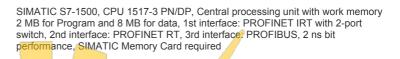
6ES7517-3AP00-0AB0

Data sheet







Product type designation HW functional status FS11 Firmware version • 18M data • Isochronous mode • 18M data • Isochronous mode Fee, Distributed and central; with minimum OB 6x cycle of 250 µs (distributed) and 1 ms (central) Engineering with • STEP 7 TIA Portal configurable/integrated from version Configuration control isolateset Ves Display Screen diagonal [cm] Control olements Number of keys Mode selector switch * 1 Supply voitage Rated value (DC) permissible range, upper limit (DC) permissible range, upper limit (DC) Reverse polarity protection Mains buffering • Mains/voitage failure stored energy time • Repeat rate, min. Input current Current consumption (rated value) Current consumption, max. Insult current, max. Prower Infeed power to the backplane bus Power loss. Yp. Power loss. Yp. 24 W Memory Number of slots for SiMATIC memory card 1 SIMATIC memory card required Yes Insultation Yes Work memory • Integrated (for program) 2 Mblyte	General information	
Firmware version Product function • 18M data • Isochronous mode Engineering with • STEP 7 TIA Portal configurable/integrated from version Configuration control via dataset Ves Display Screen diagonal [cm] Control elements Number of keys Acte value (DC) permissible range, upper limit (DC) permissible range, upper limit (DC) permissible range, upper limit (DC) Mains buffering • Mains/voltage failure stored energy time • Repeat rate, min. Input current Current consumption (rated value) Current consumption (rated value) Current consumption (rated value) Current consumption from the backplane bus Power loss Power loss Power loss Power loss Power loss Power loss SIMATIC memory card required V3.0 V3.0 V18 (FWV3.0); V13 Update 3 (FWV1.6) or higher V18 (FWV3.0); V13 Update 3 (FWV1.6) or higher Vall (FWV3.0);	Product type designation	CPU 1517-3 PN/DP
Product function • I&M data • Isochronous mode Engineering with • STEP 7 TIA Portal configurable/integrated from version Configuration control via dataset Pyes Display Screen diagonal [cm] Control elements Number of keys Mode selector switch Supply vortage Rated value (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. Input current Incurrent consumption, max. Input current Infeed power to the backplane bus Power consumption from the backplane bus (balanced) Power loss typ. 24 W Memory Number of slots for SIMATIC memory card 1 SIMATIC memory card required Work memory Number of slots for SIMATIC memory card Yes	HW functional status	FS11
• 18M data • Isochronous mode * Isochronous mode * Resp. Bistributed and central; with minimum OB 6x cycle of 250 µs (distributed) and 1 ms (central) * STEP 7 TIA Portal configurable/integrated from version * Configuration control via dataset Yes Display Screen diagonal [cm] Control elements Number of keys Mode selector switch * Supply voltago Rated value (DC) permissible range, upper 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 (rated value) Current consumption from the backplane bus Power loss, typ. 24 W Memory Number of slots for SIMATIC memory card 1 SIMATIC memory card required Yes	Firmware version	V3.0
• Isochronous mode Engineering with • STEP 7 TIA Portal configurable/integrated from version Configuration control via dataset Yes Display Screen diagonal [cm] Control elements Number of keys Addisolated 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. Insub current, max. Power loss, typ. Power loss, typ. Memory Number of slots for SIMATIC memory card SIMSTIC memory card required Work memory V18 (FWV3.0): V13 Update 3 (FW V1.6) or higher V18 (FWV3.0): V18 (FWV3.0): V18 (FWV3.0): V18 (FWV3.0): V18 (FWV3.0): V18 (FWV3.0	Product function	R G D)
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via dataset Yes Display Screen diagonal [cm] 6.1 cm Control elements Number of keys 6 Mode selector switch 1 Supply voltage Rated value (DC) permissible range, lower limit (DC) 19.2 V permissible range, upper limit (DC) 28.8 V Reverse polarity protection Mains buffering • Mains/voltage failure stored energy time • Repeat rate, min. Input current Current consumption (rated value) 1.55 A Current consumption (rated value) 1.9 A Inrush current, max. 1.9 A Inrush current, max. 1.9 A Inrush current, max. 1.9 A Infleed power to the backplane bus 1.9 A Power consumption from the backplane bus (balanced) 1.9 W Star paytakht Power consumption from the backplane bus (balanced) 1.9 W Star paytakht Power loss Power loss, typ. 24 W Mornorry Mornorry SimATIC memory card required Yes Work memory	STEP 7 TIA Portal configurable/integrated from version	V18 (FW V3.0); V13 Update 3 (FW V1.6) or higher
Display Screen diagonal [cm] 6.1 cm Control elements Number of keys 6 Mode selector switch 1 Supply voltage Rated value (DC) permissible range, lower limit (DC) 19.2 V permissible range, lower limit (DC) 28.8 V Reverse polarity protection Mains buffering • Mains/voltage failure stored energy time 5 ms • Repeat rate, min. Input current Current consumption (rated value) 1.55 A Current consumption, max. 1.9 A Inrush current, max. 1.9 A Inrush current, max. 1.9 A Inrush current, max. 1.9 A Inrush current the backplane bus Power Infeed power to the backplane bus (balanced) Power loss Power loss Power loss typ. 24 W Memory Number of slots for SIMATIC memory card 1 SIMATIC memory card required Yes Work memory	Configuration control	
Screen diagonal [cm] 6.1 cm Control elements Number of keys 6 Mode selector switch 4 Supply voltage Rated value (DC) permissible range, lower limit (DC) 24 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) 1.55 A Current consumption, max. 1.9 A Inrush current, max. 1.9 A Inrush current, max. 1.9 A Inrush current, max. 1.9 A Power Infeed power to the backplane bus (balanced) 30 W Power loss Power loss Power loss, typ. 24 W Memory Number of slots for SIMATIC memory card 1 SIMATIC memory ard required Yes Work memory	via dataset	Yes
Control elements Number of keys Mode selector switch Lipply voltage Rated value (DC) permissible range, lower 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. Inrush current, max. Power Infeed power to the backplane bus Power consumption from the backplane bus (balanced) Power loss Power loss, typ. 24 W Memory Memory Mind State (SimATIC memory card required Yes Work memory Mind State (SimATIC memory card required Yes) Work memory	Display	
