SIEMENS

Data sheet



SIMATIC S7-1500 Analog input module AI 4xU/I/RTD/TC ST, 16 bit resolution, Accuracy 0.3%, 4 channels in groups of 4; 2 channels for RTD measurement; Common mode voltage 10 V; Diagnostics; Hardware interrupts; Delivery including push-in front connector, infeed element, shield bracket, and shield terminal

Product type designation	General information	
Firmware version V1.0.0 • FW update possible Yes Product function • I&M data Yes; I&M0 to I&M3 • Isochronous mode No • Prioritized startup No • Scalable measuring range scalable No • Scalable measuring range • Adjustment of measuring range No Engineering with • STEP 7 TIA Portal configurable/integrated from version STEP 7 configurable/integrated from version V13 / V13.0.2 • STEP 7 TIA Portal configurable/integrated from version PRCPIBUS from GSD version/GSD revision V1.0 / V5.1 • PROFIBUS from GSD version/GSD revision V2.3 / - Operating mode • Oversampling No • MSI Yes CIR - Configuration in RUN Reparameterization possible in RUN Yes Calibration possible in RUN Yes Calibration possible in RUN Yes Supply voltage Rated value (DC) 24 V permissible range, lower limit (DC) 19.2 V permissible range, lower limit (DC) 28.8 V Reverse polarity protection Yes Input current Current consumption, max. 165 mA Encoder supply • Short-circuit protection Yes Short-circuit protection Yes • Ower available from the backplane bus • O'r W Power loss • Power loss, Yp. Analog linputs	Product type designation	AI 4xU/I/RTD/TC ST
Product function Rid Adata Yes; Rid No to Rid M3	HW functional status	From FS01
Product function i&M data	Firmware version	V1.0.0
	FW update possible	Yes
Isochronous mode Prioritized startup Measuring range scalable Scalable measured values No Adjustment of measuring range No Engineering with STEP 7 TIA Portal configurable/integrated from version STEP 7 TIA Portal configurable/integrated from version STEP 7 TIA Portal configurable/integrated from version PROFIBUS from GSD version/GSD revision Prover loss type Power loss Prower loss Power loss Prower loss Prower loss type. Analog inputs	Product function	
Prioritized startup Measuring range scalable Scalable measured values No Adjustment of measuring range No Engineering with STEP 7 TIA Portal configurable/integrated from version STEP 7 configurable/integrated from version PROFIBUS from GSD version/GSD revision PROFIBUS from GSD version/GSD revision PROFINET from GSD version/GSD revision Press PROFINET from GSD version/GSD revision Press Prover loss, typ. Prower loss, typ. Press Press Press Press Press Prower loss, typ. Press Press Press Press Press Press Prower loss, typ. Prower loss, typ. Prower loss, typ. Press Prower loss, typ. Press Pre	● I&M data	Yes; I&M0 to I&M3
Measuring range scalable Scalable measured values Adjustment of measuring range No Engineering with STEP 7 TIA Portal configurable/integrated from version STEP 7 TIA Portal configurable/integrated from version STEP 7 Configurable/integrated from version PROFINET from GSD version/GSD revision Operating mode Oversampling MSI STEP Configuration in RUN Reparameterization possible in RUN Pes Supply voltage Rated value (DC) Permissible range, lower limit (DC) Permissible range, upper limit (DC) Pess Current consumption, max. 165 mA Encoder supply Short-circuit protection Pes Output current, max. 20 mA; Max. 47 mA per channel for a duration < 10 s Power loss Power loss, typ. 2.3 W Analog inputs	 Isochronous mode 	No
• Scalable measured values • Adjustment of measuring range Engineering with • STEP 7 TIA Portal configurable/integrated from version • STEP 7 Ton Fortal configurable/integrated from version • STEP 7 Ton Fortal configurable/integrated from version • STEP 7 Ton Fortal configurable/integrated from version • PROFIBUS from GSD version/GSD revision • Oversampling • Oversampling • Oversampling • No • MSI • Yes Calibration possible in RUN Reparameterization possible in RUN Yes Supply voltage Rated value (DC) • permissible range, lower limit (DC) • 19.2 V • permissible range, upper limit (DC) • 28.8 V Reverse polarity protection • Yes Current consumption, max. • 165 mA Encoder supply • Short-circuit protection • Output current, max. • 20 mA; Max. 47 mA per channel for a duration < 10 s Power Power loss, typ. Power loss, typ. Analog inputs	 Prioritized startup 	No
