6ES7531-7KF00-0AB0

Data sheet



SIMATIC S7-1500 analog input module AI 8xU/I/RTD/TC ST, 16 bit resolution, accuracy 0.3%, 8 channels in groups of 8; 4 channels for RTD measurement, common mode voltage 10 V; Diagnostics; Hardware interrupts; Delivery including infeed element, shield bracket and shield terminal: Front connector (screw terminals or push-in) to be ordered separately

Product type designation HW functional status FS04 Firmware version • FW update possible Product function • I&M data • Isochronous mode • Prioritized startup • No • No • Scalable measured values • Adjustment of measuring range • Adjustment of measuring range • STEP 7 TIA Portal configurable/integrated from version • STEP 7 TONGIngurable/integrated from version • STEP 7 TONGIngurable/integrated from version • STEP 7 TONGINGURABLE/INTEGRATED V12 / V12 • STEP 7 TONGINGURABLE/INTEGRATED V13 / V15 / V16 / V16 / V16 / V16 / V17 / V17 / V17 / V17 / V17 / V18	General information		
Firmware version Fiv update possible Five update possible Fireduct function I &M data I sochronous mode Profutized startup No Scalable measured values Adjustment of measuring range Engineering with STEP 7 TAP portal configurable/integrated from version STEP 7 Tour fortal configurable/integrated from version V15 SS93/- PROFIBUS from GSD version/GSD revision V1.0 / V5.1 PROFINET from GSD version/GSD revision V2.3 /- Operating mode Oversampling No MSI CIR - Configuration in RUN Reparameterization possible in RUN Yes Calibration possible in RUN Yes Calibration possible in RUN Yes Rated value (DC) permissible range, lower limit (DC) permissible range, upper limit (DC) perm	Product type designation	AI 8xU/I/RTD/TC ST	
FW update possible Product function I&M data	HW functional status	FS04	
Product function • i&M data	Firmware version	V2.0.0	
Is M data Isochronous mode Isochronous mode Prioritized startup No Measuring range scalable Scalable measured values Adjustment of measuring range No Adjustment of measuring range No STEP 7 TonGigurable/integrated from version PROFIGURATION STEP 7 TonGigurable/integrated from version STEP 7 TonGigurable/integrated from version PROFIGURATION STEP 7 TonGigurable/integrated from version PROFIGURATION STEP 7 TonGigurable/integrated from version PROFIGURATION PROFIGURATION PROFIGURATION PROFIGURATION No SUBJURATION Reparameterization possible in RUN Pes Supply voltage Rated value (DC) Permissible range, lower limit (DC) Permissible range, upper limit	FW update possible	Yes	
Isochronous mode Prioritized startup No Measuring range scalable Scalable measured values No Adjustment of measuring range No Engineering with STEP 7 TIA Portal configurable/integrated from version STEP 7 toonfigurable/integrated from version PROFIBUS from GSD version/GSD revision Prossable in RUN Pes Calibration possible in RUN Pes Supply voltage Rated value (DC) Permissible range, lower limit (DC) Permissible range, lower limit (DC) Permissible range, upper limit (DC) Profit upper	Product function		
 Prioritized startup Measuring range scalable Scalable measured values Adjustment of measuring range No Adjustment of measuring range No STEP 7 TIA Portal configurable/integrated from version STEP 7 Tonfigurable/integrated from version STEP 7 configurable/integrated from version V12 / V12 STEP 7 configurable/integrated from version V5.5 SP3 / - PROFIBUS from GSD version/GSD revision V1.0 / V5.1 PROFINET from GSD version/GSD revision Oversampling Mo MSI Yes Cit-Configuration in RUN Reparameterization possible in RUN Yes Calibration possible in RUN Yes Supply voltage Rated value (DC) 24 V permissible range, lower limit (DC) permissible range, upper limit (DC) 28.8 V Reverse polarity protection Yes Input current Current consumption, max. 240 mA; with 24 V DC supply 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 loss Power loss Power loss Power loss, typ. Analog inputs 	● 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 PROFIBUS from GSD version/GSD revision PROFIBUS from GSD version/GSD revision PROFIBUT from GSD version/GSD revision Operating mode Oversampling MS MS Ves 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 li	 Isochronous mode 	No	
Scalable measured values Adjustment of measuring range No Engineering with STEP 7 TIA Portal configurable/integrated from version STEP 7 Ton Portal configurable/integrated from version STEP 7 configurable/integrated from version PROFIBUS from GSD version/CSD revision PROFIBUS from GSD version/CSD revision PROFIBUS from GSD version/GSD revision PROFIDE Trom GSD version/GSD revision Press SUBJUSTICE STEP 7 TIA Portal configurated from version PROFIBUS from GSD version/GSD revision PROFIBUS from GSD version/GSD revision PROFIBUS from GSD version/GSD revision Press SUBJUSTICE STEP 7 TIA Portal configurated from version PROFIBUS from GSD version/GSD revision Press SUBJUSTICE STEP 7 TIA Portal configurated from version Press SUBJUSTICE PROFIBUS from GSD version/GSD revision Press SubJUSTICE STEP 7 TIA Portal configurated from version Press SUBJUSTICE PROFIBUS from GSD version/GSD revision Press Prower loss Power loss Power loss Power loss, typ. Proser loss Prower loss Press Prower loss, typ. Proser loss Proser Pros	Prioritized startup	No	
