SIEMENS

Data sheet

6ES7134-6GD01-2BA1



SIMATIC ET 200SP, ANALOG INPUT MODULE, AI 4XI 2-/4-WIRE STANDARD, PACKING UNIT: 10 PIECES, FITS TO BU-TYPE A0, A1, COLOR CODE CC03, MODULE DIAGNOSIS, 16BIT, +/-0,3%

General information	
Product type designation	Al 4xl 2-/4-wire ST
HW functional status	From FS02
Firmware version	
 FW update possible 	Yes
usable BaseUnits	BU type A0, A1
Color code for module-specific color identification plate	CC03
Product function	
● I&M data	Yes; I&M0 to I&M3
 Isochronous mode 	No
Measuring range scalable	No
Engineering with	
 STEP 7 TIA Portal configurable/integrated from version 	V14 / -
 STEP 7 configurable/integrated from version 	V5.6 and higher
 PCS 7 configurable/integrated from version 	V8.1 SP1
 PROFIBUS from GSD version/GSD revision 	One GSD file each, Revision 3 and 5 and higher
 PROFINET from GSD version/GSD revision 	GSDML V2.3
Operating mode	
 Oversampling 	No
• 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, max.	37 mA; without sensor supply
Encoder supply	
24 V encoder supply	
• 24 V	Yes
Short-circuit protection	Yes
 Output current, max. 	20 mA; max. 50 mA per channel for a duration < 10 s
Power loss	
Power loss, typ.	0.85 W; Without encoder supply voltage
Address area	
Address space per module	
 Address space per module, max. 	8 byte; + 1 byte for QI information

Number of analog inputs permissible input current for current input (destruction limit), mix. Cycle time (all channels), min. Oybe time (all channels), min.	Automatic encoding • Mechanical coding element • Type of mechanical coding element • Type of mechanical coding element • Type of mechanical coding element • Zwife connection • Zwife connection • Awire connection • Australog inputs Number of analog inputs permissible input current for current input (destruction limit), max. Cycle time (all channels), min. Cycle time (all channels), min. • 10 to 20 mA — Input resistance (0 to 20 mA) • 100 Ω γ + approx. 0.7 V • 20 mA to +20 mA — Input resistance (-20 mA to +20 mA) • 100 Ω • 4 mA to 20 mA — Input resistance (4 mA to 20 mA) • 100 Ω • 4 mA to 20 mA — Input resistance (4 mA to 20 mA) • 100 Ω • shielded, max. Analog value generation for the inputs Measurement principle Integration and conversion time/resolution per channel • Resolution with overrange (bit including sign), max. • Integration time, parameterizable • Interference voltage suppression for interference frequency 11 in Hz • Conversion time (per channel) Smoothing of measured values • Number of smoothing levels • parameterizable * No • parameterizable * Permord/accurracies Linearity error (relative to input range), (+/-) Temperature error (relative to input range), (+/-) Operational error limit in overal temperature range • Current, relative to input range), (+/-) Operational error limit in overal lemperature range • Current, relative to input range, (+/-) Basic error limit (operational limit at 25 °C) • Current, relative to input range, (+/-) Basic error limit (operational limit at 25 °C) • Current, relative to input range, (+/-) Basic error limit (operational limit at 25 °C) • Current, relative to input range, (+/-) Basic error limit (operational limit at 25 °C) • Current, relative to input range, (+/-) Basic error limit (operational limit at 25 °C) • Current, relative to input range, (+/-) Common mode voltage, max. • Operational error limit operational limit at 25 °C) • Current, relative to input range, min. • Common mode voltage, max. • Operationa	
• Nechanical coding element • Type of mechanical coding element • Type of mechanical coding element • 2-wire connection • 2-wire connection • 8U type A0, A1 • 4-wire connection • 18U type A0, A1 • 4-wire connection • 18U type A0, A1 • 4-minor inputs • 19 minor inputs • 19 minor inputs • 19 minor input current for current input (destruction limit), min. • 19 minor input current for current input (destruction limit), min. • 19 minor input current for current input (destruction limit), min. • 19 minor input current for current input (destruction limit), min. • 10 to 20 mA • 10 to 2	• Mechanical coding element • Type of mechanical coding element • Type A • Type of mechanical coding element • 2-wire connection • 4-wire connection • 50 mA Ranalog inputs Sum of the basic conve on the parameterization on the par	
