SIEMENS

Data sheet

6ES7515-2TN03-0AB0

SIMATIC S7-1500T, CPU 1515T-2 PN, central processing unit with 1.5 MB work memory for program and 4.5 MB for data, 1st interface: PROFINET IRT with 2-port switch, 2nd interface: PROFINET RT, 6 ns bit performance, SIMATIC Memory Card required - - - approvals and certificates according to entry 109816881 at support.industry.siemens.com to be considered! - -

General information	
Product type designation	CPU 1515T-2 PN
HW functional status	FS05
Firmware version	V4.0
 FW update possible 	Yes
Product function	
● I&M data	Yes; I&M0 to I&M3
• Isochronous mode	Yes; Distributed and central; with minimum OB 6x cycle of 375 μs (distributed) and 1 ms (central)
SysLog	Yes
Engineering with	
STEP 7 TIA Portal configurable/integrated from version	V20 (FW V4.0) / V18 (FW V3.0) or higher; configurable with older TIA Portal versions as 6ES7515-2TM01-0AB0
Configuration control	
via dataset	Yes
Display	
Screen diagonal [cm]	6.1 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 	5 ms
Repeat rate, min.	1/s
Input current	
Current consumption (rated value)	0.65 A
Current consumption, max.	1.03 A
Inrush current, max.	1.15 A; Rated value
l²t	0.6 A ² ·s
Power	
Infeed power to the backplane bus	12 W
Power consumption from the backplane bus (balanced)	6.2 W
Power loss	
Power loss, typ.	3.6 W
Memory	
Number of slots for SIMATIC memory card	1
SIMATIC memory card required	Yes
Work memory	
integrated (for program)	1.5 Mbyte
integrated (for data)	4.5 Mbyte
Load memory	
 Plug-in (SIMATIC Memory Card), max. 	32 Gbyte
Backup	
maintenance-free	Yes
CPU processing times	

for bit operations, typ.	6 ns
for word operations, typ.	7 ns
for fixed point arithmetic, typ.	9 ns
for floating point arithmetic, typ.	37 ns
CPU-blocks	
Number of elements (total)	8 000; 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
• Sizo may	4.5 Mbyte; For DBs with absolute addressing, the max. size is 64 KB
• Size, max.	4.5 Mbyte, For DBs with absolute addressing, the max. Size is 64 KB
	0 65 535
Number range Size may	
• Size, max.	1 Mbyte
FC A Number range	0 65 525
Number range Size may	0 65 535
• Size, max.	1 Mbyte
OB	4 Mb. 4-
Size, max. Number of free evels OPs	1 Mbyte
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 250 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
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Nesting depth	
Nesting depth ● per priority class	24
Nesting depth • per priority class Counters, timers and their retentivity	24
Nesting depth • per priority class Counters, timers and their retentivity S7 counter	
Nesting depth • per priority class Counters, timers and their retentivity S7 counter • Number	2 0 4 8
Nesting depth • per priority class Counters, timers and their retentivity S7 counter	2 048
Nesting depth • per priority class Counters, timers and their retentivity S7 counter • Number Retentivity — adjustable	
Nesting depth • per priority class Counters, timers and their retentivity S7 counter • Number Retentivity	2 048 Yes
Nesting depth • per priority class Counters, timers and their retentivity S7 counter • Number Retentivity — adjustable	2 048
Nesting depth • per priority class Counters, timers and their retentivity S7 counter • Number Retentivity — adjustable IEC counter	2 048 Yes
Nesting depth • per priority class Counters, timers and their retentivity S7 counter • Number Retentivity — adjustable IEC counter • Number Retentivity — adjustable Retentivity — adjustable	2 048 Yes
Nesting depth • per priority class Counters, timers and their retentivity S7 counter • Number Retentivity — adjustable IEC counter • Number Retentivity — adjustable S7 times	2 048 Yes Any (only limited by the main memory) Yes
Nesting depth • per priority class Counters, timers and their retentivity S7 counter • Number Retentivity — adjustable IEC counter • Number Retentivity — adjustable S7 times • Number	2 048 Yes Any (only limited by the main memory)
Nesting depth • per priority class Counters, timers and their retentivity S7 counter • Number Retentivity — adjustable IEC counter • Number Retentivity — adjustable S7 times	2 048 Yes Any (only limited by the main memory) Yes 2 048
Nesting depth • per priority class Counters, timers and their retentivity S7 counter • Number Retentivity — adjustable IEC counter • Number Retentivity — adjustable S7 times • Number Retentivity — adjustable S7 temes	2 048 Yes Any (only limited by the main memory) Yes
Nesting depth • per priority class Counters, timers and their retentivity S7 counter • Number Retentivity — adjustable IEC counter • Number Retentivity — adjustable S7 times • Number Retentivity Retentivity	2 048 Yes Any (only limited by the main memory) Yes 2 048
Nesting depth • per priority class Counters, timers and their retentivity S7 counter • Number Retentivity — adjustable IEC counter • Number Retentivity — adjustable S7 times • Number Retentivity — adjustable S7 temes	2 048 Yes Any (only limited by the main memory) Yes 2 048
Nesting depth • per priority class Counters, timers and their retentivity S7 counter • Number Retentivity — adjustable IEC counter • Number Retentivity — adjustable S7 times • Number Retentivity — adjustable IEC timer	2 048 Yes Any (only limited by the main memory) Yes 2 048 Yes Any (only limited by the main memory)
Nesting depth • per priority class Counters, timers and their retentivity S7 counter • Number Retentivity — adjustable IEC counter • Number Retentivity — adjustable S7 times • Number Retentivity — adjustable IEC timer • Number Retentivity — adjustable Retentivity — adjustable	2 048 Yes Any (only limited by the main memory) Yes 2 048 Yes
Nesting depth • per priority class Counters, timers and their retentivity S7 counter • Number Retentivity — adjustable IEC counter • Number Retentivity — adjustable S7 times • Number Retentivity — adjustable IEC timer • Number Retentivity — Retentivity • Number Retentivity	2 048 Yes Any (only limited by the main memory) Yes 2 048 Yes Any (only limited by the main memory)
Nesting depth • per priority class Counters, timers and their retentivity S7 counter • Number Retentivity — adjustable IEC counter • Number Retentivity — adjustable S7 times • Number Retentivity — adjustable IEC timer • Number Retentivity — adjustable Retentivity — adjustable	2 048 Yes Any (only limited by the main memory) Yes 2 048 Yes Any (only limited by the main memory) Yes 512 kbyte; In total; available retentive memory for bit memories, timers,
Nesting depth • per priority class Counters, timers and their retentivity S7 counter • Number Retentivity — adjustable IEC counter • Number Retentivity — adjustable S7 times • Number Retentivity — adjustable IEC timer • Number Retentivity — adjustable IEC timer • Number Retentivity — adjustable IEC timer • Number Retentivity — adjustable Data areas and their retentivity Retentive data area (incl. timers, counters, flags), max.	2 048 Yes Any (only limited by the main memory) Yes 2 048 Yes Any (only limited by the main memory) Yes 512 kbyte; In total; available retentive memory for bit memories, timers, counters, DBs, and technology data (axes): 472 KB
Nesting depth • per priority class Counters, timers and their retentivity S7 counter • Number Retentivity — adjustable IEC counter • Number Retentivity — adjustable S7 times • Number Retentivity — adjustable IEC timer • Number Retentivity — adjustable IEC timer • Number Retentivity — adjustable IEC timer • Number Retentivity — adjustable Data areas and their retentivity Retentive data area (incl. timers, counters, flags), max.	2 048 Yes Any (only limited by the main memory) Yes 2 048 Yes Any (only limited by the main memory) Yes 512 kbyte; In total; available retentive memory for bit memories, timers,
Nesting depth • per priority class Counters, timers and their retentivity S7 counter • Number Retentivity — adjustable IEC counter • Number Retentivity — adjustable S7 times • Number Retentivity — adjustable IEC timer • Number Retentivity — adjustable IEC timer • Number Retentivity Retentivity — adjustable IEC timer • Number Retentivity — adjustable Data areas and their retentivity Retentive data area (incl. timers, counters, flags), max. Extended retentive data area (incl. timers, counters, flags), max.	Yes Any (only limited by the main memory) Yes 2 048 Yes Any (only limited by the main memory) Yes 512 kbyte; In total; available retentive memory for bit memories, timers, counters, DBs, and technology data (axes): 472 KB 4.5 Mbyte; When using PS 6 0W 24/48/60 V DC HF
Nesting depth • per priority class Counters, timers and their retentivity S7 counter • Number Retentivity — adjustable IEC counter • Number Retentivity — adjustable S7 times • Number Retentivity — adjustable IEC timer • Number Retentivity — adjustable Data areas and their retentivity Retentive data area (incl. timers, counters, flags), max. Extended retentive data area (incl. timers, counters, flags), max. Flag • Size, max.	Yes Any (only limited by the main memory) Yes 2 048 Yes Any (only limited by the main memory) Yes 512 kbyte; In total; available retentive memory for bit memories, timers, counters, DBs, and technology data (axes): 472 KB 4.5 Mbyte; When using PS 6 0W 24/48/60 V DC HF 16 kbyte
Nesting depth • per priority class Counters, timers and their retentivity S7 counter • Number Retentivity — adjustable IEC counter • Number Retentivity — adjustable S7 times • Number Retentivity — adjustable IEC timer • Number Retentivity — adjustable Data areas and their retentivity Retentive data area (incl. timers, counters, flags), max. Extended retentive data area (incl. timers, counters, flags), max. Flag • Size, max. • Number of clock memories	Yes Any (only limited by the main memory) Yes 2 048 Yes Any (only limited by the main memory) Yes 512 kbyte; In total; available retentive memory for bit memories, timers, counters, DBs, and technology data (axes): 472 KB 4.5 Mbyte; When using PS 6 0W 24/48/60 V DC HF
Nesting depth • per priority class Counters, timers and their retentivity S7 counter • Number Retentivity — adjustable IEC counter • Number Retentivity — adjustable S7 times • Number Retentivity — adjustable IEC timer • Number Retentivity — adjustable Data areas and their retentivity Retentive data area (incl. timers, counters, flags), max. Extended retentive data area (incl. timers, counters, flags), max. Flag • Size, max. • Number of clock memories Data blocks	2 048 Yes Any (only limited by the main memory) Yes 2 048 Yes Any (only limited by the main memory) Yes 512 kbyte; In total; available retentive memory for bit memories, timers, counters, DBs, and technology data (axes): 472 KB 4.5 Mbyte; When using PS 6 0W 24/48/60 V DC HF 16 kbyte 8; 8 clock memory bit, grouped into one clock memory byte
Nesting depth • per priority class Counters, timers and their retentivity S7 counter • Number Retentivity — adjustable IEC counter • Number Retentivity — adjustable S7 times • Number Retentivity — adjustable IEC timer • Number Retentivity — adjustable IEC timer • Number Retentivity — adjustable IEC timer • Number Retentivity — adjustable Data areas and their retentivity Retentive data area (incl. timers, counters, flags), max. Extended retentive data area (incl. timers, counters, flags), max. Flag • Size, max. • Number of clock memories Data blocks • Retentivity adjustable	2 048 Yes Any (only limited by the main memory) Yes 2 048 Yes Any (only limited by the main memory) Yes 512 kbyte; In total; available retentive memory for bit memories, timers, counters, DBs, and technology data (axes): 472 KB 4.5 Mbyte; When using PS 6 0W 24/48/60 V DC HF 16 kbyte 8; 8 clock memory bit, grouped into one clock memory byte
Nesting depth • per priority class Counters, timers and their retentivity S7 counter • Number Retentivity — adjustable IEC counter • Number Retentivity — adjustable S7 times • Number Retentivity — adjustable IEC timer • Number Retentivity — adjustable IEC timer • Number Retentivity Retentivity — adjustable IEC timer • Number Retentivity — adjustable Data areas and their retentivity Retentive data area (incl. timers, counters, flags), max. Extended retentive data area (incl. timers, counters, flags), max. Flag • Size, max. • Number of clock memories Data blocks • Retentivity adjustable • Retentivity preset	2 048 Yes Any (only limited by the main memory) Yes 2 048 Yes Any (only limited by the main memory) Yes 512 kbyte; In total; available retentive memory for bit memories, timers, counters, DBs, and technology data (axes): 472 KB 4.5 Mbyte; When using PS 6 0W 24/48/60 V DC HF 16 kbyte 8; 8 clock memory bit, grouped into one clock memory byte
Nesting depth • per priority class Counters, timers and their retentivity S7 counter • Number Retentivity — adjustable IEC counter • Number Retentivity — adjustable S7 times • Number Retentivity — adjustable IEC timer • Number Retentivity — adjustable IEC timer • Number Retentivity — adjustable IEC timer • Number Retentivity — adjustable Data areas and their retentivity Retentive data area (incl. timers, counters, flags), max. Extended retentive data area (incl. timers, counters, flags), max. Flag • Size, max. • Number of clock memories Data blocks • Retentivity adjustable	2 048 Yes Any (only limited by the main memory) Yes 2 048 Yes Any (only limited by the main memory) Yes 512 kbyte; In total; available retentive memory for bit memories, timers, counters, DBs, and technology data (axes): 472 KB 4.5 Mbyte; When using PS 6 0W 24/48/60 V DC HF 16 kbyte 8; 8 clock memory bit, grouped into one clock memory byte