Adjustment of measuring range Engineering with STEP 7 TIA Potal configurable/integrated from version STEP 7 configurable/integrated from version PROFIBUS from GSD version/GSD revision PROFINET from GSD version/GSD revision Operating mode Oversampling MSI SI SI CIR - Configuration in RUN Reparameterization possible in RUN Pes Calibration possible in RUN Yes Calibration possible in RUN Reparameterization possible in RUN Pes Supply voltage Rated value (DC) Permissible range, lower limit (DC) Permissible range, upper limit (DC) Permissible range, upper limit (DC) Permissible range puper limit (DC) Permiss	 Measuring range scalable 	No	
Engineering with STEP 7 TIA Portal configurable/integrated from version STEP 7 Ton Fortal configurable/integrated from version STEP 7 configurable/integrated from version PROFIBUS from GSD version/GSD revision PROFINET from GSD version/GSD revision Press SUBJECT Configuration In RUN PROFINET IN RUN PROFINET IN RUN PROFINET FROM PROFINET RUN PROFINET IN RUN PROFINET IN RUN PROFINET IN RUN PROFINET RUN PRO	 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 from GSD version/GSD revision PROFINET from GSD version/GSD revision V1.0 / V5.1 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, lower limit (DC) Permissible range, upper limit (DC) Reverse polarity protection Yes Input current Current consumption, max. 240 mA; with 24 V DC supply Encoder supply 24 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 Power loss, typ. 2.7 W Analog inputs	Adjustment of measuring range	No	
STEP 7 configurable/integrated from version PROFIBUS from GSD version/GSD revision PROFIBUS from GSD version/GSD revision PROFIBUS from GSD version/GSD revision V2.3 /- Operating mode • Oversampling No MSI Yes CIR - Configuration in RUN Reparameterization possible in RUN Pes Calibration possible in RUN Yes Supply voltage Rated value (DC) Permissible range, lower limit (DC) Permissible range, upper limit (DC) Press Reverse polarity protection Pes Input current Current consumption, max. 240 mA; with 24 V DC supply Encoder supply • Short-circuit protection Yes • Output current, max. 20 mA; Max. 47 mA per channel for a duration < 10 s Power loss Power loss Power loss, typ. Power loss, typ. 2.7 W Analog inputs	Engineering with		
PROFIBUS from GSD version/GSD revision PROFINET from GSD version/GSD revision PROFINET from GSD version/GSD revision V2.3 /- Operating mode Oversampling MSI Pes CIR - Configuration in RUN Reparameterization possible in RUN Pes Calibration possible in RUN Supply voltage Rated value (DC) Permissible range, lower limit (DC) Permissible range, upper limit (DC) Permissible range, upper limit (DC) Permissible range, upper limit (DC) Permissible range upper limit (DC	 STEP 7 TIA Portal configurable/integrated from version 	V12 / V12	
PROFINET from GSD version/GSD revision Proversampling Oversampling Mo MSI Pes CIR - Configuration in RUN Reparameterization possible 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. 240 mA; with 24 V DC supply Prover supply Short-circuit protection Yes Output current, max. 20 mA; Max. 47 mA per channel for a duration < 10 s Power oss 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 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. 240 mA; with 24 V DC supply 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	 PROFIBUS from GSD version/GSD revision 	V1.0 / V5.1	
Oversampling	PROFINET from GSD version/GSD revision	V2.3 / -	
MSI 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) Permissible range, upper limit (DC) Permissible range, with total care in the polarity protection Personal current Current consumption, max. 240 mA; with 24 V DC supply Analog inputs 2.7 W Analog inputs	Operating mode		
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 Yes Input current Current consumption, max. 240 mA; with 24 V DC supply 24 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 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. 240 mA; with 24 V DC supply 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) 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. 240 mA; with 24 V DC supply Encoder supply 24 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 0.7 W Power loss Power loss, typ. 2.7 W Analog inputs	CiR - Configuration in RUN		
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. 240 mA; with 24 V DC supply Encoder supply 24 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 0.7 W Power loss, typ. 2.7 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. 240 mA; with 24 V DC supply Encoder supply 24 V encoder supply 24 V 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. 21 V Analog inputs	Calibration possible in RUN	Yes	
permissible range, lower limit (DC) permissible range, upper limit (DC) Reverse polarity protection Yes Input current Current consumption, max. 240 mA; with 24 V DC supply Encoder supply 24 V encoder supply Short-circuit protection Output current, max. 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 Power loss, typ. 2.7 W Analog inputs	Supply voltage		
permissible range, upper limit (DC) Reverse polarity protection Yes Input current Current consumption, max. 240 mA; with 24 V DC supply Encoder supply 24 V encoder supply Short-circuit protection Output current, max. 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 Power loss, typ. 2.7 W Analog inputs	Rated value (DC)	24 V	