• 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 • PROFIBUS from GSD version/GSD revision • PROFINET from GSD version/GSD revision • PROFINET from GSD version/GSD revision • Oversampling • MSI • MSI Reparameterization possible in RUN Reparameterization possible in RUN Reparameterization possible in RUN Yes Supply voltage Rated value (DC) permissible range, lower limit (DC) permissible range, lower limit (DC) permissible range, upper limit (DC) 185 mA Encoder supply 4 Vencoder supply • Short-circuit protection • Output current, max. 20 mA; Max. 47 mA per channel for a duration < 10 s Power Power available from the backplane bus 0.7 W Power loss, typ. Power loss, typ. Power loss, typ. Analog inputs	 Measuring range scalable 	No
Engineering with STEP 7 TIA Portal configurable/integrated from version STEP 7 configurable/integrated from version PROFIBUS from GSD version/GSD revision PROFIBUS from GSD version/GSD revision PROFINET from GSD version/GSD revision Pres Operating mode Oversampling No MSI Pes CIR-Configuration in RUN Reparameterization possible in RUN Pes Calibration possible in RUN Pes Supply voltage Rated value (DC) Permissible range, lover limit (DC) Permissible range, lover limit (DC) Permissible range, upper limit (DC) Pes Input current Current consumption, max. 165 mA Encoder supply Short-circuit protection Pes Output current, max. 20 mA; Max. 47 mA per channel for a duration < 10 s Power Power available from the backplane bus Power loss Power loss Power loss, typ. 2.3 W Analog inputs	 Scalable measured values 	No
STEP 7 TIA Portal configurable/integrated from version STEP 7 configurable/integrated from version PROFIBUS from GSD version/GSD revision PROFIBUS from GSD version/GSD revision PROFINET GSD version/GSD versio	Adjustment of measuring range	No
STEP 7 configurable/integrated from version PROFIBUS from GSD version/GSD revision PROFINET from GSD version/GSD revision V2.3 /- Operating mode Oversampling No MSI Yes CIR - Configuration in RUN Reparameterization possible in RUN Yes Calibration possible in RUN Yes Supply voltage Rated value (DC) permissible range, lower limit (DC) permissible range, upper limit (DC) permissible range, upper limit (DC) Reverse polarity protection Input current Current consumption, max. Encoder supply 4 V encoder supply Short-circuit protection Yes Output current, max. Power Power available from the backplane bus Power loss Power loss, typ. Power loss, typ. Analog inputs	Engineering with	
PROFIBUS from GSD version/GSD revision PROFINET from GSD version/GSD revision V2.3 / - Operating mode Oversampling No NSI Pes CIR - Configuration in RUN Reparameterization possible in RUN Supply voltage Rated value (DC) permissible range, lower limit (DC) permissible range, upper limit (DC) permissible range, upper limit (DC) Reverse polarity protection Input current Current consumption, max. 165 mA Encoder supply 24 V encoder supply Ves Output current, max. 20 mA; Max. 47 mA per channel for a duration < 10 s Power loss Power loss Power loss, typ. Analog inputs	 STEP 7 TIA Portal configurable/integrated from version 	V13 / V13.0.2
PROFINET from GSD version/GSD revision Operating mode Oversampling Mo MSI Yes CIR - Configuration in RUN Reparameterization possible in RUN Calibration possible in RUN Yes Supply voltage Rated value (DC) permissible range, lower limit (DC) permissible range, upper limit (DC) permissible range, upper limit (DC) Reverse polarity protection Input current Current consumption, max. 165 mA Encoder supply 4 V encoder supply Short-circuit protection Yes Output current, max. 20 mA; Max. 47 mA per channel for a duration < 10 s Power Power loss Power loss, typ. Analog inputs	 STEP 7 configurable/integrated from version 	V5.5 SP3 / -
