## SIEMENS

## Data sheet

## 6ES7313-5BG04-0AB0



SIMATIC S7-300, CPU 313C, Compact CPU with MPI, 24 DI/16 DO, 4 AI, 2 AO, 1 Pt100, 3 high-speed counters (30 kHz), Integr. power supply 24 V DC, work memory 128 KB, Front connector (2x 40-pole) and Micro Memory Card required

General information	
HW functional status	01
Firmware version	V3.3
Engineering with	
<ul> <li>Programming package</li> </ul>	STEP 7 V5.5 + SP1 or higher or STEP 7 V5.3 + SP2 or higher with HSP 203
Supply voltage	
Rated value (DC)	24 V
permissible range, lower limit (DC)	19.2 V
permissible range, upper limit (DC)	28.8 V
external protection for power supply lines (recommendation)	Miniature circuit breaker, type C; min. 2 A; miniature circuit breaker type B, min. 4 A
Mains buffering	
<ul> <li>Mains/voltage failure stored energy time</li> </ul>	5 ms
Repeat rate, min.	1 s
Load voltage L+	
Digital inputs	
— Rated value (DC)	24 V
- Reverse polarity protection	Yes
Digital outputs	
— Rated value (DC)	24 V
<ul> <li>Reverse polarity protection</li> </ul>	No
Input current	
Current consumption (rated value)	650 mA
Current consumption (in no-load operation), typ.	150 mA
Inrush current, typ.	5 A
²t	0.7 A <sup>2</sup> ·s
Digital inputs	
<ul> <li>from load voltage L+ (without load), max.</li> </ul>	80 mA
Digital outputs	
<ul> <li>from load voltage L+, max.</li> </ul>	50 mA
Power loss	
Power loss, typ.	12 W
Memory	
Work memory	
• integrated	128 kbyte
• expandable	No
Load memory	
• Plug-in (MMC)	Yes
• Plug-in (MMC), max.	8 Mbyte
<ul> <li>Data management on MMC (after last programming),</li> </ul>	10 a
min.	

Backup	
• present	Yes; Guaranteed by MMC (maintenance-free)
without battery	Yes; Program and data
CPU processing times	
for bit operations, typ.	0.07 µs
for word operations, typ.	0.15 µs
for fixed point arithmetic, typ.	0.2 µs
for floating point arithmetic, typ.	0.72 µs
CPU-blocks	
Number of blocks (total)	1 024; (DBs, FCs, FBs); the maximum number of loadable blocks can be reduced by the MMC used.
DB	reduced by the minor used.
Number, max.	1 024; Number range: 1 to 16000
• Size, max.	64 kbyte
FB	
Number, max.	1 024; Number range: 0 to 7999
• Size, max.	64 kbyte
FC	
• Number, max.	1 024; Number range: 0 to 7999
• Size, max.	64 kbyte
OB	
Number, max.	see instruction list
• Size, max.	64 kbyte
Number of free cycle OBs	1; OB 1
Number of time alarm OBs	1; OB 10
<ul> <li>Number of delay alarm OBs</li> </ul>	2; OB 20, 21
<ul> <li>Number of cyclic interrupt OBs</li> </ul>	4; OB 32, 33, 34, 35
<ul> <li>Number of process alarm OBs</li> </ul>	1; OB 40
<ul> <li>Number of startup OBs</li> </ul>	1; OB 100
<ul> <li>Number of asynchronous error OBs</li> </ul>	4; OB 80, 82, 85, 87
<ul> <li>Number of synchronous error OBs</li> </ul>	2; OB 121, 122
Nesting depth	
<ul> <li>per priority class</li> </ul>	16
<ul> <li>additional within an error OB</li> </ul>	4
Counters, timers and their retentivity	
S7 counter	
Number	256
Retentivity	
— adjustable	Yes
— lower limit	0
— upper limit	255
— preset	Z 0 to Z 7
Counting range	
— lower limit	0
— upper limit	999
IEC counter	
• present	Yes
• Туре	SFB
Number	Unlimited (limited only by RAM capacity)
S7 times	
• Number	256
Retentivity	
— adjustable	Yes
— lower limit	0
— upper limit	255
— preset	No retentivity
Time range	
— lower limit	10 ms
— upper limit	9 990 s
IEC timer	
• present	Yes

-	070
•Туре	SFB
Number	Unlimited (limited only by RAM capacity)
Data areas and their retentivity	
Retentive data area (incl. timers, counters, flags), max.	64 kbyte
Flag	
• Size, max.	256 byte
Retentivity available	Yes; MB 0 to MB 255
Retentivity preset	MB 0 to MB 15
Number of clock memories	8; 1 memory byte
Data blocks	
<ul> <li>Retentivity adjustable</li> </ul>	Yes; via non-retain property on DB
Retentivity preset	Yes
Local data	
<ul> <li>per priority class, max.</li> </ul>	32 kbyte; Max. 2048 bytes per block
Address area	
I/O address area	
Inputs	1 024 byte
Outputs	1 024 byte
of which distributed	
— Inputs	none
— Outputs	none
Process image	
• Inputs	1 024 byte
Outputs	1 024 byte
Inputs, adjustable	1 024 byte
<ul> <li>Outputs, adjustable</li> </ul>	1 024 byte
Inputs, default	128 byte
Outputs, default	128 byte
Default addresses of the integrated channels	
— Digital inputs	124.0 to 126.7
— Digital outputs	124.0 to 125.7
— Analog inputs	752 to 761
— Analog outputs	752 to 755
Digital channels	
Inputs	1 016
— of which central	1 016
Outputs	1 008
— of which central	1 008
Analog channels	
Inputs	253
— of which central	253
Outputs	250
— of which central	250
Hardware configuration	
Number of expansion units, max.	3
Number of DP masters	
• integrated	none
• via CP	4
Number of operable FMs and CPs (recommended)	
• FM	8
• CP, PtP	8
• CP, LAN	6
Rack	
Racks, max.	4 A la secto 2 secto 7
Modules per rack, max.	8; In rack 3 max. 7
Time of day	
Clock	
Hardware clock (real-time)	Yes
retentive and synchronizable	Yes
Backup time	6 wk; At 40 °C ambient temperature

10 or Ture : 0 o
10 s; Typ.: 2 s Clock continues running after POWER OFF
the clock continues at the time of day it had when power was switched off
1
0
0 to 2^31 hours (when using SFC 101)
1 h
Yes; Must be restarted at each restart
Yes
Yes
Yes
Yes
No
24
12
24
Yes
24
12
12
12
24 V
-3 to +5V
+15 to +30 V
T 15 (0 T 50 V
0 4
8 mA
Yes; 0.1 / 0.3 / 3 / 15 ms (You can reconfigure the input delay of the standard inputs during program runtime. Please note that under certain circumstances your newly set filter time may not be effective until the next filter cycle.)