Address area	
Number of IO modules	8 192; 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
Hardware configuration	
Number of distributed IO systems	64; 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	8; A maximum of 8 CMs/CPs (PROFIBUS, PROFINET, Ethernet) can be inserted in total
Number of IO Controllers	
• integrated	2
• Via CM	8; A maximum of 8 CMs/CPs (PROFIBUS, PROFINET, Ethernet) 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	
• 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
• to DP, master	Yes; via PROFIBUS CM / CP
• on DP, device	Yes; via PROFIBUS CM / CP
• in AS, master	Yes
• in AS, device	Yes
• on Ethernet via NTP	Yes
Interfaces	
Number of PROFINET interfaces	2
1. Interface	
Interface types	
• RJ 45 (Ethernet)	Yes; X1
 Number of ports 	2
integrated switch	Yes
Protocols	
• IP protocol	Yes; IPv4
PROFINET IO Controller	Yes
PROFINET IO Device	Yes
SIMATIC communication	Yes
Open IE communication	Yes; Optionally also encrypted
Web server	Yes
Media redundancy	Yes
PROFINET IO Controller	
Services	
— 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. 	256; in total, up to 1024 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. 	256
— of which in line, max.	256
 Number of IO Devices that can be simultaneously activated/deactivated, max. 	8; in total across all interfaces
 Number of IO Devices per tool, max. 	8
— 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
— PROFINET Security Class	1
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 375 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	
— Isochronous mode	No
— IRT	Yes
— PROFlenergy	Yes; per user program
 Shared device 	Yes
 Number of IO Controllers with shared device, max. 	4
 activation/deactivation of I-devices 	Yes; per user program
 Asset management record 	Yes; per user program
— PROFINET Security Class	SNMP Configuration and DCP Read Only
2. Interface	
Interface types	
• RJ 45 (Ethernet)	Yes; X2
 Number of ports 	1
integrated switch	No
Protocols	
• IP protocol	Yes; IPv4
 PROFINET IO Controller 	Yes
PROFINET IO Device	Yes
SIMATIC communication	Yes
Open IE communication	Yes; Optionally also encrypted
Web server	Yes
Media redundancy	No
PROFINET IO Controller	
Services	
— Isochronous mode	No
 Direct data exchange 	No
— IRT	No
— PROFlenergy	Yes; per user program
— Prioritized startup	No
— Number of connectable IO Devices, max.	32; in total, up to 1024 distributed I/O devices can be connected via AS-i, PROFIBUS or PROFINET