* Type of mechanical coding element * 2-wite connection * 4-wire connection * 4-wire connection * 4-wire connection * 4-wire connection * 5-wite connection * 5-wite connection * 5-wite connection * 6-wire connection * 6-wire connection * 7-wire connection * 8-wire connection * 7-wire connection * 8-wire connection * 7-wire connection * 8-wire connection * 8-wire connection * 9-wire connection * 9-wire connection * 1-wire * 1-wire connection * 1-wire	Type of mechanical coding element Selection of BaseUnit for connection variants 2 - wire connection Analog inputs Number of analog inputs permissible input current for current input (destruction limit), max. Cycle time (all channels), min. Cycle time (all channels), min. Input ranges (rated values), currents 1 0 10 2 0 mA Input resistance (0 to 20 mA) Input resistance (0 to 20 mA) Input resistance (20 mA to +20 mA) Input resistance (4 mA to 20 mA) Input resistance (5 to mA) Input resistance (6 to 20 mA) Input resistance (7 to mA) Input resistance (7 to mA) Input resistance (8 to 20 mA) Input resistance (9 to 20 mA) Input resistance (9 to 20 mA) Input resistance (1 to 20 mA) Inp	
Selection of BaseJunit for connection variants • 2-wire connection • 4-wire connection • 4-wire connection • 5 U type A0, A1 • 4-mile connection • 5 U type A0, A1 • 6 U type A0, A1 • 7 U type A0, A1 • 7 U type A0, A1 • 8 U type A0, A1 • 9 U type A0, A1 • 10 U type	Selection of BaseUnit for connection variants • 2-wire connection • 2-wire connection • 2-wire connection Anatog inputs Number of analog inputs permissible input current for current input (destruction limit), max. Cycle time (all channels), min. Cycle time (all channels), min. • 0 to 20 mA — Input resistance (0 to 20 mA) • - Input resistance (0 to 20 mA) — Input resistance (-20 mA to +20 mA) — Input resistance (-20 mA to +20 mA) — Input resistance (4 mA to 20 mA) Analog value generation for the inputs Measurement principle Integration and conversion time/resolution per channel • Resolution with overrange (bit including sign), max. • Integration time, parameterizable • Integration time, parameterizable • Interference voltage suppression for interference • Integration time (per channel) Smootting of measured values • Number of smoothing levels • parameterizable • Parameterizable • Parameterizable • Orneration ender of 2-wire transmitter, max. • for current measurement as 2-wire transducer — Burden of 2-wire transmitter, max. • for current measurement as 4-wire transducer Errors/accuracies • for outlage measurement as 4-wire transducer — Burden of 2-wire transmitter, max. • for current measurement as 4-wire transducer — Burden of 2-wire transmitter, max. • for current measurement as 2-wire transducer — Burden of 2-wire transmitter, max. • for current measurement as 4-wire transducer • Connection of signal encoders • Cornection of signal encoders • Cornection of signal encoders • Cornection of signal encoders • Ourrent, relative to input range, (+/-) Temperature error (relative to input range, (+/-) Oo 5 % Crosstalk between the inputs, min. • Oo Tom	
A-viris cannection	Analog inputs Number of analog inputs permissible input current for current input (destruction limit), max. Cycle time (all channels), min. Sum of the basic conve on the parameterization input ranges (rated values), currents • 0 to 20 mA — Input resistance (0 to 20 mA) — Input resistance (-20 mA to +20 mA) — Input resistance (-20 mA to +20 mA) — Input resistance (4 mA to 20 mA) — Input resistance (5 mA to 20 mA) — Input resistance (6 mA	