3 ms
0 110
16 μs; Minimum pulse width/minimum pause between pulses at maximum counting frequency
16 μs; Minimum pulse width/minimum pause between pulses at maximum
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<ul> <li>16 μs; Minimum pulse width/minimum pause between pulses at maximum counting frequency</li> <li>1 000 m; 100 m for technological functions</li> <li>600 m; for technological functions: No</li> </ul>
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● for signal "1", min.	L+ (-0.8 V)
Output current	L+ (-0.0 V)
for signal "1" rated value	500 mA
<ul> <li>for signal "1" permissible range, min.</li> </ul>	5 mA
<ul> <li>for signal "1" permissible range, max.</li> </ul>	0.6 A
for signal "1" minimum load current	5 mA
<ul> <li>for signal "0" residual current, max.</li> </ul>	0.5 mA
Parallel switching of two outputs	0.5 mA
for uprating	No
<ul> <li>for redundant control of a load</li> </ul>	Yes
Switching frequency	
with resistive load, max.	100 Hz
with inductive load, max.	0.5 Hz
<ul> <li>on lamp load, max.</li> </ul>	100 Hz
<ul> <li>of the pulse outputs, with resistive load, max.</li> </ul>	2.5 kHz
Total current of the outputs (per group)	2.3 N 12
horizontal installation	
— up to 40 °C, max.	3 A
— up to 40°C, max.	2 A
vertical installation	
— up to 40 °C, max.	2 A
Cable length	
• shielded, max.	1 000 m
<ul> <li>shielded, max.</li> <li>unshielded, max.</li> </ul>	600 m
Analog inputs	
Number of analog inputs	4
<ul> <li>For voltage/current measurement</li> <li>For resistance/resistance thermometer measurement</li> </ul>	4
	1 E: Av aurrant/voltage 1v registeres
integrated channels (AI)	5; 4x current/voltage, 1x resistance
permissible input voltage for current input (destruction limit), max.	5 V; Permanent
permissible input voltage for voltage input (destruction limit), max.	30 V; Permanent
permissible input current for voltage input (destruction limit), max.	0.5 mA; Permanent
permissible input current for current input (destruction limit), max.	50 mA; Permanent
Electrical input frequency, max.	400 Hz
No-load voltage for resistance-type transmitter, typ.	3.3 V
Constant measurement current for resistance-type transmitter, typ.	1.25 mA
Technical unit for temperature measurement adjustable	Yes; Degrees Celsius / degrees Fahrenheit / Kelvin
Input ranges	
Voltage	Yes; ±10 V / 100 kΩ; 0 V to 10 V / 100 kΩ
• Current	Yes; ±20 mA / 100 $\Omega;$ 0 mA to 20 mA / 100 $\Omega;$ 4 mA to 20 mA / 100 $\Omega$
Resistance thermometer	Yes; Pt 100 / 10 MΩ
Resistance	Yes; 0 Ω to 600 Ω / 10 MΩ
Input ranges (rated values), voltages	
• 0 to +10 V	Yes
— Input resistance (0 to 10 V)	100 kΩ
Input ranges (rated values), currents	
• 0 to 20 mA	Yes
— Input resistance (0 to 20 mA)	100 Ω
• -20 mA to +20 mA	Yes
— Input resistance (-20 mA to +20 mA)	100 Ω
• 4 mA to 20 mA	Yes
— Input resistance (4 mA to 20 mA)	100 Ω
Input ranges (rated values), resistance thermometer	
• Pt 100	Yes
— Input resistance (Pt 100)	10 ΜΩ
Input ranges (rated values), resistors	
• 0 to 600 ohms	Yes

Input registance (0 to 600 ohme)	10 ΜΩ
— Input resistance (0 to 600 ohms)	
Thermocouple (TC)	
Temperature compensation	
— parameterizable	No
Characteristic linearization	
parameterizable	Yes; by software
— for resistance thermometer	Pt 100
Cable length	
• shielded, max.	100 m
Analog outputs	
Number of analog outputs	2
integrated channels (AO)	2
Voltage output, short-circuit protection	Yes
Voltage output, short-circuit current, max.	55 mA
Current output, no-load voltage, max.	14 V
Output ranges, voltage	
• 0 to 10 V	Yes
• -10 V to +10 V	Yes
Output ranges, current	
• 0 to 20 mA	Yes
• -20 mA to +20 mA	Yes
• 4 mA to 20 mA	Yes
Connection of actuators	
<ul> <li>for voltage output two-wire connection</li> </ul>	Yes; Without compensation of the line resistances
<ul> <li>for voltage output four-wire connection</li> </ul>	No
<ul> <li>for current output two-wire connection</li> </ul>	Yes
Load impedance (in rated range of output)	
<ul> <li>with voltage outputs, min.</li> </ul>	1 κΩ
<ul> <li>with voltage outputs, capacitive load, max.</li> </ul>	0.1 µF
<ul> <li>with current outputs, max.</li> </ul>	300 Ω
<ul> <li>with current outputs, inductive load, max.</li> </ul>	0.1 mH
Destruction limits against externally applied voltages and currents	
<ul> <li>Voltages at the outputs towards MANA</li> </ul>	16 V; Permanent
Current, max.	50 mA; Permanent
Cable length	
<ul> <li>shielded, max.</li> </ul>	200 m
Analog value generation for the inputs	
Measurement principle	Actual value encryption (successive approximation)
Integration and conversion time/resolution per channel	
<ul> <li>Resolution with overrange (bit including sign), max.</li> </ul>	12 bit
<ul> <li>Integration time, parameterizable</li> </ul>	Yes; 16.6 / 20 ms
<ul> <li>Interference voltage suppression for interference</li> </ul>	50 / 60 Hz
frequency f1 in Hz	
<ul> <li>Time constant of the input filter</li> </ul>	0.38 ms
<ul> <li>Basic execution time of the module (all channels released)</li> </ul>	1 ms
released)	
Analog value generation for the outputs	
Integration and conversion time/resolution per channel	
Resolution with overrange (bit including sign), max.	12 bit
Conversion time (per channel)	1 ms
Settling time	
for resistive load	0.6 ms
for capacitive load	1 ms
• for inductive load	0.5 ms
Encoder	
Connection of signal encoders	
for voltage measurement	Yes
<ul> <li>for current measurement as 2-wire transducer</li> </ul>	Yes; with external supply
<ul> <li>for current measurement as 4-wire transducer</li> </ul>	Yes
<ul> <li>for resistance measurement with two-wire connection</li> </ul>	Yes; Without compensation of the line resistances
<ul> <li>for resistance measurement with three-wire connection</li> </ul>	No

Description         Ves           • 2 wite status         Yes           permissible quiescent current (2 wite sensor), max         1.5 mA           Excertification of the input range, (+2)         0.06 %/K           Consult between the inputs, min.         0.06 %/K           Consult between the inputs, min.         0.06 %/K           Consult between the inputs, min.         0.06 %/K           Consult between the inputs, barbwith 0 to 50 Mtz), (-1)         0.15 %.           Consult between the output range, (+2)         0.15 %/K           Consult between the output range, (+2)         0.15 %/K           Consult between the output range, (+2)         0.15 %/K           Consult between the output range, (+2)         0.05 %           Consult between the output range, (+2)         0.05 %           Consult between the output range, (+2)         1.%           • Cotage, relative to input range, (+2)         0.5 %, Linearity error al.0.0 %           • Current, relative to input range, (+2)         0.5 %, Linearity error al.0.0 %           • Current, relative to input range, (+2)         0.5 %, Linearity error al.0.0 %	<ul> <li>for resistance measurement with four-wire connection</li> </ul>	No
• Aver sensor         Yes          permission quistoor quirul (2 wire sensor), max         15 m.           Erroratascuraciés         0008 %/K           Consolts Attender the input, min         000 %/K           Consont input mange, (+/-)         0.5 %		