Operating mode Oversampling No MSI Yes CIR - Configuration in RUN Reparameterization possible in RUN Reparameterization possible in RUN Yes Calibration possible in RUN Yes Supply voltage Rated value (DC) permissible range, lower limit (DC) permissible range, upper limit (DC) permissible range, upper limit (DC) Reverse polarity protection Yes Input current Current consumption, max. 165 mA Encoder supply Short-circuit protection Yes Output current, max. 20 mA; Max. 47 mA per channel for a duration < 10 s Power Power available from the backplane bus O.7 W Power loss Power loss, typ. Analog inputs	 PROFIBUS from GSD version/GSD revision 	V1.0 / V5.1
Oversampling MSI Yes CIR - Configuration in RUN Reparameterization possible in RUN Reparameterization possible in RUN Yes Calibration possible in RUN Yes Supply voltage Rated value (DC) permissible range, lower limit (DC) permissible range, upper limit (DC) permissible range, upper limit (DC) Reverse polarity protection Yes Input current Current consumption, max. 165 mA Encoder supply 4 V encoder supply • Short-circuit protection Yes • Output current, max. 20 mA; Max. 47 mA per channel for a duration < 10 s Power Power available from the backplane bus O.7 W Power loss Power loss, typ. Analog inputs	PROFINET from GSD version/GSD revision	V2.3 / -
NSI CiR - Configuration in RUN Reparameterization possible in RUN Yes Calibration possible in RUN Yes Supply voltage Rated value (DC) Permissible range, lower limit (DC) Permissible range, upper limit	Operating mode	
CiR - Configuration in RUN Reparameterization possible in RUN Calibration possible in RUN Yes Supply voltage Rated value (DC) permissible range, lower limit (DC) permissible range, upper limit (DC) permissible range, upper limit (DC) Reverse polarity protection Yes Input current Current consumption, max. 165 mA Encoder supply 4 V encoder supply Short-circuit protection Yes Output current, max. 20 mA; Max. 47 mA per channel for a duration < 10 s Power Power loss Power loss Power loss, typ. Analog inputs	Oversampling	No
Reparameterization possible in RUN Calibration possible in RUN Yes Supply voltage Rated value (DC) permissible range, lower limit (DC) permissible range, upper limit (DC) Reverse polarity protection Yes Input current Current consumption, max. Encoder supply 24 V encoder supply 4 V encoder supply • Short-circuit protection Yes Output current, max. Power Power available from the backplane bus Power loss, typ. Analog inputs		Yes
Calibration possible in RUN Supply voltage Rated value (DC) permissible range, lower limit (DC) permissible range, upper limit (DC) Reverse polarity protection Yes Input current Current consumption, max. 165 mA Encoder supply 24 V encoder supply • Short-circuit protection Yes • Output current, max. Power Power available from the backplane bus Power loss, typ. Analog inputs	CiR - Configuration in RUN	
Rated value (DC) permissible range, lower limit (DC) permissible range, upper limit (DC) Reverse polarity protection Fees lingut current Current consumption, max. Current consumption, max. 165 mA Encoder supply 24 V encoder supply 9 Short-circuit protection Yes Output current, max. 20 mA; Max. 47 mA per channel for a duration < 10 s Power Power available from the backplane bus Power loss, typ. 2.3 W Analog inputs	Reparameterization possible in RUN	Yes
Rated value (DC) permissible range, lower limit (DC) permissible range, upper limit (DC) Reverse polarity protection Yes Input current Current consumption, max. Encoder supply 24 V encoder supply 9 Short-circuit protection Output current, max. Power Power available from the backplane bus Power loss, typ. Analog inputs	·	Yes
permissible range, lower limit (DC) permissible range, upper limit (DC) Reverse polarity protection Yes Input current Current consumption, max. 165 mA Encoder supply 24 V encoder supply • Short-circuit protection • Output current, max. 20 mA; Max. 47 mA per channel for a duration < 10 s Power Power available from the backplane bus Power loss Power loss, typ. 2.3 W Analog inputs	Supply voltage	