Analog Inputs Number of analog Inputs Analog Inputs Number of analog Inputs Personal Exercisor Interest Provided Forward (destruction limit), max. Out of the Carbon Input resistance (or to 20 mA) - Input resistance (or to 40 mA) - Input	Number of analog inputs permissible input current for current input (destruction limit), max. Cycle time (all channels), min. O to 20 mA — Input resistance (0 to 20 mA) — Input resistance (-20 mA to +20 mA) — Input resistance (-20 mA to +20 mA) — Input resistance (-40 mA to 20 mA) — Shielded, max. Analog value generation for the inputs Measurement principle Integration and conversion time/resolution per channel Resolution with overrange (bit including sign), max. — Integration time, parameterizable — Resolution with overrange (bit including sign), max. — Integration time, parameterizable — Conversion time (per channel) Smoothing of measured values — Number of smoothing levels — parameterizable — Parameterizable — Parameterizable — Parameterizable — Burden of 2-wire transmitter, max. — for current measurement as 2-wire transducer — Burden of 2-wire transmitter, max. — for current measurement as 4-wire transducer — Burden of 2-wire transmitter, max. — for current measurement as 4-wire transducer — Burden of 2-wire transmitter, max. — for current measurement as 4-wire transducer — Burden of 2-wire transmitter, max. — for current measurement as 2-wire transducer — Burden of 2-wire transmitter, max. — for current measurement as 2-wire transducer — Burden of 2-wire transmitter, max. — for current measurement as 2-wire transducer — Burden of 2-wire transmitter, max. — for current measurement as 2-wire transducer — Burden of 2-wire transmitter, max. — for current measurement as 4-wire transducer — Burden of 2-wire transmitter, max. — for current measurement as 4-wire transducer — Burden of 2-wire transmitter, max. — for current measurement as 4-wire transducer — Burden of 2-wire transmitter, max. — for current measurement as 4-wire transducer — Burden of 2-wi	
Number of analog inputs permissible input current for current input (destruction limit), mix. Cycle time (all channels), min. Oybe time (all channels), min.	Number of analog inputs 4; Differential inputs permissible input current for current input (destruction limit), max. 50 mA	
permissible input current for current input (destruction limit), max. Cycle time (all channels), min. 6 to 20 mA - Input resistance (0 to 20 mA) - 20 mA to +20 mA - Input resistance (20 mA to +20 mA) - 4 mA to 20 mA - 4 mA to 20 mA - 4 mA to 20 mA - 5 shielded, max. Analog value generation for the input: - 1 neutrent input (4 mA to 20 mA) - 1 niput resistance (4 mA to 20 mA) - 4 mA to 20 mA - 5 shielded, max. - 1 niput resistance (4 mA to 20 mA) - 5 shielded, max. - 1 niput resistance (4 mA to 20 mA) - 5 shielded, max. - 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Permissible input current for current input (destruction limit), max.	
Toyle time (all channels), min. Cycle time (all channels), min. Lycle time (all channels), min. Sum of the basic conversion times and additional processing times (depending on the parameterization of the active channels) Pour transpace (rated values), currents O to 20 mA — Input resistance (20 mA) 100 Ω + approx. 0.7 V clode forward voltage in 2-wire operation Yes — Input resistance (20 mA to +20 mA) 100 Ω + approx. 0.7 V clode forward voltage in 2-wire operation Yes — Input resistance (4 mA to 20 mA) 100 Ω + approx. 0.7 V clode forward voltage in 2-wire operation Cable length • Shelded, max. 1000 m Analog value generation for the inputs Measurement principle Integration and conversion time/resolution per channel • Resolution with overrange (bit including sign), max. 16 bit 100 minute (1 minute	Tank Cycle time (all channels), min. Oto 20 mA — Input resistance (0 to 20 mA) — Input resistance (-20 mA to +20 mA) — Input resistance (-20 mA to +20 mA) — Input resistance (-20 mA to +20 mA) — Input resistance (-4 mA to 20 mA) — Input resistance (-4 mA to 20 mA) — Input resistance (-4 mA to 20 mA) — Input resistance (4 mA to 20 mA) — Input resistance (5 mA to 20 mA) — Input resistance (5 mA to 20 mA) — Integration for the inputs Measurement principle Integration and conversion time/resolution per channel — Resolution with overrange (bit including sign), max. — Integration time, parameterizable — Interference voltage suppression for interference — Interference voltage enasurement — For current measurement as 2-wire transducer — Burden of 2-wire transmitter, max. — For current measurement as 2-wire transducer — Burden of 2-wire transmitter, max. — For current measurement as 4-wire transducer — Burden of 2-wire transmitter, max. — For our residence voltage interference voltage voltage, max. — For current, relative to input range, (+/-) — Onerational error limit in overall temperature range — Current, relative to input range, (+/-) — Onerational error limit in overall temperature range — Current, relative to input range, (+/-) — Onerational error limit in overall temperature range — Current, relative to input range, (+/-) — Onerational error limit in overall temperature range — Current, relative	S
