



Figure similar

spare part SIPLUS S7-300 CPU 314C-2DP based on 6ES7314-6CH04-0AB0 with conformal coating, -25...+70 °C, compact CPU with MPI, 24 DI/16 DO, 4 AI, 2 AO, 1 Pt100, 4 high-speed counters (60 kHz), integrated DP interface, integrated power supply 24 V DC, work memory 192 KB, front connector (2x 40-pole) and Micro Memory Card required

General information	
Product type designation	CPU 314C-2 DP
based on	6ES7314-6CH04-0AB0
Engineering with	
• Programming package	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	
• Mains/voltage failure stored energy time	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
— Reverse polarity protection	No
Input current	
Current consumption (rated value)	880 mA
Current consumption (in no-load operation), typ.	150 mA
Inrush current, typ.	5 A
I ² t	0.7 A ² ·s
Digital inputs	
• from load voltage L+ (without load), max.	80 mA
Digital outputs	
• from load voltage L+, max.	50 mA
Power loss	
Power loss, typ.	13 W
Storage	
Work memory	
• integrated	192 kbyte
• expandable	No
Load memory	
• Plug-in (MMC)	Yes

<ul style="list-style-type: none"> • Plug-in (MMC), max. 	8 Mbyte
<ul style="list-style-type: none"> • Data management on MMC (after last programming), min. 	10 a
Backup	
<ul style="list-style-type: none"> • present 	Yes; Guaranteed by MMC (maintenance-free)
<ul style="list-style-type: none"> • without battery 	Yes; Program and data
CPU processing times	
for bit operations, typ.	0.06 μ s
for word operations, typ.	0.12 μ s
for fixed point arithmetic, typ.	0.16 μ s
for floating point arithmetic, typ.	0.59 μ s
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	
<ul style="list-style-type: none"> • Number, max. 	1 024; Number range: 1 to 16000
<ul style="list-style-type: none"> • Size, max. 	64 kbyte
FB	
<ul style="list-style-type: none"> • Number, max. 	1 024; Number range: 0 to 7999
<ul style="list-style-type: none"> • Size, max. 	64 kbyte
FC	
<ul style="list-style-type: none"> • Number, max. 	1 024; Number range: 0 to 7999
<ul style="list-style-type: none"> • Size, max. 	64 kbyte
OB	
<ul style="list-style-type: none"> • Number, max. 	see instruction list
<ul style="list-style-type: none"> • Size, max. 	64 kbyte
<ul style="list-style-type: none"> • Number of free cycle OBs 	1; OB 1
<ul style="list-style-type: none"> • Number of time alarm OBs 	1; OB 10
<ul style="list-style-type: none"> • Number of delay alarm OBs 	2; OB 20, 21
<ul style="list-style-type: none"> • Number of cyclic interrupt OBs 	4; OB 32, 33, 34, 35
<ul style="list-style-type: none"> • Number of process alarm OBs 	1; OB 40
<ul style="list-style-type: none"> • Number of DPV1 alarm OBs 	3; OB 55, 56, 57
<ul style="list-style-type: none"> • Number of startup OBs 	1; OB 100
<ul style="list-style-type: none"> • Number of asynchronous error OBs 	5; OB 80, 82, 85, 86, 87
<ul style="list-style-type: none"> • Number of synchronous error OBs 	2; OB 121, 122
Nesting depth	
<ul style="list-style-type: none"> • per priority class 	16
<ul style="list-style-type: none"> • additional within an error OB 	4
Counters, timers and their retentivity	
S7 counter	
<ul style="list-style-type: none"> • Number 	256
Retentivity	
— can be set	Yes
— preset	Z 0 to Z 7
Counting range	
— lower limit	0
— upper limit	999
IEC counter	
<ul style="list-style-type: none"> • present 	Yes
<ul style="list-style-type: none"> • Type 	SFB
<ul style="list-style-type: none"> • Number 	Unlimited (limited only by RAM capacity)
S7 timer	
<ul style="list-style-type: none"> • Number 	256
Retentivity	
— adjustable	Yes
— preset	No retentivity
Time range	
— lower limit	10 ms
— upper limit	9 990 s