permissible range, upper limit (DC) Reverse polarity protection Yes Input current Current consumption, max. 165 mA Encoder supply 24 V encoder supply • Short-circuit protection • Output current, max. Power Power available from the backplane bus Power loss Power loss, typ. 28.8 V Yes 165 mA 165 mA 20 mA Yes 20 mA; Max. 47 mA per channel for a duration < 10 s Power loss Power loss Power loss, typ. 2.3 W Analog inputs	Rated value (DC)	24 V
Reverse polarity protection Input current Current consumption, max. Encoder supply 24 V encoder supply • Short-circuit protection • Output current, max. Power Power available from the backplane bus Power loss Power loss, typ. Analog inputs	permissible range, lower limit (DC)	19.2 V
Input current Current consumption, max. Encoder supply 24 V encoder supply • Short-circuit protection • Output current, max. Power Power available from the backplane bus Power loss Power loss, typ. Analog inputs	permissible range, upper limit (DC)	28.8 V
Current consumption, max. Encoder supply 24 V encoder supply • Short-circuit protection • Output current, max. Power Power available from the backplane bus Power loss Power loss, typ. Analog inputs	Reverse polarity protection	Yes
Encoder supply 24 V encoder supply • Short-circuit protection • Output current, max. Power Power available from the backplane bus Power loss Power loss, typ. 2.3 W Analog inputs	Input current	
24 V encoder supply Short-circuit protection Output current, max. Power Power available from the backplane bus Power loss Power loss, typ. Analog inputs	Current consumption, max.	165 mA
Short-circuit protection Output current, max. Power Power available from the backplane bus Power loss Power loss, typ. Analog inputs Yes 20 mA; Max. 47 mA per channel for a duration < 10 s 0.7 W 2.3 W Analog inputs	Encoder supply	
● Output current, max. 20 mA; Max. 47 mA per channel for a duration < 10 s Power Power available from the backplane bus 0.7 W Power loss Power loss, typ. 2.3 W Analog inputs	24 V encoder supply	
Power available from the backplane bus O.7 W Power loss Power loss, typ. 2.3 W Analog inputs	Short-circuit protection	Yes
Power available from the backplane bus O.7 W Power loss Power loss, typ. Analog inputs	 Output current, max. 	20 mA; Max. 47 mA per channel for a duration < 10 s
Power loss Power loss, typ. Analog inputs 2.3 W	Power	
Power loss, typ. 2.3 W Analog inputs	Power available from the backplane bus	0.7 W
Analog inputs	Power loss	
	Power loss, typ.	2.3 W
Number of analog inputs 4	Analog inputs	
	Number of analog inputs	4

For current measurement	4
	4
For voltage measurement For registance (registance thermometer measurement)	2
For resistance/resistance thermometer measurement	
For thermocouple measurement	4
permissible input voltage for voltage input (destruction limit), max.	28.8 V
permissible input current for current input (destruction limit), max.	40 mA
Constant measurement current for resistance-type transmitter, typ.	150 Ohm, 300 Ohm, 600 Ohm, Pt100, Pt200, Ni100: 1.25 mA; 6 000 Ohm, Pt500, Pt1000, Ni1000, LG-Ni1000: 0.625 mA; PTC: 0.472 mA
Technical unit for temperature measurement adjustable	Yes; °C/°F/K
Analog input with oversampling	No
Standardization of measured values	No
Input ranges (rated values), voltages	
• 0 to +5 V	No
• 0 to +10 V	No
• 1 V to 5 V	Yes
— Input resistance (1 V to 5 V)	100 kΩ
• -1 V to +1 V	Yes
— Input resistance (-1 V to +1 V)	10 ΜΩ
• -10 V to +10 V	Yes
— Input resistance (-10 V to +10 V)	100 kΩ
• -2.5 V to +2.5 V	Yes
— Input resistance (-2.5 V to +2.5 V)	10 ΜΩ
• -25 mV to +25 mV	No
• -250 mV to +250 mV	Yes
— Input resistance (-250 mV to +250 mV)	10 ΜΩ
• -5 V to +5 V	Yes
— Input resistance (-5 V to +5 V)	100 kΩ
● -50 mV to +50 mV	Yes
— Input resistance (-50 mV to +50 mV)	10 ΜΩ
• -500 mV to +500 mV	Yes
— Input resistance (-500 mV to +500 mV)	10 ΜΩ
• -80 mV to +80 mV	Yes
— Input resistance (-80 mV to +80 mV)	10 ΜΩ
Input ranges (rated values), currents	