Number of keys Mode selector switch Supply voltage Rated value (DC) permissible range, lower 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. Inrush current, max. In y A Inrush current, max. In y A Inrush current, max. In y A In y A, Rated value S D C O A A S S Power loss, typ. Power loss, typ. Memory Number of slots for SIMATIC memory card SIMATIC memory card required Work memory V4 V Yes V4 V Yes Work memory	Screen diagonal [cm]	6.1 cm
Mode selector switch Supply voltage 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. Inrush current, max. Permissible range, lower limit (DC) 1.55 A 1.9 A Power loss Power loss Power loss Power loss, typ. Memory Number of slots for SIMATIC memory card SIMATIC memory card required Yes Work memory	Control elements	** _ *
Rated value (DC) permissible range, lower 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) Inrush current, max. Inrush current, max. Inrush current, max. Infeed power to the backplane bus Power consumption from the backplane bus (balanced) Power loss Power loss Power loss, typ. Memory Number of slots for SIMATIC memory card Insush current gas a standard	Number of keys	6 3 4 4 4
Rated value (DC) permissible range, lower 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. Inrush current, max. Inrush current, max. Interest power to the backplane bus Power consumption from the backplane bus (balanced) Power loss Power loss Power loss, typ. Memory Number of slots for SIMATIC memory card SIMATIC memory card required Work memory	Mode selector switch	4
permissible range, lower 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. Inrush current, max. Irt Power Infeed power to the backplane bus Power consumption from the backplane bus (balanced) Power loss Power loss, typ. 24 W Memory Number of slots for SIMATIC memory card SIMATIC memory card required Work memory 19.2 V 28.8 V Yes Yes Yes Yes Yes Yes Wash Yes Yes Work memory	Supply voltage	
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. Inrush current, max. Inrush current, max. Infeed power to the backplane bus Power consumption from the backplane bus (balanced) Power loss Power loss, typ. 24 W Memory Number of slots for SIMATIC memory card SIMATIC memory card required Work memory Yes Yes Yes Yes	Rated value (DC)	24 V
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. Interest 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 Work memory Waising the stored energy time 5 ms 5 ms 1/s 1 9 A 1 9 A 1 9 A; Rated value S O O O O O O O O O O O O O O O O O O	permissible range, lower limit (DC)	19.2 V
Mains buffering • Mains/voltage failure stored energy time • Repeat rate, min. Input current Current consumption (rated value) Inrush current, max. Inrush current, max. Infeed 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 Work memory Mains/voltage failure stored energy time 5 ms 5 ms 1/s 1.55 A 1.9 A 1.9 A 1.9 A; Rated value SCD. 0.4 A²-s 24 W Memory 1 Yes Work memory	permissible range, upper limit (DC)	28.8 V
Mains/voltage failure stored energy time Repeat rate, min. Input current Current consumption (rated value) Current consumption, max. Inrush current, max. Inrush current, max. Power Infeed power to the backplane bus Power consumption from the backplane bus (balanced) Power loss Power loss, typ. 24 W Memory Number of slots for SIMATIC memory card SIMATIC memory card required Work memory Wind a simulation of the stored and simulation o	Reverse polarity protection	1Yes :150 1150 ::511
• Repeat rate, min. Input current Current consumption (rated value) Current consumption, max. Inrush current, max. Inrush current, max. Infeed 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 Work memory 1/8 1.55 A 1.9 A	Mains buffering	Jorgan Janjan
Current consumption (rated value) Current consumption, max. Inrush current, max. Infeed power to the backplane bus Power consumption from the backplane bus (balanced) Power loss Power loss, typ. Memory Number of slots for SIMATIC memory card SIMATIC memory card required Work memory 1.55 A 1.9 A 1.9 A; Rated value S C C C C C C C C C C C C C C C C C C	 Mains/voltage failure stored energy time 	5 ms
Current consumption (rated value) Current consumption, max. Inrush current, max. Infeed power to the backplane bus Power consumption from the backplane bus (balanced) Power loss Power loss Power loss, typ. 24 W Memory Number of slots for SIMATIC memory card SIMATIC memory card required Work memory 1.55 A 1.9 A 1.9 A; Rated value S C C C C C C C C C C C C C C C C C C	Repeat rate, min.	1/5
Current consumption, max. Inrush current, max. It Infeed power to the backplane bus Power consumption from the backplane bus (balanced) Power loss Power loss, typ. Power loss for SIMATIC memory card SIMATIC memory card required Work memory 1.9 A; Rated value S D C C C C C C C C C C C C C C C C C C	Input current • 1 1	7 17 1 1 1 1
Inrush current, max. It is a series of the backplane bus in the backpla	Current consumption (rated value)	1.55 A
Power Infeed power to the backplane bus Power consumption from the backplane bus (balanced) Power loss Power loss, typ. 24 W Memory Number of slots for SIMATIC memory card SIMATIC memory card required Work memory	Current consumption, max.	1.9 A
Infeed power to the backplane bus Power consumption from the backplane bus (balanced) Power loss Power loss, typ. 24 W Memory Number of slots for SIMATIC memory card SIMATIC memory card required Work memory	Inrush current, max. WWW_Sa7e	1.9 A; Rated value
Infeed power to the backplane bus Power consumption from the backplane bus (balanced) Power loss Power loss, typ. 24 W Memory Number of slots for SIMATIC memory card SIMATIC memory card required Work memory	l²t	0.4 A ² ·s
Power consumption from the backplane bus (balanced) Power loss Power loss, typ. 24 W Memory Number of slots for SIMATIC memory card SIMATIC memory card required Work memory	Power	
Power loss Power loss, typ. 24 W Memory Number of slots for SIMATIC memory card 1 SIMATIC memory card required Yes Work memory	Infeed power to the backplane bus	hi²Wstar pavtakht
Power loss, typ. 24 W Memory Number of slots for SIMATIC memory card 1 SIMATIC memory card required Yes Work memory	Power consumption from the backplane bus (balanced)	30W Land
Memory Number of slots for SIMATIC memory card SIMATIC memory card required Yes Work memory	Power loss	
Number of slots for SIMATIC memory card 1 SIMATIC memory card required Yes Work memory	Power loss, typ.	24 W
SIMATIC memory card required Yes Work memory	Memory	
Work memory	Number of slots for SIMATIC memory card	1
·	SIMATIC memory card required	Yes
• integrated (for program) 2 Mbyte	Work memory	
	• integrated (for program)	2 Mbyte