Reverse polarity protection Input current Current consumption, max. 240 mA; with 24 V DC supply 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. 240 mA; with 24 V DC supply Encoder supply 24 V encoder supply • Short-circuit protection • Output current, max. Power Power available from the backplane bus Power loss Power loss Power loss, typ. Analog inputs	permissible range, upper limit (DC)	28.8 V	
Current consumption, max. 240 mA; with 24 V DC supply Encoder supply 4 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 0.7 W Power loss Power loss, typ. 2.7 W 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. 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. 2.7 W Analog inputs	Current consumption, max.	240 mA; with 24 V DC supply	
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 2.7 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. 2.7 W Analog inputs	24 V encoder supply		
Power available from the backplane bus O.7 W Power loss Power loss, typ. 2.7 W Analog inputs	Short-circuit protection	Yes	
Power available from the backplane bus O.7 W Power loss Power loss, typ. 2.7 W Analog inputs	 Output current, max. 	20 mA; Max. 47 mA per channel for a duration < 10 s	
Power loss Power loss, typ. 2.7 W Analog inputs	Power		
Power loss, typ. 2.7 W Analog inputs	Power available from the backplane bus	0.7 W	
Analog inputs	Power loss		
	Power loss, typ.	2.7 W	
Number of analog inputs 8	Analog inputs		
	Number of analog inputs	8	

For current measurement	8
 For voltage measurement 	8
 For resistance/resistance thermometer measurement 	4
For thermocouple measurement	8
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
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 MΩ
- Input resistance (-2.5 V to +2.5 V) • -25 mV to +25 mV	No No
• -250 mV to +250 mV	Yes
● -250 mV to +250 mV — Input resistance (-250 mV to +250 mV)	7es 10 MΩ
- input resistance (-250 mV to +250 mV) • -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
• Type N	Yes
Input resistance (Type N)	10 ΜΩ
• Type R	Yes
— Input resistance (Type R)	10 MΩ
Type S	Yes
**	10 MΩ
— Input resistance (Type S)	
• Type T	Yes
— Input resistance (Type T)	10 MΩ
Type TXK/TXK(L) to GOST Type TXK/TXK(L) to GOST Type TXK/TXK(L) to GOST Type TXK/TXK(L) to GOST	No
Input ranges (rated values), resistance thermometer	N-
	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 MΩ
Ni 100 according to GOST	No
• Ni 1000	Yes; Standard/climate
— Input resistance (Ni 1000)	10 MΩ
Ni 1000 according to GOST	No
• LG-Ni 1000	Yes; Standard/climate
— Input resistance (LG-Ni 1000)	10 MΩ
● Ni 120	No
Ni 120 Ni 120 according to GOST	No
Ni 200 according to GOST	No
Ni 500 Ni 500	No
Ni 500 Ni 500 according to GOST	No
• Pt 10	No
Pt 10 Pt 10 according to GOST	No
-	No
Pt 50Pt 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
— Input resistance (Pt 1000)	10 MΩ
Pt 1000 according to GOST	No
• Pt 200	Yes; Standard/climate
— Input resistance (Pt 200)	10 MΩ
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	110
• 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
internal temperature compensation	Yes
external temperature compensation via RTD	Yes
Compensation for 0 °C reference point temperature	Yes; fixed value can be set
Reference channel of the module	Yes
Cable length	
• shielded, max.	800 m; for U/I, 200 m for R/RTD, 50 m for TC
Analog value generation for the inputs	222 m, 10. 0m, 200 m 10. 10. 10.
Integration and conversion time/resolution per channel	
Resolution with overrange (bit including sign), max.	16 bit
Integration time, parameterizable	Yes

Residence time (ms) Seaso conversion fine (ms)		
	Integration time (ms)	2,5 / 16,67 / 20 / 100 ms
		9 / 23 / 27 / 107 ms
measurement inferference voltage suppression for interference frequency f in in tz in Time for other calibration (per module) Smoothing of measured values in parameterizable in parameterizable in Sign blone in S	-	
frequency filin Hz * Time for Ordinal calibration (per module) Smoothing of measured values * parameterizable * Size; None		
Smoothing of measured values • parameterizable • place of the		400 / 60 / 50 / 10 Hz
- parametrizable Yes Site; None Yes Site; None Yes Site; Nedium Yes Site; High Yes Sit	Time for offset calibration (per module)	Basic conversion time of the slowest channel
Step: None Step: None Step: Nedum Step: Ne	Smoothing of measured values	
Slap: low Yes Slap: Medium Yes Slap: Mediu	parameterizable	Yes
Sitep: Medium Sign: High Facotor Connection of signal encoders • for outrent measurement as 2-wire fransducer — Burden of 2-wire fransmitter, max. • for current measurement as 4-wire transducer — Surface measurement with two wire connection • for resistance measurement with four-wire connection • for resistance four four trape, (+/-) • for	Step: None	Yes
