SIEMENS

Data sheet

6ES7417-4XT05-0AB0



*********** Replacement part ********* SIMATIC S7-400, CPU 417-4 Central processing unit with: work memory 30 MB, (15 MB code; 15 MB data) 1st interface MPI 12 Mbit/s; 2nd interface PROFIBUS DP, 3rd/4th interface plug-in IFM module

Figure similar

riguresiiiia	
General information	
Product type designation	CPU 417-4
HW functional status	04
Firmware version	V5.3
Product function	
 Isochronous mode 	Yes; For PROFIBUS only
Engineering with	
 Programming package 	STEP 7 V5.3 SP2 or higher with HW update
CiR - Configuration in RUN	
CiR synchronization time, basic load	60 ms
CiR synchronization time, time per I/O byte	7 μs
Supply voltage	
Rated value (DC)	Power supply via system power supply
Input current	
from backplane bus 5 V DC, typ.	1.5 A
from backplane bus 5 V DC, max.	1.8 A
from backplane bus 24 V DC, max.	600 mA; 150 mA per DP interface
from interface 5 V DC, max.	90 mA; At each DP interface
Power loss	
Power loss, typ.	7.5 W
Memory	
Type of memory	RAM
Work memory	
integrated	30 Mbyte
integrated (for program)	15 Mbyte
integrated (for data)	15 Mbyte
• expandable	No
Load memory	
 expandable FEPROM 	Yes; with Memory Card (FLASH)
 expandable FEPROM, max. 	64 Mbyte
integrated RAM, max.	1 Mbyte
• expandable RAM	Yes; with Memory Card (RAM)
expandable RAM, max.	64 Mbyte
Backup	
• present	Yes
with battery	Yes; all data
without battery	No
Pottom:	
Battery	

Backup current, typ.	225 μA; up to 40 °C
Backup current, max.	750 μΑ
Backup time, max.	See reference manual, module data, Chapter 3.3
Feeding of external backup voltage to CPU	5 V DC to 15 V DC
CPU processing times	
for bit operations, typ.	18 ns
for word operations, typ.	18 ns
for fixed point arithmetic, typ.	18 ns
for floating point arithmetic, typ.	54 ns
CPU-blocks	
DB	
Number, max.	16 000; Number range: 1 to 16000
• Size, max.	64 kbyte
FB	
Number, max.	8 000; Number range: 0 to 7999
• Size, max.	64 kbyte
FC	
Number, max.	8 000; Number range: 0 to 7999
Size, max.	64 kbyte
OB	
Number, max.	see instruction list
• Size, max.	64 kbyte
 Number of free cycle OBs 	1; OB 1
 Number of time alarm OBs 	8; OB 10-17
 Number of delay alarm OBs 	4; OB 20-23
 Number of cyclic interrupt OBs 	9; OB 30-38 (shortest cycle that can be set = 500 μs)
 Number of process alarm OBs 	8; OB 40-47
 Number of DPV1 alarm OBs 	3; OB 55-57
 Number of isochronous mode OBs 	4; OB 61-64
 Number of multicomputing OBs 	1; OB 60
 Number of background OBs 	1; OB 90
 Number of startup OBs 	3; OB 100-102
 Number of asynchronous error OBs 	9; OB 80-88
Number of synchronous error OBs	2; OB 121, 122
Nesting depth	
 per priority class 	24
additional within an error OB	2
Counters, timers and their retentivity	
S7 counter	
Number	2 048
Retentivity	
— adjustable	Yes
— preset	Z 0 to Z 7
Counting range	
— lower limit	0
— upper limit	999
IEC counter	
• present	Yes
• Type	SFB
Number	Unlimited (limited only by RAM capacity)
S7 times	
Number	2 048
Retentivity	
— adjustable	Yes
— preset	No times retentive
Time range	
— lower limit	10 ms
— upper limit	9 990 s
IEC timer	
• present	Yes

 Type 	SFB
Number	Unlimited (limited only by RAM capacity)
Data areas and their retentivity	Oriminited (infilled only by KAIW capacity)
	Total working and load memory (with backup battery)
Retentive data area (incl. timers, counters, flags), max. Flag	Total working and load memory (with backup battery)
• Size, max.	16 kbyte; Size of bit memory address area
Retentivity available	Yes
•	MB 0 to MB 15
 Retentivity preset Number of clock memories 	8; in 1 memory byte
Local data	o, in Timemory byte
adjustable, max.	64 kbyte
• preset	32 kbyte
Address area	oz najto
I/O address area	
• Inputs	16 kbyte
Outputs	16 kbyte
Process image	10 10/10
Inputs, adjustable	16 kbyte
Outputs, adjustable	16 kbyte
Inputs, default	1 024 byte
Outputs, default	1 024 byte
consistent data, max.	244 byte
Access to consistent data in process image	Yes
Subprocess images	
Number of subprocess images, max.	15
Digital channels	
• Inputs	131 072
— of which central	131 072
Outputs	131 072
— of which central	131 072
Analog channels	
• Inputs	8 192
— of which central	8 192
Outputs	8 192
— of which central	8 192
Hardware configuration	
Integrated power supply	No
Number of expansion units, max.	21
connectable OPs	63
Multicomputing	Yes; 4 CPUs max. (with UR1 or UR2)
Interface modules	
 Number of connectable IMs (total), max. 	6
 Number of connectable IM 460s, max. 	6
Number of connectable IM 463s, max.	4; IM 463-2
Number of DP masters	
integrated	2
• via CP	10; CP 443-5 Extended
• via IM 467	4
Mixed mode IM + CP permitted	No; IM 467 not suitable for use with CP 443-5 Ext. and CP 443-1 EX4x, EX20, GX20 (in PROFINET IO mode)
via interface module	2
 Number of pluggable S5 modules (via adapter capsule in central device), max. 	6
Number of IO Controllers	
• integrated	0
• via CP	4; No mixed operation of CP443-1 EX40 and CP443-1 EX 41/EX20/GX20, max. 4 in central controller
Number of operable FMs and CPs (recommended)	
• FM	Limited by number of slots and number of connections
• CP, PtP	CP 440: Limited by number of slots; CP 441: limited by number of connections
 PROFIBUS and Ethernet CPs 	14; Of which 10 CPs max. or IMs as DP master, 4 PROFINET controller
	maximum

Slots	
• required slots	2
Time of day	
Clock	
 Hardware clock (real-time) 	Yes
 retentive and synchronizable 	Yes
 Resolution 	1 ms
 Deviation per day (buffered), max. 	1.7 s; Power off
 Deviation per day (unbuffered), max. 	8.6 s; For power On
Operating hours counter	
Number	16
 Number/Number range 	0 to 15
 Range of values 	SFCs 2, 3 and 4: 0 to 32767 hours SFC 101: 0 to 2^31 - 1 hours
 Granularity 	1 h
retentive	Yes
Clock synchronization	
