## **SIEMENS**

## **Data sheet**

6ES7134-6JD00-2CA1



SIMATIC ET 200SP, Analog input module, AI 4xRTD/TC High Feature, Pack quantity: 10 units, suitable for BU type A0, A1, Color code CC00, channel diagnostics, 16 bit, +/-0.1%, 2-/3-/4-wire

Figure similar

Product type designation  HW functional status  From FS08  Firmware version  FW update possible  Usable BaseUnits  Color code for module-specific color identification plate  Product function  I&M data  Sochronous mode  Adjustment of measuring range  Engineering with  STEP 7 TIA Portal configurable/integrated from version  FYES 7 configurable/integrated from version  FYES 8 configurable/integrated from version  FYES 8 configurable/integrated from version  FYES 9 configurable/integrated from version  FYES 9 configurable/integrated from version  FYES 1 configurable/integrated from version  FYES 1 configuration in GSD version/GSD revision  FYES 1 configuration in RUN		AI 4xRTD/TC 2-/3-/4-wire HF	
Firmware version  FW update possible  usable BaseUnits  Color code for module-specific color identification plate  Product function  Is&M data Isochronous mode Adjustment of measuring range  Engineering with  STEP 7 TIA Portal configurable/integrated from version STEP 7 configurable/integrated from version PCS 7 configurable/integrated from version PCS 7 configurable/integrated from version PROFIBUS from GSD version/GSD revision PROFINET from GSD version/GSD revision Operating mode Oversampling MSI  No  PSU type A0, A1  CC00  Yes  BU type A0, A1  CC00  Yes; I&M0 to I&M3  Yes; I&M0 to I&M3  V4  Yes  Engineering with V5.6  V5.6  V5.6  V5.6  V8.1 SP1  One GSD file each, Revision 3 and 5 and higher GSDML V2.3  Operating mode  No No	HW functional status		
FW update possible  usable BaseUnits  Color code for module-specific color identification plate  Product function  IskM data Ischronous mode Adjustment of measuring range  Engineering with  STEP 7 TIA Portal configurable/integrated from version STEP 7 configurable/integrated from version PCS 7 configurable/integrated from version PCS 7 configurable/integrated from version PROFIBUS from GSD version/GSD revision PROFINET from GSD version/GSD revision Operating mode Oversampling MSI  BU type A0, A1  CC00  PU (18, M3)  Ves; I&M0 to I&M3  Ves; I&M0 to I&M3  V14  Ves  V5.6  V14  V5.6  V5.6  One GSD file each, Revision 3 and 5 and higher GSDML V2.3		From FS08	
usable BaseUnits  Color code for module-specific color identification plate  Product function  I&M data Isochronous mode Adjustment of measuring range  Engineering with STEP 7 TIA Portal configurable/integrated from version STEP 7 configurable/integrated from version FCS 7 configurable/integrated from version PCS 7 configurable/integrated from version PROFIBUS from GSD version/GSD revision PROFINET from GSD version/GSD revision Operating mode Oversampling MSI  BU type A0, A1 CC00  CC00  Yes; I&M0 to I&M3  No  V14  Ves; I&M0 to I&M3  Voil  No  No  No  No  No  No  No  No  No  N	Firmware version		