- permissible quelocit ournet (2-wire sensor); max         1.5 mA           Errorebaceuracies         Tarispenduceuracies         1           Croatistic between fore inputs, min.         66 dB           Append accuracy instandy state at 25° (Fieldave to input range, 14/2)         0.15 %.           Linearthy error (relative to output range, bandwitch 0 to 50 kHz), 0.15 %.         0.15 %.           Linearthy error (relative to output range, 14/2)         0.05 %.           Constative Evence (relative to output range, 14/2)         0.05 %.           Constative Evence (relative to output range, 14/2)         0.05 %.           Constative Evence (relative to output range, 14/2)         0.05 %.           Constative Evence (relative to input range, 14/2)         0.05 %.           Constative Evence (relative to input range, 14/2)         1 %.           Constative Evence (relative to input range, 14/2)         1 %.           Constative Evence (relative to input range, 14/2)         1 %.           Constative Evence (relative to input range, 14/2)         1 %.           Constative Evence (relative to input range, 14/2)         1 %.           Constative Evence (relative to input range, 14/2)         0.8 %.           Constative Evence (relative to input range, 14/2)         0.8 %.           Constative Evence (relative to input range, 14/2)         0.8 %.           Constative E		Yes
Encoderation         Encoderation           Temperature error (relative to input range), (+/-)         0.00 %/K           Constant leterem to input range, bandwidth to 50 kHz),         0.00 %/K           Constant leterem to input range, bandwidth to 50 kHz),         0.11 %           Constant leterem to clubve to output range, bandwidth to 50 kHz),         0.11 %/K           Constant leterem treative to output range, bandwidth to 50 kHz),         0.11 %/K           Constant leterem treative to output range, (+/-)         0.11 %/K           Constant leterem treative to output range, (+/-)         0.01 %/K           Constant leterem treative to input range, (+/-)         0.15 %.           Constant leterem treative to input range, (+/-)         1.5           - Corrent, relative to input range, (+/-)         0.8 %; Linearity error e10.0 %;           - Corrent, relative to input range, (+/-)         0.8 %;           - Corrent, relative to input range, (+/-)         0.8 %           - Corrent, relative to input range, (+/-)         0.8 %		
Temperature array (relative to input mape), (+-)         0.008 %M           Crosstatic Exhemation the lipits, min,         60 dill           Constatic Exhemation is disardy state at 28 °C (relative to input maps), (+-)         0.15 %           Church rapie (relative to output maps), (+-)         0.15 %           Constatic Exhemation is disardy state at 28 °C (relative to output maps), (+-)         0.15 %           Constatic Exhemation from output maps, (+-)         0.01 %MK           Constatic Exhemation from output maps, (+-)         0.06 %           Operational error limit in overall transpace (+-)         1 %           • Outgage, relative to output maps, (+-)         1 %           • Outgage, relative to output maps, (+-)         1 %           • Outgage, relative to output maps, (+-)         1 %           • Outgage, relative to output maps, (+-)         1 %           • Outgage, relative to output maps, (+-)         0.8 %           • Outgage, relative to output maps, (+-)         0.8 %           • Outgage, relative to output maps, (+-)         0.8 %           <		
Constalls between the inputs, min.     00.08       Repear accuracy in instandy state at 25 °C (relative to input arrays, (r-i).     00.08 %.       Curpant right (relative to output range, them with the to to 50 kHz).     0.1 %.       Constalls between the output range, (r-i).     0.01 %.       Constalls between the output range, (r-i).     0.01 %.       Constalls between the output range, (r-i).     0.06 %.       Constalls between the output range, (r-i).     0.06 %.       Object to input range, (r-i).     0.06 %.       Object to input range, (r-i).     1 %.       • Voltage, relative to input range, (r-i).     1 %.       • Voltage, relative to input range, (r-i).     1 %.       • Voltage, relative to input range, (r-i).     1 %.       • Voltage, relative to input range, (r-i).     1 %.       • Voltage, relative to input range, (r-i).     1 %.       • Voltage, relative to input range, (r-i).     0.8 %. Linearity error x0.06 %.       • Current, relative to input range, (r-i).     0.8 %. Linearity error x0.06 %.       • Current, relative to input range, (r-i).     0.8 %. Linearity error x0.06 %.       • Current, relative to input range, (r-i).     0.8 %. Linearity error x0.06 %.       • Current, relative to input range, (r-i).     0.8 %. Linearity error x0.06 %.       • Current, relative to input range, (r-i).     0.8 %. Linearity error x0.06 %.       • Current, relative to input range, (r		0.006 %/K
Repeat accuracy in standy state at 28 °C (relative to input arrayb, (+')         0.09 %.           Curput right (relative to output range, bandwith 0 to 50 MH2). (+')         0.1 %.           Linearly error (relative to output range, bandwith 0 to 50 MH2). (+')         0.01 %.           Constraints of relative to output range. (+')         0.01 %.           Constraints of relative to output range. (+')         0.01 %.           Constraints of relative to output range. (+')         1 %.           Operational error limit in steam temperature range         •           • Voltage, relative to input range, (+')         1 %.           • Current, relative to input range, (+')         1 %.           • Current, relative to input range, (+')         1 %.           • Current, relative to input range, (+')         1 %.           • Current, relative to input range, (+')         1 %.           • Current, relative to input range, (+')         0 % %. Linearity error =0 0 %.           • Current, relative to input range, (+')         0 % %. Linearity error =0 0 %.           • Current, relative to input range, (+')         0 % %. Linearity error =0 0 %.           • Current, relative to input range, (+')         0 % %. Linearity error =0 0 %.           • Current, relative to input range, (+')         0 % %.           • Current, relative to input range, (+')         0 % %.           • Current		
Output range (relative to output range, (++)         0.1 %           Linearly error (relative to output range), (++)         0.15 %.           Crosstalk between the outputs, min         60 dB           Repeat accuracy in steady state at 25 °C (relative to output range), (+>)         0.05 %.           Constance inclusion output range, (+>)         0.05 %.           Constance inclusion output range, (+>)         1 %.           Constance inclusion output range, (+>)         1 %.           Constance, relative to input range, (+>)         1 %.           • Voltage, relative to output range, (+>)         1 %.           • Courrent, relative to input range, (+>)         1 %.           • Voltage, relative to output range, (+>)         1 %.           • Current, relative to input range, (+>)         1 %.           • Voltage, relative to output range, (+>)         0.8 %. Linearity error ±0 6 %.           • Current, relative to input range, (+>)         0.8 %. Linearity error ±0 6 %.           • Current, relative to input range, (+>)         0.8 %. Linearity error ±0 6 %.           • Current, relative to input range, (+>)         0.8 %. Linearity error ±0 6 %.           • Current, relative to input range, (+>)         0.8 %. Linearity error ±0 6 %.           • Current, relative to input range, (+>)         0.8 %.           • Current, relative to input range, (+>)         0.8	Repeat accuracy in steady state at 25 °C (relative to input	0.06 %