on the parameterization of the active channels) • 0 to 20 mA Yes; 16 bit incl. sign — Input resistance (0 to 20 mA) 100 Ω; + approx. 0.7 V diode forward voltage in 2-wire operation • 2 m An to 20 mA Yes — Input resistance (-20 mA to +20 mA) 100 Ω; + approx. 0.7 V diode forward voltage in 2-wire operation • 4 m An to 20 mA Yes; 15 bit — Input resistance (4 mA to 20 mA) 100 Ω; + approx. 0.7 V diode forward voltage in 2-wire operation • 4 m An to 20 mA (100 Ω; + approx. 0.7 V diode forward voltage in 2-wire operation Cable length • shelded, max. 1 000 m Anatog value generation for the inputs Measurement principle • Resolution with overrange (bit including sign). max. • Integration time, parameterizable • Resolution with overrange (bit including sign). max. • Integration time, parameterizable • Conversion time (per channel) 180 / 60 / 50 / 80 Hz • Conversion time (per channel) 180 / 60 / 50 ms Smoothing of measured values • Vamber of smoothing levels • parameterizable Yes Encoder Connection of signal encoders • for ordage measurement as 2-wire transducer Yes Encoder Connection of signal encoders • for ordage measurement as 2-wire transducer Yes Encoder (relative to input range), (+/-) 0.01 % Temperature error (relative to input, min. 50 GB, Applies to up to ±5 V overvoltage in other channels • Corversion in step of the pinut range, (+/-) 0.5 % Basic error limit in overall temperature range • Current, relative to input range, (+/-) 0.5 % Basic error limit in overall temperature range • Current, relative to input range, (+/-) 0.5 % Basic error limit in overall temperature range • Current, relative to input range, (+/-) 0.5 % Basic error limit in overall temperature range • Current, relative to input range, (+/-) 0.5 % Basic error limit in overall temperature range • Current, relative to input range, (+/-) 0.5 % Basic error limit in overall temperature range • Current, relative to input range, (+/-) 0.5 % • Correspondent interference (peak value of interference can be a value of interference ca	Input ranges (rated values), currents • 0 to 20 mA — Input resistance (0 to 20 mA) — 20 mA to +20 mA — Input resistance (-20 mA to +20 mA) 100 Ω; + approx. 0.7 V Yes — Input resistance (-20 mA to +20 mA) 100 Ω • 4 mA to 20 mA — Input resistance (4 mA to 20 mA) — Input resistance (4 mA to 20 mA) — Input resistance (5 mA) — Input resistance (4 mA to 20 mA) — Input resistance (4 mA to 20 mA) — Input resistance (5 mA) — Input resistance (6 mA) — Input resistance (6 mA) — Input resistance (7 mA) — Input resistance (8 mA) — Input resistance (9 mA) — Interrevence (1 mA) — Interrevence (1 mA) — Input resistance (9 mA) — Interrevence (1 mA) —	
- 0 to 20 mA	- 0 to 20 mA	
- Input resistance (0 to 20 mA) • 20 m Ao + 2c mA - (20 mA to +20 mA) - (20 mA to +20 mA) - (30 mA) • 4 mA to 20 mA • 100 Ω • 100 M	Input resistance (0 to 20 mA) • -20 mA to +20 mA Input resistance (-20 mA to +20 mA) • 4 mA to 20 mA Input resistance (-20 mA to +20 mA) • 4 mA to 20 mA Input resistance (4 mA to 20 mA) Input resistance (4 mA to 20 mA) Input resistance (4 mA to 20 mA) Cable length • shielded, max. Analog value generation for the inputs Measurement principle Integration and conversion time/resolution per channel • Resolution with overrange (bit including sign), max. • Integration time, parameterizable • Interference voltage suppression for interference frequency f1 in h2 • Conversion time (per channel) Smoothing of measured values • Number of smoothing levels • parameterizable • Number of smoothing levels • parameterizable Fincoder Connection of signal encoders • for voltage measurement • for current measurement as 2-wire transducer Burden of 2-wire transmitter, max. • for current measurement as 4-wire transducer Burden of 2-wire transmitter, max. • for current measurement as 