Color code for module-specific color identification plate  Product function  I&M data Isochronous mode Adjustment of measuring range  Engineering with STEP 7 TIA Portal configurable/integrated from version STEP 7 configurable/integrated from version PCS 7 configurable/integrated from version PROFIBUS from GSD version/GSD revision PROFINET from GSD version/GSD revision Operating mode Oversampling MSI  No  CC00  Yes  Yes  V14  V14  V15  V14  V2.6  V8.1 SP1 One GSD file each, Revision 3 and 5 and higher GSDML V2.3  No  No	FW update possible	Yes	
Product function  I &M data  I Sochronous mode  Adjustment of measuring range  Engineering with  STEP 7 TIA Portal configurable/integrated from version  STEP 7 configurable/integrated from version  STEP 7 configurable/integrated from version  PCS 7 configurable/integrated from version  PROFIBUS from GSD version/GSD revision  PROFINET from GSD version/GSD revision  MO  NO	usable BaseUnits	BU type A0, A1	
<ul> <li>I&amp;M data</li> <li>Isochronous mode</li> <li>Adjustment of measuring range</li> <li>Yes</li> </ul> Engineering with <ul> <li>STEP 7 TIA Portal configurable/integrated from version</li> <li>STEP 7 configurable/integrated from version</li> <li>STEP 7 configurable/integrated from version</li> <li>PCS 7 configurable/integrated from version</li> <li>PROFIBUS from GSD version/GSD revision</li> <li>PROFINET from GSD version/GSD revision</li> <li>Operating mode</li> <li>Oversampling</li> <li>MSI</li> </ul> No <ul> <li>No</li> </ul>	Color code for module-specific color identification plate	CC00	
<ul> <li>Isochronous mode</li> <li>Adjustment of measuring range</li> <li>Yes</li> </ul> Engineering with <ul> <li>STEP 7 TIA Portal configurable/integrated from version</li> <li>STEP 7 configurable/integrated from version</li> <li>PCS 7 configurable/integrated from version</li> <li>PROFIBUS from GSD version/GSD revision</li> <li>PROFINET from GSD version/GSD revision</li> <li>Operating mode</li> <li>Oversampling</li> <li>MSI</li> </ul> No <ul> <li>No</li> </ul>	Product function		
<ul> <li>Adjustment of measuring range</li> <li>Engineering with</li> <li>STEP 7 TIA Portal configurable/integrated from version</li> <li>STEP 7 configurable/integrated from version</li> <li>PCS 7 configurable/integrated from version</li> <li>PROFIBUS from GSD version/GSD revision</li> <li>PROFINET from GSD version/GSD revision</li> <li>Operating mode</li> <li>Oversampling</li> <li>MSI</li> </ul> No	I&M data	Yes; I&M0 to I&M3	
Engineering with  • STEP 7 TIA Portal configurable/integrated from version  • STEP 7 configurable/integrated from version  • STEP 7 configurable/integrated from version  • PCS 7 configurable/integrated from version  • PROFIBUS from GSD version/GSD revision  • PROFINET from GSD version/GSD revision  • PROFINET from GSD version/GSD revision  • Oversampling  • MSI  No	<ul> <li>Isochronous mode</li> </ul>	No	
<ul> <li>STEP 7 TIA Portal configurable/integrated from version</li> <li>STEP 7 configurable/integrated from version</li> <li>PCS 7 configurable/integrated from version</li> <li>PROFIBUS from GSD version/GSD revision</li> <li>PROFINET from GSD version/GSD revision</li> <li>Operating mode</li> <li>Oversampling</li> <li>MSI</li> </ul> No No	Adjustment of measuring range	Yes	
version  • STEP 7 configurable/integrated from version  • PCS 7 configurable/integrated from version  • PROFIBUS from GSD version/GSD revision  • PROFINET from GSD version/GSD revision  • Operating mode  • Oversampling  • MSI  V5.6  V8.1 SP1  One GSD file each, Revision 3 and 5 and higher  GSDML V2.3  No	Engineering with		
