SIEMENS

Data sheet

6ES7315-2FJ14-0AB0



SIMATIC S7-300 CPU315F-2 PN/DP, Central processing unit with 512 KB work memory, 1st interface MPI/DP 12 Mbit/s, 2nd interface Ethernet PROFINET, with 2-port switch, Micro Memory Card required

Figure similar

General information HW functional status Firmware version V3.2 Product function • Isochronous mode Engineering with • Programming package Rated value (DC) permissible range, lower limit (DC) permissible range, lower limit (DC) external protection for power supply lines (recommendation) • Nalins buffering • Mains/voltage failure stored energy time • Repeat rate, min. 1 s Input current Current consumption (rated value) Current consumption (in no-load operation), typ. Inrush current, typ. Power loss Polyg-in (MMC) • Plug-in (MMC) • Present • without battery • Yes; Guaranteed by MMC (maintenance-free) • without battery • Yes; Frogram and data for bit operations, typ. 0.05 µs for bit operations, typ. 0.05 µs for for ord operations, typ. 0.05 µs for for ord operations, typ. 0.09 µs		
Firmware version V3.2 Product function • Isochronous mode • Isochronous mode Engineering with • Programming package Supply voltage Rated value (DC) permissible range, lower limit (DC) permissible range, lower supply lines (recommendation) Mains buffering • Mains/voltage failure stored energy time • Repeat rate, min. 1 s Input current Current consumption (rated value) Current consumption (in no-load operation), typ. Inrush current, typ. 4 A Irt 1 A²-s Power loss Power loss, typ. 4.65 W Memory Work memory • Integrated • expandable No Load memory • Plug-in (MMC) • Present • without battery • present • yes; Guaranteed by MMC (maintenance-free) • without battery • present • yes; Program and data For bit operations, typ. 0.05 µs	General information	
Product function Isochronous mode Isochronous mode Engineering with Programming package STEP 7 V5.5 or higher, Distributed Safety V5.4 SP4 Supply voltage Rated value (DC) Permissible range, lower limit (DC) 20.4 V Permissible range, lower limit (DC) 28.8 V external protection for power supply lines (recommendation) Mains buffering Mains voltage failure stored energy time Repeat rate, min. 1 s Input current Current consumption (rated value) Current consumption (in no-load operation), typ. 150 mA Inrush current, typ. 4 A Pt 1 A²-s Power loss Power loss, typ. 4.65 W Memory Work memory Plug-in (MMC) Programming), min. Backup Programming), min. Backup Propressing times for bit operations, typ. 0.05 µs	HW functional status	01
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Engineering with Programming package STEP 7 V5.5 or higher, Distributed Safety V5.4 SP4 Supply voltage Rated value (DC) permissible range, lower limit (DC) external protection for power supply lines (recommendation) Mains buffering Nains/voltage failure stored energy time Repeat rate, min. Input current Current consumption (rated value) Current consumption (in no-load operation), typ. Inrush current, typ. Power loss Power loss Power loss, typ. Memory Vork memory Integrated Explain (MMC) Plug-in (MMC) Plug-in (MMC) Plug-in (MMC) Plug-in (MMC) Pressent Poresent Programming mins Possent Programming mins Possent Programming mins Programming mins Programming mins STEP 7 V5.5 or higher, Distributed Safety V5.4 SP4 24 V 24 V 25 Pm. 26 Pm. 27 Om M. 28 No 4 A 29 Pm. 29 Pm. 20 MA 21 MA 22 Min. 23 Min. 24 Min. 25 Min. 26 MA 27 Min. 27 Min. 28 Mbyte 29 Pm. 29 Pm. 29 Pm. 29 Pm. 20 Min. 21 Min. 22 Min. 23 Min. 24 Min. 25 Min. 26 Min. 27 Min. 27 Min. 28 Mbyte 29 Data management on MMC (after last programming), min. Backup 29 Pressent 29 Yes; Guaranteed by MMC (maintenance-free) 29 Yes; Program and data CPU processing times for bit operations, typ. 0.05 µs	Product function	
Programming package Supply voltage Rated value (DC) permissible range, lower limit (DC) external protection for power supply lines (recommendation) Mains buffering Mains/voltage failure stored energy time Repeat rate, min. Input current Current consumption (rated value) Current consumption (in no-load operation), typ. Inrush current, typ. Power loss Power loss, typ. Memory Work memory Integrated expandable No Load memory Plug-in (MMC), max. Pack Use (author of the programming), min. Backup Pregramming package STEP 7 V5.5 or higher, Distributed Safety V5.4 SP4 AV Pack V AV Pack V A min. Pack V A min. Pom A S m A S m A A min. Pom A A min.	Isochronous mode	Yes; Via PROFIBUS DP or PROFINET interface
Rated value (DC) 24 V permissible range, lower limit (DC) 28.8 V external protection for power supply lines (recommendation) Mains buffering • Mains/voltage failure stored energy time • Repeat rate, min. 1 s Input current Current consumption (rated value) 750 mA Current consumption (in no-load operation), typ. 150 mA Inrush current, typ. 4 A IPt 1 A²-s Power loss Power loss, typ. Memory Work memory • Integrated 512 kbyte • expandable Load memory • Plug-in (MMC), max. 8 Mbyte • Data management on MMC (after last programming), min. Backup • present yes; Porgram and data CPU processing times for bit operations, typ. 2 A min. (20.4 V 20.4 V 2	Engineering with	
Rated value (DC)	Programming package	STEP 7 V5.5 or higher, Distributed Safety V5.4 SP4
permissible range, lower limit (DC) permissible range, upper limit (DC) external protection for power supply lines (recommendation) Mains buffering • Mains/voltage failure stored energy time • Repeat rate, min. Input current Current consumption (rated value) Current consumption (in no-load operation), typ. Inrush current, typ. It 1 1 A² s Power loss Power loss, typ. Memory Work memory • integrated • expandable • expandable No Load memory • Plug-in (MMC), max. • Data management on MMC (after last programming), min. Backup • present • yes; Frogram and data CPU processing times for bit operations, typ. 2 A min. (2 A min.	Supply voltage	
permissible range, upper limit (DC) external protection for power supply lines (recommendation) Mains buffering • Mains/voltage failure stored energy time • Repeat rate, min. Input current Current consumption (rated value) Current consumption (in no-load operation), typ. Inrush current, typ. It is 1 A² s Power loss Power loss, typ. Memory Work memory • integrated • expandable Load memory • Plug-in (MMC) • Plug-in (MMC), max. • Data management on MMC (after last programming), min. Backup • present • without battery CPU processing times for bit operations, typ. 2 A min. 5 m. 2 A min. 7 A min. 5 ms 4 A 1 A² s 7 50 mA 4 A 1 A² s 7 50 mA 4 A 1 A² s 7 50 mA 4 A 1 A² s Power loss 4 A 1 A² s 9 Experiment on MAC (after last programming), min. 8 Mbyte 9 Plug-in (MMC) (max. 9 Experiment on MMC (maintenance-free) 9 Yes; Program and data CPU processing times for bit operations, typ. 0 .05 µs	Rated value (DC)	24 V
external protection for power supply lines (recommendation) Mains buffering • Mains/voltage failure stored energy time • Repeat rate, min. Input current Current consumption (rated value) Current consumption (in no-load operation), typ. Inrush current, typ. Power loss Power loss, typ. Memory Work memory • integrated • expandable • expandable Load memory • Plug-in (MMC), max. • Data management on MMC (after last programming), min. Backup • present • without battery CPU processing times for bit operations, typ. 5 ms 5 ms 5 ms 5 ms 1 s man. 1 s 1 s man. 1	permissible range, lower limit (DC)	20.4 V
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Mains/voltage failure stored energy time Repeat rate, min. Input current Current consumption (rated value) Current consumption (in no-load operation), typ. Inrush current, typ. Inrush current, typ. It 1 A²-s Power loss Power loss, typ. Memory Work memory integrated Pug-in (MMC) Plug-in (MMC) Plug-in (MMC), max. Data management on MMC (after last programming), min. Backup present present vithout battery CPU processing times for bit operations, typ. 750 mA 4 A 1 A²-s 750 mA 4 A 1 A²-s 4 A 1 A²-s Power loss V A S V B A S W A S W A S A S W A S A S		2 A min.
