SIEMENS

Data sheet 7MH4134-6LB00-0DA0

SIMATIC ET 200SP, ANALOG INPUT MODULE, AI 2 X SG 4-/6-WIRE HIGH SPEED, FITS TO BU-TYPE A0, COLOR CODE CC00, CHANNEL DIAGNOSIS, 28/16BIT, +/-0,05%, FOR STRAIN GAUGE FULL BRIDGES

General information	
Product type designation	AI 2xSG 4-/6-wire HS
HW functional status	01
Firmware version	V1.0.1
● FW update possible	Yes
usable BaseUnits	BU type A0
Color code for module-specific color identification plate	CC00
Product function	
● I&M data	Yes; I&M0 to I&M3
● Isochronous mode	Yes
● Measuring range scalable	Yes
● Scalable measured values	No
● Adjustment of measuring range	Yes; ±0.5 ... 320 mV/V
Engineering with	
● STEP 7 TIA Portal configurable/integrated from version	V14 SP1
● STEP 7 configurable/integrated from version	V5.6
● PROFIBUS from GSD version/GSD revision	V03.01.105
● PROFINET from GSD version/GSD revision	GSDML V2.33
Operating mode	
● Oversampling	Yes; 2 channels per module
● MSI	No
CiR - Configuration in RUN	
Reparameterization possible in RUN	Yes
Calibration possible in RUN	No
Supply voltage	
Rated value (DC)	24 V
permissible range, lower limit (DC)	19.2 V
permissible range, upper limit (DC)	28.8 V
Reverse polarity protection	Yes
Input current	
Current consumption (rated value)	70 mA
Encoder supply	
Output voltage (DC)	4.85 V
Short-circuit protection	Yes
Output current	
● Rated value	60 mA; Per channel
Power	
Power available from the backplane bus	65 mW
Power loss	

Power loss, typ.	1.5 W
Address area	
Address space per module	
● Address space per module, max.	32 byte
● Inputs	32 byte
● Outputs	8 byte
Hardware configuration	
Automatic encoding	Yes
● Mechanical coding element	Yes
● Type of mechanical coding element	Type A
Analog inputs	
Number of analog inputs	2; Differential inputs
Cycle time (all channels), min.	100 µs
Analog input with oversampling	Yes
● Values per cycle, max.	14
● Resolution, min.	100 µs
Input ranges	
● Strain gauges (full bridges)	Yes
Cable length	
● shielded, max.	500 m
Analog value generation for the inputs	
Measurement principle	Sigma Delta
Integration and conversion time/resolution per channel	
● Resolution with overrange (bit including sign), max.	28 bit; 16 bits with oversampling
● Integration time, parameterizable	Yes
● Interference voltage suppression for interference frequency f1 in Hz	60 / 50 Hz / no
● Conversion time (per channel)	100 µs
Smoothing of measured values	
● IIR low-pass filter frequency	0.01 ... 600 Hz
● IIR low-pass filter ordinal number	1 ... 4
● Notch filter frequency	0.1 ... 1 000 Hz
● Notch filter quality	5.00 ... 250.00
● Average value filter	0.1 ... 655.3 ms
Encoder	
Connection of signal encoders	
● For strain gauges (full bridges) with 4-conductor connection	Yes
● For strain gauges (full bridges) with 6-conductor connection	Yes
● Resistance of full bridge, min.	80 Ω
● Resistance of full bridge, max.	5 000 Ω
Errors/accuracies	
Linearity error (relative to input range), (+/-)	0.025 %
Temperature error (relative to input range), (+/-)	0.0005 %/°C; Strain gauge full bridge, 6-conductor connection
Temperature coefficient, zero point	≤ ±0.25 µV/K
Temperature coefficient, span, 4-wire connection (in relation to end value)	≤ ±5 ppm/K
Temperature coefficient, span, 6-wire connection (in relation to end value)	≤ ±10 ppm/K
Basic error limit (operational limit at 25 °C)	
● Voltage, relative to input range, (+/-)	0.05 %; See manual for details
Isochronous mode	
Filtering and processing time (TCI), min.	87 µs
Bus cycle time (TDP), min.	125 µs
Interrupts/diagnostics/status information	
Diagnostics function	Yes
Alarms	
● Diagnostic alarm	Yes
● Limit value alarm	Yes; two upper and two lower limit values in each case
Diagnoses	
● Monitoring the supply voltage	Yes
● Wire-break	Yes

● Short-circuit	Yes
● Group error	Yes
● Overflow/underflow	Yes
Diagnostics indication LED	
● Monitoring of the supply voltage (PWR-LED)	Yes; green PWR LED
● Channel status display	Yes; green LED
● for channel diagnostics	Yes; red LED
● for module diagnostics	Yes; green/red DIAG LED
Potential separation	
Potential separation channels	
● between the channels	No
● between the channels and backplane bus	Yes
● between the channels and the power supply of the electronics	Yes
Isolation	
Isolation tested with	707 V DC (type test)
Ambient conditions	
Ambient temperature during operation	
● horizontal installation, min.	-25 °C
● horizontal installation, max.	60 °C
● vertical installation, min.	-25 °C
● vertical installation, max.	50 °C
Altitude during operation relating to sea level	
● Ambient air temperature-barometric pressure-altitude	Tmin ... Tmax at 1 140 hPa ... 795 hPa (-1 000 m ... +2 000 m) // Tmin ... (Tmax - 1 K/100 m) at 795 hPa ... 701 hPa (+2 000 m ... +3 000 m)
Dimensions	
Width	15 mm
Height	73 mm
Depth	58 mm
Weights	
Weight, approx.	45 g

last modified: 12/28/2021