<ul> <li>PCS 7 configurable/integrated from version</li> <li>PROFIBUS from GSD version/GSD revision</li> <li>PROFINET from GSD version/GSD revision</li> <li>Operating mode</li> <li>Oversampling</li> <li>MSI</li> <li>V8.1 SP1</li> <li>One GSD file each, Revision 3 and 5 and higher</li> <li>GSDML V2.3</li> <li>No</li> <li>No</li> </ul>	ŭ ŭ	V14	
<ul> <li>PROFIBUS from GSD version/GSD revision</li> <li>PROFINET from GSD version/GSD revision</li> <li>Operating mode</li> <li>Oversampling</li> <li>MSI</li> <li>One GSD file each, Revision 3 and 5 and higher</li> <li>GSDML V2.3</li> <li>No</li> <li>No</li> </ul>	<ul> <li>STEP 7 configurable/integrated from version</li> </ul>	V5.6	
<ul> <li>◆ PROFINET from GSD version/GSD revision</li> <li>GSDML V2.3</li> <li>Operating mode</li> <li>◆ Oversampling</li> <li>◆ MSI</li> <li>No</li> </ul>	<ul> <li>PCS 7 configurable/integrated from version</li> </ul>	V8.1 SP1	
Operating mode  Oversampling  Mo  No	<ul> <li>PROFIBUS from GSD version/GSD revision</li> </ul>	One GSD file each, Revision 3 and 5 and higher	
<ul><li>Oversampling</li><li>MSI</li><li>No</li></ul>	<ul> <li>PROFINET from GSD version/GSD revision</li> </ul>	GSDML V2.3	
• MSI No	Operating mode		
	<ul> <li>Oversampling</li> </ul>	No	
CIR - Configuration in RUN	• MSI	No	
	CiR - Configuration in RUN		
Reparameterization possible in RUN Yes	·	Yes	
Calibration possible in RUN Yes	Calibration possible in RUN	Yes	
Supply voltage	Supply voltage		
Rated value (DC) 24 V	Rated value (DC)	24 V	
permissible range, lower limit (DC) 19.2 V	permissible range, lower limit (DC)	19.2 V	
permissible range, upper limit (DC) 28.8 V	permissible range, upper limit (DC)	28.8 V	
Reverse polarity protection Yes	Reverse polarity protection	Yes	
Input current	Input current		
Current consumption, max. 35 mA	Current consumption, max.	35 mA	
Power loss	Power loss		
Power loss, typ. 0.75 W	Power loss, typ.	0.75 W	
Address area	Address area		
Address space per module	Address space per module		
Address space per module, max.     8 byte; + 1 byte for QI information	<ul> <li>Address space per module, max.</li> </ul>	8 byte; + 1 byte for QI information	
Hardware configuration	Hardware configuration		
Automatic encoding Yes		.,	

Mechanical coding element	Yes
Type of mechanical coding element	Type A
Selection of BaseUnit for connection variants	.164.,
2-wire connection	BU type A0, A1
3-wire connection	BU type A0, A1
Analog inputs	
Number of analog inputs	4
permissible input voltage for voltage input (destruction	30 V
limit), max.	
Constant measurement current for resistance-type transmitter, typ.	0.7 mA; 1.7 mA for Cu10 sensors
Cycle time (all channels), min.	Sum of the basic conversion times and additional processing times (depending on the parameterization of the active channels); for line compensation in case of a three-wire connection, an additional cycle is necessary
Technical unit for temperature measurement adjustable	Yes; °C/°F/K
Input ranges (rated values), voltages	
• -1 V to +1 V	Yes; 16 bit incl. sign
<ul><li>— Input resistance (-1 V to +1 V)</li></ul>	1 ΜΩ
• -250 mV to +250 mV	Yes; 16 bit incl. sign
<ul><li>— Input resistance (-250 mV to +250 mV)</li></ul>	1 ΜΩ