Repeat rate, min. 1 s Input current Current consumption (rated value) 750 mA Current consumption (in no-load operation), typ. 150 mA Inrush current, typ. 4 A I²t 1 A²·s Power loss Power loss, typ. 4.65 W Memory Work memory integrated 512 kbyte expandable No Load memory Plug-in (MMC) Yes Plug-in (MMC), max. 8 Mbyte Data management on MMC (after last programming), min. Backup present Yes; Guaranteed by MMC (maintenance-free) without battery Yes; Program and data CPU processing times for bit operations, typ. 0.05 μs	Mains buffering	
Input current Current consumption (rated value) Current consumption (in no-load operation), typ. Inrush current, typ. It 1 A²-s Power loss Power loss, typ. 4.65 W Memory Work memory • integrated • expandable • expandable Load memory • Plug-in (MMC) • Plug-in (MMC), max. • Data management on MMC (after last programming), min. Backup • present • without battery Yes; Guaranteed by MMC (maintenance-free) • without battery CPU processing times for bit operations, typ. 750 mA 750 mA 150 mA 160 ma 1	 Mains/voltage failure stored energy time 	5 ms
Current consumption (rated value) Current consumption (in no-load operation), typ. Inrush current, typ. It 150 mA Inrush current, typ. It 1 A²-s Power loss Power loss, typ. Work memory integrated expandable Load memory I Plug-in (MMC) Plug-in (MMC), max. Data management on MMC (after last programming), min. Backup present present yes; Guaranteed by MMC (maintenance-free) without battery Yes; Program and data CPU processing times for bit operations, typ. 150 mA 160 m	 Repeat rate, min. 	1 s
Current consumption (in no-load operation), typ. Inrush current, typ. It to the second operation of the second operation operation of the second operation	Input current	
Inrush current, typ. 4 A I²t 1A²·s Power loss, Power loss, typ. 4.65 W Memory Work memory • integrated • expandable Load memory • Plug-in (MMC) • Plug-in (MMC), max. • Data management on MMC (after last programming), min. Backup • present • without battery Program and data CPU processing times for bit operations, typ. 4 A 1 A²·s 4 B 4 B 4 B 4 B 4 B 4 B 4 B 4	Current consumption (rated value)	750 mA
I ² t 1 A ² ·s Power loss, typ. 4.65 W Memory Work memory • integrated • expandable Load memory • Plug-in (MMC) • Plug-in (MMC), max. • Data management on MMC (after last programming), min. Backup • present • without battery For bit operations, typ. 1 A ² ·s 1 A ² ·s 1 A ² ·s	Current consumption (in no-load operation), typ.	150 mA
Power loss Power loss, typ. 4.65 W Memory Work memory integrated expandable No Load memory Plug-in (MMC) Plug-in (MMC), max. Data management on MMC (after last programming), min. Backup present present vithout battery Yes; Guaranteed by MMC (maintenance-free) vithout battery CPU processing times for bit operations, typ.	Inrush current, typ.	4 A
Power loss, typ. Memory Work memory integrated expandable No Load memory Plug-in (MMC) Plug-in (MMC), max. Data management on MMC (after last programming), min. Backup present vithout battery Yes; Guaranteed by MMC (maintenance-free) vithout battery CPU processing times for bit operations, typ.	I²t	1 A ² ·s
Memory Work memory • integrated 512 kbyte • expandable No Load memory • Plug-in (MMC) Yes • Plug-in (MMC), max. 8 Mbyte • Data management on MMC (after last programming), min. 10 y Backup Yes; Guaranteed by MMC (maintenance-free) • without battery Yes; Program and data CPU processing times for bit operations, typ. 0.05 μs	Power loss	
Work memory	Power loss, typ.	4.65 W
 integrated expandable No Load memory Plug-in (MMC) Plug-in (MMC), max. Data management on MMC (after last programming), min. Backup present without battery CPU processing times for bit operations, typ. 512 kbyte No Yes Subyte Quaranteed by MMC (maintenance-free) Yes; Program and data CPU processing times for bit operations, typ. 0.05 µs	Memory	
 expandable Load memory Plug-in (MMC) Plug-in (MMC), max. Data management on MMC (after last programming), min. Backup present without battery Program and data CPU processing times for bit operations, typ. No Yes Sudaranteed by MMC (maintenance-free) Yes; Program and data 0.05 μs 	Work memory	
Load memory Plug-in (MMC) Plug-in (MMC), max. Backup programming), min. Backup present without battery Pes; Guaranteed by MMC (maintenance-free) Yes; Program and data CPU processing times for bit operations, typ. Yes O.05 μs	• integrated	512 kbyte
 Plug-in (MMC) Plug-in (MMC), max. Data management on MMC (after last programming), min. Backup present without battery CPU processing times for bit operations, typ. Yes Guaranteed by MMC (maintenance-free) Yes; Program and data CPU processing times 0.05 µs 	expandable	No
 Plug-in (MMC), max. Data management on MMC (after last programming), min. Backup present without battery CPU processing times for bit operations, typ. 8 Mbyte 10 y Yes; Guaranteed by MMC (maintenance-free) Yes; Program and data 0.05 µs 	Load memory	
 Data management on MMC (after last programming), min. Backup present without battery CPU processing times for bit operations, typ. 10 y Yes; Guaranteed by MMC (maintenance-free) Yes; Program and data 	Plug-in (MMC)	Yes
programming), min. Backup ● present ● without battery CPU processing times for bit operations, typ. Yes; Guaranteed by MMC (maintenance-free) Yes; Program and data	Plug-in (MMC), max.	8 Mbyte
 present without battery CPU processing times for bit operations, typ. Yes; Guaranteed by MMC (maintenance-free) Yes; Program and data 0.05 μs 		10 y
 without battery CPU processing times for bit operations, typ. 0.05 μs 	Backup	
CPU processing times for bit operations, typ. 0.05 μs	present	Yes; Guaranteed by MMC (maintenance-free)
for bit operations, typ. 0.05 μs	without battery	Yes; Program and data
· · ·	CPU processing times	
for word operations, typ. 0.09 µs	for bit operations, typ.	0.05 μs
	for word operations, typ.	0.09 μs

	0.40
for fixed point arithmetic, typ.	0.12 μs
for floating point arithmetic, typ.	0.45 μs
CPU-blocks	
Number of blocks (total)	1 024; (DBs, FCs, FBs); the maximum number of loadable blocks can be reduced by the MMC used.