supported	Yes
to MPI, master	Yes
• on MPI, device	Yes
• to DP, master	Yes
• on DP, device	Yes
• in AS, master	Yes
• in AS, device	Yes
on Ethernet via NTP	No; Via CP
• to IF 964 DP	Yes
Time difference in system when synchronizing via	
MPI, max.	200 ms
Interfaces	
Interfaces/bus type	1 x MPI/PROFIBUS DP, 1 x PROFIBUS DP, 2 x PROFIBUS DP (optionally pluggable)
Number of RS 485 interfaces	2
Number of other interfaces	0
Optical interface	No
1. Interface	
Interface type	MPI/PROFIBUS DP
Isolated	Yes
Interface types	
• RS 485	Yes
Output current of the interface, max.	150 mA
Protocols	Ver
MPI DDOFIDUS DD moster	Yes
PROFIBUS DP davides	Yes
PROFIBUS DP device MPI	Yes
Number of connections	44; If a diagnostics repeater is used on the line, the number of connection
Transmission rate, max.	resources on the line is reduced by 1 12 Mbit/s
Services	12 IVIDIUS
— PG/OP communication	Yes
— Routing	Yes
Global data communication	Yes
— Sobal data communication — S7 basic communication	Yes
— S7 communication	Yes
— S7 communication — S7 communication, as client	Yes
— S7 communication, as crieft — S7 communication, as server	Yes
— or communication, as server	100
PROFIBUS DP master	
PROFIBUS DP master • Number of connections, max.	32; If a diagnostics repeater is used on the line, the number of connection
Number of connections, max.	resources on the line is reduced by 1

— PG/OP communication	Yes
— PG/OP communication — Routing	Yes
Global data communication	No
— S7 basic communication	Yes
— S7 communication	Yes
S7 communication S7 communication, as client	Yes
— S7 communication, as server	Yes
— Equidistance	Yes
Isochronous mode	Yes
— SYNC/FREEZE	Yes
activation/deactivation of DP devices	Yes
Direct data exchange (slave-to-slave)	Yes
communication)	165
— DPV1	Yes
Address area	
— Inputs, max.	2 kbyte
— Outputs, max.	2 kbyte
1st interface / DP master / payload data per DP Device / heade	er
— user data per DP device, max.	244 byte
— Inputs, max.	244 byte
— Outputs, max.	244 byte
— Slots, max.	244
— per slot, max.	128 byte
1st interface / PROFIBUS DP device / header	
 Number of connections 	32
• GSD file	http://support.automation.siemens.com/WW/view/en/113652
 Transmission rate, max. 	12 Mbit/s
 automatic baud rate search 	No
 Address area, max. 	32; Virtual slots
 User data per address area, max. 	32 byte
— of which consistent, max.	32 byte
Services	
— PG/OP communication	Yes; with interface active
— Routing	Yes; with interface active
 Global data communication 	No
 S7 basic communication 	No
— S7 communication	Yes
 S7 communication, as client 	Yes
 S7 communication, as server 	Yes
 Direct data exchange (slave-to-slave communication) 	No
— DPV1	No
Transfer memory	
— Inputs	244 byte
— Outputs	244 byte
2. Interface	
Interface type	PROFIBUS DP
Isolated	Yes
Interface types	V
• RS 485	Yes
Output current of the interface, max. Protocols	150 mA
Protocols • PROFIBLIS DR master	Voc
PROFIBUS DP master PROFIBUS DP devices	Yes
PROFIBUS DP device PROFIBUS DP master	Yes
PROFIBUS DP master	22
Number of connections, max.	32 42 Mhii/a
Transmission rate, max.	12 Mbit/s
max. number of DP devices	125
Services	Voc
— PG/OP communication	Yes
— Routing	Yes

	- \$7 basic communication	Clobal data communication	No
\$7 communication, as client \$7 communication, as client \$7 communication, as client \$7 communication, as client \$7 communication Equidistance Illustrictionus mode Illustrictionus mode SYNGPREEZE and-indiandreace/Matton of DP devices Direct data exchange (alave-to-allave communication) DPV1 PV1 PV1 PV2 PV3 Address area Inputs, max Inputs, max Outputs, max Outputs, max User data per DP device, max Linguis, max PV3 PV4 Inputs, max PV4 Inputs, max PV4 Inputs, max PV4 PV5 Inputs, max PV5 PV5 PV5 Inputs PV5 Inputs PV5 Inputs PV5 Inputs PV5 Inputs PV5 Inputs PV5 Inputs Inputs Inputs PV6 Inputs -	- \$7 communication, as client	— Global data communication	
- S7 communication, as elver - S7 communication, as sever - S7 communication, as sever - Equidistance - Isochronous mode - SYNOPREEZE - activation/deachyston of DP devices - SYNOPREEZE - activation/deachyston of DP devices - Direct data exchange (alave-to-slave communication) - DPV1 - Yes - Address area - Inputs, max Outputs, max Outputs, max Outputs, max Outputs, max Outputs, max User - Inputs, max Outputs, max Output			
— S7 communication, as server	- S7 communication, as server		
Equidistance Isochronous mode SYNCFREEZE activation/deachvation of DP devices activation/deachvation of DP devices activation/deachvation of DP devices Device data exchange (slave-to-slave communication) DPV1 Yes Address area Imputs, max Outputs, max Outputs, max Uniquis, max Uniquis, max Uniquis, max Uniquis, max Uniquis, max Uniquis, max Sicts, max Sicts, max Sicts, max Per solt max Is By byte Sicts, max Per solt max Is Byte Sicts, max Per solt max Is Byte Inputs, max Is Byte Inputs, max Is Byte Inputs, max Is Byte Sicts, max Per solt max Is Byte Sicts, max Is Byte Roofiles Inputs Number of connections Inputs Could byte Coulding Inputs Uniquis Sicts Coulding Inputs Uniquis Sicts Coulding Inputs Uniquis Uniquis Sicts Coulding Inputs Uniquis Uniquis Sicts Coulding Sicts Roofiles PROFIBUS DP master PROFIBUS	Equidistance Isodromous mode Isodromous mode SYNCFREEZE schwatorofeectovation of DP devices Devic data exchange (slave to allove or communication) DIV1 DIV1 DIV1 DIV1 Address area Inputs, max Outputs, max Inputs, max Uniquis, max Uniquis, max Outputs, max Inputs, max Uniquis, max Uniquis, max Uniquis, max Uniquis, max Uniquis, max Outputs, max Outputs, max Inputs, max Inputs, max Inputs, max Inputs, max Inputs, max Inputs Inputs Inputs Inputs Outputs Inputs Outputs Outp		