a integrated (for data)	9 Mbyto
• integrated (for data)	8 Mbyte
Load memory	22 Chida
Plug-in (SIMATIC Memory Card), max.	32 Gbyte
Backup	Van
maintenance-free CRU pressession times	Yes
CPU processing times	0.75
for bit operations, typ.	2 ns
for word operations, typ.	3 ns
for fixed point arithmetic, typ.	3 ns
for floating point arithmetic, typ. CPU-blocks	12 ns
	40 000 Plate (OD ED EO DD) and HDT
Number of elements (total)	12 000; Blocks (OB, FB, FC, DB) and UDTs
DB	4 CO COO and distributions are that are he would be the warm 4
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.	8 Mbyte; For DBs with absolute addressing, the max. size is 64 KB
FB	
Number range	0 65 535
• Size, max.	1 Mbyte
FC	
Number range	0 65 535
• Size, max.	1 Mbyte
ОВ	
• Size, max.	1 Mbyte
Number of free cycle OBs	100
Number of time alarm OBs	S20 G P
Number of delay alarm OBs	20
Number of cyclic interrupt OBs	20; with minimum OB 3x cycle of 100 μs
Number of process alarm OBs	50
Number of DPV1 alarm OBs	3
Number of isochronous mode OBs	3
 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. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1
Nesting depth	
per priority class	24
Counters, timers and their retentivity	1
S7 counter	نامب، کننده ملز
• Number	2 048
Retentivity	
— ایزار دقیق — adjustable	الكتريكال – مكاني&ال
IEC counter	
Number	Any (only limited by the main memory)
Retentivity	
— adjustable	Yes
S7 times	
• Number	2 048
Retentivity WWW.Sazer	
— adjustable	Yes
IEC timer	
	Any (only limited by the main memory)
Retentivity	
— adjustable	Yes
Data areas and their retentivity	
Retentive data area (incl. timers, counters, flags), max.	768 kbyte; In total; available retentive memory for bit memories, timers,
Extended retentive data area (incl. times-	counters, DBs, and technology data (axes): 700 KB
Extended retentive data area (incl. timers, counters, flags), max.	8 Mbyte; When using PS 6 0W 24/48/60 V DC HF
Flag	16 khyte
• Size, max.	16 kbyte

Number of clock memories	8; 8 clock memory bit, grouped into one clock memory byte
Data blocks	o, o dook memory bit, grouped into one clock memory byte
Retentivity adjustable	Yes
Retentivity adjustable Retentivity preset	No
Local data	
per priority class, max.	64 kbyte; max. 16 KB per block
Address area	of Royte, max. To No per blook
Number of IO modules	16 384; max. number of modules / submodules
I/O address area	10 004, max. number of modules / submodules
• Inputs	32 kbyte; All inputs are in the process image
• Outputs	32 kbyte; All outputs are in the process image
per integrated IO subsystem	Sample, American Manapassa mage
— Inputs (volume)	32 kbyte; Max. 32 KB via X1; max. 8 KB via X2 or X3
— Outputs (volume)	32 kbyte; Max. 32 KB via X1; max. 8 KB via X2 or X3
per CM/CP	
— Inputs (volume)	8 kbyte
— Outputs (volume)	8 kbyte
Subprocess images	2 4
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	
• integrated	1
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	the number of course that DCD CM 14 at 11
Number of PtP CMs	the number of connectable PtP CMs is only limited by the number of available slots
Time of day	
7 · · · · · · · · · · · · · · · · · · ·	
Clock	
• Type	Hardware clock
◆ Type ◆ Backup time	6 wk; At 40 °C ambient temperature, typically
• Type • Backup time • Deviation per day, max.	
 Type Backup time Deviation per day, max. Operating hours counter	6 wk; At 40 °C ambient temperature, typically 10 s; Typ.: 2 s
 Type Backup time Deviation per day, max. Operating hours counter Number 	6 wk; At 40 °C ambient temperature, typically
Type Backup time Deviation per day, max. Operating hours counter Number Clock synchronization	6 wk; At 40 °C ambient temperature, typically 10 s; Typ.: 2 s
Type Backup time Deviation per day, max. Operating hours counter Number Clock synchronization supported	6 wk; At 40 °C ambient temperature, typically 10 s; Typ.: 2 s 16 Yes
Type Backup time Deviation per day, max. Operating hours counter Number Clock synchronization supported to DP, master	6 wk; At 40 °C ambient temperature, typically 10 s; Typ.: 2 s 16 Yes
Type Backup time Deviation per day, max. Operating hours counter Number Clock synchronization supported to DP, master in AS, master	6 wk; At 40 °C ambient temperature, typically 10 s; Typ.: 2 s 16 Yes Yes Yes Yes
Type Backup time Deviation per day, max. Operating hours counter Number Clock synchronization supported to DP, master in AS, master in AS, slave	6 wk; At 40 °C ambient temperature, typically 10 s; Typ.: 2 s Yes Yes Yes Yes Yes
Type Backup time Deviation per day, max. Operating hours counter Number Clock synchronization supported to DP, master in AS, master in AS, slave on Ethernet via NTP	6 wk; At 40 °C ambient temperature, typically 10 s; Typ.: 2 s 16 Yes Yes Yes Yes
Type Backup time Deviation per day, max. Operating hours counter Number Clock synchronization supported to DP, master in AS, master in AS, slave on Ethernet via NTP	6 wk; At 40 °C ambient temperature, typically 10 s; Typ.: 2 s 16
Type Backup time Deviation per day, max. Operating hours counter Number Clock synchronization supported to DP, master in AS, master in AS, slave on Ethernet via NTP Interfaces Number of PROFINET interfaces	6 wk; At 40 °C ambient temperature, typically 10 s; Typ.: 2 s 16 Yes Yes Yes Yes Yes Yes Yes Ye
Type Backup time Deviation per day, max. Operating hours counter Number Clock synchronization supported to DP, master in AS, master in AS, slave on Ethernet via NTP Interfaces Number of PROFIBUS interfaces	6 wk; At 40 °C ambient temperature, typically 10 s; Typ.: 2 s 16
Type Backup time Deviation per day, max. Operating hours counter Number Clock synchronization supported to DP, master in AS, master in AS, slave on Ethernet via NTP Interfaces Number of PROFIBUS interfaces Number of PROFIBUS interfaces 1. Interface	6 wk; At 40 °C ambient temperature, typically 10 s; Typ.: 2 s 16 Yes Yes Yes Yes Yes Yes Yes Ye
Type Backup time Deviation per day, max. Operating hours counter Number Clock synchronization supported to DP, master in AS, master in AS, slave on Ethernet via NTP Interfaces Number of PROFIBUS interfaces I. Interface Interface types	6 wk; At 40 °C ambient temperature, typically 10 s; Typ.: 2 s Yes Yes Yes Yes Yes Yes 10 5 6 8 8 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9
Type Backup time Deviation per day, max. Operating hours counter Number Clock synchronization supported to DP, master in AS, master in AS, slave on Ethernet via NTP Interfaces Number of PROFIBUS interfaces I. Interface Interface types RJ 45 (Ethernet)	6 wk; At 40 °C ambient temperature, typically 10 s; Typ.: 2 s Yes Yes Yes Yes Yes Yes Yes Yes Yes Y
Type Backup time Deviation per day, max. Operating hours counter Number Clock synchronization supported to DP, master in AS, master in AS, slave on Ethernet via NTP Interfaces Number of PROFINET interfaces Number of PROFIBUS interfaces I. Interface Interface types RJ 45 (Ethernet) Number of ports	6 wk; At 40 °C ambient temperature, typically 10 s; Typ.: 2 s Yes Yes Yes Yes Yes Yes Yes Yes Yes Y
Type Backup time Deviation per day, max. Operating hours counter Number Clock synchronization supported to DP, master in AS, master in AS, slave on Ethernet via NTP Interfaces Number of PROFIBUS interfaces Number of PROFIBUS interfaces 1. Interface types RJ 45 (Ethernet) Number of ports integrated switch	6 wk; At 40 °C ambient temperature, typically 10 s; Typ.: 2 s Yes Yes Yes Yes Yes Yes Yes Yes Yes Y
Type Backup time Deviation per day, max. Operating hours counter Number Clock synchronization supported to DP, master in AS, master in AS, slave on Ethernet via NTP Interfaces Number of PROFIBUS interfaces Number of PROFIBUS interfaces Interface types RJ 45 (Ethernet) Number of ports integrated switch Protocols	6 wk; At 40 °C ambient temperature, typically 10 s; Typ.: 2 s 16
Type Backup time Deviation per day, max. Operating hours counter Number Clock synchronization supported to DP, master in AS, master in AS, slave on Ethernet via NTP Interfaces Number of PROFIBUS interfaces Number of PROFIBUS interfaces Interface types RJ 45 (Ethernet) Number of ports integrated switch Protocols IP protocol	6 wk; At 40 °C ambient temperature, typically 10 s; Typ.: 2 s Yes Yes Yes Yes Yes Yes Yes Yes Yes Y
Type Backup time Deviation per day, max. Operating hours counter Number Clock synchronization supported to DP, master in AS, master in AS, slave on Ethernet via NTP Interfaces Number of PROFIBUS interfaces Number of PROFIBUS interfaces Interface types RJ 45 (Ethernet) Number of ports integrated switch Protocols	6 wk; At 40 °C ambient temperature, typically 10 s; Typ.: 2 s 16

• SIMATIC communication Yes • Open IE communication Yes; Optionally also encrypted Web server Yes 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 Yes; Max. 32 PROFINET devices - Prioritized startup Number of connectable IO Devices, max. 512; In total, up to 1 000 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. 512 - of which in line, max. — Number of IO Devices that can be simultaneously 8; in total across all interfaces activated/deactivated, max. - Number of IO Devices per tool, max. 8 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 - Updating times configured user data Update time for IRT — for send cycle of 250 µs 250 µs to 4 ms — for send cycle of 500 µs 500 µs to 8 ms - for send cycle of 1 ms 1 ms to 16 ms 2 ms to 32 ms - for send cycle of 2 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 μs: 375 μs, 625 μs ... 3 875 µs) Update time for RT — for send cycle of 250 µs 250 µs to 128 ms 500 μs to 256 ms — for send cycle of 500 µs - 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 No - Isochronous mode - IRT — PROFlenergy Yes; per user program - Shared device Yes - Number of IO Controllers with shared device, max. activation/deactivation of I-devices Yes; per user program - Asset management record Yes; per user program Interface types Yes; X2 • RJ 45 (Ethernet) Number of ports integrated switch Protocols Yes; IPv4 • IP protocol • 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

	· · · · · · · · · · · · · · · · · · ·
— PG/OP communication	Yes
— Isochronous mode	No
Direct data exchange	No
— IRT	No
— PROFlenergy	Yes; per user program
 Prioritized startup 	No
 Number of connectable IO Devices, max. 	128; In total, up to 1 000 distributed I/O devices can be connected via AS-i, PROFIBUS or PROFINET
 Number of connectable IO Devices for RT, max. 	128
— of which in line, max.	128
 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
Update time for RT	
— for send cycle of 1 ms	1 ms to 512 ms
PROFINET IO Device	
Services	- · · ·
— PG/OP communication	Yes
— Isochronous mode	No
— IRT	No
— PROFlenergy	Yes; per user program
— Prioritized startup	No.
— Shared device	Yes
Number of IO Controllers with shared device, max.	S4 G D
— activation/deactivation of I-devices	Yes; per user program
Asset management record	Yes; per user program
3. Interface	100, por door program
Interface types	
• RS 485	Yes; X3
Number of ports	1
Protocols	'
PROFIBUS DP master	Yes
PROFIBUS DP slave	No .
SIMATIC communication (Yes
PROFIBUS DP master	5 5 W
The iboo by made	
Number of connections max	48: for the integrated PROFIBLIS DP interface
Number of DP slaves, max.	48; for the integrated PROFIBUS DP interface
 Number of connections, max. Number of DP slaves, max. 	48; for the integrated PROFIBUS DP interface 125; In total, up to 1 000 distributed I/O devices can be connected via AS-i, PROFIBUS or PROFINET
	125; In total, up to 1 000 distributed I/O devices can be connected via AS-i,
Number of DP slaves, max.	125; In total, up to 1 000 distributed I/O devices can be connected via AS-i,
• Number of DP slaves, max. Services	125; In total, up to 1 000 distributed I/O devices can be connected via AS-i, PROFIBUS or PROFINET Yes
Number of DP slaves, max. Services — PG/OP communication	125; In total, up to 1 000 distributed I/O devices can be connected via AS-i, PROFIBUS or PROFINET Yes
Number of DP slaves, max. Services — PG/OP communication — Equidistance	125; In total, up to 1 000 distributed I/O devices can be connected via AS-i, PROFIBUS or PROFINET Yes Yes
• Number of DP slaves, max. Services — PG/OP communication — Equidistance — Isochronous mode	125; In total, up to 1 000 distributed I/O devices can be connected via AS-i, PROFIBUS or PROFINET Yes Yes Yes
• Number of DP slaves, max. Services — PG/OP communication — Equidistance — Isochronous mode — Activation/deactivation of DP slaves	125; In total, up to 1 000 distributed I/O devices can be connected via AS-i, PROFIBUS or PROFINET Yes Yes Yes
• Number of DP slaves, max. Services — PG/OP communication — Equidistance — Isochronous mode — Activation/deactivation of DP slaves Interface types	125; In total, up to 1 000 distributed I/O devices can be connected via AS-i, PROFIBUS or PROFINET Yes Yes Yes
Number of DP slaves, max. Services — PG/OP communication — Equidistance — Isochronous mode — Activation/deactivation of DP slaves Interface types RJ 45 (Ethernet) • 100 Mbps	125; In total, up to 1 000 distributed I/O devices can be connected via AS-i, PROFIBUS or PROFINET Yes Yes Yes Yes
Number of DP slaves, max. Services — PG/OP communication — Equidistance — Isochronous mode — Activation/deactivation of DP slaves Interface types RJ 45 (Ethernet) • 100 Mbps • Autonegotiation	125; In total, up to 1 000 distributed I/O devices can be connected via AS-i, PROFIBUS or PROFINET Yes Yes Yes Yes Yes Yes
Number of DP slaves, max. Services — PG/OP communication — Equidistance — Isochronous mode — Activation/deactivation of DP slaves Interface types RJ 45 (Ethernet) • 100 Mbps	125; In total, up to 1 000 distributed I/O devices can be connected via AS-i, PROFIBUS or PROFINET Yes Yes Yes Yes
Number of DP slaves, max. Services — PG/OP communication — Equidistance — Isochronous mode — Activation/deactivation of DP slaves Interface types RJ 45 (Ethernet) • 100 Mbps • Autonegotiation • Autocrossing WWW.Saze	125; In total, up to 1 000 distributed I/O devices can be connected via AS-i, PROFIBUS or PROFINET Yes Yes Yes Yes Yes Yes Yes Yes Yes Ye
Number of DP slaves, max. Services — PG/OP communication — Equidistance — Isochronous mode — Activation/deactivation of DP slaves Interface types RJ 45 (Ethernet) • 100 Mbps • Autonegotiation • Autocrossing • Industrial Ethernet status LED RS 485	Yes
Number of DP slaves, max. Services — PG/OP communication — Equidistance — Isochronous mode — Activation/deactivation of DP slaves Interface types RJ 45 (Ethernet) • 100 Mbps • Autonegotiation • Autocrossing • Industrial Ethernet status LED RS 485 • Transmission rate, max.	Yes
Number of DP slaves, max. Services — PG/OP communication — Equidistance — Isochronous mode — Activation/deactivation of DP slaves Interface types RJ 45 (Ethernet) • 100 Mbps • Autonegotiation • Autocrossing • Industrial Ethernet status LED RS 485 • Transmission rate, max. Protocols	125; In total, up to 1 000 distributed I/O devices can be connected via AS-i, PROFIBUS or PROFINET Yes Yes Yes Yes Yes Yes Yes Yes Yes Ye
Number of DP slaves, max. Services — PG/OP communication — Equidistance — Isochronous mode — Activation/deactivation of DP slaves Interface types RJ 45 (Ethernet) • 100 Mbps • Autonegotiation • Autocrossing • Industrial Ethernet status LED RS 485 • Transmission rate, max. Protocols PROFIsafe	Yes
Number of DP slaves, max. Services — PG/OP communication — Equidistance — Isochronous mode — Activation/deactivation of DP slaves Interface types RJ 45 (Ethernet) • 100 Mbps • Autonegotiation • Autocrossing • Industrial Ethernet status LED RS 485 • Transmission rate, max. Protocols PROFIsafe Number of connections	125; In total, up to 1 000 distributed I/O devices can be connected via AS-i, PROFIBUS or PROFINET Yes Yes Yes Yes Yes Yes Yes Yes Yes Ye
Number of DP slaves, max. Services — PG/OP communication — Equidistance — Isochronous mode — Activation/deactivation of DP slaves Interface types RJ 45 (Ethernet) • 100 Mbps • Autonegotiation • Autocrossing • Industrial Ethernet status LED RS 485 • Transmission rate, max. Protocols PROFIsafe Number of connections • Number of connections, max.	125; In total, up to 1 000 distributed I/O devices can be connected via AS-i, PROFIBUS or PROFINET Yes Yes Yes Yes Yes Yes Yes Yes Yes Ye
Number of DP slaves, max. Services — PG/OP communication — Equidistance — Isochronous mode — Activation/deactivation of DP slaves Interface types RJ 45 (Ethernet) • 100 Mbps • Autonegotiation • Autocrossing • Industrial Ethernet status LED RS 485 • Transmission rate, max. Protocols PROFIsafe Number of connections • Number of connections, max. • Number of connections reserved for ES/HMI/web	Yes
Number of DP slaves, max. Services — PG/OP communication — Equidistance — Isochronous mode — Activation/deactivation of DP slaves Interface types RJ 45 (Ethernet) • 100 Mbps • Autonegotiation • Autocrossing • Industrial Ethernet status LED RS 485 • Transmission rate, max. Protocols PROFIsafe Number of connections • Number of connections, max. • Number of connections reserved for ES/HMI/web • Number of connections via integrated interfaces	Yes
Number of DP slaves, max. Services — PG/OP communication — Equidistance — Isochronous mode — Activation/deactivation of DP slaves Interface types RJ 45 (Ethernet) • 100 Mbps • Autonegotiation • Autocrossing • Industrial Ethernet status LED RS 485 • Transmission rate, max. Protocols PROFIsafe Number of connections • Number of connections, max. • Number of connections reserved for ES/HMI/web	Yes

■ H->VDC TODWSTOUNG	Yes
H-Sync forwarding Media redundancy	165
•	only via 1et interface (Y1)
— Media redundancy — MRP	only via 1st interface (X1) 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
Data record routing	Yes
S7 communication, as server	Yes
S7 communication, as client User data per ich, may	Yes
User data per job, max. Open IE communication	See online help (S7 communication, user data size)
• 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; 128 multicast circuits (of which max. 5 via X1)
• DHCP	SYes D
• DNS	Yes
• SNMP	Yes
• DCP	Yes
• LLDP	Yes
Encryption	Yes; Optional
Web server	
• HTTP	Yes; Standard and user pages
• HTTPS	Yes; Standard and user pages
• HTTPS OPC UA	= .1
OPC UA • Runtime license required	Yes; "Large" license required
OPC UA • Runtime license required • OPC UA Client	Yes; "Large" license required Yes; Data Access (registered Read/Write), Method Call
OPC UA Runtime license required OPC UA Client Application authentication	Yes; "Large" license required Yes; Data Access (registered Read/Write), Method Call Yes
OPC UA • Runtime license required • OPC UA Client	Yes; "Large" license required Yes; Data Access (registered Read/Write), Method Call Yes Available security policies: None, Basic128Rsa15, Basic256Rsa15,
OPC UA Runtime license required OPC UA Client Application authentication	Yes; "Large" license required Yes; Data Access (registered Read/Write), Method Call Yes Available security policies: None, Basic128Rsa15, Basic256Rsa15, Basic256Sha256
Runtime license required OPC UA Client — Application authentication — Security policies — User authentication	Yes; "Large" license required Yes; Data Access (registered Read/Write), Method Call Yes Available security policies: None, Basic128Rsa15, Basic256Rsa15,
Runtime license required OPC UA Client — Application authentication — Security policies — User authentication — Number of connections, max. — Number of nodes of the client interfaces,	Yes; "Large" license required Yes; Data Access (registered Read/Write), Method Call Yes Available security policies: None, Basic128Rsa15, Basic256Rsa15, Basic256Sha256 "anonymous" or by user name & password 40
Runtime license required OPC UA Client — Application authentication — Security policies — User authentication — Number of connections, max. — Number of nodes of the client interfaces, recommended max.	Yes; "Large" license required Yes; Data Access (registered Read/Write), Method Call Yes Available security policies: None, Basic128Rsa15, Basic256Rsa15, Basic256Sha256 "anonymous" or by user name & password 40 5 000
Runtime license required OPC UA Client — Application authentication — 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	Yes; "Large" license required Yes; Data Access (registered Read/Write), Method Call Yes Available security policies: None, Basic128Rsa15, Basic256Rsa15, Basic256Sha256 "anonymous" or by user name & password 40 5 000 300
Runtime license required OPC UA Client — Application authentication — 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_max.	Yes; "Large" license required Yes; Data Access (registered Read/Write), Method Call Yes Available security policies: None, Basic128Rsa15, Basic256Rsa15, Basic256Sha256 "anonymous" or by user name & password 40 5 000 300
Runtime license required OPC UA Client — Application authentication — 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	Yes; "Large" license required Yes; Data Access (registered Read/Write), Method Call Yes Available security policies: None, Basic128Rsa15, Basic256Rsa15, Basic256Sha256 "anonymous" or by user name & password 40 5 000 300
Runtime license required OPC UA Client — Application authentication — 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_max. — Number of elements for one call of OPC_UA_NameSpaceGetIndexList, max. — Number of elements for one call of	Yes; "Large" license required Yes; Data Access (registered Read/Write), Method Call Yes Available security policies: None, Basic128Rsa15, Basic256Rsa15, Basic256Sha256 "anonymous" or by user name & password 40 5 000 300
Runtime license required OPC UA Client — Application authentication — 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_max. — Number of elements for one call of OPC_UA_NameSpaceGetIndexList, max.	Yes; "Large" license required Yes; Data Access (registered Read/Write), Method Call Yes Available security policies: None, Basic128Rsa15, Basic256Rsa15, Basic256Sha256 "anonymous" or by user name & password 40 5 000 300
Runtime license required OPC UA Client — Application authentication — 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_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 and	Yes; "Large" license required Yes; Data Access (registered Read/Write), Method Call Yes Available security policies: None, Basic128Rsa15, Basic256Rsa15, Basic256Sha256 "anonymous" or by user name & password 40 5 000 300 20 100 10 OSTATSOP.COM
Runtime license required OPC UA Client — Application authentication — 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_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.	Yes; "Large" license required Yes; Data Access (registered Read/Write), Method Call Yes Available security policies: None, Basic128Rsa15, Basic256Rsa15, Basic256Sha256 "anonymous" or by user name & password 40 5 000 300 20 100
Runtime license required OPC UA Client — Application authentication — 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_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.	Yes; "Large" license required Yes; Data Access (registered Read/Write), Method Call Yes Available security policies: None, Basic128Rsa15, Basic256Rsa15, Basic256Sha256 "anonymous" or by user name & password 40 5 000
Runtime license required OPC UA Client — Application authentication — 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_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.	Yes; "Large" license required Yes; Data Access (registered Read/Write), Method Call Yes Available security policies: None, Basic128Rsa15, Basic256Rsa15, Basic256Sha256 "anonymous" or by user name & password 40 5 000 20 100 100 100 100 100 100 100 100 1
Runtime license required OPC UA Client — Application authentication — 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_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	Yes; "Large" license required Yes; Data Access (registered Read/Write), Method Call Yes Available security policies: None, Basic128Rsa15, Basic256Rsa15, Basic256Sha256 "anonymous" or by user name & password 40 5 000
 Runtime license required OPC UA Client — Application authentication — 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_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 OPC_UA_MethodCall, max. 	Yes; "Large" license required Yes; Data Access (registered Read/Write), Method Call Yes Available security policies: None, Basic128Rsa15, Basic256Rsa15, Basic256Sha256 "anonymous" or by user name & password 40 5 000 100 100 100 100 20
Runtime license required OPC UA Client — Application authentication — 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_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	Yes; "Large" license required Yes; Data Access (registered Read/Write), Method Call Yes Available security policies: None, Basic128Rsa15, Basic256Rsa15, Basic256Sha256 "anonymous" or by user name & password 40 5 000
 Runtime license required OPC UA Client — Application authentication — 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_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 OPC_UA_MethodCall, max. 	Yes; "Large" license required Yes; Data Access (registered Read/Write), Method Call Yes Available security policies: None, Basic128Rsa15, Basic256Rsa15, Basic256Sha256 "anonymous" or by user name & password 40 5 000 100 100 100 100 20 Yes; Data Access (Read, Write, Subscribe), Method Call, Alarms & Condition

	DesignECChanEC Academic Section Association Designed Association Designed D
Lloor outhor-licetics	Basic256Sha256, Aes128Sha256RsaOaep, Aes256Sha256RsaPss
User authentication CDS support (cortificate management)	"anonymous" or by user name & password
— GDS support (certificate management) — Number of sessions. max.	Yes 64
Number of sessions, max. Number of accessible variables, max.	200 000
•	50 000
— Number of registerable nodes, max.— Number of subscriptions per session, max.	50 000
Number of subscriptions per session, max. Sampling interval, min.	10 ms
— Sampling Interval, min. — Publishing interval, min.	10 ms
— Publishing linerval, min. — Number of server methods, max.	100
Number of inputs/outputs per server method, max.	20
Number of impuls/outputs per server method, max. Number of monitored items, recommended max.	10 000; for 1 s sampling interval and 1 s send interval
Number of server interfaces, max.	10 of each "Server interfaces" / "Companion specification" type and 20 of the
	type "Reference namespace"
 Number of nodes for user-defined server interfaces, max. 	30 000
Alarms and Conditions	Yes
— Number of program alarms	400
Number of alarms for system diagnostics	200
Further protocols	Var MODDUO TOD
• MODBUS	Yes; MODBUS TCP
Isochronous mode	Ver
Equidistance	Yes
S7 message functions	64
Number of login stations for message functions, max.	64
Program alarms Number of configurable program messages may	10 000° Program meetages are generated by the "Program Alarm" block
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.	5 000
Number of simultaneously active program alarms	
Number of program alarms	2 000
- Number of clarms for system diagraphic	
 Number of alarms for system diagnostics 	1000
Number of alarms for motion technology objects	480
Number of alarms for motion technology objects Test commissioning functions	480
Number of alarms for motion technology objects Test commissioning functions Joint commission (Team Engineering)	Yes; Parallel online access possible for up to 10 engineering systems
Number of alarms for motion technology objects Test commissioning functions Joint commission (Team Engineering) Status block	Yes; Parallel online access possible for up to 10 engineering systems Yes; Up to 16 simultaneously (in total across all ES clients)
Number of alarms for motion technology objects Test commissioning functions Joint commission (Team Engineering) Status block Single step	Yes; Parallel online access possible for up to 10 engineering systems Yes; Up to 16 simultaneously (in total across all ES clients) No
Number of alarms for motion technology objects Test commissioning functions Joint commission (Team Engineering) Status block Single step Number of breakpoints	Yes; Parallel online access possible for up to 10 engineering systems Yes; Up to 16 simultaneously (in total across all ES clients)
Number of alarms for motion technology objects Test commissioning functions Joint commission (Team Engineering) Status block Single step Number of breakpoints Status/control	Yes; Parallel online access possible for up to 10 engineering systems Yes; Up to 16 simultaneously (in total across all ES clients) No
Number of alarms for motion technology objects Test commissioning functions Joint commission (Team Engineering) Status block Single step Number of breakpoints Status/control Status/control variable	Yes; Parallel online access possible for up to 10 engineering systems Yes; Up to 16 simultaneously (in total across all ES clients) No 20 Yes
Number of alarms for motion technology objects Test commissioning functions Joint commission (Team Engineering) Status block Single step Number of breakpoints Status/control Status/control Variables	Yes; Parallel online access possible for up to 10 engineering systems Yes; Up to 16 simultaneously (in total across all ES clients) No
Number of alarms for motion technology objects Test commissioning functions Joint commission (Team Engineering) Status block Single step Number of breakpoints Status/control Status/control Status/control variable Variables Number of variables, max.	Yes; Parallel online access possible for up to 10 engineering systems Yes; Up to 16 simultaneously (in total across all ES clients) No 20 Yes Inputs/outputs, memory bits, DBs, distributed I/Os, timers, counters
Number of alarms for motion technology objects Test commissioning functions Joint commission (Team Engineering) Status block Single step Number of breakpoints Status/control Status/control Status/control variable Variables Number of variables, max. — of which status variables, max.	Yes; Parallel online access possible for up to 10 engineering systems Yes; Up to 16 simultaneously (in total across all ES clients) No 20 Yes Inputs/outputs, memory bits, DBs, distributed I/Os, timers, counters
Number of alarms for motion technology objects Test commissioning functions Joint commission (Team Engineering) Status block Single step Number of breakpoints Status/control Status/control variable Variables Number of variables, max. — of which status variables, max. — of which control variables, max.	Yes; Parallel online access possible for up to 10 engineering systems Yes; Up to 16 simultaneously (in total across all ES clients) No 20 Yes Inputs/outputs, memory bits, DBs, distributed I/Os, timers, counters
Number of alarms for motion technology objects Test commissioning functions Joint commission (Team Engineering) Status block Single step Number of breakpoints Status/control Status/control Status/control variable Variables Number of variables, max. — of which status variables, max. — of which control variables, max. Forcing	Yes; Parallel online access possible for up to 10 engineering systems Yes; Up to 16 simultaneously (in total across all ES clients) No 20 Yes Inputs/outputs, memory bits, DBs, distributed I/Os, timers, counters
Number of alarms for motion technology objects Test commissioning functions Joint commission (Team Engineering) Status block Single step Number of breakpoints Status/control Status/control variable Variables Number of variables, max. — of which status variables, max. — of which control variables, max.	Yes; Parallel online access possible for up to 10 engineering systems Yes; Up to 16 simultaneously (in total across all ES clients) No 20 Yes Inputs/outputs, memory bits, DBs, distributed I/Os, timers, counters 200; per job 200; per job
Number of alarms for motion technology objects Test commissioning functions Joint commission (Team Engineering) Status block Single step Number of breakpoints Status/control Status/control Status/control variable Variables Number of variables, max. — of which status variables, max. — of which control variables, max. Forcing Forcing	Yes; Parallel online access possible for up to 10 engineering systems Yes; Up to 16 simultaneously (in total across all ES clients) No 20 Yes Inputs/outputs, memory bits, DBs, distributed I/Os, timers, counters 200; per job 200; per job
Number of alarms for motion technology objects Test commissioning functions Joint commission (Team Engineering) Status block Single step Number of breakpoints Status/control Status/control Status/control variable Variables Number of variables, max. — of which status variables, max. — of which control variables, max. Forcing Forcing Forcing Forcing, variables	Yes; Parallel online access possible for up to 10 engineering systems Yes; Up to 16 simultaneously (in total across all ES clients) No 20 Yes Inputs/outputs, memory bits, DBs, distributed I/Os, timers, counters 200; per job 200; per job Yes Peripheral inputs/outputs
Number of alarms for motion technology objects Test commissioning functions Joint commission (Team Engineering) Status block Single step Number of breakpoints Status/control Status/control variable Variables Number of variables, max. of which status variables, max. of which control variables, max. Forcing	Yes; Parallel online access possible for up to 10 engineering systems Yes; Up to 16 simultaneously (in total across all ES clients) No 20 Yes Inputs/outputs, memory bits, DBs, distributed I/Os, timers, counters 200; per job 200; per job Yes Peripheral inputs/outputs 200
Number of alarms for motion technology objects Test commissioning functions Joint commission (Team Engineering) Status block Single step Number of breakpoints Status/control Status/control variable Variables Number of variables, max. — of which status variables, max. — of which control variables, max. Forcing Forcing Forcing Forcing, variables Number of variables, max. Diagnostic buffer	Yes; Parallel online access possible for up to 10 engineering systems Yes; Up to 16 simultaneously (in total across all ES clients) No 20 Yes Inputs/outputs, memory bits, DBs, distributed I/Os, timers, counters 200; per job 200; per job Yes Peripheral inputs/outputs 200
Number of alarms for motion technology objects Test commissioning functions Joint commission (Team Engineering) Status block Single step Number of breakpoints Status/control Status/control Status/control variable Variables Number of variables, max. — of which status variables, max. — of which control variables, max. Forcing Forcing	Yes; Parallel online access possible for up to 10 engineering systems Yes; Up to 16 simultaneously (in total across all ES clients) No 20 Yes Inputs/outputs, memory bits, DBs, distributed I/Os, timers, counters 200; per job 200; per job Yes Peripheral inputs/outputs 200 Yes
Number of alarms for motion technology objects Test commissioning functions Joint commission (Team Engineering) Status block Single step Number of breakpoints Status/control Status/control variable Variables Number of variables, max. of which status variables, max. of which control variables, max. Forcing Forcing Forcing Forcing Forcing, variables Number of variables, max. Diagnostic buffer present Number of entries, max. of which powerfail-proof Traces	Yes; Parallel online access possible for up to 10 engineering systems Yes; Up to 16 simultaneously (in total across all ES clients) No 20 Yes Inputs/outputs, memory bits, DBs, distributed I/Os, timers, counters 200; per job 200; per job Yes Peripheral inputs/outputs 200 Yes 200
Number of alarms for motion technology objects Test commissioning functions Joint commission (Team Engineering) Status block Single step Number of breakpoints Status/control Status/control variable Variables Number of variables, max. of which status variables, max. of which control variables, max. Forcing Forcing Forcing Forcing Forcing, variables Number of variables, max. Diagnostic buffer present Number of entries, max. of which powerfail-proof	Yes; Parallel online access possible for up to 10 engineering systems Yes; Up to 16 simultaneously (in total across all ES clients) No 20 Yes Inputs/outputs, memory bits, DBs, distributed I/Os, timers, counters 200; per job 200; per job Yes Peripheral inputs/outputs 200 Yes 200
Number of alarms for motion technology objects Test commissioning functions Joint commission (Team Engineering) Status block Single step Number of breakpoints Status/control Status/control variable Variables Number of variables, max. of which status variables, max. of which control variables, max. Forcing Forcing Forcing Forcing, variables Number of variables, max. Diagnostic buffer present Number of entries, max. of which powerfail-proof Traces	Yes; Parallel online access possible for up to 10 engineering systems Yes; Up to 16 simultaneously (in total across all ES clients) No 20 Yes Inputs/outputs, memory bits, DBs, distributed I/Os, timers, counters 200; per job 200; per job Yes Peripheral inputs/outputs 200 Yes 3200 1 000
Number of alarms for motion technology objects Test commissioning functions Joint commission (Team Engineering) Status block Single step Number of breakpoints Status/control Status/control variable Variables Number of variables, max. — of which status variables, max. — of which control variables, max. Forcing Forcing Forcing, variables Number of variables, max. Diagnostic buffer present Number of entries, max. — of which powerfail-proof Traces Number of configurable Traces	Yes; Parallel online access possible for up to 10 engineering systems Yes; Up to 16 simultaneously (in total across all ES clients) No 20 Yes Inputs/outputs, memory bits, DBs, distributed I/Os, timers, counters 200; per job 200; per job Yes Peripheral inputs/outputs 200 Yes 3200 1 000
Number of alarms for motion technology objects Test commissioning functions Joint commission (Team Engineering) Status block Single step Number of breakpoints Status/control Status/control Status/control variable Variables Number of variables, max. of which status variables, max. of which control variables, max. Forcing Forcing Forcing Forcing, variables Number of variables, max. Diagnostic buffer present Number of entries, max. of which powerfail-proof Traces Number of configurable Traces Interrupts/diagnostics/status information	Yes; Parallel online access possible for up to 10 engineering systems Yes; Up to 16 simultaneously (in total across all ES clients) No 20 Yes Inputs/outputs, memory bits, DBs, distributed I/Os, timers, counters 200; per job 200; per job Yes Peripheral inputs/outputs 200 Yes 3200 1 000
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Number of alarms for motion technology objects Test commissioning functions Joint commission (Team Engineering) Status block Single step Number of breakpoints Status/control Status/control variable Variables Number of variables, max. of which status variables, max. of which control variables, max. Forcing Forcing Forcing Forcing, variables Number of variables, max. Diagnostic buffer present Number of entries, max. of which powerfail-proof Traces Number of configurable Traces Interrupts/diagnostics/status information Diagnostics indication LED RUN/STOP LED	Yes; Parallel online access possible for up to 10 engineering systems Yes; Up to 16 simultaneously (in total across all ES clients) No 20 Yes Inputs/outputs, memory bits, DBs, distributed I/Os, timers, counters 200; per job 200; per job Yes Peripheral inputs/outputs 200 Yes 3 200 1 000 8. Up to 512 KB of data per trace are possible
Number of alarms for motion technology objects Test commissioning functions Joint commission (Team Engineering) Status block Single step Number of breakpoints Status/control Status/control variable Variables Number of variables, max. of which status variables, max. of which control variables, max. Forcing Forcing Forcing Forcing, variables Number of variables, max. Diagnostic buffer present Number of entries, max. of which powerfail-proof Traces Number of configurable Traces Interrupts/diagnostics/status information Diagnostics indication LED RUN/STOP LED ERROR LED	Yes; Parallel online access possible for up to 10 engineering systems Yes; Up to 16 simultaneously (in total across all ES clients) No 20 Yes Inputs/outputs, memory bits, DBs, distributed I/Os, timers, counters 200; per job 200; per job 200; per job Yes Peripheral inputs/outputs 200 Yes 3 200 1 000 8; Up to 512 KB of data per trace are possible Yes Yes
Number of alarms for motion technology objects Test commissioning functions Joint commission (Team Engineering) Status block Single step Number of breakpoints Status/control Status/control variable Variables Number of variables, max. of which status variables, max. of which control variables, max. Forcing Forcing Forcing Forcing, variables Number of variables, max. Diagnostic buffer present Number of entries, max. of which powerfail-proof Traces Number of configurable Traces Interrupts/diagnostics/status information Diagnostics indication LED RUN/STOP LED ERROR LED MAINT LED	Yes; Parallel online access possible for up to 10 engineering systems Yes; Up to 16 simultaneously (in total across all ES clients) No 20 Yes Inputs/outputs, memory bits, DBs, distributed I/Os, timers, counters 200; per job 200; per job 200; per job 200; per job 1 000 Yes Peripheral inputs/outputs 200 Yes 3 200 1 000 8: Up to 512 KB of data per trace are possible Yes Yes Yes

Yes; Note: The number of technology objects affects the cycle time of the PLC Motion Control program; selection guide via the TIA Selection Tool • Number of available Motion Control resources for 10 240 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 Positioning axis - Number of positioning axes at motion control cycle 70 of 4 ms (typical value) Number of positioning axes at motion control cycle 128 of 8 ms (typical value) 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. • horizontal installation, max. 60 °C; Display: 50 °C, at an operating temperature of typically 50 °C, the display is switched off • vertical installation, min. vertical installation, max. 40 °C; Display: 40 °C, at an operating temperature of typically 40 °C, the display is switched off Ambient temperature during storage/transportation -40 °C • min. 70 °C max 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 - STL Yes - SCL - CFC 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 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 Width 175 mm Height 147 mm Depth 129 mm

Weights

Weight, approx. 1 929 g

last modified:

9/15/2022



سازه گستر پایتخت تامین کننده ملزومات برق

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