IEC timer	
• present	Yes
• Type	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	
• Retentivity adjustable	Yes; via non-retain property on DB
• Retentivity preset	Yes
Local data	
• per priority class, max.	32 kbyte; Max. 2048 bytes per block
Address area	
I/O address area	
• Inputs	2 048 byte
• Outputs	2 048 byte
of which distributed	
— Inputs	2 003 byte
— Outputs	2 010 byte
Process image	
• Inputs	2 048 byte
• Outputs	2 048 byte
• Inputs, adjustable	2 048 byte
• Outputs, adjustable	2 048 byte
• Inputs, default	128 byte
• Outputs, default	128 byte
Digital channels	
• Inputs	16 048
— of which central	1 016
• Outputs	16 096
— of which central	1 008
Analog channels	
• Inputs	1 006
— of which central	253
• Outputs	1 007
— of which central	250
Hardware configuration	
Number of expansion units, max.	3
Number of DP masters	
• integrated	1
• via CP	4
Number of operable FMs and CPs (recommended)	
• FM	8
• CP, PtP	8
• CP, LAN	10
Rack	
• Racks, max.	4
• 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
• Deviation per day, max.	10 s; Typ.: 2 s
• Behavior of the clock following POWER-ON	Clock continues running after POWER OFF

<ul style="list-style-type: none"> • Behavior of the clock following expiry of backup period 	the clock continues at the time of day it had when power was switched off
Operating hours counter	
<ul style="list-style-type: none"> • Number • Number/Number range • Range of values • Granularity • retentive 	<p>1</p> <p>0</p> <p>0 to 2³¹ hours (when using SFC 101)</p> <p>1 h</p> <p>Yes; Must be restarted at each restart</p>
Clock synchronization	
<ul style="list-style-type: none"> • supported • to MPI, master • on MPI, device • to DP, master • on DP, device • in AS, master • in AS, device 	<p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes; With DP slave only slave clock</p> <p>Yes</p> <p>Yes</p> <p>No</p>
Digital inputs	
Number of digital inputs	24
<ul style="list-style-type: none"> • of which inputs usable for technological functions 	16
integrated channels (DI)	24
Input characteristic curve in accordance with IEC 61131, type 1	Yes
Number of simultaneously controllable inputs	
horizontal installation	
— up to 40 °C, max.	24
— up to 60 °C, max.	12; up to 70 °C
vertical installation	
— up to 40 °C, max.	12
Input voltage	
<ul style="list-style-type: none"> • Rated value (DC) • for signal "0" • for signal "1" 	<p>24 V</p> <p>-3 to +5V</p> <p>+15 to +30 V</p>
Input current	
<ul style="list-style-type: none"> • for signal "1", typ. 	8 mA
Input delay (for rated value of input voltage)	
for standard inputs	
— parameterizable	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.)
— Rated value	3 ms
for technological functions	
— at "0" to "1", max.	8 µs; Minimum pulse width/minimum pause between pulses at maximum counting frequency
Cable length	
<ul style="list-style-type: none"> • shielded, max. • unshielded, max. 	<p>1 000 m; 50 m for technological functions</p> <p>600 m; for technological functions: No</p>
for technological functions	
— shielded, max.	50 m; at maximum count frequency
— unshielded, max.	not allowed
Digital outputs	
Number of digital outputs	16
<ul style="list-style-type: none"> • of which high-speed outputs 	4; Notice: You cannot connect the fast outputs of your CPU in parallel
integrated channels (DO)	16
Short-circuit protection	Yes; Clocked electronically
<ul style="list-style-type: none"> • Response threshold, typ. 	1 A
Limitation of inductive shutdown voltage to	L+ (-48 V)
Controlling a digital input	Yes
Switching capacity of the outputs	
<ul style="list-style-type: none"> • on lamp load, max. 	5 W
Load resistance range	
<ul style="list-style-type: none"> • lower limit • upper limit 	<p>48 Ω</p> <p>4 kΩ</p>