DB	De leduced by the MINIO daed.
Number, max.	1 024; Number range: 1 to 16000
• Size, max.	64 kbyte
FB	
Number, max.	1 024; Number range: 0 to 7999
• Size, max.	64 kbyte
FC	,
Number, max.	1 024; Number range: 0 to 7999
• Size, max.	64 kbyte
OB	
• Size, max.	64 kbyte
 Number of free cycle OBs 	1; OB 1
 Number of time alarm OBs 	1; OB 10
 Number of delay alarm OBs 	2; OB 20, 21
 Number of cyclic interrupt OBs 	4; OB 32, 33, 34, 35
 Number of process alarm OBs 	1; OB 40
Number of DPV1 alarm OBs	3; OB 55, 56, 57
 Number of isochronous mode OBs 	1; OB 61
 Number of startup OBs 	1; OB 100
 Number of asynchronous error OBs 	6; OB 80, 82, 83, 85, 86, 87 (OB83 only for PROFINET IO)
 Number of synchronous error OBs 	2; OB 121, 122
Nesting depth	
per priority class	16
 additional within an error OB 	4
Counters, timers and their retentivity	
S7 counter	
Number	256
Retentivity	
— adjustable	Yes
— lower limit	0
— upper limit	255
— preset	Z 0 to Z 7
Counting range	
— adjustable	Yes
— lower limit	0
— upper limit	999
IEC counter	
• present	Yes
• Type	SFB
Number	Unlimited (limited only by RAM capacity)
S7 times	
S7 times ◆ Number	256
	256
Number	256 Yes
Number Retentivity	
NumberRetentivity— adjustable	Yes
NumberRetentivity— adjustable— lower limit	Yes 0
 Number Retentivity — adjustable — lower limit — upper limit 	Yes 0 255
 Number Retentivity — adjustable — lower limit — upper limit — preset 	Yes 0 255
 Number Retentivity — adjustable — lower limit — upper limit — preset Time range — lower limit 	Yes 0 255 No retentivity
 Number Retentivity — adjustable — lower limit — upper limit — preset Time range 	Yes 0 255 No retentivity
 Number Retentivity — adjustable — lower limit — upper limit — preset Time range — lower limit — upper limit 	Yes 0 255 No retentivity
Number Retentivity — adjustable — lower limit — upper limit — preset Time range — lower limit — upper limit — upper limit — lower limit — upper limit	Yes 0 255 No retentivity 10 ms 9 990 s
 Number Retentivity — adjustable — lower limit — upper limit — preset Time range — lower limit — upper limit IEC timer present 	Yes 0 255 No retentivity 10 ms 9 990 s Yes
 Number Retentivity — adjustable — lower limit — upper limit — preset Time range — lower limit — upper limit IEC timer ● present ● Type 	Yes 0 255 No retentivity 10 ms 9 990 s Yes SFB

Potentivo data area (incl. timore, countare flags), may	120 khyta
Retentive data area (incl. timers, counters, flags), max.	128 kbyte
Flag	2.049 byto
Size, max.Retentivity available	2 048 byte Yes; MB 0 to MB 2 047
•	
Retentivity preset	MB 0 to MB 15
Number of clock memories	8; 1 memory byte
Data blocks	
Retentivity adjustable	Yes; via non-retain property on DB
Retentivity preset	Yes
Local data	
per priority class, max.	32 768 byte; Max. 2048 bytes per block
Address area	
I/O address area	
• Inputs	2 048 byte
 Outputs 	2 048 byte
of which distributed	
— Inputs	2 048 byte
— Outputs	2 048 byte
Process image	
• Inputs	2 048 byte
Outputs	2 048 byte
Inputs, adjustable	2 048 byte
Outputs, adjustable	2 048 byte
Inputs, default	128 byte
Outputs, default	128 byte
Subprocess images	120 byte
Number of subprocess images, max.	1; With PROFINET IO, the length of the user data is limited to 1600
• Number of Subprocess images, max.	bytes
Digital channels	·
• Inputs	16 384
of which central	1 024
Outputs	16 384
— of which central	1 024
Analog channels	
• Inputs	1 024
— of which central	256
Outputs	1 024
— of which central	256
	230
Hardware configuration	
Number of expansion units, max.	3
Number of DP masters	
• integrated	1
• via CP	4
Number of operable FMs and CPs (recommended)	
• FM	8
• CP, PtP	8
• CP, LAN	10
Rack	
• Racks, max.	4
 Modules per rack, max. 	8
Time of day	
Clock	
Hardware clock (real-time)	Yes
retentive and synchronizable	Yes
Backup time	6 wk; At 40 °C ambient temperature
Deviation per day, max. Pobavier of the clock following POWER ON.	10 s; Typ.: 2 s
Behavior of the clock following POWER-ON Pobovior of the clock following expire of backup	Clock continues running after POWER OFF
 Behavior of the clock following expiry of backup period 	the clock continues at the time of day it had when power was switched off
Operating hours counter	
Operating hours counter	

Number	1
 Number/Number range 	0
Range of values	0 to 2^31 hours (when using SFC 101)
Granularity	1 h
• retentive	Yes; Must be restarted at each restart
Clock synchronization	V
• supported	Yes
• to MPI, master	Yes
• to MPI, slave	Yes
• to DP, master	Yes; With DP slave only slave clock
• to DP, slave	Yes
• in AS, master	Yes
• in AS, slave	Yes
on Ethernet via NTP	Yes; As client
Digital inputs	
Number of digital inputs	0
Digital outputs	
Number of digital outputs	0
Analog inputs	
Number of analog inputs	0
Analog outputs	
Number of analog outputs	0
Interfaces	
Number of industrial Ethernet interfaces	1
Number of PROFINET interfaces	1
Number of RS 485 interfaces	1
Number of RS 422 interfaces	0
1. Interface	
Interface type	Integrated RS 485 interface
Isolated	Yes
Interface types	
• RS 485	Yes
 Output current of the interface, max. 	200 mA
Protocols	
• MPI	Yes
 PROFIBUS DP master 	Yes
 PROFIBUS DP slave 	Yes
 Point-to-point connection 	No
MPI	
Transmission rate, max.	12 Mbit/s
Services	
— PG/OP communication	Yes
— Routing	Yes
 Global data communication 	Yes
 S7 basic communication 	Yes
— S7 communication	Yes
 S7 communication, as client 	No; but via CP and loadable FB
— S7 communication, as server	Yes
PROFIBUS DP master	
 Transmission rate, max. 	12 Mbit/s
Number of DP slaves, max.	124
Services	
— PG/OP communication	Yes
— Routing	Yes
 Global data communication 	No
 S7 basic communication 	Yes; I blocks only
— S7 communication	Yes
— S7 communication, as client— S7 communication, as server	No Yes

Fauidistance	Vos
Equidistance Isochronous mode	Yes; OB 61; isochronous mode can only be used alternatively on