Step: High Fincedor Connection of signal encoders of or voltage measurement as 2-wire transducer — Burden of 2-wire transmitter, max. of or current measurement as 4-wire transducer of or resistance measurement with wor-wire connection of or resistance measurement with wor-wire connection of or resistance measurement with four-wire connection of or sessationed except PTC: internal compensation of the cable resistance measurement with four-wire connection of or sessationed except PTC Ves; All measuring ranges except PTC; internal compensation of the cable resistance measurement or resistance of the cable resistance measurement with four-wire connection of other cable resistance measurement with four-wire connection of other cable resistance or resistance of proper resistance or resistance or frequency of other cable resi	Step: low	Yes
For college measurement Yes	Step: Medium	Yes
of ro voltage measurement as 2-wire transducer — Burden of 2-wire transmitter, max. 4 of or current measurement as 4-wire transducer 4 of or current measurement as 4-wire transducer 5 of resistance measurement with two-wire connection 6 of resistance measurement with two-wire connection 7 of resistance measurement with four-wire connection 7 of resistance measurement with four-wire connection 7 of resistance measurement with four-wire connection 8 of resistance measurement with four-wire connection 9 of resistance measurement with four-wire connection 1 of resistance measurement with four-wire connection 9 of resistance measurement with four-wire connection 1 of resistance measurement with four-wire connection 2 of Resistance measurement with four-wire connection 3 of Repeat accuracy in steady state at 25 °C (relative to input range, (+/-) 3 of Resistance measurement with four-wire connection 3 of Repeat accuracy in steady state at 25 °C (relative to	Step: High	Yes
• for voltage measurement • for current measurement as 2-wine transducer — Buden of 2-wire transmitter, max. • for current measurement as 4-wine transducer • for resistance measurement with two-wire connection • for resistance measurement with two-wire connection • for resistance measurement with four-wire connection • for resistance measurement • for resistance except PTC Ves; All measuring ranges except PTC Ves; All measuring ranges except PTC Ves; All measuring ranges except PTC Ves; All measuring ranges except PTC Ves; All measuring ranges except PTC Ves; All measuring ranges except PTC Ves; All measuring ranges except PTC Ves; All measuring ranges except PTC Ves; All measuring ranges except PTC Ves; All me	Encoder	
• for current measurement as 2-wire transducer — Burden of 2-wire transmitter, max. • for current measurement with wo-wire connection • for resistance measurement with wo-wire connection • for resistance measurement with three-wire connection • for resistance measurement with four-wire connection • for resistance for reflective to input range, (+-) • Constalk between the inputs, max. • College, relative to input range, (+-) • Current, relative to input range, (+-) • Resistance thermometer, relative to input range, (+-) • Resistance thermometer, relative to input range, (+-) • Resistance to input range, (+-) • Current, relative to input range, (+-) • Resistance to input range, (+-) • Resistance to input range, (+-) • Resistance thermometer, relative to input range, (+-) • Resistance thermometer, relative to input range, (+-) •	Connection of signal encoders	
- Burden of 2-wire transmitter, max. • for current measurement as 4-wire transducer • for resistance measurement with two-wire connection • for resistance measurement with three-wire connection • for resistance measurement with four-wire connection • for resistance problem to input range, (+-) • Current, resistive to input range, (+-) • Resistance, relative to input range, (+-) • Resistance, relative to input range, (+-) • Voltage, relative to input range, (+-) • Resistance, relative to input range, (+-) • Resistance,	 for voltage measurement 	Yes
• for current measurement as 4-wire transducer • for resistance measurement with two-wire connection • for resistance measurement with four-wire connection • for resistance in public and the following for the cable resistances • Voltage, relative to input range, (+/-) • Current, relative to input range, (+/-) • Resistance relative to input range, (+/-) • Resistance relative to input range, (+/-) • Voltage, relative to input range, (+/-) • Voltage, relative to input range, (+/-) • Current, relative to input range, (+/-) • Resistance, relative to input range, (+/-) • Resistance, relative to input range, (+/-) • Resistance, relative to input range, (+/-) • Resistance thermometer, relative to input range, (+/-) • Resistance thermometer, relative to input range, (+/-) • Resistance thermometer, relative to input range, (+/-) • Resistance relative to input ra	 for current measurement as 2-wire transducer 	Yes
• for resistance measurement with two-wire connection • for resistance measurement with tree-wire connection • for resistance measurement with four-wire connection • for resistance measurement with four-wire connection Frorsinceuracies Linearity error (relative to input range), (+/-) Temperature error (relative to input range), (+/-) Temperature error of internal compensation Ropeat accuracy in steady state at 25 °C (relative to input range), (+/-) Temperature error of internal compensation Poperational error limit in overall temperature range • Voltage, relative to input range, (+/-) • Resistance, relative to input range, (+/-) • Resistance temmoneter, relative to input range, (+/-) • Voltage, relative to input range, (+/-) • Resistance, relative to input range, (+/-) • Resistance termometer, relative to input range, (+/-) • Resistance, relative to input range, (+/-) •	 Burden of 2-wire transmitter, max. 	820 Ω