 Number of connectable IO Devices for RT, max. 	32
— of which in line, max.	32
 Number of IO Devices that can be simultaneously activated/deactivated, max. 	8; in total across all interfaces
Number of IO Devices per tool, max.	8
Updating times	The minimum value of the update time also depends on communication share
— Opdating times	set for PROFINET IO, on the number of IO devices, and on the quantity of configured user data
— PROFINET Security Class	1
Update time for RT	
— for send cycle of 1 ms	1 ms to 512 ms
PROFINET IO Device	
Services	
— Isochronous mode	No
— IRT	No
— PROFlenergy	Yes; per user program
 Prioritized startup 	No
 Shared device 	Yes
 Number of IO Controllers with shared device, max. 	4
 activation/deactivation of I-devices 	Yes; per user program
 Asset management record 	Yes; per user program
— PROFINET Security Class	SNMP Configuration and DCP Read Only
Interface types	
RJ 45 (Ethernet)	
• 100 Mbps	Yes
Autonegotiation	Yes
Autocrossing	Yes
Industrial Ethernet status LED	Yes
Protocols	
PROFIsafe	No
Number of connections	
	256: via integrated interfaces of the CPU and connected CPs / CMs
Number of connections, max.	256; via integrated interfaces of the CPU and connected CPs / CMs
Number of connections, max.Number of connections reserved for ES/HMI/web	10
 Number of connections, max. Number of connections reserved for ES/HMI/web Number of connections via integrated interfaces 	10 128
 Number of connections, max. Number of connections reserved for ES/HMI/web Number of connections via integrated interfaces Number of S7 routing paths 	10
 Number of connections, max. Number of connections reserved for ES/HMI/web Number of connections via integrated interfaces Number of S7 routing paths Redundancy mode 	10 128 16
 Number of connections, max. Number of connections reserved for ES/HMI/web Number of connections via integrated interfaces Number of S7 routing paths Redundancy mode H-Sync forwarding 	10 128
Number of connections, max. Number of connections reserved for ES/HMI/web Number of connections via integrated interfaces Number of S7 routing paths Redundancy mode H-Sync forwarding Media redundancy	10 128 16 Yes
Number of connections, max. Number of connections reserved for ES/HMI/web Number of connections via integrated interfaces Number of S7 routing paths Redundancy mode H-Sync forwarding Media redundancy — Media redundancy	10 128 16 Yes only via 1st interface (X1)
Number of connections, max. Number of connections reserved for ES/HMI/web Number of connections via integrated interfaces Number of S7 routing paths Redundancy mode H-Sync forwarding Media redundancy	10 128 16 Yes
Number of connections, max. Number of connections reserved for ES/HMI/web Number of connections via integrated interfaces Number of S7 routing paths Redundancy mode H-Sync forwarding Media redundancy — Media redundancy	10 128 16 Yes only via 1st interface (X1) Yes; MRP Automanager according to IEC 62439-2 Edition 2.0, MRP Manager;
Number of connections, max. Number of connections reserved for ES/HMI/web Number of connections via integrated interfaces Number of S7 routing paths Redundancy mode H-Sync forwarding Media redundancy Media redundancy MRP	10 128 16 Yes only via 1st interface (X1) Yes; MRP Automanager according to IEC 62439-2 Edition 2.0, MRP Manager; MRP Client
Number of connections, max. Number of connections reserved for ES/HMI/web Number of connections via integrated interfaces Number of S7 routing paths Redundancy mode H-Sync forwarding Media redundancy Media redundancy MRP MRP interconnection, supported	10 128 16 Yes only via 1st interface (X1) Yes; MRP Automanager according to IEC 62439-2 Edition 2.0, MRP Manager; MRP Client Yes; as MRP ring node according to IEC 62439-2 Edition 3.0
Number of connections, max. Number of connections reserved for ES/HMI/web Number of connections via integrated interfaces Number of S7 routing paths Redundancy mode H-Sync forwarding Media redundancy Media redundancy MRP MRP interconnection, supported MRPD Switchover time on line break, typ.	10 128 16 Yes only via 1st interface (X1) Yes; MRP Automanager according to IEC 62439-2 Edition 2.0, MRP Manager; MRP Client Yes; as MRP ring node according to IEC 62439-2 Edition 3.0 Yes; Requirement: IRT
Number of connections, max. Number of connections reserved for ES/HMI/web Number of connections via integrated interfaces Number of S7 routing paths Redundancy mode H-Sync forwarding Media redundancy Media redundancy MRP MRP interconnection, supported MRPD	10 128 16 Yes only via 1st interface (X1) Yes; MRP Automanager according to IEC 62439-2 Edition 2.0, MRP Manager; MRP Client Yes; as MRP ring node according to IEC 62439-2 Edition 3.0 Yes; Requirement: IRT 200 ms; For MRP, bumpless for MRPD
Number of connections, max. Number of connections reserved for ES/HMI/web Number of connections via integrated interfaces Number of S7 routing paths Redundancy mode H-Sync forwarding Media redundancy Media redundancy MRP MRP interconnection, supported MRPD Switchover time on line break, typ. Number of stations in the ring, max.	10 128 16 Yes only via 1st interface (X1) Yes; MRP Automanager according to IEC 62439-2 Edition 2.0, MRP Manager; MRP Client Yes; as MRP ring node according to IEC 62439-2 Edition 3.0 Yes; Requirement: IRT 200 ms; For MRP, bumpless for MRPD 50
Number of connections, max. Number of connections reserved for ES/HMI/web Number of connections via integrated interfaces Number of S7 routing paths Redundancy mode H-Sync forwarding Media redundancy Media redundancy MRP MRP MRP MRP Switchover time on line break, typ. Number of stations in the ring, max. SIMATIC communication PG/OP communication	10 128 16 Yes only via 1st interface (X1) Yes; MRP Automanager according to IEC 62439-2 Edition 2.0, MRP Manager; MRP Client Yes; as MRP ring node according to IEC 62439-2 Edition 3.0 Yes; Requirement: IRT 200 ms; For MRP, bumpless for MRPD
Number of connections, max. Number of connections reserved for ES/HMI/web Number of connections via integrated interfaces Number of S7 routing paths Redundancy mode H-Sync forwarding Media redundancy Media redundancy MRP MRP MRP MRP interconnection, supported MRPD Switchover time on line break, typ. Number of stations in the ring, max. SIMATIC communication PG/OP communication S7 routing	10 128 16 Yes only via 1st interface (X1) Yes; MRP Automanager according to IEC 62439-2 Edition 2.0, MRP Manager; MRP Client Yes; as MRP ring node according to IEC 62439-2 Edition 3.0 Yes; Requirement: IRT 200 ms; For MRP, bumpless for MRPD 50 Yes; encryption with TLS V1.3 pre-selected
Number of connections, max. Number of connections reserved for ES/HMI/web Number of connections via integrated interfaces Number of S7 routing paths Redundancy mode H-Sync forwarding Media redundancy Media redundancy MRP MRP MRP MRP interconnection, supported MRPD Switchover time on line break, typ. Number of stations in the ring, max. SIMATIC communication PG/OP communication S7 routing Data record routing	10 128 16 Yes only via 1st interface (X1) Yes; MRP Automanager according to IEC 62439-2 Edition 2.0, MRP Manager; MRP Client Yes; as MRP ring node according to IEC 62439-2 Edition 3.0 Yes; Requirement: IRT 200 ms; For MRP, bumpless for MRPD 50 Yes; encryption with TLS V1.3 pre-selected Yes Yes
Number of connections, max. Number of connections reserved for ES/HMI/web Number of connections via integrated interfaces Number of S7 routing paths Redundancy mode H-Sync forwarding Media redundancy Media redundancy MRP MRP interconnection, supported MRPD Switchover time on line break, typ. Number of stations in the ring, max. SIMATIC communication PG/OP communication PG/OP communication S7 routing Data record routing S7 communication, as server	10 128 16 Yes only via 1st interface (X1) Yes; MRP Automanager according to IEC 62439-2 Edition 2.0, MRP Manager; MRP Client Yes; as MRP ring node according to IEC 62439-2 Edition 3.0 Yes; Requirement: IRT 200 ms; For MRP, bumpless for MRPD 50 Yes; encryption with TLS V1.3 pre-selected Yes Yes Yes
Number of connections, max. Number of connections reserved for ES/HMI/web Number of connections via integrated interfaces Number of S7 routing paths Redundancy mode H-Sync forwarding Media redundancy Media redundancy MRP MRP interconnection, supported MRPD Switchover time on line break, typ. Number of stations in the ring, max. SIMATIC communication PG/OP communication PG/OP communication S7 routing Data record routing S7 communication, as server S7 communication, as client	10 128 16 Yes only via 1st interface (X1) Yes; MRP Automanager according to IEC 62439-2 Edition 2.0, MRP Manager; MRP Client Yes; as MRP ring node according to IEC 62439-2 Edition 3.0 Yes; Requirement: IRT 200 ms; For MRP, bumpless for MRPD 50 Yes; encryption with TLS V1.3 pre-selected Yes Yes Yes Yes
Number of connections, max. Number of connections reserved for ES/HMI/web Number of connections via integrated interfaces Number of S7 routing paths Redundancy mode H-Sync forwarding Media redundancy Media redundancy MRP MRP MRP MRP interconnection, supported MRPD Switchover time on line break, typ. Number of stations in the ring, max. SIMATIC communication PG/OP communication S7 routing Data record routing S7 communication, as server S7 communication, as client User data per job, max.	10 128 16 Yes only via 1st interface (X1) Yes; MRP Automanager according to IEC 62439-2 Edition 2.0, MRP Manager; MRP Client Yes; as MRP ring node according to IEC 62439-2 Edition 3.0 Yes; Requirement: IRT 200 ms; For MRP, bumpless for MRPD 50 Yes; encryption with TLS V1.3 pre-selected Yes Yes Yes
Number of connections, max. Number of connections reserved for ES/HMI/web Number of connections via integrated interfaces Number of S7 routing paths Redundancy mode H-Sync forwarding Media redundancy Media redundancy MRP MRP MRP MRP Interconnection, supported MRPD Switchover time on line break, typ. Number of stations in the ring, max. SIMATIC communication PG/OP communication S7 routing Data record routing S7 communication, as server S7 communication, as client User data per job, max. Open IE communication	10 128 16 Yes only via 1st interface (X1) Yes; MRP Automanager according to IEC 62439-2 Edition 2.0, MRP Manager; MRP Client Yes; as MRP ring node according to IEC 62439-2 Edition 3.0 Yes; Requirement: IRT 200 ms; For MRP, bumpless for MRPD 50 Yes; encryption with TLS V1.3 pre-selected Yes Yes Yes Yes Yes See online help (S7 communication, user data size)
Number of connections, max. Number of connections reserved for ES/HMI/web Number of connections via integrated interfaces Number of S7 routing paths Redundancy mode H-Sync forwarding Media redundancy Media redundancy MRP MRP interconnection, supported MRPD Switchover time on line break, typ. Number of stations in the ring, max. SIMATIC communication PG/OP communication PG/OP communication S7 routing Data record routing S7 communication, as server S7 communication, as client User data per job, max. Open IE communication TCP/IP	10 128 16 Yes only via 1st interface (X1) Yes; MRP Automanager according to IEC 62439-2 Edition 2.0, MRP Manager; MRP Client Yes; as MRP ring node according to IEC 62439-2 Edition 3.0 Yes; Requirement: IRT 200 ms; For MRP, bumpless for MRPD 50 Yes; encryption with TLS V1.3 pre-selected Yes Yes Yes Yes Yes Yes See online help (S7 communication, user data size)
Number of connections, max. Number of connections reserved for ES/HMI/web Number of connections via integrated interfaces Number of S7 routing paths Redundancy mode H-Sync forwarding Media redundancy Media redundancy MRP MRP interconnection, supported MRPD Switchover time on line break, typ. Number of stations in the ring, max. SIMATIC communication PG/OP communication PG/OP communication S7 routing Data record routing S7 communication, as server S7 communication, as client User data per job, max. Open IE communication TCP/IP Data length, max.	10 128 16 Yes only via 1st interface (X1) Yes; MRP Automanager according to IEC 62439-2 Edition 2.0, MRP Manager; MRP Client Yes; as MRP ring node according to IEC 62439-2 Edition 3.0 Yes; Requirement: IRT 200 ms; For MRP, bumpless for MRPD 50 Yes; encryption with TLS V1.3 pre-selected Yes Yes Yes Yes See online help (S7 communication, user data size) Yes 64 kbyte
 Number of connections, max. Number of connections reserved for ES/HMI/web Number of connections via integrated interfaces Number of S7 routing paths Redundancy mode H-Sync forwarding Media redundancy Media redundancy MRP MRP interconnection, supported MRPD Switchover time on line break, typ. Number of stations in the ring, max. SIMATIC communication PG/OP communication S7 routing Data record routing S7 communication, as server S7 communication, as client User data per job, max. Open IE communication TCP/IP Data length, max. several passive connections per port, supported 	10 128 16 Yes only via 1st interface (X1) Yes; MRP Automanager according to IEC 62439-2 Edition 2.0, MRP Manager; MRP Client Yes; as MRP ring node according to IEC 62439-2 Edition 3.0 Yes; Requirement: IRT 200 ms; For MRP, bumpless for MRPD 50 Yes; encryption with TLS V1.3 pre-selected Yes Yes Yes Yes Yes See online help (S7 communication, user data size) Yes 64 kbyte Yes
Number of connections, max. Number of connections reserved for ES/HMI/web Number of connections via integrated interfaces Number of S7 routing paths Redundancy mode H-Sync forwarding Media redundancy Media redundancy MRP MRP MRP interconnection, supported MRPD Switchover time on line break, typ. Number of stations in the ring, max. SIMATIC communication PG/OP communication S7 routing Data record routing S7 communication, as server S7 communication, as client User data per job, max. Open IE communication TCP/IP Data length, max. several passive connections per port, supported	10 128 16 Yes only via 1st interface (X1) Yes; MRP Automanager according to IEC 62439-2 Edition 2.0, MRP Manager; MRP Client Yes; as MRP ring node according to IEC 62439-2 Edition 3.0 Yes; Requirement: IRT 200 ms; For MRP, bumpless for MRPD 50 Yes; encryption with TLS V1.3 pre-selected Yes Yes Yes Yes Yes See online help (S7 communication, user data size) Yes 64 kbyte Yes Yes
 Number of connections, max. Number of connections reserved for ES/HMI/web Number of connections via integrated interfaces Number of S7 routing paths Redundancy mode H-Sync forwarding Media redundancy — Media redundancy — MRP — MRP — MRPD — Switchover time on line break, typ. — Number of stations in the ring, max. SIMATIC communication PG/OP communication \$7 routing Data record routing \$7 communication, as server \$7 communication, as client User data per job, max. Open IE communication TCP/IP — Data length, max. — several passive connections per port, supported ISO-on-TCP (RFC1006) — Data length, max. 	10 128 16 Yes only via 1st interface (X1) Yes; MRP Automanager according to IEC 62439-2 Edition 2.0, MRP Manager; MRP Client Yes; as MRP ring node according to IEC 62439-2 Edition 3.0 Yes; Requirement: IRT 200 ms; For MRP, bumpless for MRPD 50 Yes; encryption with TLS V1.3 pre-selected Yes Yes Yes Yes Yes See online help (S7 communication, user data size) Yes 64 kbyte Yes Yes Yes 64 kbyte
 Number of connections, max. Number of connections reserved for ES/HMI/web Number of connections via integrated interfaces Number of S7 routing paths Redundancy mode H-Sync forwarding Media redundancy — Media redundancy — MRP MRP MRP interconnection, supported MRPD Switchover time on line break, typ. Number of stations in the ring, max. SIMATIC communication PG/OP communication S7 routing Data record routing S7 communication, as server S7 communication, as client User data per job, max. Open IE communication TCP/IP Data length, max. several passive connections per port, supported ISO-on-TCP (RFC1006) Data length, max. UDP 	10 128 16 Yes only via 1st interface (X1) Yes; MRP Automanager according to IEC 62439-2 Edition 2.0, MRP Manager; MRP Client Yes; as MRP ring node according to IEC 62439-2 Edition 3.0 Yes; Requirement: IRT 200 ms; For MRP, bumpless for MRPD 50 Yes; encryption with TLS V1.3 pre-selected Yes Yes Yes Yes See online help (S7 communication, user data size) Yes 64 kbyte Yes Yes 64 kbyte Yes
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In HTTP In HTTP In HTTP In Number of sessions, max. In number of simultaneous HTTP calls, max. In HTTP request body, max. In HTTP medical required to the HTTP required to the HTTP required to the HTTP required to the HTTP reputation of the HTTP required to the HTTP req		
■ ILCID ■ Chroyotion ■ Chroyo	• DNS	Yes
Encryption Ves Cyptional Ves Cyptional Ves Cyptional Ves Standard and user pages Ves Standard and use	• SNMP	Yes
Encryption **Yes : Optional **Ves standard and user pages **ITTP **ITTTP** **ITTTP** **Number of sessions, max. **Out of standard server interfaces, recommended max. **Out Author of dements for one call of OPC_UA_hameSpaceEntiotachist, max. **Number of dements for one call of OPC_UA_hameSpaceEntiotachist, max. **Number of elements for one call of OPC_UA_hameSpaceEntiotachist, max. **Number of elements for one call of OPC_UA_hameSpaceEntiotachist, max. **Number of elements for one call of OPC_UA_hameSpaceEntiotachist, max. **Number of elements for one call of OPC_UA_hameSpaceEntiotachist, max. **Number of elements for each of the commendation of OPC_UA_hameSpaceEntiotachist, max. **Number of elements for each of open standard exact of elements for each of elements for elements for each of elements for elements for each	• DCP	Yes
● HTTP ● whe API - Number of simultaneous HTTP calls, max number of simultaneous HTTP calls, max HTTP request body, max. ● PC UA Client - Application authentication - Security policies - Security policies - Number of connections, max Number of nodes of the client interfaces, recommended max Number of olements for one call of OPC_UA, Node-Gel-Handle List/OPC_UA, ReadList/OPC_U max Number of elements for one call of OPC_UA, Node-Sept-Handle List/OPC_UA, ReadList/OPC_U max Number of elements for one call of OPC_UA, Node-Sept-Handle List/OPC_UA, ReadList/OPC_UA, ReadList/OPC_UA, ReadList/OPC_UA, Node-Sept-Handle List/OPC_UA, ReadList/OPC_UA, ReadLis	• LLDP	Yes
In HTTP In HTTP In HTTP In Number of sessions, max. In number of simultaneous HTTP calls, max. In HTTP request body, max. In HTTP medical required to the HTTP required to the HTTP required to the HTTP required to the HTTP reputation of the HTTP required to the HTTP req	Encryption	Yes; Optional
Number of sessions, max. - number of simultaneous HTTP calls, max. - number for simultaneous HTTP calls, max. - number for simultaneous HTTP calls, max. - HTTP request body, max. PRUITINE (leanse required	Web server	
Number of sessions, max. - number of simultaneous HTTP calls, max. - number of simultaneous HTTP calls, max. - number of simultaneous HTTP calls, max. - Number of sessions, max. - Number of servine of connections, max. - Number of elements for one call of OPC_UA_NoteCelethandLets/OPC_UA_ReadList/OPC_Imax. - Number of elements for one call of OPC_UA_NoteCelethandLets/OPC_UA_ReadList/OPC_Imax. - Number of elements for one call of OPC_UA_NethodCelethandLets, max. - Number of elements for one call of OPC_UA_NethodCelethandLets, max. - Number of elements for one call of OPC_UA_NethodCelethandLets, max. - Number of elements for one call of OPC_UA_NethodCelethandLets, max. - Number of elements for one call of OPC_UA_NethodCelethandLets, max. - Number of elements for one call of OPC_UA_NethodCelethandLets, max. - Number of registerable method calls of the client instructions for data access, per connection, max. - Number of registerable method calls of OPC_UA_NethodCell, max. - Number of registerable method calls of OPC_UA_NethodCell, max. - Number of registerable method calls of OPC_UA_NethodCell, max. - Number of registerable method calls of OPC_UA_NethodCell, max. - Number of registerable method calls of OPC_UA_NethodCell, max. - Number of registerable modes, max. - Number of inputs/outputs per server method, max. - Number of inputs/outputs per server method, max. - Number of onoticerof liems, recommended max. - Number of program alarms - Number of program alarms - Number of program alarms - Number of	• HTTP	Yes; Standard and user pages
- Number of sessions, max number of simultaneous HTTP calls, max HTTP request body, max. - Runtime license required • OPC UA Client - Application authentication - Security policies - Security profices - Number of elements for one call of - OPC, UA, Node-GetH-andleList/OPC_UA, ReadList/OPC_UA, Number of sements for one call of - OPC, UA, NoneSpace-GetIndexList, max Number of elements for one call of - OPC, UA, NoneSpace-GetIndexList, max - Number of simultaneous calls of the client instructions for data access, per connection, max Number of simultaneous calls of the client instructions for data access, per connection, max Number of registerable method calls of OPC_UA, NethodCall, max Number of registerable method calls of OPC_UA, NethodCall, max Number of registerable method calls of OPC_UA, NethodCall, max Number of registerable method calls of OPC_UA, NethodCall, max Number of registerable method calls of OPC_UA, NethodCall, max Number of registerable method calls of OPC_UA, NethodCall, max Number of registerable method calls of OPC_UA, NethodCall, max Number of registerable method calls of OPC_UA, NethodCall, max Number of registerable method calls of OPC_UA, NethodCall, max Number of registerable method calls of OPC_UA, NethodCall, max Number of registerable method calls of OPC_UA, ServerMethodPost - OPC UA Server Methods management) - Number of registerable nodes, max Number of registerable nodes, max Number of monitored terms, recommended max Number of server methods, max Number of monitored terms, recommended max Number of romoritored terms, recommended max Number	• HTTPS	Yes; Standard and user pages
- number of simultaneous HTTP calls, max HTTP request body, max. • Runtime license required • OPC UA Client - Application authentication - Security policies - Security policies - Security policies - Security policies - User authentication - Number of connections, max Number of connections, max Number of connections or call of OPC_UA, Node-GetHandelLst/OPC_U max Number of elements for one call of OPC_UA, Node-GetHandelLst/OPC_U max Number of elements for one call of OPC_UA, Node-GetHandelLst, max Number of elements for one call of OPC_UA, Method-CetHandelLst, max Number of simultaneous calls of the client instructions for session management, per connection, max Number of finalitaneous calls of the client instructions for data access, per connection, max Number of registerable nodes, max Number of registerable method calls of OPC_UA, Method-Call, max Number of registerable method calls of OPC_UA, Method-Call, max Number of registerable modes, max Number of registerable modes, max Number of registerable modes, max Number of program attended to the client instructions for sessions, max Number of registerable modes, max Number of sessions, max Number of sessions, max Number of sessions, max Number of sessions max Number of sessions max Number of registerable modes, max Number of sessions max Number of sessions max Number of inputs/solupts per server method, max Number of server interfaces, max Number of inputs/solupts per server method, max Number of program alarms - Nu	• web API	
	 Number of sessions, max. 	100
• Runtime license required • Papilication authentication — Security policies — User authentication — Number of connections, max. — Number of connections, max. — Number of lements for one call of OPC_UA_Nade-gehandelstyOPC_Imax. — Number of elements for one call of OPC_UA_Nade-gehandelstyOPC_Imax. — Number of elements for one call of OPC_UA_Namespace-GetIndex.List, max. — Number of elements for one call of OPC_UA_Namespace-GetIndex.List, max. — Number of elements for one call of OPC_UA_Neded-GetHandels.List, 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 method calls of OPC_UA_Method-Cell, max. — Number of registerable modes, max. — Number of projuticus when calling OPC_UA_Method-Cell, max. • OPC UA Server — Application authentication — Security policies — Security policies: None, Basic 128Fsaa15, Basic256Fsaa15, Basic256Fsaa15, Basic256Fsaa15, Basic256Fsaa15, Basic256Fsaa55, Acs128Sha256Fsaa0ape, Acs256Sha256FsaaPss **anonymous** or by user name & password 100 100 100 100 100 100 100 1	— number of simultaneous HTTP calls, max.	4
Runtime license required Pes: "Data Access (registered Read/Write), Method Call Yes; Data Access (registered Read/Write), Method Call Yes security policies: None, Basic128Rsa15, Basic256Rsa15, Basic2568ha256, Pace Call of Ore Commented max. — Number of connections, max. — Number of learnents for one call of OPC_UA, Note/GetHandlet, StrOPC_UA ReadList/OPC_Imax. — Number of elements for one call of OPC_UA, MethodCetHandlet, Ist, max. — Number of simultaneous calls of the client instructions for seasion management, per connection, max. — Number of simultaneous calls of the client instructions for seasion management, per connection, max. — Number of registerable method calls of OPC_UA, MethodCetI, max. — Number of registerable method calls of OPC_UA, MethodCetI, max. — Number of registerable method calls of OPC_UA, MethodCetI, max. — Number of registerable method calls of OPC_UA, MethodCetI, max. • OPC UA Server Application authentication — Security policies — User authentication — Security policies — User authentication — Security policies — User authentication — Security policies management) — Number of sessions, max. — Number of server methods, max. — Number of server methods, max. — Number of server methods, max. — Number of inputs/outputs per server method, max. — Number of server methods, max. — Number of program alarms — Number of program al	— HTTP request body, max.	131 072 byte
OPC UA Client Application authentication Security policies Senior policies Se	OPC UA	