Linearly error (relative to output range), (+/-)         0.15 %.           Temperature error (relative to output range), (+/-)         0.01 %.K           Constalk between the outputs, rinn.         60 dB           Repeat accuracy in steady state at 25 °C (relative to output range), (+/-)         1 %.           Operational error limit in overall temperature range         0.06 %.           Output         1 %.           Current, relative to input range, (+/-)         1 %.           • Vottage, relative to output range, (+/-)         1 %.           • Vottage, relative to input range, (+/-)         1 %.           • Vottage, relative to input range, (+/-)         0 % %. Linearity error ±0.06 %.           • Current, relative to input range, (+/-)         0 % %. Linearity error ±0.06 %.           • Current, relative to input range, (+/-)         0 % %. Linearity error ±0.06 %.           • Current, relative to input range, (+/-)         0 % %. Linearity error ±0.06 %.           • Current, relative to input range, (+/-)         0 % %. Linearity error ±0.06 %.           • Current, relative to input range, (+/-)         0 % %.           • Vottage, relative to input range, (+/-)         0 %           • Corrent, relative to input range, (+/-)         0 %           • Corrent, relative to input range, (+/-)         0 %           • Corrent, relative to input range, (+/-)	Output ripple (relative to output range, bandwidth 0 to 50 kHz),	0.1 %
Crossalk between the outputs, min.         60.049           Appact accouncy in steady state at 25 °C (relative to output anya), (**)         0.06 %           Obtained ancol limit in overall temperature range         0.06 %           • Ovitage, relative to input range, (*+)         1 %           • Contract, relative to input range, (*+)         1 %           • Contract, relative to input range, (*+)         1 %           • Contract, relative to input range, (*+)         1 %           • Contract, relative to input range, (*+)         0.8 %; Linearity error ±0.06 %.           • Current, relative to input range, (*+)         0.8 %; Linearity error ±0.06 %.           • Current, relative to input range, (*+)         0.8 %; Linearity error ±0.06 %.           • Current, relative to input range, (*+)         0.8 %; Linearity error ±0.06 %.           • Current, relative to input range, (*+)         0.8 %; Linearity error ±0.06 %.           • Current, relative to input range, (*+)         0.8 %           • Contract, relative to input range, (*+)         0.8 %           • Contract, relative to input range, (*+)         0.8 %           • Contract, relative to input range, (*+)         0.8 %           • Contract output range, (*+)         0.8 %           • Contract output range, (*+)         0.8 %           • Contract output range, (*+)         0.8 %	Linearity error (relative to output range), (+/-)	0.15 %
Research accuracy in stady state at 25 °C (relative to output range), (+')         0.06 %           Operational error limit in overall temperature range         1 %           • Votage, relative to input range, (+')         1 %           • Current, relative to input range, (+')         1 %           • Current, relative to input range, (+')         1 %           • Current, relative to output range, (+')         1 %           • Current, relative to output range, (+')         0.8 %; Linearity error ±0.06 %           • Current, relative to output range, (+')         0.8 %; Linearity error ±0.06 %           • Current, relative to output range, (+')         0.8 %; Linearity error ±0.06 %           • Resistance thermometer, relative to input range, (+')         0.8 %; Linearity error ±0.08 %           • Resistance thermometer, relative to output range, (+')         0.8 %           • Notage, relative to output range, (+')         0.8 %           • Votage, relative to output range, (+')         0.8 %           • Notage, relative to output range, (+')         0.8 %           • Ovtage, relative to output range, (+')         0.8 %           • Resistance hereforence (relative to output range, (+')         0.8 %           • Current, relative to output range, (+')         0.8 %           Interfaces         0           Interfaces         0           Num	Temperature error (relative to output range), (+/-)	0.01 %/K
range, (+)         Control in the order limb in overall temperature range           • Voltage, relative to input range, (+)         1 %           • Current, relative to input range, (+)         1 %           • Voltage, relative to input range, (+)         1 %           • Voltage, relative to output range, (+)         1 %           • Voltage, relative to output range, (+)         0.8 %; Linearity error ±0.06 %           • Current, relative to input range, (+)         0.8 %; Linearity error ±0.06 %           • Current, relative to input range, (+)         0.8 %; Linearity error ±0.06 %           • Current, relative to input range, (+)         0.8 %; Linearity error ±0.0 %           • Current, relative to output range, (+)         0.8 %; Linearity error ±0.0 %           • Current, relative to output range, (+)         0.8 %; Linearity error ±0.0 %           • Voltage, relative to output range, (+)         0.8 %           • Current, relative to output range, (+)         0.8 %           • Voltage, relative to output range, (+)         0.8 %           • Voltage, relative to output range, (+)         0.8 %           • Voltage, relative to output range, (+)         0.8 %           • Voltage, relative to output range, (+)         0.8 %           • Voltage, relative to output range, (+)         0.8 %           • Voltage, relative to output range, (+)         0.8 %	Crosstalk between the outputs, min.	60 dB
• Voltage, relative to input range, (+-)     1 %       • Current, relative to input range, (+-)     1 %       • Voltage, relative to output range, (+-)     1 %       • Voltage, relative to input range, (+-)     1 %       • Voltage, relative to input range, (+-)     0.8 %; Linearity eror ±0.06 %       • Current, relative to input range, (+-)     0.8 %; Linearity eror ±0.06 %       • Current, relative to input range, (+-)     0.8 %; Linearity eror ±0.08 %       • Resistance, relative to input range, (+-)     0.8 %; Linearity eror ±0.2 %       • Resistance, relative to input range, (+-)     0.8 %; Linearity eror ±0.2 %       • Resistance, relative to input range, (+-)     0.8 %; Linearity eror ±0.2 %       • Resistance, relative to input range, (+-)     0.8 %       • Voltage, relative to input range, (+-)     0.8 %       • Notage, relative to input range, (+-)     0.8 %       • Current, relative to output range, (+-)     0.8 %       • Voltage, nelative to input range, (+-)     0.8 %       • Notage a supression for 1 = x (11 + 1 %) f1 = internece frequency     0       • Notage of industrial Ethernet interfaces     0       • Number of RS 42 interfaces     0       Number of RS 42 interfaces     1 Met freace       Isolated     No       • Notage, Felsive to input range, (+-)     0 %       • Number of RS 422 interfaces     0       •		0.06 %