• for resistance measurement with three-wire connection • for resistance measurement with four-wire connection • for resistance measurement with four-wire connection *Yes; All measuring ranges except PTC **Perside of the cable resistance service of the cable resistance measurement with four-wire connection *Yes; All measuring ranges except PTC **Perside of the cable resistance measurement with four-wire connection *Yes; All measuring ranges except PTC **Perside of the cable resistance resistance in put range, (+/-) **Description of the cable resistance in put range, (+/-) **Crosstalk between the inputs, max.** **Repeat accuracy in steady state at 25 °C (relative to input range). **Poltage, relative to input range, (+/-) **Outrent, relative to input range, (+/-) **Pesistance fleative to input range, (+/-) **Pesistance fleative to input range, (+/-) **Pesistance fleative to input range, (+/-) **Promocouple, relative to input range, (+/-)	 for current measurement as 4-wire transducer 	Yes
• for resistance measurement with four-wire connection Errors/accuracies Linearity error (relative to input range), (+/-) Crosstalk between the inputs, max. -80 dB Repeat accuracy in steady state at 25 °C (relative to input range), (+/-) Temperature error of internal compensation Operational error limit in overall temperature range • Voltage, relative to input range, (+/-) • Current, relative to input range, (+/-) • Resistance, relative to input range, (+/-) • Resistance relative to input range, (+/-) • Resistance relative to input range, (+/-) • Voltage, relative to input range, (+/-) • Resistance, relative to input range, (+/-) • Resistance, relative to input range, (+/-) • Resistance, relative to input range, (+/-) • Resistance thermometer, relative to input range, (+/-) • Resistance measurement with formulations (-/-) • Resistance measurement with formulations (-/-) • Resistance measurement with formulations (-/-) • Resistance measurement with range, (+/-) • Phoxos standard: ±0.7 K, Phoxo climate: ±0.2 K, Nixox standard: ±0.3 K, Nixox climate: ±0.15 K • Thermocouple, relative to input range, (+/-) • Resistance measurement with range, (-/-) • Series mode interference (-/-) • Series mode interference (-/-) • Series mode interference, min. • Common mode oblage, max. • Common mode interference, min. • Common mode interference, mi	 for resistance measurement with two-wire connection 	
Linearity error (relative to input range), (+/-) Crosstalk between the inputs, max. Repeat accuracy in steady state at 25° C' (relative to input range), (+/-) Temperature error of internal compensation Repeat accuracy in steady state at 25° C' (relative to input range), (+/-) Temperature error of internal compensation \$\frac{45}{200}\$ \$\text{Corsstalk}\$ between the inputs, max. \$\text{Repeat accuracy in steady state at 25° C' (relative to input range), (+/-) \$\text{Temperature error of internal compensation} \text{ \$\frac{45}{200}\$} \$\text{Corrent, relative to input range, (+/-)} \text{ \$\text{0.3 %}\$} \$\text{Voltage, relative to input range, (+/-)} \text{ \$\text{0.3 %}\$} \$\text{Resistance, relative to input range, (+/-)} \text{ \$\text{0.3 %}\$} \$Pboxx standard: \$\text{2.5 K, Nixox	for resistance measurement with three-wire connection	
Linearity error (relative to input range), (+/-) Temperature error (relative to input range), (+/-) Crosstalk between the inputs, max. Repeat accuracy in steady state at 25 °C (relative to input range), (+/-) Temperature error of internal compensation Departitional error limit in overall temperature range • Voltage, relative to input range, (+/-) • Current, relative to input range, (+/-) • Resistance, relative to input range, (+/-) • Resistance thermometer, relative to input range, (+/-) • Thermocouple, relative to input range, (+/-) • Voltage, relative to input range, (+/-) • Resistance thermometer, relative to input range, (+/-) • Resistance thermometer, relative to input range, (+/-) • Thermocouple, relative to input range, (+/-) • Voltage, relative to input range, (+/-) • Resistance thermometer, relative to input	for resistance measurement with four-wire connection	Yes; All measuring ranges except PTC
Temperature error (relative to input range), (+/-) Crosstalk between the inputs, max. -80 dB Repeat accuracy in steady state at 25 °C (relative to input range), (+/-) Temperature error of internal compensation Operational error limit in overall temperature range • Voltage, relative to input range, (+/-) • Resistance, relative to input range, (+/-) • Resistance thermometer, relative to input range, (+/-) • Thermocouple, relative to input range, (+/-) • Voltage, relative to input range, (+/-) • Resistance thermometer, relative to input range, (+/-) • Resistance ilimit (operational limit at 25 °C) • Voltage, relative to input range, (+/-) • Voltage, relative to input range, (+/-) • Resistance ilimit (operational limit at 25 °C) • Voltage, relative to input range, (+/-) • Voltage, relative to input range, (+/-) • Resistance relative to input range, (+/-) • Resistance relative to input range, (+/-) • Resistance, relative to input range, (+/-) • Resistance, relative to input range, (+/-) • Resistance relative to input range, (+/-) • Resistance relative to input range, (+/-) • Resistance thermometer, relative to input range, (+/-) • Resistance, relative to input range, (+/-)	Errors/accuracies	
