SIEMENS

Product data sheet 6ES7231-7PC22-0XA0

SIMATIC S7-200, RTD INPUT MOD. EM 231,
FOR S7-22X CPU ONLY, 4AI,
PT100/200/500/1000/10000 NI100/120/1000,
CU10, 14 GOST,
RESISTANCE 150/300/600 OHM 15 BIT+ SIGN

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Input current	
from load voltage L+ (without load), max.	60 mA
from backplane bus 5 V DC, max.	87 mA
Power losses	
Power loss, typ.	1.8 W ; Sensor: 1 mW
Analog inputs	
Number of analog inputs	4
permissible input voltage for voltage input (destruction limit), max.	30 V ; 30 V DC (probe), 5 V DC (source)
Loop resistance cable	20 Ω ; max. 2.7 Ohm for Cu
Updating time (all channels)	810 ms ; 1400 ms with Pt10000
Input ranges	
Voltage	No
Current	No
Thermocouple	No
Resistance thermometer	Yes
Resistance	Yes
Input ranges (rated values), resistance thermometers	
Cu 10	Yes
Input resistance (Cu 10)	10 MΩ

Ni 10	Yes
Input resistance (Ni 10)	10 MΩ
Ni 1000	Yes
Input resistance (Ni 1000)	10 MΩ
Ni 120	Yes
Input resistance (Ni 120)	10 MΩ
Pt 100	Yes
Input resistance (Pt 100)	10 MΩ
Pt 1000	Yes
Input resistance (Pt 1000)	10 MΩ
Pt 10000	Yes
Input resistance (Pt 10000)	10 MΩ
Pt 200	Yes
Input resistance (Pt 200)	10 MΩ
Pt 500	Yes
Input resistance (Pt 500)	10 MΩ
Input ranges (rated values), resistors	
0 to 150 ohms	Yes
Input resistance (0 to 150 ohms)	10 MΩ
0 to 300 ohms	Yes
Input resistance (0 to 300 ohms)	10 MΩ
0 to 600 ohms	Yes
Input resistance (0 to 600 ohms)	10 MΩ
Cable length	
Cable length, shielded, max.	100 m ; to the sensor
Analog value creation	
Measurement principle	Sigma Delta
Integrations and conversion time/ resolution per channel	
Resolution with overrange (bit including sign), max.	16 bit ; Temperature 0.1 °C / 0.1 °F
Interference voltage suppression for interference frequency f1 in Hz	85 dB at 50 / 60 / 400 Hz
Displayable conversion value range	
bipolar signals	-27.648 to +27.648
Errors/accuracies	
Repeat accuracy in settled status at 25 °C (relative to input area)	+/- 0,05 %
Operational limit in overall temperature range	
Voltage, relative to output area	+/- 0,1 %
Interference voltage suppression for f = n x (f1 +/- 1%), f1 = interference frequency	
common mode voltage, max.	0 V

Common mode interference, min.	120 dB ; At 120 V DC
Interrupts/diagnostics/status information	
Diagnostics indication LED	
External fault EXTF (red)	Yes
Group error SF (red)	Yes
Galvanic isolation	
Galvanic isolation analog inputs	
Galvanic isolation analog inputs	Yes
Permissible potential difference	
between inputs and MANA (UCM)	500 V AC
between M internally and the inputs	500 V AC
Connection method	
Plug-in I/O terminals	No
Dimensions	
Width	71.2 mm
Height	80 mm
Depth	62 mm
Weight	
Weight, approx.	210 g
Status	Feb 25, 2013