• Current, relative to input range, (+/)     1 %       • Voltage, relative to output range, (+/)     1 %       • Current, relative to output range, (+/)     1 %       • Base: corront into (operational limit range, (+/)     0.8 %; Linearity error ±0.06 %       • Current, relative to input range, (+/)     0.8 %; Linearity error ±0.06 %       • Current, relative to input range, (+/)     0.8 %; Linearity error ±0.06 %       • Resistance thermometer, relative to input range, (+/)     0.8 %; Linearity error ±0.06 %       • Voltage, relative to output range, (+/)     0.8 %       • Voltage, relative to output range, (+/)     0.8 %       • Voltage, relative to output range, (+/)     0.8 %       • Current, relative to output range, (+/)     0.8 %       • Current, relative to output range, (+/)     0.8 %       • Current, relative to output range, (+/)     0.8 %       • Current, relative to output range, (+/)     0.8 %       • Current, relative to output range, (+/)     0.8 %       • Current, relative to output range, (+/)     0.8 %       • Current, relative to output range, (+/)     0.8 %       • Current, relative to output range, (+/)     0.8 %       • Current, relative to output range, (+/)     0.8 %       • Current, relative to output range, (+/)     0.8 %       • Current, relative to output range, (+/)     0.8 %       • Number of Inderference, main. <td< td=""><td>Operational error limit in overall temperature range</td><td></td></td<>	Operational error limit in overall temperature range	
• Resistance, relative to input range, (+/-)     1 %       • Voltage, relative to input range, (+/-)     1 %       Basic error. limit (operational limit at 25 "O     -       • Voltage, relative to input range, (+/-)     0.8 %; Linearity error ±0.06 %       • Current. relative to input range, (+/-)     0.8 %; Linearity error ±0.06 %       • Resistance, relative to input range, (+/-)     0.8 %; Linearity error ±0.2 %       • Resistance, relative to input range, (+/-)     0.8 %       • Voltage, relative to output range, (+/-)     0.8 %       • Voltage, relative to output range, (+/-)     0.8 %       • Nothege suppression for 1 = n x (14 + 1 %), 11 = interface     0       • Voltage, relative to input range, (+/-)     0.8 %       • Number of Industrial Ethernet, firefaces     30 dB       • rated value of input range), min.     40 dB       Interfaces     0       Number of PACPINET interfaces     0       Number of RS 485 interfaces     1, MPI       Number of RS 485 interfaces     0       • RS 485     Yes       • Output current of the interface, max.     200 mA       Protextes     No       • PROFIBUS DP master     No       • PROFIBUS DP shave     No       • PROFIBUS DP interpoint connection     No       MPI     Yes       • PROFIBUS DP interface     No	<ul> <li>Voltage, relative to input range, (+/-)</li> </ul>	1 %
• Voltage, relative to output range, (+/-)     1 %       • Current, relative to input range, (+/-)     0.8 %; Linearity error ±0.06 %       • Voltage, relative to input range, (+/-)     0.8 %; Linearity error ±0.26 %       • Resistance thermometer, relative to input range, (+/-)     0.8 %; Linearity error ±0.2 %       • Resistance thermometer, relative to input range, (+/-)     0.8 %       • Voltage, relative to input range, (+/-)     0.8 %       • Voltage, relative to output range, (+/-)     0.8 %       • Voltage, relative to output range, (+/-)     0.8 %       • Current, relative to output range, (+/-)     0.8 %       • Current, relative to output range, (+/-)     0.8 %       • Current one one interference (relax value of interference <	• Current, relative to input range, (+/-)	1 %
• Current, relative to output range, (+/-)       1 %         Basic error limit toperational limit at 25 °O         • Voltage, relative to input range, (+/-)       0.8 %; Linearity error ±0.06 %         • Current, relative to input range, (+/-)       0.8 %; Linearity error ±0.06 %         • Resistance, relative to input range, (+/-)       0.8 %; Linearity error ±0.06 %         • Resistance, relative to output range, (+/-)       0.8 %         • Outge, relative to output range, (+/-)       0.8 %         • Current, relative to output range, (+/-)       0.8 %         • Current, relative to output range, (+/-)       0.8 %         • Current, relative to output range, (+/-)       0.8 %         • Current, relative to output range, (+/-)       0.8 %         • Current, relative to output range, (+/-)       0.8 %         • Current, relative to output range, (+/-)       0.8 %         • Current, relative to output range, (+/-)       0.8 %         • Common mode interference, min.       40 dB         Interfaces       0         Number of RS 485 interfaces       0         Number of RS 485 interfaces       0         Number of RS 485 interfaces       0         Interface type       Interfaces         • Rot A85       Yes         • Output current of the interface, max.       200 mA<	• Resistance, relative to input range, (+/-)	1 %
Basic error limit (operational limit at 25 °C)         • Voltage, relative to input range, (+/-)       0.8 %; Linearity error ±0.06 %,         • Current, relative to input range, (+/-)       0.8 %; Linearity error ±0.2 %         • Resistance, trelative to input range, (+/-)       0.8 %; Linearity error ±0.2 %         • Voltage, relative to output range, (+/-)       0.8 %;         • Current, relative to output range, (+/-)       0.8 %         • Current, relative to output range, (+/-)       0.8 %         • Current, relative to output range, (+/-)       0.8 %         • Current, relative to output range, (+/-)       0.8 %         • Current, relative to output range, (+/-)       0.8 %         • Current, relative to output range, (+/-)       0.8 %         • Series mode interference (ceak value of interference <	<ul> <li>Voltage, relative to output range, (+/-)</li> </ul>	1 %
• Voltage, relative to input range, (+/-)     0.8 %; Linearity error ±0.06 %;       • Current, relative to input range, (+/-)     0.8 %; Linearity error ±0.06 %;       • Resistance thermometer, relative to input range, (+/-)     0.8 %; Linearity error ±0.02 %;       • Voltage, relative to output range, (+/-)     0.8 %;       • Current, relative to output range, (+/-)     0.8 %;       • Current, relative to output range, (+/-)     0.8 %;       • Current, relative to output range, (+/-)     0.8 %;       • Current, relative to output range, (+/-)     0.8 %;       • Current, relative to output range, (+/-)     0.8 %;       • Current, relative to output range, (+/-)     0.8 %;       • Current, relative to output range, (+/-)     0.8 %;       • Current, relative to output range, (+/-)     0.8 %;       • Current, relative to output range, (+/-)     0.8 %;       • Current, relative to output range, (+/-)     0.8 %;       • Current, relative to output range, (+/-)     0.8 %;       • Current, relative to output range, (+/-)     0.8 %;       • Current, relative to output range, (+/-)     0.8 %;       • Current, relative to output range, (+/-)     0.8 %;       • Interface     0       • Number of RS.48 d5 interfaces     0       • Number of RS.48 d5 interfaces     1; MPI       • Number of RS.48 d5 interfaces, max.     200 mA       • Protoc	• Current, relative to output range, (+/-)	1 %
• Current, relative to input range, (+/-)     0.8 %; Linearity error 20.06 %       • Resistance, relative to input range, (+/-)     0.8 %; Linearity error 20.2 %       • Voltage, relative to output range, (+/-)     0.8 %       • Current, relative to output range, (+/-)     0.8 %       • Current, relative to output range, (+/-)     0.8 %       • Saries mode interference (pask value of interference      30 dB       • Common mode interference, min,     40 dB       • Common mode interference, min,     40 dB       • Number of PROFINET interfaces     0       • Number of PROFINET interfaces     0       • Number of RS 485 interfaces     11.MPI       Number of RS 485 interfaces     0       • Linterface     0       • Number of RS 485 interfaces     0       • Interface type     Integrated RS 485 interface       • Isolated     No       • No HPI     Yes       • RS 485     Yes       • Output current of the interface, max.     20 mA       • PROFIBUS DP master     No       • PROFIBUS DP master     No <td>Basic error limit (operational limit at 25 °C)</td> <td></td>	Basic error limit (operational limit at 25 °C)	