Crosstalk between the inputs, max. Repeat accuracy in steady state at 25 °C (relative to input range), (+/-) Temperature error of internal compensation Operational error limit in overall temperature range • voltage, relative to input range, (+/-) • Current, relative to input range, (+/-) • Resistance, relative to input range, (+/-) • Thermocouple, relative to input range, (+/-) • Thermocouple, relative to input range, (+/-) • Voltage, relative to input range, (+/-) • Voltage, relative to input range, (+/-) • Voltage, relative to input range, (+/-) • Resistance, relative to input range, (+/-) • Resistance, relative to input range, (+/-) • Provided in the first of the fi	Linearity error (relative to input range), (+/-)	0.02 %
Repeat accuracy in steady state at 25 °C (relative to input range), (+/-)	Temperature error (relative to input range), (+/-)	0.005 %/K; With TC type T 0.02 ± % / K
Tange), (+/-) Temperature error of internal compensation	Crosstalk between the inputs, max.	-80 dB
Operational error limit in overall temperature range Otoltage, relative to input range, (+/-) Current, relative to input range, (+/-) Resistance, relative to input range, (+/-) Resistance thermometer, relative to input range, (+/-) Type B:> 600 °C±4.6 K, type E:> -200 °C±1.5 K, Nixxx standard: ±0.5 K, Nixxx standar	range), (+/-)	0.02 %
Voltage, relative to input range, (+/-) Current, relative to input range, (+/-) Resistance, relative to input range, (+/-) Resistance thermometer, relative to input range, (+/-) Pbxx standard: ±1.5 K, Pbxx climate: ±0.5 K, Nixxx standard: ±0.5 K, Nixxx climate: ±0.3 K 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 P:> -210 °C ±2.4 K, t	Temperature error of internal compensation	±6 °C
 Current, relative to input range, (+/-) Resistance, relative to input range, (+/-) Resistance thermometer, relative to input range, (+/-) Pbox standard: ±1.5 K, Pbox climate: ±0.5 K, Nixox standard: ±0.5 K, Nixox climate: ±0.3 K Thermocouple, relative to input range, (+/-) Type B:>600 °C ±4.6 K, type E:>-200 °C ±1.5 K, type J:>-210 °C ±1.9 K, type R:>-200 °C ±2.4 K, type R:>-200 °C ±2.4 K Voltage, relative to input range, (+/-) Voltage, relative to input range, (+/-) Current, relative to input range, (+/-) Resistance, relative to input range, (+/-) Resistance thermometer, relative to input range, (+/-) Resistance, relative to input range, (+/-) Resistance thermometer, relative to input range, (+/-) Thermocouple, relative to input range, (+/-) Pbox standard: ±0.7 K, Pboxx climate: ±0.2 K, Nixxx standard: ±0.3 K, Nixxx climate: ±0.15 K 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 R:>-200 °C ±1.2 K, type R:>-200 °C ±1.9 K,	·	
Resistance, relative to input range, (+/-) Resistance thermometer, relative to input range, (+/-) Thermocouple, relative to input range, (+/-) Thermocouple, relative to input range, (+/-) Type B:> 600 °C ±4.6 K, type E:> -200 °C ±2.9 K, type B:> -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 ±2.9 K, type R:> 0 °C ±4.7 K, type S:> 0 °C ±4.6 K, type T:> -200 °C ±2.9 K, type R:> 0 °C ±4.7 K, type S:> 0 °C ±4.6 K, type T:> -200 °C ±2.9 K, type R:> 0 °C ±4.7 K, type S:> 0 °C ±4.6 K, type T:> -200 °C ±2.9 K, type R:> 0 °C ±4.7 K, type S:> 0 °C ±4.6 K, type T:> -200 °C ±2.9 K, type R:> 0 °C ±4.7 K, type S:> 0 °C ±4.6 K, type T:> -200 °C ±2.9 K, type R:> 0 °C ±4.7 K, type S:> 0 °C ±4.7 K, type T:> -200 °C ±2.9 K, type R:> 0.1 % Resistance, relative to input range, (+/-) Resistance thermometer, relative to input range, (+/-) Type B:> 600 °C ±1.7 K, type E:> -200 °C ±0.7 K, type J:> -210 °C ±0.8 K, type R:> 0 °C ±1.9 K, type R:> 20 °C ±1.2 K, type R:> 200 °C ±1.2 K, type R:> 200 °C ±1.9 K, type R:> 0 °C ±1.9 K, type S:> 0 °C ±1.9 K, type T:> -200 °C ±0.8 K 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. Ommon mode voltage, max. Ommon mode voltage, max. Ommon mode voltage, max. Piagnostics function Yes Alarms Diagnostics function Yes Monitoring the supply voltage Monitoring the supply voltage Monitoring the supply voltage Wire-break Overflow/underflow	 Voltage, relative to input range, (+/-) 	
Resistance thermometer, relative to input range, (+/-) Thermocouple, relative to input range, (+/-) Type B: > 600 °C ±4.6 K, type E: > -200 °C ±2.9 K, type R: > 0 °C ±4.7 K, type S: > 0 °C ±4.6 K, type B: > -200 °C ±2.9 K, type R: > 0 °C ±4.7 K, type S: > 0 °C ±4.6 K, type R: > -200 °C ±2.9 K, type R: > 0 °C ±4.7 K, type S: > 0 °C ±4.6 K, type R: > -200 °C ±2.9 K, type R: > 0 °C ±4.7 K, type S: > 0 °C ±4.6 K, type R: > -200 °C ±2.9 K, type R: > 0 °C ±4.7 K, type S: > 0 °C ±4.6 K, type R: > -200 °C ±2.9 K, type R: > 0 °C ±4.7 K, type S: > 0 °C ±4.6 K, type T: > -200 °C ±2.9 K, type R: > 0 °C ±4.7 K, type S: > 0 °C ±4.6 K, type T: > -200 °C ±2.9 K, type R: > 0 °C ±4.7 K, type S: > 0 °C ±4.7 K, type R: > 0 °C ±4.7 K, type R: > 0 °C ±4.7 K, type S: > 0 °C ±4.8 K, type R: > -200 °C ±2.9 K,		