Output voltage	
• for signal "1", min.	L+ (-0.8 V)
Output current	
• for signal "1" rated value	500 mA
• for signal "1" permissible range, min.	5 mA
• for signal "1" permissible range, max.	0.6 A
• for signal "1" minimum load current	5 mA
• for signal "0" residual current, max.	0.5 mA
Parallel switching of two outputs	
• for uprating	No
• for redundant control of a load	Yes
Switching frequency	
• with resistive load, max.	100 Hz
• with inductive load, max.	0.5 Hz
• on lamp load, max.	100 Hz
• of the pulse outputs, with resistive load, max.	2.5 kHz
Total current of the outputs (per group)	
horizontal installation	
— up to 40 °C, max.	3 A
— up to 60 °C, max.	2 A; 1.5 A @ > 60 °C
vertical installation	
— up to 40 °C, max.	2 A
Cable length	
• shielded, max.	1 000 m
• unshielded, max.	600 m
Analog inputs	
Number of analog inputs	
• For voltage/current measurement	4
• For resistance/resistance thermometer measurement	1
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 Ω; 0 mA to 20 mA / 100 Ω; 4 mA to 20 mA / 100 Ω
• 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 MΩ
Input ranges (rated values), resistors	
• 0 to 600 ohms	Yes
— Input resistance (0 to 600 ohms)	10 MΩ
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	
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	
• for voltage output two-wire connection	Yes; Without compensation of the line resistances
• for voltage output four-wire connection	No
• for current output two-wire connection	Yes
Load impedance (in rated range of output)	
• with voltage outputs, min.	1 kΩ
• with voltage outputs, capacitive load, max.	0.1 μF
• with current outputs, max.	300 Ω
• with current outputs, inductive load, max.	0.1 mH
Destruction limits against externally applied voltages and currents	
• Voltages at the outputs towards MANA	16 V; Permanent
• Current, max.	50 mA; Permanent
Cable length	
• shielded, max.	200 m
Analog value generation for the inputs	
Measurement principle	Actual value encryption (successive approximation)
Integration and conversion time/resolution per channel	
• Resolution with overrange (bit including sign), max.	12 bit
• Integration time, parameterizable	Yes; 16.6 / 20 ms
• Interference voltage suppression for interference frequency f1 in Hz	50 / 60 Hz
• Time constant of the input filter	0.38 ms
• Basic execution time of the module (all channels released)	1 ms
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 style="list-style-type: none"> • for current measurement as 2-wire transducer 	Yes; with external supply
<ul style="list-style-type: none"> • for current measurement as 4-wire transducer 	Yes
<ul style="list-style-type: none"> • for resistance measurement with two-wire connection 	Yes; Without compensation of the line resistances
<ul style="list-style-type: none"> • for resistance measurement with three-wire connection 	No
<ul style="list-style-type: none"> • for resistance measurement with four-wire connection 	No
Connectable encoders	
<ul style="list-style-type: none"> • 2-wire sensor 	Yes
— permissible quiescent current (2-wire sensor), max.	1.5 mA
Errors/accuracies	
Temperature error (relative to input range), (+/-)	0.006 %/K
Crosstalk between the inputs, min.	60 dB
Repeat accuracy in steady state at 25 °C (relative to input range), (+/-)	0.06 %
Output ripple (relative to output range, bandwidth 0 to 50 kHz), (+/-)	0.1 %
Linearity error (relative to output range), (+/-)	0.15 %
Temperature error (relative to output range), (+/-)	0.01 %/K
Crosstalk between the outputs, min.	60 dB
Repeat accuracy in steady state at 25 °C (relative to output range), (+/-)	0.06 %
Operational error limit in overall temperature range	
<ul style="list-style-type: none"> • Voltage, relative to input range, (+/-) 	1 %
<ul style="list-style-type: none"> • Current, relative to input range, (+/-) 	1 %
<ul style="list-style-type: none"> • Resistance, relative to input range, (+/-) 	1 %
<ul style="list-style-type: none"> • Voltage, relative to output range, (+/-) 	1 %
<ul style="list-style-type: none"> • Current, relative to output range, (+/-) 	1 %
Basic error limit (operational limit at 25 °C)	
<ul style="list-style-type: none"> • Voltage, relative to input range, (+/-) 	0.8 %; Linearity error ±0.06 %
<ul style="list-style-type: none"> • Current, relative to input range, (+/-) 	0.8 %; Linearity error ±0.06 %
<ul style="list-style-type: none"> • Resistance, relative to input range, (+/-) 	0.8 %; Linearity error ±0.2 %
<ul style="list-style-type: none"> • Resistance thermometer, relative to input range, (+/-) 	0.8 %
<ul style="list-style-type: none"> • Voltage, relative to output range, (+/-) 	0.8 %
<ul style="list-style-type: none"> • Current, relative to output range, (+/-) 	0.8 %
Interference voltage suppression for $f = n \times (f_1 \pm 1 \%)$, $f_1 =$ interference frequency	
<ul style="list-style-type: none"> • Series mode interference (peak value of interference < rated value of input range), min. 	30 dB
<ul style="list-style-type: none"> • Common mode interference, min. 	40 dB
Interfaces	
Number of PROFINET interfaces	0
Number of RS 485 interfaces	2; MPI and PROFIBUS DP
Number of RS 422 interfaces	0
1. Interface	
Interface type	Integrated RS 485 interface
Isolated	No
Interface types	
<ul style="list-style-type: none"> • RS 485 	Yes
<ul style="list-style-type: none"> • Output current of the interface, max. 	200 mA
Protocols	
<ul style="list-style-type: none"> • MPI 	Yes
<ul style="list-style-type: none"> • PROFIBUS DP master 	No
<ul style="list-style-type: none"> • PROFIBUS DP device 	No
<ul style="list-style-type: none"> • Point-to-point connection 	No
MPI	
<ul style="list-style-type: none"> • Transmission rate, max. 	187.5 kbit/s
Services	
— PG/OP communication	Yes
— Routing	Yes
— 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

