD INPUT,
SB 1231 RTD, 1 AI RTD, 1 CHANNEL,
PT 100 AND PT1000

Supply voltage	
24 V DC	Yes
Input current	
Current consumption, typ.	5 mA
from backplane bus 5 V DC, typ.	20 mA
Power loss	
Power loss, typ.	0.5 W
Analog inputs	
Number of analog inputs	1 ; Resistance thermometer
permissible input voltage for current input (destruction limit), max.	± 35 V
Technical unit for temperature measurement adjustable	Degrees Celsius/degrees Fahrenheit
Input ranges	
Thermocouple	No
Resistance thermometer	Yes ; Platinum (Pt)
Resistance	Yes ; 150 Ω, 300 Ω, 600 Ω
Input ranges (rated values), voltages	
Input resistance (-80 mV to +80 mV)	≥ 10 MOhm
Input ranges (rated values), resistance thermometers	

Pt 100	Yes
Input resistance (Pt 100)	100 Ω
Pt 1000	Yes
Input resistance (Pt 1000)	1000 Ω
Pt 200	Yes
Input resistance (Pt 200)	200 Ω
Pt 500	Yes
Input resistance (Pt 500)	500 Ω
Input ranges (rated values), resistors	
0 to 150 Ohm	Yes
0 to 300 Ohm	Yes
0 to 600 Ohm	Yes
Thermocouple (TC)	
Temperature compensation	
parameterizable	No
Analog outputs	
Number of analog outputs	0
Analog value generation	
Measurement principle	integrating
Integration and conversion time/resolution per channel	
Resolution with overrange (bit including sign), max.	15 bit ; + sign
Integration time, parameterizable	No
Interference voltage suppression for interference frequency f1 in Hz	85 dB at 10 / 50 / 60 / 400 Hz
Errors/accuracies	
Repeat accuracy in steady state at 25 °C (relative to output area), (+/-)	0.05 %
Interference voltage suppression for $f = n \times (f1 \pm 1 \%)$, f1 = interference frequency	
Common mode interference, min.	120 dB
Interrupts/diagnostics/status information	
Alarms	
Alarms	Yes
Diagnostic alarm	Yes
Diagnostic messages	
Diagnostic functions	Yes ; Can be read out
Wire-break	Yes
Diagnostics indication LED	
for status of the inputs	Yes
for maintenance	Yes

Degree and class of protection	
IP20	Yes
Standards, approvals, certificates	
CE mark	Yes
RCM (former C-TICK)	Yes
FM approval	Yes
Climatic and mechanical conditions for storage and transport	
Climatic conditions for storage and transport	
Free fall	
Drop height, max. (in packaging)	0.3 m ; five times, in dispatch package
Temperature	
permissible temperature range	-40 °C to +70 °C
Air pressure acc. to IEC 60068-2-13	
permissible air pressure	1080 to 660 hPa
Relative humidity	
permissible range (without condensation) at 25 °C	95 %
Mechanical and climatic conditions during operation	
Climatic conditions in operation	
Temperature	
permissible temperature range	0 °C to 55 °C horizontal installation, 0 °C to 45 °C vertical installation
Air pressure acc. to IEC 60068-2-13	
permissible air pressure	1080 to 795 hPa
Pollutant concentrations	
SO2 at RH < 60% without condensation	SO2: < 0.5 ppm; H2S: < 0.1 ppm; RH < 60% condensation-free
Connection method	
required front connector	Yes
Mechanics/material	
Type of housing (front)	
Plastic	Yes
Dimensions	
Width	38 mm
Height	62 mm
Depth	21 mm
Weights	
Weight, approx.	35 g
Status	Jul 28, 2014