

SIMATIC S7-200, T/C INPUT MOD. EM 231, FOR S7-22X CPU ONLY, 8 AI, +/-80 MV AND THERMOCOUPLE TYPE J,K,S,T,R,E,N; 15BIT+SIGN



Figure similar

Input current	
from load voltage L+ (without load), max.	60 mA
from backplane bus 5 V DC, max.	87 mA
Power loss	
Power loss, typ.	1.8 W
Analog inputs	
Number of analog inputs	8
permissible input voltage for voltage input (destruction limit), max.	30 V
Loop resistance cable	100 Ω
Updating time (all channels)	810 ms
Input ranges	
• Voltage	Yes
• Current	No
• Thermocouple	Yes
• Resistance thermometer	No

• Resistance	No
Input ranges (rated values), voltages	
• -80 mV to +80 mV	Yes
• Input resistance (-80 mV to +80 mV)	1 MΩ
Input ranges (rated values), thermocouples	
• Type E	Yes
• Input resistance (Type E)	1 MΩ
• Type J	Yes
• Input resistance (type J)	1 MΩ
• Type K	Yes
• Input resistance (Type K)	1 MΩ
• Type N	Yes
• Input resistance (Type N)	1 MΩ
• Type R	Yes
• Input resistance (Type R)	1 MΩ
• Type S	Yes
• Input resistance (Type S)	1 MΩ
• Type T	Yes
• Input resistance (Type T)	1 MΩ
Cable length	
• shielded, max.	100 m; to the sensor
Analog value generation for the inputs	
Measurement principle	Sigma Delta
Integration 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
Errors/accuracies	
cold connection point	+/-1,5 °C
Repeat accuracy in steady state at 25 °C (relative to input range), (+/-)	0.05 %
Operational error limit in overall temperature range	
• Voltage, relative to input range, (+/-)	0.1 %
Interference voltage suppression for $f = n \times (f1 \pm 1 \%)$, f1 = interference frequency	
• Common mode voltage, max.	120 V; AC
• 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

Potential separation

Potential separation analog inputs

- Potential separation analog inputs Yes

Permissible potential difference

Between the 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

Weights

Weight, approx. 210 g

last modified: 03/16/2017