• 0 to 20 mA	Yes
— Input resistance (0 to 20 mA)	25 $Ω$; Plus approx. 42 ohms for overvoltage protection by PTC
• -20 mA to +20 mA	Yes
— Input resistance (-20 mA to +20 mA)	25 Ω ; Plus approx. 42 ohms for overvoltage protection by PTC
• 4 mA to 20 mA	Yes
 Input resistance (4 mA to 20 mA) 	25 Ω ; Plus approx. 42 ohms for overvoltage protection by PTC
Input ranges (rated values), thermocouples	
Type B	Yes
Input resistance (Type B)	10 ΜΩ
• Type C	No
• Type E	Yes
Input resistance (Type E)	10 ΜΩ
• Type J	Yes
Input resistance (type J)	10 ΜΩ
• Type K	Yes
Input resistance (Type K)	10 ΜΩ
• Type L	No
. , , , , , , , , , , , , , , , , , , ,	
	Yes
Type N — Input resistance (Type N)	Yes 10 $M\Omega$
• Type N	
Type N— Input resistance (Type N)Type R	10 ΜΩ
 Type N — Input resistance (Type N) Type R — Input resistance (Type R) 	10 M Ω Yes
 Type N — Input resistance (Type N) Type R — Input resistance (Type R) Type S 	10 M Ω Yes 10 M Ω Yes
 Type N — Input resistance (Type N) Type R — Input resistance (Type R) Type S — Input resistance (Type S) 	10 M Ω Yes 10 M Ω Yes 10 M Ω
 Type N — Input resistance (Type N) Type R — Input resistance (Type R) Type S 	10 M Ω Yes 10 M Ω Yes



Type TXK/TXK(L) to GOST	No
Input ranges (rated values), resistance thermometer	
• Cu 10	No
 Cu 10 according to GOST 	No
• Cu 50	No
Cu 50 according to GOST	No
• Cu 100	No
Cu 100 according to GOST	No
• Ni 10	No
Ni 10 according to GOST	No
• Ni 100	Yes; Standard/climate
— Input resistance (Ni 100)	10 ΜΩ
Ni 100 according to GOST	No
• Ni 1000	Yes; Standard/climate
— Input resistance (Ni 1000)	10 ΜΩ
Ni 1000 according to GOST	No
• LG-Ni 1000	Yes; Standard/climate
— Input resistance (LG-Ni 1000)	10 ΜΩ
• Ni 120	No
Ni 120 according to GOST	No
• Ni 200	No
Ni 200 according to GOST	No
• Ni 500	No
Ni 500 according to GOST	No
• Pt 10	No
Pt 10 according to GOST	No
• Pt 50	No
Pt 50 according to GOST	No
• Pt 100	Yes; Standard/climate
— Input resistance (Pt 100)	10 MΩ
Pt 100 according to GOST	No
• Pt 1000 according to GOS1	Yes; Standard/climate
	Tes, Standard/Climate 10 MΩ
— Input resistance (Pt 1000)	
Pt 1000 according to GOST Pt 200	No
• Pt 200	Yes; Standard/climate
— Input resistance (Pt 200)	10 ΜΩ
Pt 200 according to GOST	No
• Pt 500	Yes; Standard/climate
— Input resistance (Pt 500)	10 MΩ
Pt 500 according to GOST	No
Input ranges (rated values), resistors	
• 0 to 150 ohms	Yes
— Input resistance (0 to 150 ohms)	10 ΜΩ
• 0 to 300 ohms	Yes
— Input resistance (0 to 300 ohms)	10 ΜΩ
• 0 to 600 ohms	Yes
— Input resistance (0 to 600 ohms)	10 ΜΩ
• 0 to 3000 ohms	No
• 0 to 6000 ohms	Yes
— Input resistance (0 to 6000 ohms)	10 ΜΩ
• PTC	Yes
— Input resistance (PTC)	10 ΜΩ
Thermocouple (TC)	
Temperature compensation	
— parameterizable	Yes
	Yes
 internal temperature compensation 	
internal temperature compensationexternal temperature compensation via RTD	Yes
	Yes Yes; fixed value can be set
— external temperature compensation via RTD	
— external temperature compensation via RTD— Compensation for 0 °C reference point temperature	Yes; fixed value can be set



Analog value generation for the inputs	
Integration and conversion time/resolution per channel	
Resolution with overrange (bit including sign), max.	16 bit
Integration time, parameterizable	Yes
• Integration time (ms)	2,5 / 16,67 / 20 / 100 ms
Basic conversion time, including integration time (ms)	9 / 23 / 27 / 107 ms
additional conversion time for wire-break monitoring	9 ms (to be considered in R/RTD/TC measurement)
additional conversion time for resistance	150 ohm, 300 ohm, 600 ohm, Pt100, Pt200, Ni100: 2 ms, 6000 ohm, Pt500,
measurement	Pt1000, Ni1000, LG-Ni1000, PTC: 4 ms
 Interference voltage suppression for interference 	400 / 60 / 50 / 10
frequency f1 in Hz	
Time for offset calibration (per module)	Basic conversion time of the slowest channel
Smoothing of measured values	Van
parameterizable Stan: Nana	Yes Yes
• Step: None	Yes
Step: lowStep: Medium	Yes
·	Yes
Step: High Encoder	100
Connection of signal encoders	
for voltage measurement	Yes