Schronous mode	Isactivonous moide SYNCIFREEZE activation/descrivation of DP devices Direct data exchange (slave-to-slave Direct, max Address area Imputs, max Address area Imputs, max Address area Use data per DP device, max Address data per DP device, presente Number of connections Stots, max Address data, max Address d	,	
	- SYNCPREEZE - activation/deactivation of DP devices - Direct data exchange (slave-to-slave communication) - DPV1 - Ves - Address area - Inputs, max Outputs, max Outputs, max Outputs, max Outputs, max Outputs, max Outputs, max Inputs, max Inputs, max Inputs, max State of the mater's psyload data per DP Device in beader - user data per DP device, max Inputs, max Use of the mater's psyload data per DP Device in beader - user data per DP device, max Inputs, max Outputs, max State of the mater's psyload data per DP Device in beader - User data per DP device, max State of the material state of the device in beader - User data per actives area State of the material state of the device in beader - Number of connections - State of the material state of the device in beader - Number of connections - State of the device in beader - State of	·	
activation/deachvation of DP devices Direct data acchange (slave-to-slave communication) DPV1 PV1 Yes Address are acchange (slave-to-slave communication) DPV1 Address are acchange (slave-to-slave communication) Inputs, max Outputs, max Outputs, max Outputs, max Por slate pro DP device, max Liputs, max.			
- Direct data exchange (slave-to-slave communication) - DPV1 - DPV1 - Yes Address area - Inputs, max. 8 kbyte - Outputs, max. 8 kbyte - Outputs, max. 2 kbyte - User data per DP device, max. 244 byte - User data per DP device, max. 244 byte - User data per DP device, max. 244 byte - User data per DP device, max. 244 byte - User data per DP device, max. 244 byte - Slots, max. 244 byte - Slots, max. 244 byte - Slots, max. 128 byte Zend interface / PROSEBUS DP device / header • Number of connections - SSD file - Transmission rate, max. 12 Mbits - Transmission rate, max. 32 byte - Outputs area. 32 byte - Outputs - Sobress - Routing - Routing - Yes - Routing - Outputs - User data per address area, max. 32 byte - Outputs - User data per address area, max. 32 byte - Outputs - User data per address area, max. 32 byte - Routing - Noting - Yes - Routing - User data per address area, max. 32 byte - Outputs - User data per address area, max. 32 byte - Outputs - User data per address area, max. 32 byte - Province - Inputs - Outputs - User data per address area, max. 32 byte - Outputs - User data per address area, max. 32 byte - Routing - Noting Yes - Inputs - Outputs - User data per address area, max. 32 byte - Outputs - User data per address area, max. 32 byte - Province - Inputs - Outputs - User data per address area, max. 32 byte - Outputs - User data per address area, max. 32 byte - Province - Inputs - Outputs - No Interface byte - No Interface byte - No Interface byte - PROFIBUS DP device - Yes - PROFIBUS DP device - PROFIBUS DP master - PROFIBUS DP master - PROFIBUS DP master - PROFIDUS DP device - PROFI	— Direct data exchange (slave-to-slave communication) — DPV1 Address ares — In-plus, max. — Outputs, max. — Outputs, max. — User data per DP device, max. — Liputs, max. — Sids, max — Per sidt, max. — Sids, max — Per sidt, max. — Sids, max — Per sidt, max. — Sids, max. — Liputs, max. — Sids, max. — Liputs, max. — Sids, max. — Liputs, max. — Liputs, max. — Sids, max. — Liputs, ma		
communication) - DPV1 Address area - Inputs, max. - Outputs, max. 2 M kbyte - User data per DP device, max. - Inputs, max. - Outputs, max. - User data per DP device, max. - User data per DP device / header - Number of cornections - SS D file - Transmission rate, max. - User data per De device / header - User data per Device / header - User data per address area, max. - User data per address area, max. - Of which consistent, max. - Services - Routing - Routing - Routing - Routing - Outputs - User data per device / header - Where consistent, max. - Services - Routing - Routing - Wes - Routing - Wes - User data per device / header - Where consistent / header - Wes - Wes - Routing - Wes - Routing - Wes - Routing - Wes - User data per device / header - Wes - Wes - Routing - Wes - Routing - Wes - Routing - Wes - No - Where consistent / wes - Routing - Wes - No - Where consistent / wes - Routing - Wes - Routing - Wes - PROFIBUS DP master - Wes - PROFIBUS DP master - PROFIBUS DP master - No - Routing -	Communication) — DPV1 Yes Address area — Inputs, max. — Outputs, max. 2 A byte — User data per DP device, max. — 244 byte — User data per DP device, max. — 244 byte — User data per DP device, max. — 244 byte — User data per DP device, max. — 244 byte — Outputs, max. — Slots, max. — 244 byte — PROFIBUS DP device / header • Number of connections • SSD file • Transmission rate, max. • Address area, max. • Address area, max. — of which consistent, max. — 32 byte — Routing — Routing — Routing — Routing — Profice byce — Inputs — Outputs — User data per address area, max. — Inputs — Outputs — State — Inputs — Outputs — Inputs — Outputs — Interface byce — Interface		
Address area - Inputs, max Outputs, max. 2 du interface / DP master / payload data per DP Device / header - user data per DP device, max Inputs, max Outputs, max User data per DP device, max Inputs, max Outputs, max Slots, max Slots, max Slots, max Slots, max per slot, max per slot, max per slot, max 128 byte 2nd interface / PROFIBIUS DP master - Number of cornections - St output current of the interface, max 12 Mobil's - Outputs - No - Red 485 - Output current of the interface, max Services - Red 485 - Output current of the interface, max Services - Red 685 - Red 785 - Red 7	Address area	communication)	