- Application authentication - Security policies - Number of connections, max Number of onnections, max Number of onnections, max Number of elements for one call of OPC_UA_Nodesdethandle.lst/OPC_UA_ReadList/OPC_U max Number of elements for one call of OPC_UA_Names/space/SetindexList, max Number of elements for one call of OPC_UA_Nembore/SetindexList, max Number of elements for one call of OPC_UA_Nembore/SetindexList, 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 registrate method calls of OPC_UA_MethodCell, max Number of finguistrate method calls of OPC_UA_MethodCell, max Number of projection authentication - Security policies - User authentication - Shapilication authenticati	Runtime license required	Yes; "Medium" license required
- 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_NodeGelthandleList/OPC_UA_ReadList/OPC_Inax. - Number of elements for one call of OPC_UA_Nemeroper of seminates of the client interfaces, resonance of seminates of the client interfaces, recommended max. - Number of elements for one call of OPC_UA_Nemeroper of seminates of the client instructions for session management, per connection, max. - Number of elements for one call of OPC_UA_Method delthandleList, max. - Number of simultaneous calls of the client instructions for data access, 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 nodes, max. - Number of registerable nodes, max. - Number of proputsouptus when calling OPC_UA_Method_Call, max. • OPC UA Server - OPC UA Server - OPC UA Server - OPC UA server - OPC UA server (ASC), custom address space, role-based access control	OPC UA Client	Yes; Data Access (registered Read/Write), Method Call
Available security policies: None, Basic128Rsa15, Basic256Rsa15, Basic256Rsa256, Ras1258Rsa15, Basic256Rsa15, Basic256Rsa256, Ras1258Rsa15, Basic256Rsa15, B	 Application authentication 	
- User authentication - Number of connections, max Number of connections, max Number of connections, max Number of connections, max Number of elements for one call of OPC_UA_NedecidethandleListOPC_UA_ReadListOPC_U max Number of elements for one call of OPC_UA_NedecidethandleList, max Number of elements for one call of OPC_UA_NembordSpaceGetIndexList, max Number of elements for one call of OPC_UA_NembordSpaceGetIndexList, max Number of elements for one call of OPC_UA_NembordSpaceGetIndexList, max Number of simultaneous calls of the client instructions for data access, per connection, max Number of registerable nodes, max Number of registerable nodes, max Number of inputsfoutputs when calling OPC_UA_MethodCall, max Number of sessions max Number of sessions, max Number of sessions, max Number of sessions, max Number of sessions, max Number of subscriptions per session, max Number of subscriptions per session, max Number of subscriptions per session, max Number of inputsfoutputs per server method, max Number of forger interfaces, max Number of forger methods, max Number of f	* *	Available security policies: None, Basic128Rsa15, Basic256Rsa15,
- Number of connections, max Number of ledient interfaces, recommended max Number of elements for one call of OPC_UA_NoteGetHandleList/OPC_UA_ReadList/OPC_U max Number of elements for one call of OPC_UA_NoteGetHandleList/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_NameSpaceGetIndexList, max Number of elements for one call of OPC_UA_NameSpaceGetIndexList, 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 method calls of OPC_UA_NethodCall, max Number of inpulsfoutputs when calling OPC_UA_NethodCall, max OPC UA Server - Application authentication - Security policies - User authentication - GDS support (certificate management) - GDS support (certificate management) - Number of accessible variables, max Number of accessible variables, max Number of registerable nodes, max Number of server methods, max Number of server methods, max Number of server methods, max Number of inpulsfoutputs per server method, max Number of inpulsfoutputs per server method, max Number of nodes for user-defined server interfaces, max Number of program alarms - Number of larms for system diagnostics	9 1	
- Number of nodes of the client interfaces, recommended max Number of elements for one call of OPC_UA_NodeCetHandieList/OPC_UA_ReadList/OPC_I max. - Number of elements for one call of OPC_UA_NeadeCetHandieList/max Number of elements for one call of OPC_UA_NemeSpaceGetIndexList, max Number of elements for one call of OPC_UA_MemoGetHandieList, 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 method calls of OPC_UA_MethodCall, max Number of registerable method calls of OPC_UA_MethodCall, max Number of inputs/outputs when calling OPC_UA_MethodCall, max Number of inputs/outputs when calling OPC_UA_MethodCall, max Very displaction authentication Very displacement of inputs/outputs when calling OPC_UA_MethodCall, max Very displacement of inputs/outputs per server method, max Number of sessions, max Number of subscriptions per session, max Number of subscriptions per session, max Number of sever methods, max Number of inputs/outputs per server method, max Number of of nodes for user-defined server interfaces, max Number of nodes for user	— User authentication	"anonymous" or by user name & password
recommended max. Number of elements for one call of OPC_UA_NodeGetHandleList/OPC_UA_ReadList/OPC_U ax. Number of elements for one call of OPC_UA_NameSpaceGetIndexList, max. Number of elements for one call of OPC_UA_Member 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 modes max. Number of inputs/outputs when calling OPC_UA_MethodCall, max. OPC_UA_MethodCall, max. OPC_UA_MethodCall, max. Number of policies Security policies Security policies Number of server member of concessible variables, max. Number of sessions, max. Number of registerable nodes, max. Number of registerable nodes, max. Number of server methods, max. Number of server methods, max. Number of inputs/outputs per server method, max. Number of inputs/outputs per server method, max. Number of inputs/outputs per server method, max. Number of server interfaces, max. Number of or ouse-defined server interfaces, max. Number of or ouse-defined server interfaces, max. Number of or ouse-defined server interfaces, max. Number of program alarms Number of program alarms Number of program alarms Number of param alarms Number of param server method, max. Number of param alarms Number of program alarms Number of program alarms Number of program alarms Number of params for system diagnostics	 Number of connections, max. 	10
OPC_UA_NodeGelHandleList/OPC_UA_ReadList/OPC_I max. — Number of elements for one call of OPC_UA_NemeSpaceGetinexList, max. — Number of elements for one call of OPC_UA_MethodGelHandleList, 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 modes and so the client instructions for data access, per connection, max. — Number of registerable modes and so the client instructions for data access, per connection, max. — Number of registerable modes and so the client instructions for data access, per connection, max. — Number of inputs/outputs when calling OPC_UA_MethodCall, max. — Number of inputs/outputs when calling OPC_UA_MethodCall, max. — Application authentication — Security policies — User authentication — Security policies — User authentication — GDS support (certificate management) — Number of sessions, max. — Number of sessions, max. — Number of registerable nodes, max. — Number of sessions, max. — Number of server methods, max. — Number of server methods, max. — Number of inputs/outputs per server method, max. — Number of inputs/outputs per server method, max. — Number of inputs/outputs per server method, max. — Number of server interfaces, max. — Number of or inputs/outputs per server method, max. — Number of or odes for user-defined server interfaces, max. — Number of or odes for user-defined server interfaces, max. — Number of program alarms — Number o		2 000
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 OPC_UA_MethodCall, max. — Number of Inputs/outputs when calling OPC_UA_MethodCall, max. — OPC UA Server — Application authentication — Security policies — User authentication — GDS support (certificate management) — Number of sessions, max. — Number of sessions per session, max. — Number of sessions per session, max. — Number of server methods, max. — Number of monitored items, recommended max. — Number of monitored items, recommended max. — Number of server interfaces, max. — Number of nodes for user-defined server interfaces, max. — Number of program alarms — Number of patarms for system diagnostics 100 100 100 100 100 100 100 1	OPC_UA_NodeGetHandleList/OPC_UA_ReadList/OPC_U	
OPC_UA_MethodCetHandleList, 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 method calls of OPC_UA_MethodCall, max. — Number of ripputs/outputs when calling OPC_UA_MethodCall, max. — Number of ripputs/outputs when calling OPC_UA_MethodCall, max. — OPC UA Server — Application authentication — Security policies — Security policies — User authentication — GDS support (certificate management) — Number of sessions, max. — Number of sessions, max. — Number of sessions, max. — Number of sessions per session, max. — Number of subscriptions per session, max. — Publishing interval, min. — Publishing interval, min. — Number of server methods, max. — Number of server methods, max. — Number of server methods, max. — Number of server interfaces, max. — Number of server interfaces, max. — Number of nodes for user-defined server interfaces, max. — Number of program alarms — Number of pagram alarms 200 Number of ala access fread, write, subscribe), method call, alarms at 5000 100 200 420 22 24 25 26 27 28 29 20 20 20 20 20 21 22 22 22 22		20
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 OPC_UA_MethodCall, max. — Number of inputs/outputs when calling OPC_UA_MethodCall, max. — OPC UA Server — Application authentication — Security policies — Security policies — Security policies — User authentication — GDS support (certificate management) — Number of sessions, max. — Number of sessions, max. — Number of subscriptions per session, max. — Number of subscriptions per session, max. — Publishing interval, min. — Publishing interval, min. — Number of server methods, max. — Number of server methods, max. — Number of server methods, max. — Number of nondors for user-defined server interfaces, max. — Number of nodes for user-defined server interfaces, max. — Number of nodes for user-defined server interfaces, max. — Number of program alarms — Number of program alarms — Number of program alarms — Number of alarms for system diagnostics 5 000 100 20 20 20 20 20 20 20 20		100
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 OPC_UA_MethodCall, max. OPC_UA_ServerMethodPreserv	instructions for session management, per connection,	1
- Number of registerable method calls of OPC_UA_MethodCall, max. - Number of inputs/outputs when calling OPC_UA_MethodCall, max. ■ OPC UA Server - Application authentication - Security policies - Security policies - Security policies - User authentication - GDS support (certificate management) - Number of sessions, max. - Number of sessions, max. - Number of subscriptions per session, max. - Number of subscriptions per session, max. - Number of server methods, max. - Number of server methods, max. - Number of server methods, max. - Number of inputs/outputs per server method, max. - Number of inputs/outputs per server method, max. - Number of nonlitored items, recommended max. - Number of nonlitored items, recommended max. - Number of nonlitored items, recommended max. - Number of nodes for user-defined server interfaces, max. ■ Alarms and Conditions - Number of larms for system diagnostics 100 100 20 Yes: data access (read, write, subscribe), method call, alarms & condition (A&C), custom address space, role-based access control Yes: data access (read, write, subscribe), method call, alarms & condition (A&C), custom address space, role-based access control Yes: data access (read, write, subscribe), method call, alarms & condition (A&C), custom address space, role-based access control Yes: data access (read, write, subscribe), method call, alarms & condition (A&C), custom address space, role-based access control Yes: data access (read, write, subscribe), method call, alarms & condition (A&C), custom address space, role-based access control Yes: data access (read, write, subscribe), method call, alarms & condition (A&C), custom address space, role-based access control Yes: data acces (read, write, subscribe), method call, alarms & condition (A&C), custom address space, role-based access control Yes: data acces (read, write, subscribe), method call, alarms & condition (A&C), custom address space, role-based access control Yes: data acces (read, write, subscribed, assistance space		5
OPC_UA_MethodCall, max. — Number of inputs/outputs when calling OPC_UA_MethodCall, max. • OPC UA Server — Application authentication — Security policies — Security policies — User authentication — GDS support (certificate management) — Number of sessions, max. — Number of subscriptions per session, max. — Number of server methods, max. — Publishing interval, min. — Number of server methods, max. — Number of inputs/outputs per server method, max. — Number of or server methods, max. — Number of inputs/outputs per server method, max. — Number of inputs/outputs per server method, max. — Number of inputs/outputs per server method, max. — Number of or server interfaces, max. — Number of server interfaces, max. — Number of server interfaces, max. • Alarms and Conditions — Number of program alarms — Number of alarms for system diagnostics 20 20 20 20 20 20 20 20 20 2	 Number of registerable nodes, max. 	5 000