for current measurement as 2-wire transducer	Yes
Burden of 2-wire transmitter, max.	820 Ω
for current measurement as 4-wire transducer	Yes
for resistance measurement with two-wire connection	Yes; Only for PTC
for resistance measurement with three-wire connection	Yes; All measuring ranges except PTC; internal compensation of the cable
	resistances
for resistance measurement with four-wire connection	Yes; All measuring ranges except PTC
Errors/accuracies	
Linearity error (relative to input range), (+/-)	0.02 %
Temperature error (relative to input range), (+/-)	0.005 %/K; With TC type T 0.02 ± % / K
Crosstalk between the inputs, max.	-80 dB
Repeat accuracy in steady state at 25 °C (relative to input range), (+/-)	0.02 %
Temperature error of internal compensation	±6 °C
note regarding accuracy	at temperatures below 0 °C, the figures for operating error and temperature error are doubled
Operational error limit in overall temperature range	
 Voltage, relative to input range, (+/-) 	0.3 %
 Current, relative to input range, (+/-) 	0.3 %
 Resistance, relative to input range, (+/-) 	0.3 %
 Resistance thermometer, relative to input range, (+/-) 	0.3 %; Ptxxx standard: ±1.5 K, Ptxxx climate: ±0.5 K, Nixxx standard: ±0.5 K, Nixxx climate: ±0.3 K
Thermocouple, relative to input range, (+/-)	0.3 %; Type B: > 600 °C ±4.6 K, type E: > -200 °C ±1.5 K, type J: > -210 °C ±1.9 K, type K: > -200 °C ±2.4 K, type N: > -200 °C ±2.9 K, type R: > 0 °C ±4.7 K, type S: > 0 °C ±4.6 K, type T: > -200 °C ±2.4 K
Basic error limit (operational limit at 25 °C)	
 Voltage, relative to input range, (+/-) 	0.1 %
• Current, relative to input range, (+/-)	0.1 %
• Resistance, relative to input range, (+/-)	0.1 %
• Resistance thermometer, relative to input range, (+/-)	0.1 %; Ptxxx standard: ± 0.7 K, Ptxxx climate: ± 0.2 K, Nixxx standard: ± 0.3 K, Nixxx climate: ± 0.15 K
• Thermocouple, relative to input range, (+/-)	0.1 %; Type B: > 600 °C ±1.7 K, type E: > -200 °C ±0.7 K, type J: > -210 °C ±0.8 K, type K: > -200 °C ±1.2 K, type N: > -200 °C ±1.2 K, type R: > 0 °C ±1.9 K, type S: > 0 °C ±1.9 K, t
Interference voltage suppression for f = n x (f1 +/- 1 %), f1 = interfe	K, type S: > 0 °C ±1.9 K, type T: > -200 °C ±0.8 K
Series mode interference (peak value of interference <	40 dB
rated value of input range), min.	
 Common mode voltage, max. 	10 V
Common mode interference, min.	60 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	res, two upper and two lower limit values in each case
Monitoring the supply voltage	Yes
Wire-break	Yes; Only for 1 to 5 V, 4 to 20 mA, TC, R, and RTD
Overflow/underflow	Yes
Diagnostics indication LED	165
• RUN LED	Yes; green LED
• ERROR LED	Yes; red LED
Monitoring of the supply voltage (PWR-LED)	Yes; green LED
Channel status display	Yes; green LED
for channel diagnostics	Yes; red LED
for module diagnostics	Yes; red LED
Potential separation	100,100 EEB
Potential separation channels	
between the channels	No
between the channels, in groups of	4
between the channels and backplane bus	Yes
between the channels and the power supply of the electronics	Yes
Permissible potential difference	
between the inputs (UCM)	20 V DC
Between the inputs and MANA (UCM)	10 V DC
Isolation	
Isolation tested with	707 V DC (type test)
Ambient conditions	
Ambient temperature during operation	
horizontal installation, min.	-25 °C; From FS03
 horizontal installation, max. 	60 °C
• vertical installation, min.	-25 °C; From FS03
vertical installation, max.	40 °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	
Width	25 mm
Height	147 mm
Depth	129 mm
Weights	
Weight, approx.	210 g
Other	
Note:	Supplied incl. 40-pole push-in front connectors. Additional basic error and noise for integration time = 2.5 ms: Voltage: ±250 mV (±0.02%), ±80 mV (±0.05%), ±50 mV (±0.05%); resistance: 150 Ohms (±0.02%); resistance thermometer: Pt100 climate: ±0.08 K, Ni100 climate: ±0.08 K; thermoelement: Type B, R, S: ±3 K, type E, J, K, N, T: ±1 K

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last modified: