Data sheet

6ES7513-1AL02-0AB0



SIMATIC S7-1500, CPU 1513-1 PN, central processing unit with working memory 300 KB for program and 1.5 MB for data, 1. interface: PROFINET IRT with 2 port switch, 40 NS bit-performance, SIMATIC memory card necessary

Product type designation HW functional status FS03 Froduct function • I&M data • Isochronous mode Tengineering with • STEP 7 TIA Portal configurable/integrated from version configuration control via dataset Ves Display Screen diagonal [cm] Control elements Number of keys Rated value (DC) permissible range, lower limit (DC) permissible range, upper limit (DC) permissible range, upper limit (DC) permissible range, lower limit (DC) pe	General information	
Firmware version V2.9 Product function • I&M data • Isochronous mode Find Mata • Isochronous mode Find Mata • Isochronous mode Find Mata • Isochronous mode Find I mis (central) Engineering with • STEP 7 TIA Portal configurable/integrated from version Configuration control via dataset Ves Display Screen diagonal [cm] Control elements Number of keys Rated value (DC) permissible range, lower limit (DC) permissible range, upper limit (DC) permissible range, upper limit (DC) Reverse polarity protection Mains buffering • Mains/voltage failure stored energy time • Repeat rate, min. Input current Current consumption, (rated value) Current consumption, max. In ya K, Rated value Power consumption from the backplane bus (balanced) Fower consumption from the backplane bus (balanced) Power loss, typ. Memory Number of slots for SIMATIC memory card I SIMATIC memory card required Ves	Product type designation	CPU 1513-1 PN
Product function • I&M data • Isochronous mode Engineering with • STEP 7 TIA Portal configurable/integrated from version configurable and central; with minimum OB 6x cycle of 500 µs (distributed) and 1 ms (central) Engineering with • STEP 7 TIA Portal configurable/integrated from version Configuration control via dataset Yes Display Screen diagonal [cm] Control elements Number of keys 8 Mode buttons 2 2 Supply voltage Rated value (DC) permissible range, lower limit (DC) permissible range, upper limit (DC) 28.8 V Reverse polarity protection Yes Mains buffering • Mains/voltage failure stored energy time • Repeat rate, min. Input current Current consumption (rated value) 0.7 A Current consumption (rated value) 0.92 A*s Power Infeed power to the backplane bus In Web Collaboration Power loss, lyp. Memory Number of slots for SIMATIC memory card 1 SIMATIC memory card required Yes	HW functional status	FS03
IsM data Yes; IsM0 to IsM3 Yes; Distributed and central; with minimum OB 6x cycle of 500 µs (distributed) and 1 ms (central)	Firmware version	V2.9
STEP 7 TIA Portal configurable/integrated from version configurable integrated from version configurable as 6ES7513-1AL01-0AB0 Configuration control via dataset Ves Display Screen diagonal [cm] Control elements Number of keys Bando buttons 2 Supply voltage Rated value (DC) permissible range, lower limit (DC) permissible range, upper limit (DC) permissible range, upper limit (DC) Mains buffering Namis buffering Namis voltage failure stored energy time Repeat rate, min. 1/s Input current Current consumption (rated value) Out A*s Power Infeed power to the backplane bus (balanced) Power consumption from the backplane bus (balanced) Power loss, typ. Namis of slots for SiMATIC memory card Almanument Number of keys Almanument Ves Naminument Simanument Out A*s Power loss, typ. Naminument Number of slots for SiMATIC memory card Almanument Life (DC) Power consumption (manument) SimATIC memory card required Ves	Product function	
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STEP 7 TIA Portal configurable/integrated from version configurable as 6ES7512-1AL01-0AB0 Configuration control via dataset Yes Display Screen diagonal [cm] 3.45 cm Control elements Number of keys 8 Mode buttons 2 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 Mains buffering • Mains/voltage failure stored energy time • Repeat rate, min. 1/s Input current Current consumption (rated value) 0.7 A Current consumption (rated value) 0.95 A Inrush current, max. 1.9 A; Rated value Prower Infleed power to the backplane bus (balanced) 5.5 W Power loss, typ. Memory Number of slots for SiMATIC memory card 1 SIMATIC memory card required Yes	• Isochronous mode	
Configuration control	Engineering with	
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Screen diagonal [cm] 3.45 cm	via dataset	Yes
Number of keys 8 Mode buttons 2 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 Mains buffering • Mains/voltage failure stored energy time 5 ms • Repeat rate, min. 1/s Input current Current consumption (rated value) 0.7 A Current consumption (rated value) 0.95 A Inrush current, max. 1.9 A; Rated value It 0.02 A²s Power Infeed power to the backplane bus (balanced) 5.5 W Power loss Power loss, typ. 5.7 W Memory Number of slots for SIMATIC memory card 1 SIMATIC memory card required Yes	Display	
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Mode buttons 2 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 Mains buffering • Mains/voltage failure stored energy time 5 ms e Repeat rate, min. 1/s Input current Current consumption (rated value) 0.7 A Current consumption, max. 0.95 A Inrush current, max. 1.9 A; Rated value Pt 0.02 A²-s Power Infeed power to the backplane bus 10 W Power consumption from the backplane bus (balanced) 5.5 W Power loss Power loss Power of slots for SIMATIC memory card 1 SIMATIC memory card required Yes	Control elements	
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Reverse polarity protection Mains buffering Mains/voltage failure stored energy time Repeat rate, min. Input current Current consumption (rated value) Current consumption, max. Inrush current, max. Insubscurrent, max. Insubscurrent, max. Infeed power to the backplane bus Power Infeed power to the backplane bus (balanced) Power loss Power loss Power loss, typ. Memory Number of slots for SIMATIC memory card SIMATIC memory card required Yes	permissible range, lower limit (DC)	19.2 V
Mains buffering	permissible range, upper limit (DC)	28.8 V
Mains/voltage failure stored energy time Repeat rate, min. 1/s Input current Current consumption (rated value) Current consumption, max. Inrush current, max. Insufaced power to the backplane bus Power consumption from the backplane bus (balanced) Power loss Power loss Power of slots for SIMATIC memory card SIMATIC memory card required 5 ms 5 ms 5 ms 1/s Insufaced power value 0.7 A 0.95 A 1.9 A; Rated value 1.9 A; Rated value 1.9 A; Rated value 1.9 A; Rated value 5.5 W Fower loss value Fower	Reverse polarity protection	Yes
● Repeat rate, min. 1/s Input current Current consumption (rated value) 0.7 A Current consumption, max. 0.95 A Inrush current, max. 1.9 A; Rated value I²t 0.02 A²-s Power Infeed power to the backplane bus 10 W Power consumption from the backplane bus (balanced) 5.5 W Power loss, typ. 5.7 W Memory Number of slots for SIMATIC memory card 1 SIMATIC memory card required Yes	Mains buffering	
Current consumption (rated value) Current consumption, max. Inrush current, max. If to 0.02 A²-s Power Infeed power to the backplane bus 10 W Power consumption from the backplane bus (balanced) 5.5 W Power loss Power loss, typ. Memory Number of slots for SIMATIC memory card 1 SIMATIC memory card required Yes	 Mains/voltage failure stored energy time 	5 ms
Current consumption (rated value) Current consumption, max. Inrush current, max. Insufficient power to the backplane bus Power consumption from the backplane bus (balanced) Power loss Power loss, typ. Number of slots for SIMATIC memory card SIMATIC memory card required 0.7 A 0.95 A 1.9 A; Rated value 0.02 A²·s Power 1.9 W 1.9 W 1.9 W 1.0 W 5.5 W 1.0 W 5.7 W 1.0 W	Repeat rate, min.	1/s
Current consumption, max. Inrush current, max. In A; Rated value It 0.02 A²-s Power Infeed power to the backplane bus 10 W Power consumption from the backplane bus (balanced) 5.5 W Power loss Power loss, typ. 5.7 W Memory Number of slots for SIMATIC memory card 1 SIMATIC memory card required Yes	Input current	
Inrush current, max. 1.9 A; Rated value 1.9	Current consumption (rated value)	0.7 A
Power Infeed power to the backplane bus Infeed power to the backplane bus Power consumption from the backplane bus (balanced) Power loss Power loss, typ. 5.7 W Memory Number of slots for SIMATIC memory card SIMATIC memory card required Yes	Current consumption, max.	0.95 A
Power Infeed power to the backplane bus Power consumption from the backplane bus (balanced) Power loss Power loss, typ. 5.7 W Memory Number of slots for SIMATIC memory card SIMATIC memory card required Yes	Inrush current, max.	1.9 A; Rated value
Infeed power to the backplane bus Power consumption from the backplane bus (balanced) 5.5 W Power loss Power loss, typ. 5.7 W Memory Number of slots for SIMATIC memory card SIMATIC memory card required Yes	l²t	0.02 A²-s
Power consumption from the backplane bus (balanced) 5.5 W Power loss Power loss, typ. 5.7 W Memory Number of slots for SIMATIC memory card 1 SIMATIC memory card required Yes	Power	
Power loss Power loss, typ. 5.7 W Memory Number of slots for SIMATIC memory card 1 SIMATIC memory card required Yes	Infeed power to the backplane bus	10 W
Power loss, typ. 5.7 W Memory Number of slots for SIMATIC memory card 1 SIMATIC memory card required Yes	Power consumption from the backplane bus (balanced)	5.5 W
Memory Number of slots for SIMATIC memory card SIMATIC memory card required Yes	Power loss	
Number of slots for SIMATIC memory card 1 SIMATIC memory card required Yes	Power loss, typ.	5.7 W
Number of slots for SIMATIC memory card 1 SIMATIC memory card required Yes		
SIMATIC memory card required Yes	Number of slots for SIMATIC memory card	1
Work memory	<u>.</u>	Yes
	Work memory	

a integrated (for progress)	200 lebyto
• integrated (for program)	300 kbyte
• integrated (for data)	1.5 Mbyte
Load memory	00.01
Plug-in (SIMATIC Memory Card), max.	32 Gbyte
Backup	Vaa
maintenance-free	Yes
CPU processing times	
for bit operations, typ.	40 ns
for word operations, typ.	48 ns
for fixed point arithmetic, typ.	64 ns
for floating point arithmetic, typ.	256 ns
CPU-blocks	
Number of elements (total)	4 000; Blocks (OB, FB, FC, DB) and UDTs
DB	
Number range	1 60 999; subdivided into: number range that can be used by the user: 1 59 999, and number range of DBs created via SFC 86: 60 000 60 999
• Size, max.	1.5 Mbyte; For DBs with absolute addressing, the max. size is 64 KB
	1.5 Mbyte, For DBS with absolute addressing, the max. Size is 04 KB
FB • Number range	0 65 535
Number rangeSize, max.	
• Size, max.	300 kbyte
	0 65 535
Number rangeSize, max.	0 65 535
	300 kbyte
OB ◆ Size, max.	300 khyte
	300 kbyte
Number of free cycle OBs Number of time clare OBs	100
Number of time alarm OBs	20
Number of delay alarm OBs	20
Number of cyclic interrupt OBs	20; With minimum OB 3x cycle of 500 μs
Number of process alarm OBs	50
Number of DPV1 alarm OBs	3
Number of isochronous mode OBs	2
Number of technology synchronous alarm OBs	2
 Number of startup OBs 	100
 Number of asynchronous error OBs 	4
 Number of synchronous error OBs 	2
Number of diagnostic alarm OBs	1
Nesting depth	
per priority class	24
Counters, timers and their retentivity	
S7 counter	
Number	2 048
Retentivity	
— adjustable	Yes
IEC counter	
Number	Any (only limited by the main memory)
Retentivity	
— adjustable	Yes
S7 times	
Number	2 048
Retentivity	
— adjustable	Yes
IEC timer	
Number	Any (only limited by the main memory)
Retentivity	
— adjustable	Yes
Data areas and their retentivity	
Retentive data area (incl. timers, counters, flags), max.	128 kbyte; In total; available retentive memory for bit memories, timers, counters, DBs, and technology data (axes): 88 KB
Retentive data area (incl. timers, counters, flags), max. Extended retentive data area (incl. timers, counters, flags), max.	