4-wire transducer Burden of 2-wire transmitter, max. • for current measurement as 4-wire transducer Burden of 2-wire transmitter, max. • for current measurement as 2-wire transducer Burden of 2-wire transmitter, max. • for current measurement as 4-wire transducer Burden of 2-wire transmitter, max. • for current measurement as 5-wire transducer Burden of 2-wire transmitter, max. • for current measurement as 4-wire transducer Burden of 2-wire transmitter, max. • for current measurement as 4-wire transducer Burden of 2-wire transmitter, max. • for current measurement as 4-wire transducer Burden of 2-wire transmitter, max. • for ourrent measurement as 4-wire transducer Burden of 2-wire transmitter, max. • for ourrent measurement as 4-wire transducer Burden of 2-wire transmitter, max. • for ourrent measurement as 4-wire transducer Burden of 2-wire transmitter, max. • for ourrent measurement as 4-wire transducer Burden of 2-wire transmitter, max. • fo	
- 20 mA to +20 mA	20 mA to +20 mA	ı
- Input resistance (-20 mA to +20 mA) • 4 mA to 20 mA — Input resistance (4 mA to 20 mA) Cable length • 5 shielded, max. Analog value generation for the inputs Measurement principle Integration and conversion time/resolution per channel Integration and conversion time/resolution per channel • Resolution with overrange (bit including sign), max. • Integration time, parameterizable • Integration independent of the input sequence	- Input resistance (-20 mA to +20 mA) • 4 mA to 20 mA — Input resistance (4 mA to 20 mA) • 100 Ω Yes; 15 bit 100 Ω; + approx. 0.7 V Cable length • shielded, max. 1 000 m Analog value generation for the inputs Measurement principle Integration and conversion time/resolution per channel • Resolution with overrange (bit including sign), max. • Integration time, parameterizable • Interference voltage suppression for interference frequency f1 in Hz • Conversion time (per channel) Smoothing of measured values • Number of smoothing levels • parameterizable Percoder Connection of signal encoders • for voltage measurement • for current measurement as 2-wire transducer — Burden of 2-wire transmitter, max. • for current measurement as 4-wire transducer Yes Errors/accuracios Linearity error (relative to input range), (+/-) Temperature error (relative to input range), (+/-) Qoperational error limit in overall temperature range • Current, relative to input range, (+/-) Basic error limit (operational limit at 25 °C) • Current, relative to input range, (+/-) Basic error limit (operational limit at 25 °C) • Current, relative to input range, (+/-) Interference voltage suppression for f = n x (f1 +/- 1 %), f1 = interference frequency • Series mode interference (peak value of interference < rated value of input range, (+/-) Interference voltage suppression for f = n x (f1 +/- 1 %), f1 = interference frequency • Series mode interference, min. • Diagnostic sfunction Alarms • Diagnostic sfatus information Diagnoses	7 V diode forward voltage in 2-wire operation
- 4 mA to 20 mA — Input resistance (4 mA to 20 mA) — Input resistance (4 mA to 20 mA) — Input resistance (4 mA to 20 mA) — Serieded, max. — Input resistance (4 mA to 20 mA) — Serieded, max. — Input resistance (4 mA to 20 mA) — Serieded, max. — Inou om Analog value generation for the inputs Measurement principle Integration and conversion time/resolution per channel — Resolution with overrange (bit including sign), max. — Inlegration time, parameterizable — Interference vorlage suppression for interference frequency f1 in hz — Conversion time (per channel) — 180 / 60 / 50 ms Smoothing of measured values — Number of smoothing levels — parameterizable — Yes — Purden of 2-wire transmitter, max. — 650 Ω — For current measurement as 2-wire transducer — Burden of 2-wire transmitter, max. — 650 Ω — For current measurement as 4-wire transducer — Burden of 2-wire transmitter, max. — 650 Ω — For current measurement as 4-wire transducer — Furner measurement as 4-wire transducer — Series accuracies Linearity error (relative to input range), (+/-) — 0.005 %/K Crosstalk between the inputs, min. — 50 dB; Applies to up to ±5 V overvoltage in other channels — 0.5 % — Series mode interference (peak value of interference