— isociironous mode	PROFIBUS DP or PROFINET IO
— SYNC/FREEZE	Yes
Activation/deactivation of DP slaves	Yes
Number of DP slaves that can be	8
simultaneously activated/deactivated, max.	
 — Direct data exchange (slave-to-slave 	Yes; as subscriber
communication)	
— DPV1	Yes
Address area	
— Inputs, max.	2 kbyte
— Outputs, max.	2 kbyte
User data per DP slave	
— Inputs, max.	244 byte
— Outputs, max.	244 byte
PROFIBUS DP slave	
 Transmission rate, max. 	12 Mbit/s
automatic baud rate search	Yes; only with passive interface
Address area, max.	32
User data per address area, max.	32 byte
Services	
— PG/OP communication	Yes
— Routing	Yes; Only with active interface
 Global data communication 	No
 — S7 basic communication 	No
— S7 communication	Yes
 — S7 communication, as client 	No
 S7 communication, as server 	Yes; Connection configured on one side only
Direct data exchange (slave-to-slave	Yes
communication) — DPV1	No
	INO
Transfer memory	244 byte
— Inputs	244 byte
— Inputs — Outputs	244 byte 244 byte
— Inputs — Outputs 2. Interface	244 byte
Inputs Outputs 2. Interface Interface type	244 byte PROFINET
— Inputs — Outputs 2. Interface Interface type Isolated	244 byte PROFINET Yes
Inputs Outputs 2. Interface Interface type Isolated automatic detection of transmission rate	244 byte PROFINET Yes Yes; 10/100 Mbit/s
— Inputs — Outputs 2. Interface Interface type Isolated automatic detection of transmission rate Autonegotiation	PROFINET Yes Yes; 10/100 Mbit/s Yes
— Inputs — Outputs 2. Interface Interface type Isolated automatic detection of transmission rate Autonegotiation Autocrossing	PROFINET Yes Yes; 10/100 Mbit/s Yes Yes
— Inputs — Outputs 2. Interface Interface type Isolated automatic detection of transmission rate Autonegotiation Autocrossing Change of IP address at runtime, supported	PROFINET Yes Yes; 10/100 Mbit/s Yes
— Inputs — Outputs 2. Interface Interface type Isolated automatic detection of transmission rate Autonegotiation Autocrossing Change of IP address at runtime, supported Interface types	PROFINET Yes Yes; 10/100 Mbit/s Yes Yes Yes
— Inputs — Outputs 2. Interface Interface type Isolated automatic detection of transmission rate Autonegotiation Autocrossing Change of IP address at runtime, supported Interface types • RJ 45 (Ethernet)	244 byte PROFINET Yes Yes; 10/100 Mbit/s Yes Yes Yes Yes
— Inputs — Outputs 2. Interface Interface type Isolated automatic detection of transmission rate Autonegotiation Autocrossing Change of IP address at runtime, supported Interface types • RJ 45 (Ethernet) • Number of ports	PROFINET Yes Yes; 10/100 Mbit/s Yes Yes Yes Yes Yes Yes
— Inputs — Outputs 2. Interface Interface type Isolated automatic detection of transmission rate Autonegotiation Autocrossing Change of IP address at runtime, supported Interface types • RJ 45 (Ethernet) • Number of ports • integrated switch	PROFINET Yes Yes; 10/100 Mbit/s Yes Yes Yes Yes
— Inputs — Outputs 2. Interface Interface type Isolated automatic detection of transmission rate Autonegotiation Autocrossing Change of IP address at runtime, supported Interface types • RJ 45 (Ethernet) • Number of ports • integrated switch Protocols	PROFINET Yes Yes; 10/100 Mbit/s Yes Yes Yes Yes Yes Yes
— Inputs — Outputs 2. Interface Interface type Isolated automatic detection of transmission rate Autonegotiation Autocrossing Change of IP address at runtime, supported Interface types • RJ 45 (Ethernet) • Number of ports • integrated switch Protocols • MPI	PROFINET Yes Yes; 10/100 Mbit/s Yes Yes Yes Yes Yes No
— Inputs — Outputs 2. Interface Interface type Isolated automatic detection of transmission rate Autonegotiation Autocrossing Change of IP address at runtime, supported Interface types • RJ 45 (Ethernet) • Number of ports • integrated switch Protocols • MPI • PROFINET IO Controller	PROFINET Yes Yes; 10/100 Mbit/s Yes Yes Yes Yes Yes Yes Yes Yes Yes Ye
— Inputs — Outputs 2. Interface Interface type Isolated automatic detection of transmission rate Autonegotiation Autocrossing Change of IP address at runtime, supported Interface types • RJ 45 (Ethernet) • Number of ports • integrated switch Protocols • MPI • PROFINET IO Controller • PROFINET IO Device	PROFINET Yes Yes; 10/100 Mbit/s Yes Yes Yes Yes Yes Yes Yes Yes Yes Ye
— Inputs — Outputs 2. Interface Interface type Isolated automatic detection of transmission rate Autonegotiation Autocrossing Change of IP address at runtime, supported Interface types • RJ 45 (Ethernet) • Number of ports • integrated switch Protocols • MPI • PROFINET IO Controller • PROFINET IO Device • PROFINET CBA	PROFINET Yes Yes; 10/100 Mbit/s Yes Yes Yes Yes Yes Yes Yes Yes Ye
— Inputs — Outputs 2. Interface Interface type Isolated automatic detection of transmission rate Autonegotiation Autocrossing Change of IP address at runtime, supported Interface types • RJ 45 (Ethernet) • Number of ports • integrated switch Protocols • MPI • PROFINET IO Controller • PROFINET IO Device • PROFIBUS DP master	PROFINET Yes Yes; 10/100 Mbit/s Yes Yes Yes Yes Yes Yes Yes Yes Y
— Inputs — Outputs 2. Interface Interface type Isolated automatic detection of transmission rate Autonegotiation Autocrossing Change of IP address at runtime, supported Interface types • RJ 45 (Ethernet) • Number of ports • integrated switch Protocols • MPI • PROFINET IO Controller • PROFINET IO Device • PROFIBUS DP master • PROFIBUS DP slave	PROFINET Yes Yes; 10/100 Mbit/s Yes Yes Yes Yes Yes Yes Yes Yes No Yes; Also simultaneously with IO-Device functionality Yes; Also simultaneously with IO Controller functionality Yes No No No