• Size, max.	16 kbyte
Number of clock memories	8; 8 clock memory bit, grouped into one clock memory byte
Data blocks	
 Retentivity adjustable 	Yes
Retentivity preset	No
Local data	
per priority class, max.	64 kbyte; max. 16 KB per block
Address area	o i la jugi mata i o i a por alconi
Number of IO modules	2.049; may number of modules / submodules
	2 048; max. number of modules / submodules
I/O address area	
• Inputs	32 kbyte; All inputs are in the process image
Outputs	32 kbyte; All outputs are in the process image
per integrated IO subsystem	
— Inputs (volume)	8 kbyte
— Outputs (volume)	8 kbyte
per CM/CP	
— Inputs (volume)	8 kbyte
— Outputs (volume)	8 kbyte
Subprocess images	
Number of subprocess images, max.	32
	JL
Hardware configuration	
Number of distributed IO systems	32; A distributed I/O system is characterized not only by the integration of distributed I/O via PROFINET or PROFIBUS communication modules, but also by the connection of I/O via AS-i master modules or links (e.g. IE/PB-Link)
Number of DP masters	
• Via CM	6; A maximum of 6 CMs (PROFINET + PROFIBUS) can be inserted in total
Number of IO Controllers	
• integrated	1
• Via CM	6; A maximum of 6 CMs (PROFINET + PROFIBUS) can be inserted in total
Rack	
Modules per rack, max.	32; CPU + 31 modules
Number of lines, max.	1
·	
PtP CM ◆ Number of PtP CMs	the number of connectable PtP CMs is only limited by the number of available slots
Time of day	
Clock	Handware sheets
• Type	Hardware clock
Backup time	6 wk; At 40 °C ambient temperature, typically
Deviation per day, max.	10 s; Typ.: 2 s
Operating hours counter	
Number	16
Clock synchronization	
• supported	Yes
in AS, master in AS, master	Yes
• in AS, slave	Yes
• on Ethernet via NTP	Yes
	163
Interfaces	
Number of PROFINET interfaces	1
1. Interface	
Interface types	
 RJ 45 (Ethernet) 	Yes; X1
 Number of ports 	2
integrated switch	Yes
Protocols	
• IP protocol	Yes; IPv4
- 11	Yes
■ DPOFINET IO Controllor	165
PROFINET IO Controller PROFINET IO Devices	Voc
PROFINET IO Device	Yes
PROFINET IO DeviceSIMATIC communication	Yes
PROFINET IO Device	

Media redundancy	Yes
PROFINET IO Controller	
Services	
— PG/OP communication	Yes
— Isochronous mode	Yes
Direct data exchange	Yes; Requirement: IRT and isochronous mode (MRPD optional)
— IRT	Yes
— PROFlenergy	Yes; per user program
Prioritized startup	Yes; Max. 32 PROFINET devices
Number of connectable IO Devices, max.	128; In total, up to 512 distributed I/O devices can be connected via AS-i,
	PROFIBUS or PROFINET
 Of which IO devices with IRT, max. 	64
 Number of connectable IO Devices for RT, max. 	128
— of which in line, max.	128
Number of IO Devices that can be simultaneously	8; in total across all interfaces
activated/deactivated, max.	
Number of IO Devices per tool, max.	