2. Interface

Interface type	Integrated RS 485 interface
Isolated	Yes
Interface types	
• RS 485	Yes
• Output current of the interface, max.	200 mA
Protocols	
• MPI	No
• PROFINET IO Controller	No
• PROFINET IO device	No
• PROFINET CBA	No
• PROFIBUS DP master	Yes
• PROFIBUS DP device	Yes
• Point-to-point connection	No
PROFIBUS DP master	
• Transmission rate, max.	12 Mbit/s
• max. number of DP devices	124
Services	
— PG/OP communication	Yes
— Routing	Yes
— Global data communication	No
— S7 basic communication	Yes; 1 blocks only
— S7 communication	Yes; Only server, configured on one side
— S7 communication, as client	No
— S7 communication, as server	Yes
— Equidistance	Yes
— Isochronous mode	No
— SYNC/FREEZE	Yes
— activation/deactivation of DP devices	Yes
— max. number of DP devices that can be activated/deactivated at the same time	8
— Direct data exchange (slave-to-slave communication)	Yes; as subscriber
— DPV1	Yes
Address area	
— Inputs, max.	2 kbyte
— Outputs, max.	2 kbyte
User data per DP device	
— Inputs, max.	244 byte
— Outputs, max.	244 byte
PROFIBUS DP device	
• GSD file	The latest GSD file is available on the Internet (http://www.siemens.com/profibus-gsd)
• Transmission rate, max.	12 Mbit/s
• automatic baud rate search	Yes; only with passive interface
• Address area, max.	32
• User data per address area, max.	32 byte
Services	
— PG/OP communication	Yes
— Routing	Yes; Only with active interface
— Global data communication	No
— S7 basic communication	No
— S7 communication	Yes; Only server, configured on one side
— S7 communication, as client	No
— S7 communication, as server	Yes
— Direct data exchange (slave-to-slave communication)	Yes
— DPV1	No

Transfer memory	
— Inputs	244 byte
— Outputs	244 byte
Protocols	
PROFIsafe	No
Communication functions	
PG/OP communication	Yes
Data record routing	Yes
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
• Size of GD packet (of which consistent), max.	22 byte
S7 basic communication	
• supported	Yes
• User data per job, max.	76 byte
• User data per job (of which consistent), max.	76 byte; 76 bytes (with X_SEND or X_RCV); 64 bytes (with X_PUT or X_GET as server)
S7 communication	
• supported	Yes
• as server	Yes
• as client	Yes; Via CP and loadable FB
• User data per job, max.	180 kbyte; 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	12
• usable for PG communication	11
— reserved for PG communication	1
— adjustable for PG communication, min.	1
— adjustable for PG communication, max.	11
• usable for OP communication	11
— reserved for OP communication	1
— adjustable for OP communication, min.	1
— adjustable for OP communication, max.	11
• usable for S7 basic communication	8
— reserved for S7 basic communication	0
— adjustable for S7 basic communication, min.	0
— adjustable for S7 basic communication, max.	8
• usable for routing	4; max.
S7 message functions	
Number of login stations for message functions, max.	12; 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	
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	
<ul style="list-style-type: none"> • Forcing • Forcing, variables • Number of variables, max. 	Yes Inputs, outputs 10
Diagnostic buffer	
<ul style="list-style-type: none"> • present • Number of entries, max. <ul style="list-style-type: none"> — can be set — of which powerfail-proof • Number of entries readable in RUN, max. <ul style="list-style-type: none"> — can be set — preset 	Yes 500 No 100; Only the last 100 entries are retained 499 Yes; From 10 to 499 10
Service data	
<ul style="list-style-type: none"> • Can be read out 	Yes
Interrupts/diagnostics/status information	
Diagnostics indication LED	
<ul style="list-style-type: none"> • Status indicator digital input (green) • Status indicator digital output (green) 	Yes Yes
Integrated Functions	
Counter	
<ul style="list-style-type: none"> • Number of counters • Counting frequency, max. 	4; See "Technological Functions" manual 60 kHz
Frequency measurement	
<ul style="list-style-type: none"> • Number of frequency meters 	4; up to 60 kHz (see "Technological Functions" manual)
controlled positioning	
integrated function blocks (closed-loop control)	
PID controller	
Number of pulse outputs	
Limit frequency (pulse)	
Yes Yes Yes Yes; PID controller (see "Technological Functions" manual) Yes 4; Pulse width modulation up to 2.5 kHz (see "Technological Functions" Manual) 2.5 kHz	
Potential separation	
Potential separation digital inputs	
<ul style="list-style-type: none"> • Potential separation digital inputs • between the channels • between the channels and backplane bus 	Yes No Yes
Potential separation digital outputs	
<ul style="list-style-type: none"> • Potential separation digital outputs • between the channels • between the channels, in groups of • between the channels and backplane bus 	Yes Yes 8 Yes
Potential separation analog inputs	
<ul style="list-style-type: none"> • Potential separation analog inputs • between the channels • between the channels and backplane bus 	Yes; common for analog I/O No Yes
Potential separation analog outputs	
<ul style="list-style-type: none"> • Potential separation analog outputs • between the channels • between the channels and backplane bus 	Yes; common for analog I/O No Yes
Isolation	
Isolation tested with	
600 V DC	
Standards, approvals, certificates	
CE mark	
UL approval	
RCM (formerly C-TICK)	
KC approval	
EAC (formerly Gost-R)	
Use in hazardous areas	
<ul style="list-style-type: none"> • ATEX 	Yes
Ambient conditions	