— Inputs — Outputs 2. Interface Interface type Isolated automatic detection of transmission rate Autonegotiation Autocrossing Change of IP address at runtime, supported Interface types • RJ 45 (Ethernet) • Number of ports • integrated switch Protocols • MPI • PROFINET IO Controller • PROFINET IO Device • PROFIBUS DP master • PROFIBUS DP slave • Open IE communication	PROFINET Yes Yes; 10/100 Mbit/s Yes Yes Yes Yes Yes Yes Yes Yes No Yes; Also simultaneously with IO-Device functionality Yes; Also simultaneously with IO Controller functionality Yes No No No Yes; Via TCP/IP, ISO on TCP, and UDP
— Inputs — Outputs 2. Interface Interface type Isolated automatic detection of transmission rate Autonegotiation Autocrossing Change of IP address at runtime, supported Interface types • RJ 45 (Ethernet) • Number of ports • integrated switch Protocols • MPI • PROFINET IO Controller • PROFINET IO Device • PROFIBUS DP master • PROFIBUS DP slave • Open IE communication • Web server	PROFINET Yes Yes; 10/100 Mbit/s Yes Yes Yes Yes Yes Yes Yes Yes No Yes; Also simultaneously with IO-Device functionality Yes; Also simultaneously with IO Controller functionality Yes No No Yes; Via TCP/IP, ISO on TCP, and UDP Yes; only read function
— Inputs — Outputs 2. Interface Interface type Isolated automatic detection of transmission rate Autonegotiation Autocrossing Change of IP address at runtime, supported Interface types • RJ 45 (Ethernet) • Number of ports • integrated switch Protocols • MPI • PROFINET IO Controller • PROFINET IO Device • PROFIBUS DP master • PROFIBUS DP slave • Open IE communication • Web server • Media redundancy	PROFINET Yes Yes; 10/100 Mbit/s Yes Yes Yes Yes Yes Yes Yes Yes No Yes; Also simultaneously with IO-Device functionality Yes; Also simultaneously with IO Controller functionality Yes No No No Yes; Via TCP/IP, ISO on TCP, and UDP
— Inputs — Outputs 2. Interface Interface type Isolated automatic detection of transmission rate Autonegotiation Autocrossing Change of IP address at runtime, supported Interface types • RJ 45 (Ethernet) • Number of ports • integrated switch Protocols • MPI • PROFINET IO Controller • PROFINET IO Device • PROFIBUS DP master • PROFIBUS DP slave • Open IE communication • Web server • Media redundancy PROFINET IO Controller	PROFINET Yes Yes; 10/100 Mbit/s Yes Yes Yes Yes Yes Yes Yes No Yes; Also simultaneously with IO-Device functionality Yes; Also simultaneously with IO Controller functionality Yes No No No Yes; Via TCP/IP, ISO on TCP, and UDP Yes; only read function Yes
— Inputs — Outputs 2. Interface Interface type Isolated automatic detection of transmission rate Autonegotiation Autocrossing Change of IP address at runtime, supported Interface types • RJ 45 (Ethernet) • Number of ports • integrated switch Protocols • MPI • PROFINET IO Controller • PROFINET IO Device • PROFIBUS DP master • PROFIBUS DP slave • Open IE communication • Web server • Media redundancy PROFINET IO Controller • Transmission rate, max.	PROFINET Yes Yes; 10/100 Mbit/s Yes Yes Yes Yes Yes Yes Yes Yes No Yes; Also simultaneously with IO-Device functionality Yes; Also simultaneously with IO Controller functionality Yes No No Yes; Via TCP/IP, ISO on TCP, and UDP Yes; only read function
— Inputs — Outputs 2. Interface Interface type Isolated automatic detection of transmission rate Autonegotiation Autocrossing Change of IP address at runtime, supported Interface types • RJ 45 (Ethernet) • Number of ports • integrated switch Protocols • MPI • PROFINET IO Controller • PROFINET IO Device • PROFIBUS DP master • PROFIBUS DP slave • Open IE communication • Web server • Media redundancy PROFINET IO Controller • Transmission rate, max. Services	PROFINET Yes Yes; 10/100 Mbit/s Yes Yes Yes Yes Yes Yes Yes No Yes; Also simultaneously with IO-Device functionality Yes; Also simultaneously with IO Controller functionality Yes No No No Yes; Via TCP/IP, ISO on TCP, and UDP Yes; only read function Yes 100 Mbit/s
— Inputs — Outputs 2. Interface Interface type Isolated automatic detection of transmission rate Autonegotiation Autocrossing Change of IP address at runtime, supported Interface types • RJ 45 (Ethernet) • Number of ports • integrated switch Protocols • MPI • PROFINET IO Controller • PROFINET IO Device • PROFIBUS DP master • PROFIBUS DP slave • Open IE communication • Web server • Media redundancy PROFINET IO Controller • Transmission rate, max.	PROFINET Yes Yes; 10/100 Mbit/s Yes Yes Yes Yes Yes Yes No Yes; Also simultaneously with IO-Device functionality Yes; Also simultaneously with IO Controller functionality Yes No No No Yes; Via TCP/IP, ISO on TCP, and UDP Yes; only read function Yes

— S7 communication	Yes; With loadable FBs, max. configurable connections: 14, max. number of instances: 32
— Isochronous mode	Yes; OB 61; isochronous mode can only be used alternatively on PROFIBUS DP or PROFINET IO
— IRT	Yes
— Shared device	Yes
Prioritized startup	Yes
Number of IO devices with prioritized startup,	32
max.	-
 Number of connectable IO Devices, max. 	128
— Of which IO devices with IRT, max.	64
— of which in line, max.	64
Number of IO Devices with IRT and the option	128
"high flexibility"	
— of which in line, max.	61
 Number of connectable IO Devices for RT, 	128
max.	400
— of which in line, max.	128
Activation/deactivation of IO Devices	Yes
 Number of IO Devices that can be simultaneously activated/deactivated, max. 	8
 IO Devices changing during operation (partner ports), supported 	Yes
Number of IO Devices per tool, max.	8
Device replacement without swap medium	Yes
— Send cycles	250 μs, 500 μs,1 ms; 2 ms, 4 ms (not in the case of IRT with "high
— Updating time	flexibility" option) 250 µs to 512 ms (depending on the operating mode, see Manual "S7-
A ! !	300 CPU 31xC and CPU 31x, technical Data" for more details)
Address area	014-4-
— Inputs, max.	2 kbyte
— Outputs, max.	2 kbyte
— User data consistency, max.	1 024 byte
DDOFINITIO Davisa	
PROFINET IO Device	
Services	Vos
Services — PG/OP communication	Yes
Services — PG/OP communication — Routing	Yes