— Updating times	The minimum value of the update time also depends on communication share set for PROFINET IO, on the number of IO devices, and on the quantity of configured user data
Update time for IRT	
— for send cycle of 250 μs	250 µs to 4 ms; Note: In the case of IRT with isochronous mode, the minimum
	update time of 500 µs of the isochronous OB is decisive
— for send cycle of 500 μs	500 μs to 8 ms
— for send cycle of 1 ms	1 ms to 16 ms
— for send cycle of 2 ms	2 ms to 32 ms
— for send cycle of 4 ms	4 ms to 64 ms
With IRT and parameterization of "odd" send cycles	Update time = set "odd" send clock (any multiple of 125 μ s: 375 μ s, 625 μ s 3 875 μ s)
Update time for RT	
— for send cycle of 250 µs	250 μs to 128 ms
— for send cycle of 500 μs	500 μs to 256 ms
— for send cycle of 1 ms	1 ms to 512 ms
— for send cycle of 2 ms	2 ms to 512 ms
— for send cycle of 4 ms	4 ms to 512 ms
PROFINET IO Device	
Services — PG/OP communication	Yes
Isochronous mode	No
— ISOCITIONOUS Mode — IRT	Yes
— PROFlenergy — Shared device	Yes; per user program Yes
— Shared device — Number of IO Controllers with shared device, max.	4
— number of IO Controllers with shared device, max. — activation/deactivation of I-devices	Yes; per user program
Asset management record	Yes; per user program
- Asset management record Interface types	100, por usor program
RJ 45 (Ethernet)	
• 100 Mbps	Yes
Autonegotiation	Yes
Autoriegotiation Autocrossing	Yes
Industrial Ethernet status LED	Yes
Protocols	
PROFIsafe	No
Number of connections	
Number of connections, max.	128; via integrated interfaces of the CPU and connected CPs / CMs
Number of connections reserved for ES/HMI/web	10
Number of connections via integrated interfaces	88
Number of S7 routing paths	16
Redundancy mode	
H-Sync forwarding	Yes
Media redundancy	
— Media redundancy	only via 1st interface (X1)
<u> </u>	

— MRP	Yes; MRP Automanager according to IEC 62439-2 Edition 2.0, MRP Manager; MRP Client
 MRP interconnection, supported 	Yes; as MRP ring node according to IEC 62439-2 Edition 3.0
— MRPD	Yes; Requirement: IRT
 Switchover time on line break, typ. 	200 ms; For MRP, bumpless for MRPD
 Number of stations in the ring, max. 	50
SIMATIC communication	
 PG/OP communication 	Yes; encryption with TLS V1.3 pre-selected
S7 routing	Yes
 S7 communication, as server 	Yes
 S7 communication, as client 	Yes
User data per job, max.	See online help (S7 communication, user data size)
Open IE communication	
• TCP/IP	Yes
— Data length, max.	64 kbyte
several passive connections per port, supported	Yes
• ISO-on-TCP (RFC1006)	Yes
— Data length, max.	64 kbyte
• UDP	Yes
— Data length, max.	2 kbyte; 1 472 bytes for UDP broadcast
— UDP multicast	Yes; Max. 5 multicast circuits
• DHCP	Yes
• DNS	Yes
• SNMP	Yes
• DCP	Yes
• LLDP	Yes
• Encryption	Yes; Optional
Web server	166, Optional
• HTTP	Yes; Standard and user pages
• HTTPS	Yes; Standard and user pages
OPC UA	roc, otaliaala alla aosi pagoo
Runtime license required	Yes; "Small" license required
OPC UA Client	Yes
Application authentication	
	Yes
Security policies	Yes Available security policies: None, Basic128Rsa15, Basic256Rsa15, Basic256Sha256
	Available security policies: None, Basic128Rsa15, Basic256Rsa15, Basic256Sha256
— Security policies— User authentication	Available security policies: None, Basic128Rsa15, Basic256Rsa15,
— Security policies	Available security policies: None, Basic128Rsa15, Basic256Rsa15, Basic256Sha256 "anonymous" or by user name & password
 — Security policies — User authentication — Number of connections, max. — Number of nodes of the client interfaces, 	Available security policies: None, Basic128Rsa15, Basic256Rsa15, Basic256Sha256 "anonymous" or by user name & password 4 1 000
— Security policies — User authentication — Number of connections, max. — Number of nodes of the client interfaces, recommended max. — Number of elements for one call of OPC_UA_NodeGetHandleList/OPC_UA_ReadList/OPC_I max. — Number of elements for one call of	Available security policies: None, Basic128Rsa15, Basic256Rsa15, Basic256Sha256 "anonymous" or by user name & password 4 1 000