• -50 mV to +50 mV	Yes; 16 bit incl. sign
— Input resistance (-50 mV to +50 mV)	1 ΜΩ
• -80 mV to +80 mV	Yes; 16 bit incl. sign
— Input resistance (-80 mV to +80 mV)	1 ΜΩ
Input ranges (rated values), thermocouples	
• Type B	Yes; 16 bit incl. sign
— Input resistance (Type B)	1 ΜΩ
• Type C	Yes; 16 bit incl. sign
<ul><li>— Input resistance (Type C)</li></ul>	1 ΜΩ
▼ Type E	Yes; 16 bit incl. sign
— Input resistance (Type E)	1 ΜΩ
• Type J	Yes; 16 bit incl. sign
— Input resistance (type J)	1 ΜΩ
• Type K	Yes; 16 bit incl. sign
— Input resistance (Type K)	1 ΜΩ
• Type L	Yes; 16 bit incl. sign
— Input resistance (Type L)	1 ΜΩ
• Type N	Yes; 16 bit incl. sign
— Input resistance (Type N)	1 ΜΩ
• Type R	Yes; 16 bit incl. sign
— Input resistance (Type R)	1 MΩ
• Type S	Yes; 16 bit incl. sign
— Input resistance (Type S)	1 MΩ
Type T  Input resistance (Type T)	Yes; 16 bit incl. sign
— Input resistance (Type T)	1 M $\Omega$
• Type U	Yes; 16 bit incl. sign
— Input resistance (Type U)	1 M $\Omega$
<ul> <li>Type TXK/TXK(L) to GOST         — Input resistance (Type TXK/TXK(L) to GOST)</li> </ul>	Yes; 16 bit incl. sign 1 $M\Omega$
	I IVILZ
Input ranges (rated values), resistance thermometer  • Cu 10	Vec. 16 hit incl. sign
— Input resistance (Cu 10)	Yes; 16 bit incl. sign 1 $M\Omega$
Ni 100	
	Yes; 16 bit incl. sign 1 $M\Omega$
<ul><li>— Input resistance (Ni 100)</li><li>◆ Ni 1000</li></ul>	
	Yes; 16 bit incl. sign 1 $M\Omega$
<ul><li>— Input resistance (Ni 1000)</li><li>◆ LG-Ni 1000</li></ul>	
	Yes; 16 bit incl. sign 1 $M\Omega$
<ul><li>— Input resistance (LG-Ni 1000)</li><li>● Ni 120</li></ul>	Yes; 16 bit incl. sign
	Tes, 16 bit inci. sign
— Input resistance (Ni 120)	I IVIXZ

a Ni 200	Voc. 16 hit ingl. gign
• Ni 200	Yes; 16 bit incl. sign
— Input resistance (Ni 200)	1 ΜΩ
• Ni 500	Yes; 16 bit incl. sign
— Input resistance (Ni 500)	1 ΜΩ
• Pt 100	Yes; 16 bit incl. sign
— Input resistance (Pt 100)	1 ΜΩ
• Pt 1000	Yes; 16 bit incl. sign
— Input resistance (Pt 1000)	1 ΜΩ
• Pt 200	Yes; 16 bit incl. sign
— Input resistance (Pt 200)	1 ΜΩ
● Pt 500	Yes; 16 bit incl. sign
— Input resistance (Pt 500)	1 ΜΩ
Input ranges (rated values), resistors	
• 0 to 150 ohms	Yes; 15 bit
— Input resistance (0 to 150 ohms)	1 ΜΩ
• 0 to 300 ohms	Yes; 15 bit
<ul><li>— Input resistance (0 to 300 ohms)</li></ul>	1 ΜΩ
• 0 to 600 ohms	Yes; 15 bit
<ul><li>— Input resistance (0 to 600 ohms)</li></ul>	1 ΜΩ
• 0 to 3000 ohms	Yes; 15 bit
<ul><li>— Input resistance (0 to 3000 ohms)</li></ul>	1 ΜΩ
• 0 to 6000 ohms	Yes; 15 bit
<ul><li>— Input resistance (0 to 6000 ohms)</li></ul>	1 ΜΩ
• PTC	Yes; 15 bit
<ul><li>— Input resistance (PTC)</li></ul>	1 ΜΩ
Thermocouple (TC)	
Temperature compensation	
— parameterizable	Yes
<ul> <li>Reference channel of the module</li> </ul>	Yes
<ul> <li>internal comparison point</li> </ul>	Yes; with BaseUnit type A1
<ul> <li>Reference channel of the group</li> </ul>	Yes
<ul> <li>Number of reference channel groups</li> </ul>	4; Group 0 to 3
<ul> <li>fixed reference temperature</li> </ul>	Yes
Cable length	
• shielded, max.	200 m; 50 m with thermocouples
Analog value generation for the inputs	
Measurement principle	integrating (Sigma-Delta)
Integration and conversion time/resolution per channel	300000000000000000000000000000000000000