Services — PG/OP communication — Routing — S7 communication	Yes; With loadable FBs, max. configurable connections: 14, max. number of instances: 32
Services — PG/OP communication — Routing — S7 communication — Isochronous mode	Yes Yes; With loadable FBs, max. configurable connections: 14, max. number of instances: 32 No
Services — PG/OP communication — Routing — S7 communication — Isochronous mode — IRT	Yes Yes; With loadable FBs, max. configurable connections: 14, max. number of instances: 32 No Yes
Services — PG/OP communication — Routing — S7 communication — Isochronous mode	Yes Yes; With loadable FBs, max. configurable connections: 14, max. number of instances: 32 No
Services — PG/OP communication — Routing — S7 communication — Isochronous mode — IRT	Yes Yes; With loadable FBs, max. configurable connections: 14, max. number of instances: 32 No Yes Yes; With SFB 73 / 74 prepared for loadable PROFlenergy standard FB
Services — PG/OP communication — Routing — S7 communication — Isochronous mode — IRT — PROFlenergy	Yes; With loadable FBs, max. configurable connections: 14, max. number of instances: 32 No Yes Yes; With SFB 73 / 74 prepared for loadable PROFlenergy standard FB for I-Device
Services — PG/OP communication — Routing — S7 communication — Isochronous mode — IRT — PROFlenergy — Shared device — Number of IO Controllers with shared device, max.	Yes; With loadable FBs, max. configurable connections: 14, max. number of instances: 32 No Yes Yes; With SFB 73 / 74 prepared for loadable PROFlenergy standard FB for I-Device Yes
Services — PG/OP communication — Routing — S7 communication — Isochronous mode — IRT — PROFlenergy — Shared device — Number of IO Controllers with shared device, max. Transfer memory	Yes; With loadable FBs, max. configurable connections: 14, max. number of instances: 32 No Yes Yes; With SFB 73 / 74 prepared for loadable PROFlenergy standard FB for I-Device Yes 2
Services — PG/OP communication — Routing — S7 communication — Isochronous mode — IRT — PROFlenergy — Shared device — Number of IO Controllers with shared device, max. Transfer memory — Inputs, max.	Yes Yes; With loadable FBs, max. configurable connections: 14, max. number of instances: 32 No Yes Yes; With SFB 73 / 74 prepared for loadable PROFlenergy standard FB for I-Device Yes 2 1 440 byte; Per IO Controller with shared device
Services — PG/OP communication — Routing — S7 communication — Isochronous mode — IRT — PROFlenergy — Shared device — Number of IO Controllers with shared device, max. Transfer memory — Inputs, max. — Outputs, max.	Yes; With loadable FBs, max. configurable connections: 14, max. number of instances: 32 No Yes Yes; With SFB 73 / 74 prepared for loadable PROFlenergy standard FB for I-Device Yes 2
Services — PG/OP communication — Routing — S7 communication — Isochronous mode — IRT — PROFlenergy — Shared device — Number of IO Controllers with shared device, max. Transfer memory — Inputs, max. — Outputs, max. Submodules	Yes; With loadable FBs, max. configurable connections: 14, max. number of instances: 32 No Yes Yes; With SFB 73 / 74 prepared for loadable PROFlenergy standard FB for I-Device Yes 2 1 440 byte; Per IO Controller with shared device 1 440 byte; Per IO Controller with shared device
Services — PG/OP communication — Routing — S7 communication — Isochronous mode — IRT — PROFlenergy — Shared device — Number of IO Controllers with shared device, max. Transfer memory — Inputs, max. — Outputs, max. Submodules — Number, max.	Yes; With loadable FBs, max. configurable connections: 14, max. number of instances: 32 No Yes Yes; With SFB 73 / 74 prepared for loadable PROFlenergy standard FB for I-Device Yes 2 1 440 byte; Per IO Controller with shared device 1 440 byte; Per IO Controller with shared device
Services — PG/OP communication — Routing — S7 communication — Isochronous mode — IRT — PROFlenergy — Shared device — Number of IO Controllers with shared device, max. Transfer memory — Inputs, max. — Outputs, max. Submodules — Number, max. — User data per submodule, max.	Yes; With loadable FBs, max. configurable connections: 14, max. number of instances: 32 No Yes Yes; With SFB 73 / 74 prepared for loadable PROFlenergy standard FB for I-Device Yes 2 1 440 byte; Per IO Controller with shared device 1 440 byte; Per IO Controller with shared device
Services — PG/OP communication — Routing — S7 communication — Isochronous mode — IRT — PROFlenergy — Shared device — Number of IO Controllers with shared device, max. Transfer memory — Inputs, max. — Outputs, max. Submodules — Number, max. — User data per submodule, max.	Yes; With loadable FBs, max. configurable connections: 14, max. number of instances: 32 No Yes Yes; With SFB 73 / 74 prepared for loadable PROFlenergy standard FB for I-Device Yes 2 1 440 byte; Per IO Controller with shared device 1 440 byte; Per IO Controller with shared device 64 1 024 byte
Services — PG/OP communication — Routing — S7 communication — Isochronous mode — IRT — PROFlenergy — Shared device — Number of IO Controllers with shared device, max. Transfer memory — Inputs, max. — Outputs, max. Submodules — Number, max. — User data per submodule, max. PROFINET CBA • acyclic transmission	Yes; With loadable FBs, max. configurable connections: 14, max. number of instances: 32 No Yes Yes; With SFB 73 / 74 prepared for loadable PROFlenergy standard FB for I-Device Yes 2 1 440 byte; Per IO Controller with shared device 1 440 byte; Per IO Controller with shared device 64 1 024 byte
Services — PG/OP communication — Routing — S7 communication — Isochronous mode — IRT — PROFlenergy — Shared device — Number of IO Controllers with shared device, max. Transfer memory — Inputs, max. — Outputs, max. Submodules — Number, max. — User data per submodule, max. PROFINET CBA • acyclic transmission • cyclic transmission	Yes; With loadable FBs, max. configurable connections: 14, max. number of instances: 32 No Yes Yes; With SFB 73 / 74 prepared for loadable PROFlenergy standard FB for I-Device Yes 2 1 440 byte; Per IO Controller with shared device 1 440 byte; Per IO Controller with shared device 64 1 024 byte