— Security policies — User authentication — Number of connections, max. — Number of nodes of the client interfaces, recommended max. — Number of elements for one call of OPC_UA_NodeGetHandleList/OPC_UA_ReadList/OPC_U max. — Number of elements for one call of OPC_UA_NameSpaceGetIndexList, max. — Number of elements for one call of	Available security policies: None, Basic128Rsa15, Basic256Rsa15, Basic256Sha256 "anonymous" or by user name & password 4 1 000 300
— Security policies — User authentication — Number of connections, max. — Number of nodes of the client interfaces, recommended max. — Number of elements for one call of OPC_UA_NodeGetHandleList/OPC_UA_ReadList/OPC_U max. — Number of elements for one call of OPC_UA_NameSpaceGetIndexList, max. — Number of elements for one call of OPC_UA_MethodGetHandleList, max. — Number of simultaneous calls of the client	Available security policies: None, Basic128Rsa15, Basic256Rsa15, Basic256Sha256 "anonymous" or by user name & password 4 1 000 300
— Security policies — User authentication — Number of connections, max. — Number of nodes of the client interfaces, recommended max. — Number of elements for one call of OPC_UA_NodeGetHandleList/OPC_UA_ReadList/OPC_U max. — Number of elements for one call of OPC_UA_NameSpaceGetIndexList, max. — Number of elements for one call of OPC_UA_MethodGetHandleList, max. — Number of simultaneous calls of the client instructions for session management, per connection, max.	Available security policies: None, Basic128Rsa15, Basic256Rsa15, Basic256Sha256 "anonymous" or by user name & password 4 1 000 300 20 100
— Security policies — User authentication — Number of connections, max. — Number of nodes of the client interfaces, recommended max. — Number of elements for one call of OPC_UA_NodeGetHandleList/OPC_UA_ReadList/OPC_U max. — Number of elements for one call of OPC_UA_NameSpaceGetIndexList, max. — Number of elements for one call of OPC_UA_MethodGetHandleList, max. — Number of simultaneous calls of the client instructions for session management, per connection,	Available security policies: None, Basic128Rsa15, Basic256Rsa15, Basic256Sha256 "anonymous" or by user name & password 4 1 000 300 20 100
— Security policies — User authentication — Number of connections, max. — Number of nodes of the client interfaces, recommended max. — Number of elements for one call of OPC_UA_NodeGetHandleList/OPC_UA_ReadList/OPC_U max. — Number of elements for one call of OPC_UA_NameSpaceGetIndexList, max. — Number of elements for one call of OPC_UA_MethodGetHandleList, max. — Number of simultaneous calls of the client instructions for session management, per connection, max. — Number of simultaneous calls of the client	Available security policies: None, Basic128Rsa15, Basic256Rsa15, Basic256Sha256 "anonymous" or by user name & password 4 1 000 300 20 100
— Security policies — User authentication — Number of connections, max. — Number of nodes of the client interfaces, recommended max. — Number of elements for one call of OPC_UA_NodeGetHandleList/OPC_UA_ReadList/OPC_U max. — Number of elements for one call of OPC_UA_NameSpaceGetIndexList, max. — Number of elements for one call of OPC_UA_MethodGetHandleList, max. — Number of simultaneous calls of the client instructions for session management, per connection, max. — Number of simultaneous calls of the client instructions for data access, per connection, max.	Available security policies: None, Basic128Rsa15, Basic256Rsa15, Basic256Sha256 "anonymous" or by user name & password 4 1 000 300 20 100 1
— Security policies — User authentication — Number of connections, max. — Number of nodes of the client interfaces, recommended max. — Number of elements for one call of OPC_UA_NodeGetHandleList/OPC_UA_ReadList/OPC_U max. — Number of elements for one call of OPC_UA_NameSpaceGetIndexList, max. — Number of elements for one call of OPC_UA_MethodGetHandleList, max. — Number of simultaneous calls of the client instructions for session management, per connection, max. — Number of simultaneous calls of the client instructions for data access, per connection, max. — Number of registerable nodes, max. — Number of registerable method calls of	Available security policies: None, Basic128Rsa15, Basic256Rsa15, Basic256Sha256 "anonymous" or by user name & password 4 1 000 300 20 100 1 5 5 000
