

SIMATIC S7-1200, ANALOG INPUT, SM 1231 TC, 4 AI
THERMOCOUPLE



Supply voltage	
Rated value (DC)	
<ul style="list-style-type: none"> • 24 V DC 	Yes
Input current	
Current consumption, typ.	40 mA
from backplane bus 5 V DC, typ.	80 mA
Power loss	
Power loss, typ.	1.5 W
Analog inputs	
Number of analog inputs	4; Thermocouples
permissible input voltage for current input (destruction limit), max.	± 35 V
permissible input voltage for voltage input (destruction limit), max.	+ -35 V
Technical unit for temperature measurement adjustable	Degrees Celsius/degrees Fahrenheit
Input ranges	
<ul style="list-style-type: none"> • Voltage 	Yes

• Current	No
• Thermocouple	Yes; J, K, T, E, R, S, N, C, TXK/XK(L); voltage range: ± 80 mV
• Resistance thermometer	No
• Resistance	No
Input ranges (rated values), voltages	
• -80 mV to +80 mV	Yes
• Input resistance (-80 mV to +80 mV)	≥ 1 MOhm
Input ranges (rated values), thermocouples	
• Type B	Yes
• Type C	Yes
• Type E	Yes
• Type J	Yes
• Type K	Yes
• Type N	Yes
• Type R	Yes
• Type S	Yes
• Type T	Yes
• Type TXK/TXK(L) to GOST	Yes
Thermocouple (TC)	
Temperature compensation	
— parameterizable	No
Analog value generation for the inputs	
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 f_1 in Hz	85 dB at 50 / 60 / 400 Hz
Smoothing of measured values	
• parameterizable	Yes
Errors/accuracies	
Temperature error (relative to input range), (+/-)	25 °C $\pm 0.1\%$, to 55 °C $\pm 0.2\%$ total measurement range
Repeat accuracy in steady state at 25 °C (relative to output range), (+/-)	0.5 %
Interference voltage suppression for $f = n \times (f_1 \pm 1 \%)$, f_1 = interference frequency	
• Common mode interference, min.	120 dB
Interrupts/diagnostics/status information	
Alarms	Yes
Diagnostic functions	Yes; Can be read out
Alarms	

• Diagnostic alarm	Yes
Diagnostic messages	
• Monitoring the supply voltage	Yes
• Wire-break	Yes
Diagnostics indication LED	
• for status of the inputs	Yes
• for maintenance	Yes
Degree and class of protection	
Degree of protection acc. to EN 60529	
• IP20	Yes
Standards, approvals, certificates	
CE mark	Yes
CSA approval	Yes
FM approval	Yes
RCM (formerly C-TICK)	Yes
Ambient conditions	
Free fall	
• Fall height, max.	0.3 m; five times, in product package
Ambient temperature during operation	
• min.	-20 °C
• max.	60 °C
• horizontal installation, min.	-20 °C
• horizontal installation, max.	60 °C
• vertical installation, min.	-20 °C
• vertical installation, max.	50 °C
Ambient temperature during storage/transportation	
• min.	-40 °C
• max.	70 °C
Air pressure acc. to IEC 60068-2-13	
• Operation, min.	795 hPa
• Operation, max.	1 080 hPa
• Storage/transport, min.	660 hPa
• Storage/transport, max.	1 080 hPa
Relative humidity	
• Operation at 25 °C without condensation, max.	95 %
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	

Enclosure material (front)	
• Plastic	Yes
Dimensions	
Width	45 mm
Height	100 mm
Depth	75 mm
Weights	
Weight, approx.	180 g
last modified:	11/28/2017

X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for [Clock Drivers & Distribution](#) category:

Click to view products by [Siemens](#) manufacturer:

Other Similar products are found below :

[8501BYLF](#) [854S015CKI-01LF](#) [8T33FS6221EPGI](#) [NB7V72MMNHTBG](#) [Si53314-B-GMR](#) [4RCD0124KC0ATG](#) [P9090-0NLGI8](#)
[SY100EP33VKG](#) [850S1201BGILF](#) [8004AC-13-33E-125.00000X](#) [ISPPAC-CLK5520V-01T100C8P](#) [4RCD0124KC0ATG8](#) [854110AKILF](#)
[PI6C4931504-04LIE](#) [SI53305-B-GMR](#) [83210AYLF](#) [NB6VQ572MMNG](#) [4RCD0229KB1ATG](#) [PI6C4931502-04LIE](#) [8SLVD1212ANLGI](#)
[PI6C4931504-04LIE](#) [AD9508BCPZ-REEL7](#) [NBA3N200SDR2G](#) [8T79S308NLGI](#) [SI53315-B-GMR](#) [NB7NQ621MMUTWG](#)
[49FCT3805DPYGI8](#) [49FCT805BTPYG](#) [49FCT805PYGI](#) [RS232-S5](#) [542MILFT](#) [6ES7390-1AF30-0AA0](#) [74FCT3807PYGI](#) [SY89873LMG](#)
[SY89875UMG-TR](#) [853S011BGILFT](#) [853S9252BKILF](#) [8P34S1102NLGI8](#) [8T53S111NLGI](#) [CDCVF2505IDRQ1](#) [CDCUA877ZQLT](#)
[CDCE913QPWRQ1](#) [CDC2516DGGR](#) [8SLVP2104ANBGI/W](#) [8S73034AGILF](#) [LV5609LP-E](#) [5T9950PFGI](#) [STCD2400F35F](#)
[74FCT3807QGI8](#) [74FCT3807PYGI8](#)