- Inputs, max Outputs, max Outputs, max. 2 du interface / DP master / payload data per DP Device / header - user data per DP device, max Inputs, max Outputs, max Outputs, max Slots, max Per slot, max Per	Inputs, max Outputs, max		Yes
- Outputs, max. 2nd Interface / IDP master / payload data per DP Device / header - user data per DP device, max. - Inputs, max. - Outputs, max. - Outputs, max. - Stots, max. - Stots, max. - per slot, max. - Number of connections - STomministion rate, max. - Address area, max. - Address area, max. - Address area, max. - User data per address area, max. - of which consistent, max. - Services - Routing - User data per address area, max. - Outputs - User data per address area, max. - Outputs - User data per address area, max. -	## Address of Paraster / payload data per DP Device / header		0 lebuta
2nd interface / I/P master / payload data per I/P Device / header user data per I/P device, max. 244 byte	2nd interface: / DP master / payload data per DP Device / header user data per D device, max. 244 byte Inputs, max. 244 byte Outputs, max. 244 byte Outputs, max. 244 byte Outputs, max. 244 byte Inputs, max. 244 byte Outputs, max. 244 byte Outputs, max. 244 byte Outputs, max. 244 byte Outputs, max. 128 byte 2nd interface / PROFIBUS DP device / header • Number of connections 3 ST devices area, max. 32 Outputs 32 byte Outputs 32 byte Outputs 244 byte Outputs 244 b	•	
	user data per DP device, max Inputs, max Unputs, max Unputs, max Slots, max Slots, max Slots, max Per slot, max Slots fle Number of connections No No No No No No Protocols No PROFIBUS DP master PROFIBUS DP master PROFIBUS DP master No No Slots communication Slots	·	·
- Inputs, max. 244 byte Outputs, max. 244 byte Outputs, max. 244 byte Slots, max. 244 per slot, max. 128 byte Per slot, max. 32 byte Per slot, max P	Inputs, max.	i i	
Outputs, max Siots, max Siots, max Siots, max Siots, max Per siot, max Per siot, max. 244 2nd interface / PROFIBUS DP device / header • Number of connections • SD file • Transmission rate, max. • Address area, max. • User data per address area, max of which consistent, max. 2 Services Routing Routing Inputs Unputs	- Outputs, max.	·	·
Slots, max.	Siots, max.	·	·
	per slot, max. 2nd interface / PROFIBUS DP device / header Number of connections GSD file Transmission rate, max. 12 Mbit/s Transmission rate, max. 22 Mbit/s User data per address area, max. 23 byte of which consistent, max. 32 byte of which consistent, max. 32 byte of which consistent, max. 32 byte of which consistent, max. Services Routing Transfer memory Inputs 244 byte Outputs 244 byte Outputs 244 byte Outputs 2 Dutputs 2 Dutput current of the interface, max. 2 PROFIBUS DP master 3	•	·
Number of connections 32	2nd interface / PROFIBUS DP device / header • Number of connections • CSD file • Transmission rate, max. • Address area, max. • Address area, max. • Of which consistent, max. - of which consistent, max. 22 byte - of which consistent, max. 32 byte - Routing - Routing - Routing - Outputs - Output Carea		
		•	126 byte
SSD file Transmission rate, max. Address area, max. Address area, max. User data per address area, max. Frouting Transfer memory Inputs Outputs Address area, max. Interface Interface type Interface modules Interface modules Interface fype Interface fype Interface modules Interface module (IF), technical data as for 2nd interface Interface modules Interface modules Interface module (IF), technical data as for 2nd interface Interface modules Interface modules Interface module (IF), technical data as for 2nd interface Interface modules Interface modules Interface module (IF), technical data as for 2nd interface Interface module (IF), technical data as for 2nd interface Interface module (IF), technical data as for 2nd interface module (IF), technical data as for 2nd interface module for 2nd interface	SSD file http://support.automation.siemens.com/WWviewlen/113652 Transmission rate, max. 12 Mibil/s A dafdress area, max. 32 User data per address area, max. 32 byte — of which consistent, max. 32 byte Services — Routing Yes Transfer memory — Inputs 244 byte — Outputs 244 byte — Outputs 244 byte — Outputs 1.Interface Interface bype pluggable interface module (IF), technical data as for 2nd interface interface interface modules IF 964-DP (MLFB: 6ES7964-2AA04-0AB0) Isolated Yes automatic detection of transmission rate Interface types • RS 485 Yes • Output current of the interface, max. 150 mA Protocois • MPI No • PROFIBUS DP master Yes • PROFIBUS DP master • PROFIBUS DP device Yes PROFIBUS DP master • Number of connections, max. 12 Mibil/s • Transmission rate, max. 12 Mibil/s • Transmission rate, max. 12 Mibil/s • PROFICUS DP communication Yes Services — PG/OP communication Yes Services — PG/OP communication Yes - S7 communication Yes - S7 communication Yes - S7 communication Yes - S7 communication, as server Yes - Equidistance Yes - Equidistance Yes - Equidistance Yes - SYNC/FREEZE Yes		00