— Security policies — User authentication — Number of connections, max. — Number of nodes of the client interfaces, recommended max. — Number of elements for one call of OPC_UA_NodeGetHandleList/OPC_UA_ReadList/OPC_U max. — Number of elements for one call of OPC_UA_NameSpaceGetIndexList, max. — Number of elements for one call of OPC_UA_MethodGetHandleList, max. — Number of simultaneous calls of the client instructions for session management, per connection, max. — Number of simultaneous calls of the client instructions for data access, per connection, max. — Number of registerable nodes, max. — Number of registerable method calls of OPC_UA_MethodCall, max. — Number of inputs/outputs when calling	Available security policies: None, Basic128Rsa15, Basic256Rsa15, Basic256Sha256 "anonymous" or by user name & password 4 1 000 300 20 100 1 5 5 000 100
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- Number of subscriptions per session, max Number of subscriptions per server method, max Number of imputisouplays between methods, max Number of modes for user defined server interfaceds, max Number of server interfaces max Number of server interfaces max Number of server interfaces max Number of server interfaces, max Number of program alarms Number of parts of subscriptions and server interfaces Number of parts of system degrostics - Number of ordinary system degrostics - Number of ordinary system degrostics - Number of configurable program messages, max Program alarms - Number of configurable program messages in RDN, max Program alarms - Number of standard system degrostics - Number of situations or messages in RDN, max Program alarms - Number of standard system degrostics - Number of situations or system degrostics - Number of situations and system degrostics - Number of situations or system degrostics - Number of situations for messages in RDN, max Of which status variables, max Of which control variables max Of which control varia	Number of registerable nodes, may	10 000
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- Number of alarms for system diagnostics - Number of alarms for system diagnostics - Number of alarms for system diagnostics - Wes MODBUS TCP Equidistance	max.	
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Number of configurable Traces Interrupts/diagnostics/status information Diagnostics indication LED RUN/STOP LED PROR LED MAINT LED STOP ACTIVE LED Connection display LINK TX/RX Supported technology objects Motion Control Number of available Motion Control resources for technology objects 4; Up to 512 KB of data per trace are possible 4; Up to 512 KB of data per trace are possible 4; Up to 512 KB of data per trace are possible 4; Up to 512 KB of data per trace are possible 4; Up to 512 KB of data per trace are possible 4; Up to 512 KB of data per trace are possible 4; Up to 512 KB of data per trace are possible 4; Up to 512 KB of data per trace are possible Figure 12		500
Interrupts/diagnostics/status information Diagnostics indication LED • RUN/STOP LED • ERROR LED • MAINT LED • STOP ACTIVE LED • Connection display LINK TX/RX Supported technology objects Motion Control • Number of available Motion Control resources for technology objects 800		
Diagnostics indication LED RUN/STOP LED ERROR LED MAINT LED STOP ACTIVE LED Connection display LINK TX/RX Yes Supported technology objects Motion Control Number of available Motion Control resources for technology objects 800	Number of configurable Traces	4; Up to 512 KB of data per trace are possible
RUN/STOP LED ERROR LED MAINT LED STOP ACTIVE LED Connection display LINK TX/RX Yes Connection display LINK TX/RX Yes Supported technology objects Motion Control Yes; Note: The number of technology objects affects the cycle time of the PLC program; selection guide via the TIA Selection Tool Number of available Motion Control resources for technology objects 800	Interrupts/diagnostics/status information	
ERROR LED MAINT LED Yes STOP ACTIVE LED Connection display LINK TX/RX Yes Supported technology objects Motion Control Yes; Note: The number of technology objects affects the cycle time of the PLC program; selection guide via the TIA Selection Tool Number of available Motion Control resources for technology objects 800	Diagnostics indication LED	