Resolution with overrange (bit including sign), max.	16 bit
Integration time, parameterizable	Yes
Basic conversion time, including integration time	
(ms)	
<ul> <li>additional processing time for wire-break check</li> </ul>	2 ms; In the ranges resistance thermometers, resistors and
	thermocouples
<ul> <li>additional power line wire-break check</li> </ul>	2 ms; for 3/4 wire transducer (resistance thermometer and resistor)
Interference voltage suppression for interference	16.6 / 50 / 60 Hz
frequency f1 in Hz	
Conversion time (per channel)	180 / 60 / 50 ms
Smoothing of measured values	4.11 4/8/49 ()
Number of smoothing levels	4; None; 4/8/16 times
parameterizable	Yes
Encoder	
Connection of signal encoders	
<ul> <li>for voltage measurement</li> </ul>	Yes
<ul> <li>for resistance measurement with two-wire</li> </ul>	Yes
connection	v.
for resistance measurement with three-wire     connection.	Yes
<ul><li>connection</li><li>for resistance measurement with four-wire</li></ul>	Voc
tor resistance measurement with four-wire connection	Yes
Errors/accuracies	

Linearity error (relative to input range), (+/-)	0.01 %; ±0.1 % for resistance thermometers and resistance
Temperature error (relative to input range), (+/-)	0.0009 %/K; ±0.005 % / K at thermocouple
Crosstalk between the inputs, min.	-50 dB
Repeat accuracy in steady state at 25 °C (relative to input range), (+/-)	0.05 %
Operational error limit in overall temperature range	
<ul> <li>Voltage, relative to input range, (+/-)</li> </ul>	0.1 %
Resistance, relative to input range, (+/-)	0.1 %
Basic error limit (operational limit at 25 °C)	
<ul> <li>Voltage, relative to input range, (+/-)</li> </ul>	0.05 %
Resistance, relative to input range, (+/-)	0.05 %
Interference voltage suppression for f = n x (f1 +/- 1 %), f1 =	interference frequency
<ul> <li>Series mode interference (peak value of interference &lt; rated value of input range), min.</li> </ul>	70 dB
<ul> <li>Common mode voltage, max.</li> </ul>	10 V
<ul> <li>Common mode interference, min.</li> </ul>	90 dB
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; channel by channel
Group error	Yes
Overflow/underflow	Yes; channel by channel
Diagnostics indication LED	
Monitoring of the supply voltage (PWR-LED)	Yes; green PWR LED
Channel status display	Yes; green LED
<ul> <li>for channel diagnostics</li> </ul>	Yes; red LED
<ul> <li>for module diagnostics</li> </ul>	Yes; green/red DIAG LED
Potential separation	
Potential separation channels	
between the channels	No
<ul> <li>between the channels and backplane bus</li> </ul>	Yes
<ul> <li>between the channels and the power supply of the electronics</li> </ul>	Yes
Permissible potential difference	
between the inputs (UCM)	10 V DC
Isolation	
Isolation tested with	707 V DC (type test)
Ambient conditions	
Ambient temperature during operation	
horizontal installation, min.	-30 °C; < 0 °C as of FS08
horizontal installation, max.	60 °C
vertical installation, min.	-30 °C; < 0 °C as of FS08
vertical installation, max.	50 °C
Altitude during operation relating to sea level	
Installation altitude above sea level, max.	5 000 m; Restrictions for installation altitudes > 2 000 m, see manual
Dimensions	2 3 3 3 1, 1 3 3 3 3 3 3 3 3 3 3 3 3 3 3
Width	15 mm
	73 mm
Height	58 mm
Depth	JO IIIII
last modified:	2/6/2021 🗗