• Resistance, relative to input range, (+/-)       0.8 %; Linearity error ±0.2 %         • Resistance thermometer, relative to output range, (+/-)       0.8 %         • Current, relative to output range, (+/-)       0.8 %         • Current, relative to output range, (+/-)       0.8 %         • Current, relative to output range, (+/-)       0.8 %         • Current, relative to output range, (+/-)       0.8 %         • Current, relative to output range, (+/-)       0.8 %         • Current, relative to output range, (+/-)       0.8 %         • Series mode interference (pask value of interference frequency       •         • Series mode interference (pask value of interference        30 dB         • Tarteraces       0         Number of RS 422 interfaces       0         Number of RS 422 interfaces       0         • Number of RS 422 interfaces       0         • Interface type       Intergrated RS 485 interface         • Isolated       No         • Interface type       Interfaces         • Output current of the interface, max.       200 mA         • Protocols       Yes         • PROFIBUS DP master       No         • PROFIBUS DP slave       No         • PROFIBUS DP slave       No         • Transmission rate, max.       187.5	• Voltage, relative to input range, (+/-)	0.8 %; Linearity error ±0.06 %
• Resistance thermometer, relative to input range, (+/-)       0.8 %         • Voltage, relative to output range, (+/-)       0.8 %         • Eurer, relative to output range, (+/-)       0.8 %         Interference voltage suppression for f = nx (f1 +/- 1 %), f1 = interference frequency       0         • Series mode interference, pain.       40 dB         Interfaces       0         Number of Industrial Ethernet interfaces       0         Number of RA 458 interfaces       0         Number of S 485 interfaces       0         Number of RS 422 interfaces       0         Number of RS 425 interfaces       0         Interface type       Integrated RS 485 interface         Isolated       No         Interface type       No         • FROFIBUS DP master       Yes         • Output connection       No         MPI       Yes         • PROFIBUS DP master       No         • PROFIBUS DP master       No         • PROFORD Master       Yes         • PROFORD Master       No         • PROFORD Master       No         • PROFORD Master       No         • PROFORD Master       No         • PROFIBUS DP master       No         • PROFORD Master	• Current, relative to input range, (+/-)	0.8 %; Linearity error ±0.06 %
• Voltage, relative to output range, (+f.)     0.8 %       • Current, relative to output range, (+f.)     0.8 %       Interference voltage suppression for f = n x (ft +f. 1 %), ft = interference frequency     30 dB       • Series mode interference (peak value of interference < rated value of input range), min.	<ul> <li>Resistance, relative to input range, (+/-)</li> </ul>	0.8 %; Linearity error ±0.2 %
Current, relative to output range, (+/-)     0.8 % Interference voltage suppression for 1 = n x (11 +/-1 %), 11 = interference frequency     Series mode interference (peak value of interference < 30 dB     common mode interference, min. 40 dB     Interfaces     Number of Industrial Ethernet interfaces     0 Number of Industrial Ethernet interfaces     0 Number of RS 485 interfaces     0 Interface type I	<ul> <li>Resistance thermometer, relative to input range, (+/-)</li> </ul>	0.8 %
Interference voltage supression for f = x (ft +/: 1 %), ft = interference frequency <ul></ul>	<ul> <li>Voltage, relative to output range, (+/-)</li> </ul>	0.8 %
• Series mode interference (peak value of interference < rated value of input range), min.	<ul> <li>Current, relative to output range, (+/-)</li> </ul>	0.8 %
rated value of input range), min.     40 dB       • Common mode interference, min.     40 dB       Interfaces     0       Number of Industrial Ethernet interfaces     0       Number of RS 455 interfaces     1; MPI       Number of RS 455 interfaces     0       Number of RS 455 interfaces     1; MPI       Number of RS 455 interfaces     0       1. Interface     0       1. Interface type     Integrated RS 485 interface       Isolated     No       Interface types     Ves       • RS 455     Yes       • Output current of the interface, max.     200 mA       Protocols     Ves       • PROFIBUS DP master     No       • PROFIBUS DP slave     No       • Proorection     No       MPI     Ves       • Transmission rate, max.     187.5 kbit/s       Services     -       - PG/OP communication     Yes       - Routing     No       - ST communication     Yes       - ST communication     Yes       - ST communication, as server     Yes <tr< td=""><td>Interference voltage suppression for f = n x (f1 +/- 1 %), f1 = interfe</td><td>erence frequency</td></tr<>	Interference voltage suppression for f = n x (f1 +/- 1 %), f1 = interfe	erence frequency
Interfaces         0           Number of Industrial Ethernet interfaces         0           Number of RNOFINET interfaces         0           Number of RS 485 interfaces         1; MPI           Number of RS 485 interfaces         0           1. Interface         0           Interface type         Integrated RS 485 interface           Isolated         No           Interface types         Interface types           • RS 485         Yes           • Output current of the interface, max.         200 mA           Protocols         -           • PROFIBUS DP master         No           • PROFIBUS DP stave         No           • PROFIBUS DP stave         No           • Protocols         -           • Protocols         -           • PROFIBUS DP stave         No           • Protocols or state         No           • Protocols         -           • Protocols         -           • Oransission rate, max.         187.5 kbit/s           Services         -           - PG/OP communication         Yes           - Sommunication         Yes           - S7 communication         Yes           - S7 communication		30 dB
Number of Industrial Ethernet interfaces     0       Number of PROFINET interfaces     0       Number of RS 485 interfaces     1; MPI       Number of RS 422 interfaces     0       1. Interface     0       Interface type     Integrated RS 485 interface       Isolated     No       Interface types     •       • RS 485     Yes       • Output current of the interface, max.     200 mA       Protocols     •       • MPI     Yes       • PROFIBUS DP master     No       • PROFIBUS DP slave     No       • PROFIBUS DP slave     No       • Point-to-point connection     No       MPI     Yes       • Colopal data communication     Yes       • Routing     No       - Global data communication     Yes       - S7 communication     Yes; Only server, configured on one side       - S7 communication, as client     No; but via CP and loadable FB       - S7 communication, as server     Yes	Common mode interference, min.	40 dB