Services — PG/OP communication — Routing — S7 communication — Isochronous mode — IRT — PROFlenergy — Shared device — Number of IO Controllers with shared device, max. Transfer memory — Inputs, max. — Outputs, max. Submodules — Number, max. — User data per submodule, max. PROFINET CBA • acyclic transmission • cyclic transmission Open IE communication	Yes; With loadable FBs, max. configurable connections: 14, max. number of instances: 32 No Yes Yes; With SFB 73 / 74 prepared for loadable PROFlenergy standard FB for I-Device Yes 2 1 440 byte; Per IO Controller with shared device 1 440 byte; Per IO Controller with shared device 64 1 024 byte Yes Yes
Services — PG/OP communication — Routing — S7 communication — Isochronous mode — IRT — PROFlenergy — Shared device — Number of IO Controllers with shared device, max. Transfer memory — Inputs, max. — Outputs, max. — Outputs, max. Submodules — Number, max. — User data per submodule, max. PROFINET CBA • acyclic transmission • cyclic transmission Open IE communication • Number of connections, max.	Yes; With loadable FBs, max. configurable connections: 14, max. number of instances: 32 No Yes Yes; With SFB 73 / 74 prepared for loadable PROFlenergy standard FB for I-Device Yes 2 1 440 byte; Per IO Controller with shared device 1 440 byte; Per IO Controller with shared device 64 1 024 byte Yes Yes Yes
Services — PG/OP communication — Routing — S7 communication — Isochronous mode — IRT — PROFlenergy — Shared device — Number of IO Controllers with shared device, max. Transfer memory — Inputs, max. — Outputs, max. Submodules — Number, max. — User data per submodule, max. PROFINET CBA • acyclic transmission • cyclic transmission Open IE communication	Yes; With loadable FBs, max. configurable connections: 14, max. number of instances: 32 No Yes Yes; With SFB 73 / 74 prepared for loadable PROFlenergy standard FB for I-Device Yes 2 1 440 byte; Per IO Controller with shared device 1 440 byte; Per IO Controller with shared device 64 1 024 byte Yes Yes
Services — PG/OP communication — Routing — S7 communication — Isochronous mode — IRT — PROFlenergy — Shared device — Number of IO Controllers with shared device, max. Transfer memory — Inputs, max. — Outputs, max. — Outputs, max. Submodules — Number, max. — User data per submodule, max. PROFINET CBA • acyclic transmission • cyclic transmission Open IE communication • Number of connections, max.	Yes; With loadable FBs, max. configurable connections: 14, max. number of instances: 32 No Yes Yes; With SFB 73 / 74 prepared for loadable PROFlenergy standard FB for I-Device Yes 2 1 440 byte; Per IO Controller with shared device 1 440 byte; Per IO Controller with shared device 64 1 024 byte Yes Yes Yes 8 0, 20, 21, 23, 25, 80, 102, 135, 161, 443, 8080, 34962, 34963, 34964,
Services — PG/OP communication — Routing — S7 communication — Isochronous mode — IRT — PROFlenergy — Shared device — Number of IO Controllers with shared device, max. Transfer memory — Inputs, max. — Outputs, max. Submodules — Number, max. — User data per submodule, max. PROFINET CBA • acyclic transmission • cyclic transmission Open IE communication • Number of connections, max. • Local port numbers used at the system end	Yes; With loadable FBs, max. configurable connections: 14, max. number of instances: 32 No Yes Yes; With SFB 73 / 74 prepared for loadable PROFlenergy standard FB for I-Device Yes 2 1 440 byte; Per IO Controller with shared device 1 440 byte; Per IO Controller with shared device 64 1 024 byte Yes Yes Yes Yes Yes Yes
Services — PG/OP communication — Routing — S7 communication — Isochronous mode — IRT — PROFlenergy — Shared device — Number of IO Controllers with shared device, max. Transfer memory — Inputs, max. — Outputs, max. — Outputs, max. — User data per submodule, max. PROFINET CBA • acyclic transmission • cyclic transmission • cyclic transmission • Number of connections, max. • Local port numbers used at the system end • Keep-alive function, supported	Yes; With loadable FBs, max. configurable connections: 14, max. number of instances: 32 No Yes Yes; With SFB 73 / 74 prepared for loadable PROFlenergy standard FB for I-Device Yes 2 1 440 byte; Per IO Controller with shared device 1 440 byte; Per IO Controller with shared device 64 1 024 byte Yes Yes Yes Yes Yes Yes
Services — PG/OP communication — Routing — S7 communication — Isochronous mode — IRT — PROFlenergy — Shared device — Number of IO Controllers with shared device, max. Transfer memory — Inputs, max. — Outputs, max. Submodules — Number, max. — User data per submodule, max. PROFINET CBA • acyclic transmission • cyclic transmission • cyclic transmission • Number of connections, max. • Local port numbers used at the system end • Keep-alive function, supported Protocols	Yes; With loadable FBs, max. configurable connections: 14, max. number of instances: 32 No Yes Yes; With SFB 73 / 74 prepared for loadable PROFlenergy standard FB for I-Device Yes 2 1 440 byte; Per IO Controller with shared device 1 440 byte; Per IO Controller with shared device 64 1 024 byte Yes Yes Yes Yes 8 0, 20, 21, 23, 25, 80, 102, 135, 161, 443, 8080, 34962, 34963, 34964, 65532, 65533, 65534, 65535 Yes

Madia radundan	
Media redundancy	200 mai DDOFINET MDD
Switchover time on line break, typ.	200 ms; PROFINET MRP
— Number of stations in the ring, max.	50
Open IE communication • TCP/IP	Voc. via integrated PDOFINET interface and leadable EDa
— Number of connections, max.	Yes; via integrated PROFINET interface and loadable FBs 8
Data length for connection type 01H, max.	1 460 byte