• Transmission rate, max. • Address area, max. • User data per address area, max. — of which consistent, max. Services — Routing Transfer memory — Inputs — Outputs 244 byte — Outputs 244 byte - Outputs 244 byte Services Interface type Plug-in interface modules Isolated automatic detection of transmission rate Interface types • RS 485 • Output current of the interface, max. Protocois • MPI • PROFIBUS DP master • PROFIBUS DP device PROFIBUS DP device PROFIBUS DP master • PROFIBUS DP mate, max. • Transmission rate, max. • Transmission rate, max. • Transmission rate, max. • Routing •	■ Transmission rate, max. ■ Address area, max. ■ User data per address area, max. ■ of which consistent, max. ■ 32 byte ■ of which consistent, max. ■ 32 byte Services - Routing Transfer memory - Inputs - Outputs 244 byte - Outputs 3. Interface Interface bype Interface bype Interface modules Is 964-DP (MLFB: 6ES7964-2AA04-0AB0) Solated Yes automatic detection of transmission rate No Interface byes • RS 485 • Output current of the interface, max. Protocois • MPI • PROFIBUS DP master • PROFIBUS DP device PROFIBUS DP device PROFIBUS DP master • Number of connections, max. • Transmission rate, max. 12 Mbit/s • max. mumber of DP devices Services - PG/OP communication - S7 basic communication - S7 basic communication - S7 communication, as server - Equidistance - Isochronous mode - Yes - Equidistance - SYNC/FREEZE Yes - Yes - Equidistance - Yes - SYNC/FREEZE - Yes		
Address area, max. User data per address area, max. Owhich consistent, max. Services - Routing - Routing - Fransfer memory - Inputs - Outputs - Output output of transmission rate - No - Interface woodules - Output current of the interface, max Output current of the interface, max Output current of the interface, max Output output output of the interface, max Output output output of woodules - PROFIBUS DP master - PROFIBUS DP master - PROFIBUS DP device - PROFIBUS DP master - Number of connections, max Transmission rate, max Output output of DP devices - PROFIBUS DP master - Number of DP devices - PROFIBUS DP master - Number of DP devices - PROFIBUS DP master - Number of DP devices - PROFIBUS DP master - Number of DP devices - PC/OP communication - No - Routing - Global data communication - No - S7 basic communication - S7 communication	Address area, max. User data per address area, max. Or which consistent, max. Services Routing Transfer memory Inputs Outputs Outputs Outputs If 964-DP (MLFB: 6ES7964-2AA04-0AB0) Interface byee Interface byes Interface modules If 964-DP (MLFB: 6ES7964-2AA04-0AB0) Interface byes Interface byes Interface byes If 964-DP (MLFB: 6ES7964-2AA04-0AB0) Interface byes Interface by		
User data per address area, max. — of which consistent, max. Services Routing Yes Transfer memory — Inputs — Outputs 244 byte 3. Interface Interface type Interface modules Isolated automatic detection of transmission rate Interface types RS 485 Output current of the interface, max. Protocols WPI PROFIBUS DP master PROFIBUS DP master No PROFIBUS DP master No No PROFIBUS DP master No No PROFIBUS DP master No No PROFIBUS DP device PROFIBUS DP device PROFIBUS DP device PROFIBUS DP device PROFIBUS DP master No No No PROFIBUS DP master No No No PROFIBUS DP master No	■ User data per address area, max. — of which consistent, max. Services — Routing — Routing — Yes Transfer memory — Inputs — Outputs — Outputs 3. Intorface Interface type — Plug-in interface modules IF 964-DP (MLFB: 6ES7964-2AA04-0AB0) Isolated Yes automatic detection of transmission rate No Interface types ● RS 485 ● Output current of the interface, max. Protocols ● MP ● PROFIBUS DP master ● PROFIBUS DP master ● PROFIBUS DP master ● Number of connections, max. ■ Transmission rate, max. ■ RS 495 ■ Output current of the interface, max. ■ Transmission rate, max. ■ PROFIBUS DP master ● Number of connections, max. ■ Transmission rate, max. ■ Routing — Global data communication — S7 communication — S7 communication — S7 communication, as client — S7 communication, as server — Equidistance — Lesothonous mode — Yes — SYNC/FREEZE Yes		
of which consistent, max. Services Routing Routing Cutputs Cu	Services		
Services — Routing Transfer memory — Inputs — Outputs 244 byte 3. Interface Interface type Interface modules IF 964-DP (MLFB: 6ES7964-2AA04-0AB0) Isolated automatic detection of transmission rate Interface types • RS 485 • Output current of the interface, max. Protocols • MPI • PROFIBUS DP master • PROFIBUS DP device PROFIBUS DP master • PROFIBUS DP master • PROFIBUS DP master • Number of connections, max. • Transmission rate, max. • Transmission rate, max. • Transmission rate, max. • PROFIBUS DP master • Number of DP devices - PROFIBUS DP device PROFIBUS DP master • Number of DP devices - PROFIDUS DP device - PROFIDUS DP master • Number of DP devices - PROFIDUS DP device - PROFIDUS DP master • Number of DP devices - PROFIDUS DP devices - PG/OP communication - Routing - Global data communication - S7 basic communication - S7 basic communication - S7 communication	Services		
- Routing Yes Transfer memory - Inputs 244 byte - Outputs 244 byte 3. Interface Interface type plugable interface module (IF), technical data as for 2nd interface Plug-in interface modules Isolated Yes automatic detection of transmission rate No Interface types • RS 485 Yes • Output current of the interface, max. 150 mA Protocols • MPI No • PROFIBUS DP master Yes • PROFIBUS DP device Yes PROFIBUS DP device Yes PROFIBUS DP master • Number of connections, max. 32 • Transmission rate, max. 12 Mbit/s • max. number of DP devices 125 Services - PG/OP communication Yes - Routing Yes: S7 routing - Global data communication No - S7 basic communication Yes - S7 communication Yes	Transfer memory Transfer		32 byte
Transfer memory - Inputs - Outputs 244 byte 3. Interface Interface type Plug-in interface modules IF 964-DP (MLFB: 6ES7964-2AA04-0AB0) Isolated automatic detection of transmission rate Interface types • RS 485 • Output current of the interface, max. Protocols • MPI • PROFIBUS DP master • PROFIBUS DP device PROFIBUS DP device PROFIBUS DP master • Number of connections, max. • Transmission rate, max. • Transmission rate, max. • Transmission rate, max. • RS 485 • Output current of the interface, max. 150 mA Protocols • MPI • PROFIBUS DP device • Yes • PROFIBUS DP device PROFIBUS DP device 125 Services - PG/OP communication - Routing - Global data communication - S7 basic communication - S7 basic communication - S7 communication	Transfer memory		