Number of PROFINET interfaces       0         Number of RS 485 interfaces       1; MPI         Number of RS 422 interfaces       0         1. Interface       0         Interface type       Integrated RS 485 interface         isolated       No         Interface types       Ves         • Cutput current of the interface, max.       200 mA         Protocols       Ves         • MPI       Yes         • PROFIBUS DP master       No         • PROFIBUS DP slave       No         • PROFIBUS DP slave       No         • Protocols       Ves         • Clobal data communication       Yes         • Colobal data communication       Yes         • S7 basic communication       Yes         • S7 communication	Interfaces	
Number of RS 485 interfaces       1; MPI         Number of RS 422 interfaces       0         1.Interface       Integrated RS 485 interface         Interface type       Integrated RS 485 interface         Isolated       No         Interface types       • RS 485         • RS 485       Yes         • Output current of the interface, max.       200 mA         Protocols       • PROFIBUS DP master         • PROFIBUS DP master       No         • PROFIBUS DP slave       No         • Protocols       No         • Protocols       • Protocols         • PROFIBUS DP slave       No         • Point-to-point connection       No         MPI       • Prosecommunication         • PG/OP communication       Yes         - Routing       No         - Global data communication       Yes         - S7 basic communication       Yes         - S7 communication       Yes (Only server, configured on one side         - S7 communication, as client       No; but via CP and loadable FB         - S7 communication, as server       Yes         - S7 communication, as server       Yes         - S7 communication, as server       Yes         - S7 communication, as ser	Number of industrial Ethernet interfaces	0
Number of RS 422 interfaces       0         1. Interface type       Integrated RS 485 interface         Isolated       No         Interface types	Number of PROFINET interfaces	0
1. Interface         Interface type       Integrated RS 485 interface         Isolated       No         Interface types       Interface types         • RS 485       Yes         • Output current of the interface, max.       200 mA         Protocols       Interface types         • MPI       Yes         • PROFIBUS DP master       No         • PROFIBUS DP slave       No         • Point-to-point connection       No         MPI       Transmission rate, max.         187.5 kbit/s       Services         - PG/OP communication       Yes         - Routing       No         - S7 basic communication       Yes         - S7 communication       Yes; Only server, configured on one side         - S7 communication, so client       No; but via CP and loadable FB         - S7 communication, as server       Yes;         PROFIsafe       No	Number of RS 485 interfaces	1; MPI
Interface type         Integrated RS 485 interface           Isolated         No           Interface types	Number of RS 422 interfaces	0
Isolated     No       Interface types	1. Interface	
Interface types         • RS 485       Yes         • Output current of the interface, max.       200 mA         Protocols       200 mA         • MPI       Yes         • PROFIBUS DP master       No         • PROFIBUS DP slave       No         • Protocolis       No         • PROFIBUS DP slave       No         • Protint-to-point connection       No         MPI       Transmission rate, max.         • Transmission rate, max.       187.5 kbit/s         Services	Interface type	Integrated RS 485 interface
• RS 485       Yes         • Output current of the interface, max.       200 mA         Protocols       ************************************	Isolated	No
• Output current of the interface, max.       200 mA         Protocols         • MPI       Yes         • PROFIBUS DP master       No         • PROFIBUS DP slave       No         • Point-to-point connection       No         MPI       Yes         • Transmission rate, max.       187.5 kbit/s         Services       -         • PG/OP communication       Yes         • Routing       No         • Global data communication       Yes         • S7 basic communication       Yes; Only server, configured on one side         • S7 communication, as client       No; but via CP and loadable FB         • S7 communication, as server       Yes         PROFIsafe       No	Interface types	
Protocols       Yes         • PROFIBUS DP master       No         • PROFIBUS DP slave       No         • Protocols       No         • Protit-to-point connection       No         MPI       Its7.5 kbit/s         Services       -         - PG/OP communication       Yes         - Routing       No         - Global data communication       Yes         - S7 basic communication       Yes         - S7 communication, as client       No; but via CP and loadable FB         - S7 communication, as server       Yes         PROFIsafe       No	• RS 485	Yes
• MPIYes• PROFIBUS DP masterNo• PROFIBUS DP slaveNo• Point-to-point connectionNoMPI-• Transmission rate, max.187.5 kbit/sServices PG/OP communicationYes- RoutingNo- Global data communicationYes- S7 basic communicationYes- S7 communicationYes; Only server, configured on one side- S7 communicationYes; Only server, configured on one side- S7 communication, as clientNo; but via CP and loadable FB- S7 communication, as serverYesProtocolsNo	<ul> <li>Output current of the interface, max.</li> </ul>	200 mA
• PROFIBUS DP master       No         • PROFIBUS DP slave       No         • Point-to-point connection       No         MPI       -         • Transmission rate, max.       187.5 kbit/s         Services       -         - PG/OP communication       Yes         - Routing       No         - Global data communication       Yes         - S7 basic communication       Yes; Only server, configured on one side         - S7 communication, as client       No; but via CP and loadable FB         - S7 communication, as server       Yes         Protocols       PROFIsafe	Protocols	
• PROFIBUS DP slave       No         • Point-to-point connection       No         MPI       Mo         • Transmission rate, max.       187.5 kbit/s         Services       -         - PG/OP communication       Yes         - Routing       No         - Global data communication       Yes         - Global data communication       Yes         - S7 basic communication       Yes; Only server, configured on one side         - S7 communication, as client       No; but via CP and loadable FB         - S7 communication, as server       Yes         Protocols       No	• MPI	Yes
• Point-to-point connection       No         MPI         • Transmission rate, max.       187.5 kbit/s         Services       -         - PG/OP communication       Yes         - Routing       No         - Global data communication       Yes         - S7 basic communication       Yes         - S7 communication       Yes; Only server, configured on one side         - S7 communication, as client       No; but via CP and loadable FB         - S7 communication, as server       Yes         PROFIsafe       No	PROFIBUS DP master	No
MPI         • Transmission rate, max.       187.5 kbit/s         Services       -         - PG/OP communication       Yes         - Routing       No         - Global data communication       Yes         - S7 basic communication       Yes         - S7 communication       Yes; Only server, configured on one side         - S7 communication, as client       No; but via CP and loadable FB         - S7 communication, as server       Yes         PROFIsafe       No	PROFIBUS DP slave	No