OPC_UA_MethodCall, max. OPC UA Server (A&C), custom address space, role-based access control Application authentication Security policies User authentication OBS support (certificate management) Number of sessions, max. Number of registerable nodes, max. Sampling interval, min. Number of server methods, max. Number of inputs/outputs per server method, max. Number of monitored items, recommended max. Number of server interfaces, max. Number of nodes for user-defined server interfaces, max. Number of program alarms Number of alarms for system diagnostics Yes: data access (read, write, subscribe), method call, alarms & condition (A&C), custom address space, role-based access control Yes: data access (read, write, subscribe), method call, alarms & condition (A&C), custom address space, role-based access control Yes: data access (read, write, subscribe), method call, alarms & condition (A&C), custom address space, role-based access control Yes: data access (read, write, subscribe), method call, alarms & condition (A&C), custom address space, role-based access control Yes: data access (read, write, subscribe), method call, alarms & condition (A&C), custom address space, role-based access control Yes: data access (read, write, subscribe), method call, alarms & control of pasced access control Yes: data acces (read, write, subscribe), method call, alarms & control of pasced access control Yes: data acces (read, write, subscribe), max available scurity policies: None, Basic128Rsa15, Basic256Rsa2	•	100
(A&C), custom address space, role-based access control Yes Security policies User authentication GDS support (certificate management) Number of sessions, max. Number of subscriptions per session, max. Sampling interval, min. Number of server methods, max. Number of server methods, max. Number of monitored items, recommended max. Number of server interfaces, max. Number of nodes for user-defined server interfaces, max. Number of program alarms Number of program alarms Number of program alarms Number of program alarms Number of alarms for system diagnostics Alsarisable security policies: None, Basic128Rsa15, Basic256Rsa15, Basic256Sha256, Aes128Sha256RsaOaep, Aes256Sha256RsaPss available security policies: None, Basic128Rsa15, Basic256Rsa15, Basic256Sha256, Aes128Sha256RsaOaep, Aes256Sha256RsaPss available security policies: None, Basic128Rsa15, Basic256Rsa15, Basic256Sha256, Aes128Sha256RsaOaep, Aes256Sha256RsaPss available security policies: None, Basic128Rsa15, Basic256Rsa15, Basic256Sha256, Aes128Sha256RsaOaep, Aes256Sha256RsaDs available security policies: None, Basic128Rsa15, Basic256RsaDs available security policies: None, Basic128Rsa15, Basic26Eshaps avanous of by user name & password 48 100 000		20
- Security policies available security policies: None, Basic128Rsa15, Basic256Rsa15, Basic256Sha256, Aes128Sha256RsaOaep, Aes256Sha256RsaPss - User authentication "anonymous" or by user name & password - GDS support (certificate management) Yes - Number of sessions, max. 48 - Number of accessible variables, max. 100 000 - Number of registerable nodes, max. 20 000 - Number of subscriptions per session, max. 50 - Sampling interval, min. 100 ms - Publishing interval, min. 100 ms - Number of server methods, max. 50; max. 20 concurrently running jobs each for asynchronous instructions OPC_UA_ServerMethodPost - Number of inputs/outputs per server method, max. 20 - Number of monitored items, recommended max. 4000; for 1 s sampling interval and 1 s send interval - Number of nodes for user-defined server interfaces, max. 10 of each "Server interfaces" / "Companion specification" type and 20 of the type "Reference namespace" 30 000 - Number of program alarms 200 - Number of alarms for system diagnostics 100	OPC UA Server	
Basic256Sha256, Aes128Sha256RsaOaep, Aes256Sha256RsaPss User authentication GDS support (certificate management) Number of sessions, max. Number of accessible variables, max. Number of registerable nodes, max. Number of subscriptions per session, max. Sampling interval, min. Publishing interval, min. Number of server methods, max. Number of inputs/outputs per server method, max. Number of monitored items, recommended max. Number of server interfaces, max. Number of nodes for user-defined server interfaces, max. Alarms and Conditions Number of alarms for system diagnostics Basic256Sha256RsaOaep, Aes256Sha256RsaPss "anonymous" or by user name & password Yes 48 100 000 20 000 100 ms 100 ms 100 ms 100 ms 50; max. 20 concurrently running jobs each for asynchronous instructions OPC_UA_ServerMethodPre and OPC_UA_ServerMethodPost 20 Under 1 s sampling interval and 1 s send interval 10 of each "Server interfaces" / "Companion specification" type and 20 of the type "Reference namespace" 30 000 Alarms and Conditions Yes Number of program alarms 200 Number of alarms for system diagnostics 100	 Application authentication 	Yes
- GDS support (certificate management) - Number of sessions, max Number of accessible variables, max Number of registerable nodes, max Number of subscriptions per session, max Sampling interval, min Publishing interval, min Number of server methods, max Number of inputs/outputs per server method, max Number of monitored items, recommended max Number of server interfaces, max Number of nodes for user-defined server interfaces, max. • Alarms and Conditions - Number of laarms for system diagnostics - Number of accessible variables, max 100 000 - 100 ms - 100 m	— Security policies	
 Number of sessions, max. Number of accessible variables, max. Number of registerable nodes, max. Number of subscriptions per session, max. Sampling interval, min. Publishing interval, min. Number of server methods, max. Number of inputs/outputs per server method, max. Number of monitored items, recommended max. Number of server interfaces, max. Number of nodes for user-defined server interfaces, max. Alarms and Conditions Number of alarms for system diagnostics 100 000 100 000<!--</td--><td> User authentication </td><td>"anonymous" or by user name & password</td>	 User authentication 	"anonymous" or by user name & password
 Number of accessible variables, max. Number of registerable nodes, max. Number of subscriptions per session, max. Sampling interval, min. Publishing interval, min. Number of server methods, max. Number of inputs/outputs per server method, max. Number of monitored items, recommended max. Number of server interfaces, max. Number of nodes for user-defined server interfaces, max. Alarms and Conditions Number of alarms for system diagnostics 100 ms 50; max. 20 concurrently running jobs each for asynchronous instructions OPC_UA_ServerMethodPre and OPC_UA_ServerMethodPost 40 onc; for 1 s sampling interval and 1 s send interval 10 of each "Server interfaces" / "Companion specification" type and 20 of the type "Reference namespace" 30 000 Yes Number of program alarms Number of alarms for system diagnostics 100 	 — GDS support (certificate management) 	Yes
 Number of registerable nodes, max. Number of subscriptions per session, max. Sampling interval, min. Publishing interval, min. Number of server methods, max. Number of inputs/outputs per server method, max. Number of inputs/outputs per server method, max. Number of monitored items, recommended max. Number of server interfaces, max. Number of nodes for user-defined server interfaces, max. Alarms and Conditions Number of alarms for system diagnostics 20 000 4000; for 1 s sampling interval and 1 s send interval 10 of each "Server interfaces" / "Companion specification" type and 20 of the type "Reference namespace" 30 000 Yes Number of program alarms Number of alarms for system diagnostics 	Number of sessions, max.	48
 Number of subscriptions per session, max. Sampling interval, min. Publishing interval, min. Number of server methods, max. Number of inputs/outputs per server method, max. Number of monitored items, recommended max. Number of server interfaces, max. Number of nodes for user-defined server interfaces, max. Alarms and Conditions Number of audicines Alarms for system diagnostics 100 ms 100 ms 50; max. 20 concurrently running jobs each for asynchronous instructions OPC_UA_ServerMethodPre and OPC_UA_ServerMethodPost 4000; for 1 s sampling interval and 1 s send interval 10 of each "Server interfaces" / "Companion specification" type and 20 of the type "Reference namespace" 30 000 Yes Number of program alarms Number of alarms for system diagnostics 100 	 Number of accessible variables, max. 	100 000
 — Sampling interval, min. — Publishing interval, min. — Number of server methods, max. — Number of inputs/outputs per server method, max. — Number of monitored items, recommended max. — Number of server interfaces, max. — Number of nodes for user-defined server interfaces, max. • Alarms and Conditions — Number of alarms for system diagnostics 100 ms 100 ms 100 ms 400 ms 50; max. 20 concurrently running jobs each for asynchronous instructions OPC_UA_ServerMethodPost 20 4 000; for 1 s sampling interval and 1 s send interval 10 of each "Server interfaces" / "Companion specification" type and 20 of the type "Reference namespace" 30 000 Yes — Number of program alarms — Number of alarms for system diagnostics 100 	 Number of registerable nodes, max. 	20 000
 — Sampling interval, min. — Publishing interval, min. — Number of server methods, max. — Number of inputs/outputs per server method, max. — Number of monitored items, recommended max. — Number of server interfaces, max. — Number of nodes for user-defined server interfaces, max. • Alarms and Conditions — Number of alarms for system diagnostics 100 ms 100 ms 50; max. 20 concurrently running jobs each for asynchronous instructions OPC_UA_ServerMethodPre and OPC_UA_ServerMethodPost 20 4 000; for 1 s sampling interval and 1 s send interval 10 of each "Server interfaces" / "Companion specification" type and 20 of the type "Reference namespace" 30 000 Yes — Number of program alarms — Number of alarms for system diagnostics 100 	Number of subscriptions per session, max.	50
 — Publishing interval, min. — Number of server methods, max. — Number of inputs/outputs per server method, max. — Number of monitored items, recommended max. — Number of server interfaces, max. — Number of nodes for user-defined server interfaces, max. • Alarms and Conditions — Number of alarms for system diagnostics 100 ms 50; max. 20 concurrently running jobs each for asynchronous instructions OPC_UA_ServerMethodPre and OPC_UA_ServerMethodPost 4 000; for 1 s sampling interval and 1 s send interval 10 of each "Server interfaces" / "Companion specification" type and 20 of the type "Reference namespace" 30 000 Yes — Number of program alarms — Number of alarms for system diagnostics 		100 ms
 Number of server methods, max. Number of inputs/outputs per server method, max. Number of monitored items, recommended max. Number of server interfaces, max. Number of nodes for user-defined server interfaces, max. Alarms and Conditions Number of alarms for system diagnostics 50; max. 20 concurrently running jobs each for asynchronous instructions OPC_UA_ServerMethodPre and OPC_UA_ServerMethodPost 4 000; for 1 s sampling interval and 1 s send interval 10 of each "Server interfaces" / "Companion specification" type and 20 of the type "Reference namespace" 30 000 Yes Number of program alarms 100 		100 ms
 Number of monitored items, recommended max. Number of server interfaces, max. Number of nodes for user-defined server interfaces, max. Alarms and Conditions Number of program alarms Number of alarms for system diagnostics 4 000; for 1 s sampling interval and 1 s send interval 10 of each "Server interfaces" / "Companion specification" type and 20 of the type "Reference namespace" 30 000 Yes 100 	-	
 Number of server interfaces, max. Number of nodes for user-defined server interfaces, max. Alarms and Conditions Number of program alarms Number of alarms for system diagnostics 10 of each "Server interfaces" / "Companion specification" type and 20 of the type "Reference namespace" 30 000 Yes Number of program alarms 100 	— Number of inputs/outputs per server method, max.	
type "Reference namespace" Number of nodes for user-defined server interfaces, max. • Alarms and Conditions Number of program alarms Number of alarms for system diagnostics type "Reference namespace" 30 000 Yes Number of program alarms 200 Number of alarms for system diagnostics	 Number of monitored items, recommended max. 	4 000; for 1 s sampling interval and 1 s send interval
max. • Alarms and Conditions — Number of program alarms — Number of alarms for system diagnostics 100	— Number of server interfaces, max.	
 Number of program alarms Number of alarms for system diagnostics 100 		30 000
— Number of alarms for system diagnostics 100	Alarms and Conditions	Yes
	— Number of program alarms	200
Further protocols	 Number of alarms for system diagnostics 	100
	Further protocols	