Inputs Outputs 244 byte 3. Interface Interface type Interface modules Isolated automatic detection of transmission rate Interface types • RS 485 • Output current of the interface, max. Protocols • MPI • PROFIBUS DP master • PROFIBUS DP device PROFIBUS DP device PROFIBUS DP device PROFIBUS DP device • Number of connections, max. • Transmission rate, max. • Transmission rate, max. • PG/OP communication Routing Global data communication S7 basic communication S7 basic communication S7 communication S7 communication, as client Plugation interface module (IF), technical data as for 2nd interface Plugation interface module (IF), technical data as for 2nd interface Plugation interface module (IF), technical data as for 2nd interface Plugation interface module (IF), technical data as for 2nd interface Plugation interface module (IF), technical data as for 2nd interface Plugation interface module (IF), technical data as for 2nd interface Plugation interface module (IF), technical data as for 2nd interface Plugation interface module (IF), technical data as for 2nd interface Plugation interface module (IF), technical data as for 2nd interface module (IF), technical data a	Inputs Outputs Output ournert of transmission rate Interface types RS 485 Output current of the interface, max PROFIBUS DP master PROFIBUS DP device PROFIBUS DP devices PROFIBUS DP devices PROFIBUS DP devices PROFIBUS DP devices S7 communication S7 communication S7 communication S7 communication, as server Interface types PSO Interface module (IF), technical data as for 2nd interface Peso Pugable interface module (IF), technical data as for 2nd interface Peso Pugable interface module (IF), technical data as for 2nd interface Peso Pugable interface module (IF), technical data as for 2nd interface Peso Pugable interface module (IF), technical data as for 2nd interface Peso Pugable interface module (IF), technical data as for 2nd interface Peso Pugable interface module (IF), technical data as for 2nd interface Peso Pugable interface module (IF), technical data as for 2nd interface Peso Pugable interface module (IF), technical data as for 2nd interface Peso Pugable interface module (IF), technical data as for 2nd interface Peso Pugable interface module (IF), technical data as for 2nd interface Peso Pugable interface module (IF), technical data as for 2nd interface Peso Pugable interface module (IF), technical data as for 2nd interface Peso Pugable interface module (IF), technical data as for 2nd interface Peso Pugable interface module (IF), technical data as for 2nd inte	-	Yes
- Outputs S. Interface Interface type Plug-in interface modules IF 964-DP (MLFB: 6ES7964-2AA04-0AB0) Isolated automatic detection of transmission rate No Interface types RS 485 Output current of the interface, max. Protocols MPI PROFIBUS DP master PROFIBUS DP device PROFIBUS DP device PROFIBUS DP master Number of connections, max. Transmission rate, max. 12 Mbit/s max. number of DP devices PG/OP communication Routed Routput data as for 2nd interface Pug-84-2AA04-0AB0) IF 964-DP (MLFB: 6ES7964-2AA04-0AB0) No No Interface types No No No PROFIBUS DP master Yes PROFIBUS DP master Yes PROFIBUS DP master Yes PROFIBUS DP master Number of connections, max. 12 Mbit/s Pax. number of DP devices 125 Services PG/OP communication Routput Pes; S7 routing Global data communication No S7 basic communication No S7 communication, as client Yes	Outputs State	·	
Interface type Interface type Plug-in interface modules Isolated Aves Automatic detection of transmission rate Interface types • RS 485 • Output current of the interface, max. Protocols • MPI • PROFIBUS DP master • PROFIBUS DP device PROFIBUS DP device PROFIBUS DP device • RS 485 • Output our ent of the interface, max. 150 mA Protocols • MPI • PROFIBUS DP device PROFIBUS DP device PROFIBUS DP device PROFIBUS DP device PROFIBUS DP master • Number of connections, max. • 12 Mbit/s • max. number of DP devices - PG/OP communication - Routing - Global data communication - S7 basic communication - S7 communicatio	Interface type pluggable interface module (IF), technical data as for 2nd interface Plug-in interface modules IF 964-DP (MLFB: 6ES7964-2AA04-0AB0) Isolated Yes automatic detection of transmission rate No Interface types • RS 485 Yes • Output current of the interface, max. 150 mA Protocols • MPI No PROFIBUS DP master Yes • PROFIBUS DP device Yes PROFIBUS DP device Yes PROFIBUS DP device 125 Services - PG/OP communication Yes; S7 routing - Global data communication No S7 communication Yes S7 communication Yes S7 communication Yes S7 communication, as client Yes - S7 communication, as client Yes - Equidistance Yes - Isochronous mode Yes - SYNC/FREEZE Yes	Innute	244 hvte
Interface type pluggable interface module (IF), technical data as for 2nd interface Plug-in interface modules IF 964-DP (MLFB: 6ES7964-2AA04-0AB0) Isolated Yes automatic detection of transmission rate No Interface types • RS 485 Yes • Output current of the interface, max. 150 mA Protocols • MPI No • PROFIBUS DP master Yes • PROFIBUS DP device Yes PROFIBUS DP device Yes PROFIBUS DP device Yes PROFIBUS DP device Yes PROFIBUS DP master • Number of connections, max. 32 • Transmission rate, max. 12 Mbit/s • max. number of DP devices 125 Services - PG/OP communication Yes - Routing Yes; S7 routing - Global data communication No - S7 basic communication Yes - S7 communication Yes - S7 communication Yes - S7 communication, as client	Interface type	·	