erequency — Series mode interference (peak value of interference erequency — Series mode interference (peak value of interference erequency — Series mode interference (peak value of interference erea erea erea value of input range), (+/-) — 0.0 mode voltage, max. — 10 V — Common mode voltage, max. — 10 V — Common mode voltage, max. — 10 V erea erea final final at 25 *CCCCCCCCCCCCCCCCCCCCCCCCCCCCC	• 4 mA to 20 mA — Input resistance (4 mA to 20 mA) Cable length • shielded, max. Analog value generation for the inputs Measurement principle Integration and conversion time/resolution per channel • Resolution with overrange (bit including sign), max. • Integration time, parameterizable • Interference voltage suppression for interference frequency f1 in Hz • Conversion time (per channel) Smoothing of measured values • Number of smoothing levels • parameterizable Frocoder Connection of signal encoders • for voltage measurement • for current measurement as 2-wire transducer — Burden of 2-wire transmitter, max. • for current measurement as 4-wire transducer — Burden of 2-wire transmitter, max. • for current of (relative to input range), (+/-) Temperature error (relative to input range), (+/-) Crosstalk between the inputs, min. Repeat accuracy in steady state at 25 °C (relative to input range), (+/-) Operational error limit in overall temperature range • Current, relative to input range, (+/-) Operational error limit in overall temperature range • Current, relative to input range, (+/-) Operational error limit in overall temperature range • Current, relative to input range, (+/-) Operational error limit in overall temperature range • Current, relative to input range, (+/-) Operational error limit in overall temperature range • Current, relative to input range, (+/-) Operational error limit in overall temperature range • Current, relative to input range, (+/-) Operational error limit in overall temperature range • Current, relative to input range, (+/-) Operational error limit in overall temperature range • Current, relative to input range, (+/-) Diagnostic and interference, min. • Diagnostics function Diagnostics function Diagnostics alarm • Limit value alarm Diagnoses	
— Input resistance (4 mA to 20 mA) Cable length • shielded, max. 1 000 m Analog value generation for the inputs Measurement principle Integration and conversion time/resolution per channel • Resolution with overrange (bit including sign), max. • Integration inne, parameterizable • Interference voltage suppression for interference frequency f1 in h2 • Conversion time (per channel) • None; 4/8/16 times • parameterizable • Conversion time (per channel) • None; 4/8/16 times • parameterizable • for current measurement as 2-wire transducer — Burden of 2-wire transmitter, max. • for current measurement as 4-wire transducer — Burden of 2-wire transmitter, max. • for current measurement as 4-wire transducer — Burden of 2-wire transmitter, max. • for current measurement as 4-wire transducer — Burden of 2-wire transmitter, max. • for current measurement as 4-wire transducer — Burden of 2-wire transmitter, max. • for current measurement as 4-wire transducer — Burden of 2-wire transmitter, max. • for current measurement as 4-wire transducer — Burden of 2-wire transmitter, max. • for current measurement as 4-wire transducer — Burden of 2-wire transmitter, max. • for current measurement as 4-wire transducer — Burden of 2-wire transmitter, max. • for current measurement as 4-wire transducer — Burden of 2-wire transmitter, max. • for current measurement as 4-wire transducer — Comment provided to input range), (+/-) Temperature error (relative to input range), (+/-) Operational error limit in overall temperature range • Current, relative to input range, (+/-) Operational error limit in overall temperature range • Current, relative to input range, (+/-) Series mode interference (peak value of interference < replace to input range, min. • Common mode voltage, max. • Common mode voltage, max. • Common mode interference, min. Interpretable to input trange, information Pogenation of the provided transpect of the pro	- Input resistance (4 mA to 20 mA) Cable length • shielded, max. Analog value