• Transmission rate, max.       187.5 kbit/s         Services       -         - PG/OP communication       Yes         - Routing       No         - Global data communication       Yes         - S7 basic communication       Yes         - S7 communication       Yes; Only server, configured on one side         - S7 communication, as client       No; but via CP and loadable FB         - S7 communication, as server       Yes         PROFIsafe       No	Point-to-point connection	No
Services         - PG/OP communication       Yes         - Routing       No         - Global data communication       Yes         - S7 basic communication       Yes         - S7 communication       Yes; Only server, configured on one side         - S7 communication, as client       No; but via CP and loadable FB         - S7 communication, as server       Yes	MPI	
PG/OP communication       Yes         Routing       No         Global data communication       Yes         S7 basic communication       Yes         S7 communication       Yes; Only server, configured on one side         S7 communication, as client       No; but via CP and loadable FB         S7 communication, as server       Yes         Protocols       No	Transmission rate, max.	187.5 kbit/s
- Routing       No         - Global data communication       Yes         - S7 basic communication       Yes; Only server, configured on one side         - S7 communication, as client       No; but via CP and loadable FB         - S7 communication, as server       Yes         Protocols       No	Services	
Global data communication     Yes       S7 basic communication     Yes       S7 communication     Yes; Only server, configured on one side       S7 communication, as client     No; but via CP and loadable FB       S7 communication, as server     Yes	— PG/OP communication	Yes
- S7 basic communication     Yes       - S7 communication     Yes; Only server, configured on one side       - S7 communication, as client     No; but via CP and loadable FB       - S7 communication, as server     Yes	— Routing	No
S7 communication     Yes; Only server, configured on one side       S7 communication, as client     No; but via CP and loadable FB       S7 communication, as server     Yes         Protocols       PROFIsafe     No	— Global data communication	Yes
S7 communication, as client     No; but via CP and loadable FB       S7 communication, as server     Yes       Protocols     PROFIsafe       No     No	— S7 basic communication	Yes
— S7 communication, as server     Yes       Protocols     Yes       PROFIsafe     No	— S7 communication	Yes; Only server, configured on one side
Protocols         No	- S7 communication, as client	No; but via CP and loadable FB
PROFIsafe No	— S7 communication, as server	Yes
	Protocols	
communication functions / header	PROFIsafe	No
	communication functions / header	

PG/OP communication	Yes
Data record routing	No
Global data communication	
supported	Yes
Number of GD loops, max.	8
Number of GD packets, max.	8
Number of GD packets, transmitter, max.	8
Number of GD packets, receiver, max.	8
Size of GD packets, max.	22 byte
<ul> <li>Size of GD packets, max.</li> <li>Size of GD packet (of which consistent), max.</li> </ul>	22 byte
S7 basic communication	22 byte
	Yes
• supported	
<ul> <li>User data per job, max.</li> <li>User data per job (of which consistent), max.</li> </ul>	76 byte 76 byte; 76 bytes (with X_SEND or X_RCV); 64 bytes (with X_PUT or X_GET
S7 communication	as server)
supported	Yes
• as server	Yes
• as client	Yes; Via CP and loadable FB
• User data per job, max.	180 byte; With PUT/GET
User data per job (of which consistent), max.	240 byte; as server
S5 compatible communication	
supported	Yes; via CP and loadable FC
Number of connections	
overall	8
<ul> <li>usable for PG communication</li> </ul>	7
<ul> <li>reserved for PG communication</li> </ul>	1
<ul> <li>adjustable for PG communication, min.</li> </ul>	1
<ul> <li>adjustable for PG communication, max.</li> </ul>	7
<ul> <li>usable for OP communication</li> </ul>	7
<ul> <li>reserved for OP communication</li> </ul>	1
— adjustable for OP communication, min.	1
— adjustable for OP communication, max.	7
usable for S7 basic communication	4
<ul> <li>reserved for S7 basic communication</li> </ul>	0
<ul> <li>adjustable for S7 basic communication, min.</li> </ul>	0
- adjustable for S7 basic communication, max.	4
S7 message functions	
Number of login stations for message functions, max.	8; Depending on the configured connections for PG/OP and S7 basic communication
Process diagnostic messages	Yes
simultaneously active Alarm-S blocks, max.	300
Test commissioning functions	
	Ver Up to 2 simultaneously
Status block	Yes; Up to 2 simultaneously
Single step	Yes
Number of breakpoints	4
Status/control	
Status/control variable	Yes
Variables	Inputs, outputs, memory bits, DB, times, counters
Number of variables, max.	30
— of which status variables, max.	30
— of which control variables, max.	14
Forcing	
• Forcing	Yes
<ul> <li>Forcing, variables</li> </ul>	Inputs, outputs
<ul> <li>Number of variables, max.</li> </ul>	10
Diagnostic buffer	
• present	Yes
Number of entries, max.	500
— adjustable	No
— of which powerfail-proof	100; Only the last 100 entries are retained

<ul> <li>Number of entries readable in RUN, max.</li> </ul>	499
adjustable	Yes; From 10 to 499
— preset	10
Service data	10
• can be read out	Yes
Interrupts/diagnostics/status information	
Diagnostics indication LED	
Status indicator digital input (green)	Yes
Status indicator digital output (green)	Yes
Integrated Functions	
Frequency measurement	Yes
Number of frequency meters	3; up to 30 kHz (see "Technological Functions" manual)
controlled positioning	No
integrated function blocks (closed-loop control)	Yes; PID controller (see "Technological Functions" manual)
PID controller	Yes
Number of pulse outputs	3; Pulse width modulation up to 2.5 kHz (see "Technological Functions" Manual)
Limit frequency (pulse)	2.5 kHz
Potential separation	
Potential separation digital inputs	
Potential separation digital inputs	Yes
between the channels	No
between the channels and backplane bus	Yes
Potential separation digital outputs	
Potential separation digital outputs	Yes
between the channels	Yes
<ul> <li>between the channels, in groups of</li> </ul>	8
between the channels and backplane bus	Yes
Potential separation analog inputs	
<ul> <li>Potential separation analog inputs</li> </ul>	Yes; common for analog I/O
between the channels	No
<ul> <li>between the channels and backplane bus</li> </ul>	Yes
Potential separation analog outputs	
Potential separation analog outputs	Yes; common for analog I/O
between the channels	No
<ul> <li>between the channels and backplane bus</li> </ul>	Yes
Isolation	
Isolation tested with	600 V DC
Ambient conditions	
Ambient temperature during operation	
• min.	0 °C
• max.	60 °C
configuration / header	
Configuration software	
• STEP 7	Yes; STEP 7 V5.5 + SP1 or higher or STEP 7 V5.3 + SP2 or higher with HSP 203
STEP 7 Lite	No
configuration / programming / header	
Command set	see instruction list
Nesting levels	8
System functions (SFC)	see instruction list
<ul> <li>System function blocks (SFB)</li> </ul>	see instruction list
Programming language	
— LAD	Yes
— FBD	Yes
— STL	Yes
— SCL	Yes
— CFC	Yes
— GRAPH	Yes
— HiGraph®	Yes
Know-how protection	

User program protection/password protection	Yes
<ul> <li>Block encryption</li> </ul>	Yes; With S7 block Privacy
Dimensions	
Width	120 mm
Height	125 mm
Depth	130 mm
Weights	
Weight, approx.	660 g

last modified:

8/16/2023 🖸