MAINT LED STOP ACTIVE LED Connection display LINK TX/RX Yes Supported technology objects Motion Control Yes; Note: The number of technology objects affects the cycle time of the PLC program; selection guide via the TIA Selection Tool Number of available Motion Control resources for technology objects 800	RUN/STOP LED	Yes
STOP ACTIVE LED Connection display LINK TX/RX Yes Supported technology objects Motion Control Yes; Note: The number of technology objects affects the cycle time of the PLC program; selection guide via the TIA Selection Tool Number of available Motion Control resources for technology objects 800	• ERROR LED	Yes
 ◆ Connection display LINK TX/RX Yes Supported technology objects Motion Control Yes; Note: The number of technology objects affects the cycle time of the PLC program; selection guide via the TIA Selection Tool Number of available Motion Control resources for technology objects 800 	MAINT LED	Yes
Supported technology objects Motion Control Yes; Note: The number of technology objects affects the cycle time of the PLC program; selection guide via the TIA Selection Tool ◆ Number of available Motion Control resources for technology objects 800	STOP ACTIVE LED	Yes
Supported technology objects Motion Control Yes; Note: The number of technology objects affects the cycle time of the PLC program; selection guide via the TIA Selection Tool ◆ Number of available Motion Control resources for technology objects 800	 Connection display LINK TX/RX 	Yes
Motion Control Yes; Note: The number of technology objects affects the cycle time of the PLC program; selection guide via the TIA Selection Tool Number of available Motion Control resources for technology objects Yes; Note: The number of technology objects affects the cycle time of the PLC program; selection guide via the TIA Selection Tool 800		
 Number of available Motion Control resources for technology objects program; selection guide via the TIĂ Selection Tool 800 		Yes; Note: The number of technology objects affects the cycle time of the PLC
technology objects		
Required Motion Control resources		800
	 Required Motion Control resources 	

per speed-controlled axis	40
per positioning axis	80
— per synchronous axis	160
— per external encoder	80
— per output cam	20
— per cam track	160
— per probe	40
Positioning axis	
Number of positioning axes at motion control cycle of 4 ms (typical value)	5
 Number of positioning axes at motion control cycle of 8 ms (typical value) 	10
Controller	
PID_Compact	Yes; Universal PID controller with integrated optimization
PID_3Step	Yes; PID controller with integrated optimization for valves
PID-Temp	Yes; PID controller with integrated optimization for temperature
Counting and measuring	
High-speed counter	Yes
Ambient conditions	
Ambient temperature during operation	
horizontal installation, min.	-25 °C; No condensation
• horizontal installation, max.	60 °C; Display: 50 °C, at an operating temperature of typically 50 °C, the display is switched off
vertical installation, min.	-25 °C; No condensation
vertical installation, max.	40 °C; Display: 40 °C, at an operating temperature of typically 40 °C, the
Volucia installation, max.	display is switched off
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; Restrictions for installation altitudes > 2 000 m, see manual
configuration / header	
configuration / programming / header	
Programming language	
— LAD	Yes
— FBD	Yes
— STL	Yes
— SCL	Yes
— GRAPH	Yes
Know-how protection	
 User program protection/password protection 	Yes
 Copy protection 	Yes
Block protection	Yes
Access protection	
 protection of confidential configuration data 	Yes
 Password for display 	Yes
 Protection level: Write protection 	Yes
 Protection level: Read/write protection 	Yes
 Protection level: Complete protection 	Yes
programming / cycle time monitoring / header	
• lower limit	adjustable minimum cycle time
• upper limit	adjustable maximum cycle time
Dimensions	
Width	35 mm
Height	147 mm
Depth	129 mm
Weights	120 11111
	405 a
Weight, approx.	405 g
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