climate: ±0.3 K • Thermocouple, relative to input range, (+/-) 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 ±2.9 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, (+/-) • Current, relative to input range, (+/-) • Resistance, relative to input range, (+/-) • Resistance thermometer, relative to input range, (+/-) • Thermocouple, relative to input range, (+/-) • 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, type R:> -200 °C ±1.2 K, type R:> 0 °C ±1.9		
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 ±2.9 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, (+/-) • Current, relative to input range, (+/-) • Resistance, relative to input range, (+/-) • Resistance thermometer, relative to input range, (+/-) • Resistance thermometer, relative to input range, (+/-) • Thermocouple, relative to input range, (+/-) • 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 R: > 0 °C ±1.9 K, type S: > 0 °C ±1.9 K, type T: > -200 °C ±0.8 K Interference voltage suppression for f = n x (f1 +/- 1 %), f1 = interference frequency • Series mode interference (peak value of interference < requency • Series mode interference (peak value of interference < requency • Common mode voltage, max. • Common mode voltage, max. • Common mode interference, min. • Obagnostics function Diagnostics function Alarms • Diagnostic alarm • Limit value alarm Yes • Limit value alarm Yes • Limit value alarm Yes • Wire-break • Wire-break • Overflow/underflow Yes • Wire-break • Overflow/underflow	 Resistance thermometer, relative to input range, (+/-) 	climate: ±0.3 K
Voltage, relative to input range, (+/-) Current, relative to input range, (+/-) Resistance, relative to input range, (+/-) Resistance thermometer, relative to input range, (+/-) Type B:> 600 °C ±1.7 K, Pbxxx climate: ±0.2 K, Nixxx standard: ±0.3 K, Nixxx climate: ±0.15 K 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 T:> -200 °C ±1.2 K, type R:> 0 °C ±1.9 K, type T:> -200 °C ±0.8 K Interference voltage suppression for f = n x (f1 +/- 1 %), f1 = interference final value of interference (peak value of interference < reduced value of input range), min. Common mode voltage, max. Common mode interference, min. Diagnostics function Pyes Alarms Diagnostic alarm Diagnostic alarm Limit value alarm Yes; two upper and two lower limit values in each case Diagnoses Monitoring the supply voltage Wire-break Overflow/underflow Yes	Thermocouple, relative to input range, (+/-)	type K: $>$ -200 °C ±2.4 K, type N: $>$ -200 °C ±2.9 K, type R: $>$ 0 °C ±4.7 K, type
Current, relative to input range, (+/-) Resistance, relative to input range, (+/-) Resistance thermometer, relative to input range, (+/-) Resistance thermometer, relative to input range, (+/-) Thermocouple, relative to input range, (+/-) Thermocouple, relative to input range, (+/-) Thermocouple, relative to input range, (+/-) Type B:> 600 °C ±1.7 K, Ptxxx climate: ±0.2 K, Nixxx standard: ±0.3 K, Nixxx climate: ±0.15 K Type B:> 600 °C ±1.2 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, type T:> -200 °C ±0.8 K Interference voltage suppression for f = n x (f1 +/- 1 %), f1 = interference frequency Series mode interference (peak value of interference < requency Common mode voltage, max. Common mode voltage, max. Common mode interference, min. Diagnostics/status information Diagnostics/status information Diagnostics function Yes Alarms Diagnostics alarm Yes; two upper and two lower limit values in each case Diagnoses Monitoring the supply voltage Wire-break Ves; Only for 1 to 5 V, 4 to 20 mA, TC, R, and RTD Yes Overflow/underflow	Basic error limit (operational limit at 25 °C)	
Resistance, relative to input range, (+/-) Resistance thermometer, relative to input range, (+/-) Resistance thermometer, relative to input range, (+/-) Thermocouple, relative to input range, (+/-) 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 R: > 0 °C ±1.9 K, type R: > -200 °C ±1.2 K, type R: > 0 °C ±1.9 K, type R: > 0 °C ±1.9 K, type R: > -200 °C ±0.8 K Interference voltage suppression for f = n x (f1 +/-1 %), f1 = interference frequency Series mode interference (peak value of interference < reduced value of input range), min. Common mode voltage, max. Common mode voltage, max. Common mode interference, min. Interrupts/diagnostics/status information Diagnostics function Alarms Diagnostic alarm Pes; two upper and two lower limit values in each case Diagnoses Monitoring the supply voltage Wire-break Overflow/underflow Yes Yes Yes Yes Yes Yes Yes Ye	Voltage, relative to input range, (+/-)	0.1 %
Resistance thermometer, relative to input range, (+/-) Thermocouple, relative to input range, (+/-) Thermocouple, relative to input range, (+/-) 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 R: > 0 °C ±1.9 K, type R: 0 °C ±1.9 K, type R: > 0 °C ±1.9 K, type R: > 0 °C ±1.9 K, type R: > 0 °C ±1.9 K, type R: 0 °C ±	 Current, relative to input range, (+/-) 	0.1 %
climate: ±0.15 K 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 R: 0 °C ±	 Resistance, relative to input range, (+/-) 	0.1 %