S7 message functions	
Number of login stations for message functions, max.	64
number of subscriptions, max.	500
number of tags/attributes for subscriptions, max.	8 000
Program alarms	Yes
Number of configurable program messages, max.	10 000; Program messages are generated by the "Program_Alarm" block, ProDiag or GRAPH
Number of loadable program messages in RUN, max.	10 000
Number of simultaneously active program alarms	
Number of program alarms	1 000
Number of alarms for system diagnostics	200
Number of alarms for motion technology objects	160
Test commissioning functions	
Joint commission (Team Engineering)	Yes; Parallel online access possible for up to 8 engineering systems
Status block	Yes; Up to 8 simultaneously (in total across all ES clients)
Single step	No
Number of breakpoints	8
Profiling	Yes
Status/control	100
Status/control variable	Yes
Variables	Inputs/outputs, memory bits, DBs, distributed I/Os, timers, counters
Number of variables, max.	pac. outputs, morner, out, obo, alouisated 11-05, tilleto, counters
- of which status variables, max.	200; per job
of which control variables, max.	200; per job
Forcing	200, pci job
• Forcing	Yes
• Forcing, variables	Peripheral inputs/outputs
Number of variables, max.	200
Diagnostic buffer	200
·	Yes
presentNumber of entries, max.	3 200
— of which powerfail-proof	500
Traces	300
Number of configurable Traces	4
Memory size per trace, max.	512 kbyte
Interrupts/diagnostics/status information	312 kByto
Diagnostics indication LED • RUN/STOP LED	Von
• ERROR LED	Yes Yes
MAINT LED	Yes
STOP ACTIVE LED	Yes
Connection display LINK TX/RX Supported technology objects	Yes
Supported technology objects Motion Control	Voc. Note: The number of technology chicate affects the girls time of the DLC
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 	2 400
technology objects	
 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
 Number of available Extended Motion Control resources for technology objects 	120
 Required Extended Motion Control resources 	
per cam (1 000 points and 50 segments)	2
— per cam (10 000 points and 50 segments)	20
per cam (50 points and 600 segments)	2
 per cam (50 points and 6 000 segments) 	20