Data length for connection type 011, max. — Data length for connection type 11H, max.	32 768 byte
several passive connections per port,	Yes
supported	165
• ISO-on-TCP (RFC1006)	Yes; via integrated PROFINET interface and loadable FBs
 Number of connections, max. 	8
— Data length, max.	32 768 byte
• UDP	Yes; via integrated PROFINET interface and loadable FBs
 Number of connections, max. 	8
— Data length, max.	1 472 byte
Web server	
• supported	Yes; only read function
 User-defined websites 	Yes
Number of HTTP clients	5
communication functions / header	
PG/OP communication	Yes
Data record routing	Yes
Global data communication	
• supported	Yes
Number of GD loops, max.	8
Number of GD packets, max.	8
 Number of GD packets, transmitter, max. 	8
 Number of GD packets, receiver, max. 	8
Size of GD packets, max.	22 byte
Size of GD packet (of which consistent), max.	22 byte
S7 basic communication	V
• supported	Yes
User data per job, max. Value data per job, (af which per sistent), reserved.	76 byte
 User data per job (of which consistent), max. 	76 byte; 76 bytes (with X_SEND or X_RCV); 64 bytes (with X_PUT or X_GET as server)
S7 communication	
• supported	Yes
• as server	Yes
• as client	Yes; via integrated PROFINET interface and loadable FB or via CP and loadable FB
 User data per job, max. 	See online help of STEP 7 (shared parameters of the SFBs/FBs and of
S5 compatible communication	the SFCs/FCs of S7 Communication)
supported	Yes; via CP and loadable FC
communication functions / PROFINET CBA (with set target	· · ·
Setpoint for the CPU communication load	50 %
Number of remote interconnection partners	32
Number of functions, master/slave	30
Total of all master/slave connections	1 000
Data length of all incoming connections	4 000 byte
master/slave, max. • Data length of all outgoing connections	4 000 byte
master/slave, max. • Number of device-internal and PROFIBUS	500
interconnections	4 000 h. t-
Data length of device-internal und PROFIBUS interconnections, max.	4 000 byte
Data length per connection, max. PROFINET CRA / remate intersents.	1 400 byte
performance data / PROFINET CBA / remote interconn	
— Sampling interval, min. Number of incoming interconnections.	500 ms
Number of incoming interconnections	100

Number of outgoing interconnections	100
 Data length of all incoming interconnections, max. 	2 000 byte
 Data length of all outgoing interconnections, max. 	2 000 byte
 Data length per connection, max. 	1 400 byte
performance data / PROFINET CBA / remote interconne	ction / with cyclic transfer / header
 Transmission frequency: Transmission interval, min. 	10 ms
 Number of incoming interconnections 	200
 Number of outgoing interconnections 	200
 Data length of all incoming interconnections, max. 	2 000 byte
 Data length of all outgoing interconnections, max. 	2 000 byte
 Data length per connection, max. 	450 byte
performance data / PROFINET CBA / HMI variables via I	PROFINET / acyclic / header
 Number of stations that can log on for HMI variables (PN OPC/iMap) 	3; 2x PN OPC/1x iMap
 HMI variable updating 	500 ms
 Number of HMI variables 	200
 Data length of all HMI variables, max. 	2 000 byte
performance data / PROFINET CBA / PROFIBUS proxy	functionality / header
— supported	Yes
Number of linked PROFIBUS devices	16
— Data length per connection, max.	240 byte; Slave-dependent
Number of connections	40
• overall	16
usable for PG communication	15
— reserved for PG communication	1
— adjustable for PG communication, min.	1
— adjustable for PG communication, max.	15
usable for OP communication	15
— reserved for OP communication	1
— adjustable for OP communication, min.	1
— adjustable for OP communication, max.	15
usable for S7 basic communication	14
— reserved for S7 basic communication	0
— adjustable for S7 basic communication, min.	0
— adjustable for S7 basic communication, max.	14
usable for S7 communication	14
— reserved for S7 communication	0
— adjustable for S7 communication, min.	0
— adjustable for S7 communication, max.	14
total number of instances, max. usable for routing.	32 V1 as MDI: may 10: V1 as DD master: may 24: V1 as DD slave
usable for routing	X1 as MPI: max. 10; X1 as DP master: max. 24; X1 as DP slave (active): max. 14; X2 as PROFINET: 24 max.
S7 message functions	
Number of login stations for message functions, max.	16; Depending on the configured connections for PG/OP and S7 basic communication
Process diagnostic messages	Yes
simultaneously active Alarm-S blocks, max.	300
Test commissioning functions	
Status block	Yes; Up to 2 simultaneously
Single step	Yes
Number of breakpoints	4
Status/control	
Status/control variable	Yes
Variables	Inputs, outputs, memory bits, DB, times, counters
 Number of variables, max. 	30
— of which status variables, max.	30
— of which control variables, max.	14

Forcing	
• Forcing	Yes
Forcing, variables	Inputs, outputs
Number of variables, max.	10
Diagnostic buffer	10
• present	Yes
Number of entries, max.	500
— adjustable	No
of which powerfail-proof	100
Number of entries readable in RUN, max.	499
— adjustable	Yes
— preset	10
Service data	10
• can be read out	Yes
Ambient conditions	
Ambient temperature during operation	
• min.	0 °C
• max.	60 °C
configuration / header	
Configuration software	
• STEP 7	Yes; V5.5 or higher
configuration / programming / header	100, Vo.0 of higher
Command set	see instruction list
Nesting levels	8
System functions (SFC)	see instruction list
System function blocks (SFB)	see instruction list
Programming language	
— LAD	Yes
— FBD	Yes
— STL	Yes
— SCL	Yes
— CFC	Yes
— GRAPH	Yes
— HiGraph®	Yes
Know-how protection	
User program protection/password protection	Yes
Block encryption	Yes; With S7 block Privacy
Dimensions	
Width	40 mm
Height	125 mm
Depth	130 mm
Weights	
Weight, approx.	340 g
- ''	

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