generation for the inputs Measurement principle Integration and conversion time/resolution per channel • Resolution with overrange (bit including sign), max. • Integration time, parameterizable • Integration time, parameterizable • Integration time, parameterizable • Integration time, parameterizable • Interference voltage suppression for interference frequency f1 in Hz • Conversion time (per channel) Smoothing of measured values • Number of smoothing levels • parameterizable Fencoder Connection of signal encoders • for voltage measurement • for current measurement as 2-wire transducer — Burden of 2-wire transmitter, max. • for current measurement as 4-wire transducer Ferrors/accuracles Linearity error (relative to input range), (+/-) 7 emperature error (relative to input range), (+/-) Questian error limit in overall temperature range • Current, relative to input range, (+/-) Operational error limit in overall temperature range • Current, relative to input range, (+/-) Assic error limit (operational limit at 25 °C) • Current, relative to input range, (+/-) Interference voltage suppression for f = n x (f1 +/- 1 %), f1 = interference frequency • Series mode interference (peak value of interference < rated value of input range), min. • Common mode voltage, max. • Common mode interference, min. Interrupts/diagnostics/status Information Diagnostic alarm • Limit value alarm • Limit value alarm • Limit value alarm • Limit value alarm	
Assistance of the companies of the comp	Analog value generation for the inputs Measurement principle Integration and conversion time/resolution per channel • Resolution with overrange (bit including sign), max. • Integration time, parameterizable • Integration time, parameterizable • Integration time, parameterizable • Integration time, parameterizable • Interference voltage suppression for interference frequency f1 in Hz • Conversion time (per channel) Smoothing of measured values • Number of smoothing levels • parameterizable Final Properation of signal encoders • for voltage measurement • for current measurement as 2-wire transducer — Burden of 2-wire transmitter, max. • for current measurement as 4-wire transducer — Burden of 2-wire transmitter, max. • for current measurement as 4-wire transducer Firors/accuracies Linearity error (relative to input range), (+/-) Crosstalk between the inputs, min. Repeat accuracy in steady state at 25 °C (relative to input range), (+/-) Operational error limit in overall temperature range • Current, relative to input range, (+/-) Basic error limit (operational limit at 25 °C) • Current, relative to input range, (+/-) Series mode interference (peak value of interference < rated value of input range), min. • Common mode voltage, max. • Common mode voltage, max. • Common mode interference, min. Piagnostics laarm • Diagnostics laarm • Diagnostics laarm • Limit value alarm Diagnoses	
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Alarms	Alarms Diagnostic alarm Limit value alarm Diagnoses	
	 Diagnostic alarm Limit value alarm Diagnoses Yes No	
Diagnostic alarm Yes	Limit value alarm No Diagnoses	
	Diagnoses	
Limit value alarm No		
·	Monitoring the supply voltage Yes	
0 117		
Wire break	Wire-break Yes; at 4 to 20 mA	

Short-circuit	Yes; 2-wire mode: Short-circuit of the encoder supply to ground or of an input to the encoder supply
Group error	Yes
 Overflow/underflow 	Yes
Diagnostics indication LED	
 Monitoring of the supply voltage (PWR-LED) 	Yes; green LED
Channel status display	Yes; green LED
 for channel diagnostics 	No
 for module diagnostics 	Yes; green/red LED
Potential separation	
Potential separation channels	
• between the channels	Yes; channel group-specific between 2-wire current input group and 4-wire voltage input group
 between the channels and backplane bus 	Yes
 between the channels and the power supply of the electronics 	Yes; only for 4-wire transducer
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 FS02
 horizontal installation, max. 	60 °C
 vertical installation, min. 	-30 °C; < 0 °C as of FS02
 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	
Width	15 mm
Height	73 mm
Depth	58 mm
Weights	
Weight, approx.	31 g

last modified: 2/6/2021 🖸