Plug-in interface modules Isolated Yes automatic detection of transmission rate No Interface types • RS 485 • Output current of the interface, max. Protocols • MPI • PROFIBUS DP master • PROFIBUS DP device PROFIBUS DP master • Number of connections, max. • Transmission rate, max. • Transmission rate, max. • Transmission rate, max. • Transmission rate, max. • RS 486 • Output current of the interface, max. 12 Mbit/s • max. number of DP devices - PG/OP communication - Routing - Global data communication - S7 basic communication - S7 communication - Yes - S7 communication, as client	Plug-in interface modules IF 964-DP (MLFB: 6ES7964-2AA04-0AB0) Isolated Yes automatic detection of transmission rate No Interface types *** • RS 485 Yes • Output current of the interface, max. 150 mA Protocols • MPI No • PROFIBUS DP master Yes • PROFIBUS DP device Yes PROFIBUS DP master *** • Number of connections, max. 32 • Transmission rate, max. 12 Mbit/s • max. number of DP devices 125 Services *** — PG/OP communication Yes — Routing Yes; \$7 routing — Global data communication No — S7 basic communication No — S7 communication, as client Yes — S7 communication, as client Yes — Equidistance Yes — SYNC/FREEZE Yes	— Outputs	
Isolated	Isolated	— Outputs	244 byte
automatic detection of transmission rate Interface types RS 485 Output current of the interface, max. Protocols MPI PROFIBUS DP master PROFIBUS DP device PROFIBUS DP master Number of connections, max. Transmission rate, max. Transmission rate, max. Transmission rate, max. Tensume of DP devices Services PG/OP communication Routing Global data communication ST basic communication No ST communication ST communication Yes Yes ST communication Yes	automatic detection of transmission rate Interface types RS 485 Output current of the interface, max. Protocols MPI No PROFIBUS DP master PROFIBUS DP master PROFIBUS DP master Number of connections, max. Transmission rate, max. Transmission rate, max. Transmission rate, max. Tespecies PG/OP communication Routing Global data communication S7 basic communication S7 communication S8 communication S9 communicat	— Outputs 3. Interface	244 byte pluggable interface module (IF), technical data as for 2nd interface
Interface types RS 485 Output current of the interface, max. Protocols MPI PROFIBUS DP master PROFIBUS DP device PROFIBUS DP master Number of connections, max. Transmission rate, max. Transmission rate, max. Transmission rate, max. Transmission rate, max. Temporary for the foliable of the foliable	Interface types ● RS 485 Yes ● Output current of the interface, max. 150 mA Protocols ● MPI No ● PROFIBUS DP master Yes ● PROFIBUS DP device Yes PROFIBUS DP master ● Number of connections, max. 32 ● Transmission rate, max. 12 Mbit/s ● max. number of DP devices 125 Services — PG/OP communication Yes — Routing Yes; S7 routing — Global data communication No — S7 basic communication No — S7 communication, as client Yes — S7 communication, as server Yes — Equidistance Yes — Isochronous mode Yes — SYNC/FREEZE Yes	— Outputs 3. Interface Interface type	244 byte pluggable interface module (IF), technical data as for 2nd interface
RS 485 Output current of the interface, max. Protocols MPI PROFIBUS DP master PROFIBUS DP device PROFIBUS DP master Number of connections, max. Transmission rate, max. Transmission rate, max. Transmission rate, max. Transmission rate, max. PG/OP communication Routing Global data communication PS7 basic communication No S7 communication PYes S7 communication, as client Yes	RS 485 Output current of the interface, max. Protocols MPI PROFIBUS DP master PROFIBUS DP device PROFIBUS DP master Number of connections, max. Transmission rate, max. Testing the following services PG/OP communication Routing Global data communication S7 basic communication No S7 basic communication S7 communication S7 communication S7 communication S7 communication, as client S7 communication, as server Equidistance Yes Isochronous mode Yes SYNC/FREEZE Yes	— Outputs 3. Interface Interface type Plug-in interface modules	pluggable interface module (IF), technical data as for 2nd interface IF 964-DP (MLFB: 6ES7964-2AA04-0AB0)
Output current of the interface, max. Protocols MPI PROFIBUS DP master PROFIBUS DP device PROFIBUS DP master Number of connections, max. Transmission rate, max. Transmission rate, max. Transmission rate, max. PROFIBUS DP devices PROFIBUS DP master Number of connections, max. Transmission rate, max. Transmis	Output current of the interface, max. Protocols MPI PROFIBUS DP master PROFIBUS DP device PROFIBUS DP master Number of connections, max. It Mbit/s Transmission rate, max. Transmission rate, max. PROFO communication Routing Global data communication S7 basic communication S7 communication S7 communication S7 communication S7 communication, as client S7 communication, as server Equidistance Jess Yes Liston Transmission rate, max. Yes Yes Services PG/OP communication Yes Yes Yes S7 communication No S7 communication Yes Yes Equidistance Yes Liston Yes Yes SYNC/FREEZE Yes	— Outputs 3. Interface Interface type Plug-in interface modules Isolated	pluggable interface module (IF), technical data as for 2nd interface IF 964-DP (MLFB: 6ES7964-2AA04-0AB0) Yes
Protocols	Protocols • MPI PROFIBUS DP master PROFIBUS DP device PROFIBUS DP master • Number of connections, max. • Number of connections, max. • Transmission rate, max. • max. number of DP devices - PG/OP communication Routing - Global data communication - S7 basic communication - S7 communication, as client - S7 communication, as server - Equidistance - Isochronous mode - SYNC/FREEZE Yes	— Outputs 3. Interface Interface type Plug-in interface modules Isolated automatic detection of transmission rate	pluggable interface module (IF), technical data as for 2nd interface IF 964-DP (MLFB: 6ES7964-2AA04-0AB0) Yes