for each act of kinematics	20
— for each set of kinematics	30
— per Interpreter	60
— Per leading axis proxy	3
kinematics functions	
 kinematics with up to 4 interpolating axes 	Yes; max. 3D + orientation
 kinematics with 5 or more interpolating axes 	No
 user-defined kinematics 	No
— SIMATIC Safe Kinematics	No
 Positioning axis 	
 — Number of positioning axes at motion control cycle of 4 ms (typical value) 	11
 Number of positioning axes at motion control cycle of 8 ms (typical value) 	20
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
Standards, approvals, certificates	
Ecological footprint	
Global warming potential	
— global warming potential, (total) [CO2 eq]	100 kg
— global warming potential, (during production) [CO2	25.8 kg
eq]	·
 global warming potential, (during operation) [CO2 	75.2 kg
eq]	
— global warming potential, (after end of life cycle) [CO2 eq]	-0.83 kg
Ambient conditions	
Ambient temperature during operation	
 horizontal installation, min. 	-30 °C; No condensation
 horizontal installation, max. 	60 °C; Display: 50 °C, at an operating temperature of typically 50 °C, the display is switched off
	uispiay is switched on
• vertical installation, min.	-30 °C; No condensation
vertical installation, min.vertical installation, max.	
	-30 °C; No condensation 40 °C; Display: 40 °C, at an operating temperature of typically 40 °C, the
vertical installation, max.	-30 °C; No condensation 40 °C; Display: 40 °C, at an operating temperature of typically 40 °C, the
vertical installation, max. Ambient temperature during storage/transportation	-30 °C; No condensation 40 °C; Display: 40 °C, at an operating temperature of typically 40 °C, the display is switched off
 vertical installation, max. Ambient temperature during storage/transportation min. 	-30 °C; No condensation 40 °C; Display: 40 °C, at an operating temperature of typically 40 °C, the display is switched off -40 °C
 vertical installation, max. Ambient temperature during storage/transportation min. max. 	-30 °C; No condensation 40 °C; Display: 40 °C, at an operating temperature of typically 40 °C, the display is switched off -40 °C
 vertical installation, max. Ambient temperature during storage/transportation min. max. Altitude during operation relating to sea level 	-30 °C; No condensation 40 °C; Display: 40 °C, at an operating temperature of typically 40 °C, the display is switched off -40 °C 70 °C
 vertical installation, max. Ambient temperature during storage/transportation min. max. Altitude during operation relating to sea level Installation altitude above sea level, max. 	-30 °C; No condensation 40 °C; Display: 40 °C, at an operating temperature of typically 40 °C, the display is switched off -40 °C 70 °C
vertical installation, max. Ambient temperature during storage/transportation min. max. Altitude during operation relating to sea level Installation altitude above sea level, max. configuration / header configuration / programming / header	-30 °C; No condensation 40 °C; Display: 40 °C, at an operating temperature of typically 40 °C, the display is switched off -40 °C 70 °C
vertical installation, max. Ambient temperature during storage/transportation min. max. Altitude during operation relating to sea level Installation altitude above sea level, max. configuration / header	-30 °C; No condensation 40 °C; Display: 40 °C, at an operating temperature of typically 40 °C, the display is switched off -40 °C 70 °C
vertical installation, max. Ambient temperature during storage/transportation min. max. Altitude during operation relating to sea level Installation altitude above sea level, max. configuration / header configuration / programming / header Programming language — LAD	-30 °C; No condensation 40 °C; Display: 40 °C, at an operating temperature of typically 40 °C, the display is switched off -40 °C 70 °C 5 000 m; Restrictions for installation altitudes > 2 000 m, see manual
vertical installation, max. Ambient temperature during storage/transportation min. max. Altitude during operation relating to sea level Installation altitude above sea level, max. configuration / header configuration / programming / header Programming language	-30 °C; No condensation 40 °C; Display: 40 °C, at an operating temperature of typically 40 °C, the display is switched off -40 °C 70 °C 5 000 m; Restrictions for installation altitudes > 2 000 m, see manual Yes Yes
vertical installation, max. Ambient temperature during storage/transportation min. max. Altitude during operation relating to sea level Installation altitude above sea level, max. configuration / header configuration / programming / header Programming language — LAD — FBD — STL	-30 °C; No condensation 40 °C; Display: 40 °C, at an operating temperature of typically 40 °C, the display is switched off -40 °C 70 °C 5 000 m; Restrictions for installation altitudes > 2 000 m, see manual Yes Yes Yes
vertical installation, max. Ambient temperature during storage/transportation min. max. Altitude during operation relating to sea level Installation altitude above sea level, max. configuration / header configuration / programming / header Programming language — LAD — FBD — STL — SCL	-30 °C; No condensation 40 °C; Display: 40 °C, at an operating temperature of typically 40 °C, the display is switched off -40 °C 70 °C 5 000 m; Restrictions for installation altitudes > 2 000 m, see manual Yes Yes Yes Yes
vertical installation, max. Ambient temperature during storage/transportation min. max. Altitude during operation relating to sea level Installation altitude above sea level, max. configuration / header configuration / programming / header Programming language — LAD — FBD — STL — SCL — CFC	-30 °C; No condensation 40 °C; Display: 40 °C, at an operating temperature of typically 40 °C, the display is switched off -40 °C 70 °C 5 000 m; Restrictions for installation altitudes > 2 000 m, see manual Yes Yes Yes Yes Yes Yes
vertical installation, max. Ambient temperature during storage/transportation min. max. Altitude during operation relating to sea level Installation altitude above sea level, max. configuration / header configuration / programming / header Programming language — LAD — FBD — STL — SCL — CFC — GRAPH	-30 °C; No condensation 40 °C; Display: 40 °C, at an operating temperature of typically 40 °C, the display is switched off -40 °C 70 °C 5 000 m; Restrictions for installation altitudes > 2 000 m, see manual Yes Yes Yes Yes
vertical installation, max. Ambient temperature during storage/transportation min. max. Altitude during operation relating to sea level Installation altitude above sea level, max. configuration / header configuration / programming / header Programming language — LAD — FBD — STL — SCL — CFC — GRAPH Know-how protection	-30 °C; No condensation 40 °C; Display: 40 °C, at an operating temperature of typically 40 °C, the display is switched off -40 °C 70 °C 5 000 m; Restrictions for installation altitudes > 2 000 m, see manual Yes Yes Yes Yes Yes Yes Yes Yes
vertical installation, max. Ambient temperature during storage/transportation min. max. Altitude during operation relating to sea level Installation altitude above sea level, max. configuration / header configuration / programming / header Programming language — LAD — FBD — STL — SCL — CFC — GRAPH Know-how protection • User program protection/password protection	-30 °C; No condensation 40 °C; Display: 40 °C, at an operating temperature of typically 40 °C, the display is switched off -40 °C 70 °C 5 000 m; Restrictions for installation altitudes > 2 000 m, see manual Yes Yes Yes Yes Yes Yes Yes Yes
vertical installation, max. Ambient temperature during storage/transportation min. max. Altitude during operation relating to sea level Installation altitude above sea level, max. configuration / header configuration / programming / header Programming language — LAD — FBD — STL — SCL — CFC — GRAPH Know-how protection • User program protection/password protection • Copy protection	-30 °C; No condensation 40 °C; Display: 40 °C, at an operating temperature of typically 40 °C, the display is switched off -40 °C 70 °C 5 000 m; Restrictions for installation altitudes > 2 000 m, see manual Yes Yes Yes Yes Yes Yes Yes Yes Yes Ye
vertical installation, max. Ambient temperature during storage/transportation min. max. Altitude during operation relating to sea level Installation altitude above sea level, max. configuration / header configuration / programming / header Programming language — LAD — FBD — STL — SCL — CFC — GRAPH Know-how protection • User program protection/password protection • Copy protection • Block protection	-30 °C; No condensation 40 °C; Display: 40 °C, at an operating temperature of typically 40 °C, the display is switched off -40 °C 70 °C 5 000 m; Restrictions for installation altitudes > 2 000 m, see manual Yes Yes Yes Yes Yes Yes Yes Yes
vertical installation, max. Ambient temperature during storage/transportation min. max. Altitude during operation relating to sea level Installation altitude above sea level, max. configuration / header configuration / programming / header Programming language — LAD — FBD — STL — SCL — CFC — GRAPH Know-how protection • User program protection/password protection • Copy protection • Block protection Access protection	-30 °C; No condensation 40 °C; Display: 40 °C, at an operating temperature of typically 40 °C, the display is switched off -40 °C 70 °C 5 000 m; Restrictions for installation altitudes > 2 000 m, see manual Yes Yes Yes Yes Yes Yes Yes Yes Yes Ye
vertical installation, max. Ambient temperature during storage/transportation min. max. Altitude during operation relating to sea level Installation altitude above sea level, max. configuration / header configuration / programming / header Programming language — LAD — FBD — STL — SCL — CFC — GRAPH Know-how protection User program protection/password protection Copy protection Block protection Access protection protection of confidential configuration data	-30 °C; No condensation 40 °C; Display: 40 °C, at an operating temperature of typically 40 °C, the display is switched off -40 °C 70 °C 5 000 m; Restrictions for installation altitudes > 2 000 m, see manual Yes Yes Yes Yes Yes Yes Yes Yes Yes Ye
vertical installation, max. Ambient temperature during storage/transportation min. max. Altitude during operation relating to sea level Installation altitude above sea level, max. configuration / header configuration / programming / header Programming language — LAD — FBD — STL — SCL — CFC — GRAPH Know-how protection • User program protection/password protection • Copy protection • Block protection Access protection • protection of confidential configuration data • Password for display	-30 °C; No condensation 40 °C; Display: 40 °C, at an operating temperature of typically 40 °C, the display is switched off -40 °C 70 °C 5 000 m; Restrictions for installation altitudes > 2 000 m, see manual Yes Yes Yes Yes Yes Yes Yes Yes Yes Ye
vertical installation, max. Ambient temperature during storage/transportation min. max. Altitude during operation relating to sea level Installation altitude above sea level, max. configuration / header configuration / programming / header Programming language — LAD — FBD — STL — SCL — CFC — GRAPH Know-how protection User program protection/password protection Copy protection Block protection Access protection protection of confidential configuration data Password for display Protection level: Write protection	-30 °C; No condensation 40 °C; Display: 40 °C, at an operating temperature of typically 40 °C, the display is switched off -40 °C 70 °C 5 000 m; Restrictions for installation altitudes > 2 000 m, see manual Yes Yes Yes Yes Yes Yes Yes Yes Yes Ye
vertical installation, max. Ambient temperature during storage/transportation min. max. Altitude during operation relating to sea level Installation altitude above sea level, max. configuration / header configuration / programming / header Programming language — LAD — FBD — STL — SCL — CFC — GRAPH Know-how protection User program protection/password protection Copy protection Block protection Access protection protection of confidential configuration data Password for display Protection level: Write protection Protection Protection level: Read/write protection	-30 °C; No condensation 40 °C; Display: 40 °C, at an operating temperature of typically 40 °C, the display is switched off -40 °C 70 °C 5 000 m; Restrictions for installation altitudes > 2 000 m, see manual Yes Yes Yes Yes Yes Yes Yes Yes Yes Ye
vertical installation, max. Ambient temperature during storage/transportation min. max. Altitude during operation relating to sea level Installation altitude above sea level, max. configuration / header configuration / programming / header Programming language — LAD — FBD — STL — SCL — CFC — GRAPH Know-how protection • User program protection/password protection • Copy protection • Block protection Access protection • protection of confidential configuration data • Password for display • Protection level: Write protection • Protection level: Read/write protection • Protection level: Write protection for Failsafe	-30 °C; No condensation 40 °C; Display: 40 °C, at an operating temperature of typically 40 °C, the display is switched off -40 °C 70 °C 5 000 m; Restrictions for installation altitudes > 2 000 m, see manual Yes Yes Yes Yes Yes Yes Yes Yes Yes Ye
vertical installation, max. Ambient temperature during storage/transportation min. max. Altitude during operation relating to sea level Installation altitude above sea level, max. configuration / header configuration / programming / header Programming language — LAD — FBD — STL — SCL — CFC — GRAPH Know-how protection User program protection/password protection Copy protection Block protection Access protection protection of confidential configuration data Password for display Protection level: Write protection Protection Protection level: Read/write protection	-30 °C; No condensation 40 °C; Display: 40 °C, at an operating temperature of typically 40 °C, the display is switched off -40 °C 70 °C 5 000 m; Restrictions for installation altitudes > 2 000 m, see manual Yes Yes Yes Yes Yes Yes Yes Yes Yes Ye

100 • Number of users Number of groups 100 • Number of roles 50 programming / cycle time monitoring / header • lower limit adjustable minimum cycle time • upper limit adjustable maximum cycle time Dimensions Width 70 mm Height 147 mm 129 mm Depth Weights Weight, approx. 456 g

lassifications

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

Approvals / Certificates

General Product Approval





Miscellaneous



Miscellaneous



General Product Approval

For use in hazardous locations

<u>KC</u>



<u>FM</u>



CCC-Ex

<u>FM</u>

For use in hazardous locations

Test Certificates

Marine / Shipping

Miscellaneous



IECEx



CCC-Ex

Type Test Certificates/Test Report



Marine / Shipping







NK / Nippon Kaiji Kyokai



CCS (China Classification Society)

Marine / Shipping

other

Environment

PROFINET





last modified: 12/8/2024 🖸