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, type T: > -200 °C ±1.2 K, type R: > 0 °C ±1.9 K, type T: > -200 °C ±0.8 K 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. 10 V 60 dB Interrupts/diagnostics/status information Diagnostics function Yes • Limit value alarm Yes; two upper and two lower limit values in each case Diagnoses • Monitoring the supply voltage • Wire-break • Overflow/underflow Yes	• Resistance thermometer, relative to input range, (+/-)	
Interference voltage suppression for f = n x (f1 +/- 1 %), f1 = interference frequency Series mode interference (peak value of interference < 40 dB rated value of input range), min. Common mode voltage, max. Common mode interference, min. Interrupts/diagnostics/status information Diagnostics function Pes Diagnostic alarm Limit value alarm Yes Limit value alarm Piagnoses Monitoring the supply voltage Wire-break Overflow/underflow Yes Vand dB Vand dB Ves Ves Ves Ves Ves Ves Ves Ve	• Thermocouple, relative to input range, (+/-)	type K: $>$ -200 °C ±1.2 K, type N: $>$ -200 °C ±1.2 K, type R: $>$ 0 °C ±1.9 K, type
Series mode interference (peak value of interference < rated value of input range), min. Common mode voltage, max. Common mode interference, min. 60 dB Interrupts/diagnostics/status information Diagnostics function Pes Diagnostic alarm Limit value alarm Piagnoses Monitoring the supply voltage Wire-break Overflow/underflow 40 dB	Interference voltage suppression for f = n x (f1 +/- 1 %), f1 = interference	
Common mode voltage, max. Common mode interference, min. 60 dB Interrupts/diagnostics/status information Diagnostics function Alarms Diagnostic alarm Limit value alarm Yes; two upper and two lower limit values in each case Diagnoses Monitoring the supply voltage Wire-break Ves; Only for 1 to 5 V, 4 to 20 mA, TC, R, and RTD Overflow/underflow Yes	Series mode interference (peak value of interference <	
Common mode interference, min. Interrupts/diagnostics/status information Diagnostics function Alarms Diagnostic alarm Limit value alarm Ves; two upper and two lower limit values in each case Diagnoses Monitoring the supply voltage Wire-break Overflow/underflow Overflow/underflow 60 dB Yes Yes Yes Yes Yes Yes Yes Ye		10 V
Interrupts/diagnostics/status information Diagnostics function Alarms Diagnostic alarm Limit value alarm Yes Limit value alarm Yes; two upper and two lower limit values in each case Diagnoses Monitoring the supply voltage Wire-break Overflow/underflow Yes Yes; Only for 1 to 5 V, 4 to 20 mA, TC, R, and RTD		60 dB
Alarms • Diagnostic alarm • Limit value alarm Yes; two upper and two lower limit values in each case Diagnoses • Monitoring the supply voltage • Wire-break • Overflow/underflow Yes Yes Yes; Only for 1 to 5 V, 4 to 20 mA, TC, R, and RTD Yes	Interrupts/diagnostics/status information	
 Diagnostic alarm Limit value alarm Yes; two upper and two lower limit values in each case Diagnoses Monitoring the supply voltage Wire-break Overflow/underflow Yes Yes Overflow/underflow Yes Yes Yes Overflow/underflow Yes Yes Yes Yes Yes Yes 	Diagnostics function	Yes
 Limit value alarm Yes; two upper and two lower limit values in each case Diagnoses Monitoring the supply voltage Wire-break Overflow/underflow Yes Yes; Only for 1 to 5 V, 4 to 20 mA, TC, R, and RTD Yes 	Alarms	
Diagnoses	Diagnostic alarm	Yes
 Monitoring the supply voltage Wire-break Overflow/underflow Yes Yes Yes Only for 1 to 5 V, 4 to 20 mA, TC, R, and RTD Yes 	Limit value alarm	Yes; two upper and two lower limit values in each case
 Wire-break Overflow/underflow Yes; Only for 1 to 5 V, 4 to 20 mA, TC, R, and RTD Yes 	Diagnoses	
Overflow/underflow Yes	Monitoring the supply voltage	Yes
	Wire-break	Yes; Only for 1 to 5 V, 4 to 20 mA, TC, R, and RTD
Diagnostics indication LED	Overflow/underflow	Yes
	Diagnostics indication LED	

DUNIED	V
• RUN LED	Yes; green LED
ERROR LED Maritaria a of the assumptional trans (RIMB 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	
Potential separation channels • between the channels	No
	8
between the channels, in groups of between the channels and backglane bus	o Yes
between the channels and backplane bus	Yes
 between the channels and the power supply of the electronics 	Tes
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)
Standards, approvals, certificates	
Suitable for applications according to AMS 2750	Yes; Declaration of Conformity, see online support entry 109757262
Suitable for applications according to CQI-9	Yes; Based on AMS 2750 E
product functions / security / header	
signed firmware update	No
data integrity	No
Ambient conditions	
Ambient temperature during operation	
 horizontal installation, min. 	-25 °C; From FS08
 horizontal installation, max. 	60 °C
 vertical installation, min. 	-25 °C; From FS08
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	35 mm
Height	147 mm
Depth	129 mm
Weights	
Weight, approx.	310 g
Other	
Note:	Additional basic error and noise for integration time = 2.5 ms: Voltage: ± 250 mV ($\pm 0.02\%$), ± 80 mV ($\pm 0.05\%$), ± 50 mV ($\pm 0.05\%$); resistance: 150 ohms $\pm 0.02\%$; resistance thermometer: Pt100 climate: ± 0.08 K, Ni100 climate: ± 0.08 K; thermocouple: Type B, R, S: ± 3 K, type E, J, K, N, T: ± 1 K

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last modified:

4/25/2024