Ambient temperature during operation	
• min.	-25 °C; = Tmin
• max.	70 °C; = Tmax; 60 °C @ UL/cUL, ATEX and FM use
Ambient temperature during storage/transportation	
• min.	-40 °C
• max.	70 °C
Altitude during operation relating to sea level	
• Installation altitude above sea level, max.	5 000 m
• Ambient air temperature-barometric pressure-altitude	Tmin ... Tmax at 1 140 hPa ... 795 hPa (-1 000 m ... +2 000 m) // Tmin ... (Tmax - 10 K) at 795 hPa ... 658 hPa (+2 000 m ... +3 500 m) // Tmin ... (Tmax -20 K) at 658 hPa ... 540 hPa (+3 500 m ... +5 000 m)
Relative humidity	
• With condensation, tested in accordance with IEC 60068-2-38, max.	100 %; RH incl. condensation/frost (no commissioning under condensation conditions)
Resistance	
Use in stationary industrial systems	
— to biologically active substances according to EN 60721-3-3	Yes; Class 3B2 mold, fungus and dry rot spores (with the exception of fauna); Class 3B3 on request
— to chemically active substances according to EN 60721-3-3	Yes; Class 3C4 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); *
— to mechanically active substances according to EN 60721-3-3	Yes; Class 3S4 incl. sand, dust, *
Use on ships/at sea	
— to biologically active substances according to EN 60721-3-6	Yes; Class 6B2 mold and fungal spores (excluding fauna); Class 6B3 on request
— to chemically active substances according to EN 60721-3-6	Yes; Class 6C3 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); *
— to mechanically active substances according to EN 60721-3-6	Yes; Class 6S3 incl. sand, dust; *
Usage in industrial process technology	
— Against chemically active substances acc. to EN 60654-4	Yes; Class 3 (excluding trichlorethylene)
— Environmental conditions for process, measuring and control systems acc. to ANSI/ISA-71.04	Yes; Level GX group A/B (excluding trichlorethylene; harmful gas concentrations up to the limits of EN 60721-3-3 class 3C4 permissible); level LC3 (salt spray) and level LB3 (oil)
Remark	
— Note regarding classification of environmental conditions acc. to EN 60721, EN 60654-4 and ANSI/ISA-71.04	* The supplied plug covers must remain in place over the unused interfaces during operation!
Configuration	
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
Programming	
• Command set	see instruction list
• Nesting levels	8
• System functions (SFC)	see instruction list
• System function blocks (SFB)	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
• Block encryption	Yes; With S7 block Privacy
Dimensions	
Width	120 mm
Height	125 mm

Depth	130 mm
Weights	
Weight, approx.	680 g

Classifications		
	Version	Classification
eClass	14	27-24-22-07
eClass	12	27-24-22-07
eClass	9.1	27-24-22-07
eClass	9	27-24-22-07
eClass	8	27-24-22-07
eClass	7.1	27-24-22-07
eClass	6	27-24-22-07
ETIM	10	EC000236
ETIM	9	EC000236
ETIM	8	EC000236
ETIM	7	EC000236
IDEA	4	3565
UNSPSC	15	32-15-17-05

Approvals / Certificates
General Product Approval



[Manufacturer Declaration](#)



[China RoHS](#)



EMV **For use in hazardous locations**



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