	MPI PROFIBUS DP master PROFIBUS DP device PROFIBUS DP master Number of connections, max. Transmission rate, max. Transmission rate, max. Transmission rate, max. Transmission rate, max. End of the profibus of the pro	— Outputs 3. Interface Interface type Plug-in interface modules Isolated automatic detection of transmission rate Interface types	pluggable interface module (IF), technical data as for 2nd interface IF 964-DP (MLFB: 6ES7964-2AA04-0AB0) Yes No
 PROFIBUS DP master PROFIBUS DP master Number of connections, max. Transmission rate, max. max. number of DP devices Services PG/OP communication Routing Global data communication S7 basic communication Yes No S7 communication Yes Yes S7 communication Yes 	PROFIBUS DP master PROFIBUS DP device PROFIBUS DP master Number of connections, max. 12 Mbit/s max. number of DP devices PG/OP communication Routing Global data communication S7 basic communication S7 communication S8 communication S9 comm	— Outputs 3. Interface Interface type Plug-in interface modules Isolated automatic detection of transmission rate Interface types • RS 485	pluggable interface module (IF), technical data as for 2nd interface IF 964-DP (MLFB: 6ES7964-2AA04-0AB0) Yes No Yes
 PROFIBUS DP device PROFIBUS DP master Number of connections, max. Transmission rate, max. max. number of DP devices Services PG/OP communication Routing Global data communication S7 basic communication S7 communication Yes Yes S7 communication Yes Yes Yes S7 communication, as client Yes 	PROFIBUS DP device PROFIBUS DP master Number of connections, max. Transmission rate, max. Transmission rate, max. Table max. number of DP devices PG/OP communication PG/OP communication Post pasic communication No S7 basic communication No S7 communication Yes S7 communication, as client Yes S7 communication, as server Yes S8 Communication Yes S9 Communication Yes	— Outputs 3. Interface Interface type Plug-in interface modules Isolated automatic detection of transmission rate Interface types • RS 485 • Output current of the interface, max. Protocols	pluggable interface module (IF), technical data as for 2nd interface IF 964-DP (MLFB: 6ES7964-2AA04-0AB0) Yes No Yes
PROFIBUS DP master Number of connections, max. Transmission rate, max. max. max. 12 Mbit/s 125 Services PG/OP communication Routing Global data communication S7 basic communication S7 communication S7 communication Yes Yes Yes Yes Yes Yes Yes Ye	PROFIBUS DP master • Number of connections, max. • Transmission rate, max. • max. number of DP devices 125 Services - PG/OP communication - Routing - Global data communication - S7 basic communication - S7 communication - S7 communication - S7 communication, as client - S7 communication, as server - Equidistance - Isochronous mode - SYNC/FREEZE • Number of connections, max. 32 32 32 32 32 32 32 32 32 3	— Outputs 3. Interface Interface type Plug-in interface modules Isolated automatic detection of transmission rate Interface types • RS 485 • Output current of the interface, max. Protocols • MPI	pluggable interface module (IF), technical data as for 2nd interface IF 964-DP (MLFB: 6ES7964-2AA04-0AB0) Yes No Yes 150 mA
 Number of connections, max. Transmission rate, max. max. number of DP devices Services — PG/OP communication — Routing — Global data communication — S7 basic communication — S7 communication — S7 communication — S7 communication, as client 	 Number of connections, max. Transmission rate, max. max. number of DP devices 125 Services — PG/OP communication — Routing — Global data communication — S7 basic communication — S7 communication — S7 communication — S7 communication, as client — S7 communication, as server — Equidistance — Isochronous mode — SYNC/FREEZE Yes 	— Outputs 3. Interface Interface type Plug-in interface modules Isolated automatic detection of transmission rate Interface types • RS 485 • Output current of the interface, max. Protocols • MPI	pluggable interface module (IF), technical data as for 2nd interface IF 964-DP (MLFB: 6ES7964-2AA04-0AB0) Yes No Yes 150 mA
 Transmission rate, max. max. number of DP devices Services — PG/OP communication — Routing — Global data communication — S7 basic communication — S7 communication — S7 communication — S7 communication, as client Yes 	 Transmission rate, max. 12 Mbit/s 125 Services — PG/OP communication — Routing — Global data communication — S7 basic communication — S7 communication — S7 communication — S7 communication, as client — S7 communication, as server — Equidistance — Isochronous mode — SYNC/FREEZE Yes 	— Outputs 3. Interface Interface type Plug-in interface modules Isolated automatic detection of transmission rate Interface types • RS 485 • Output current of the interface, max. Protocols • MPI • PROFIBUS DP master	pluggable interface module (IF), technical data as for 2nd interface IF 964-DP (MLFB: 6ES7964-2AA04-0AB0) Yes No Yes 150 mA
 max. number of DP devices Services — PG/OP communication — Routing — Global data communication — S7 basic communication — S7 communication, as client 	 max. number of DP devices Services — PG/OP communication — Routing — Global data communication — S7 basic communication — S7 communication — S7 communication — S7 communication — S7 communication, as client — S7 communication, as server — Equidistance — Lsochronous mode — SYNC/FREEZE Yes 	— Outputs 3. Interface Interface type Plug-in interface modules Isolated automatic detection of transmission rate Interface types • RS 485 • Output current of the interface, max. Protocols • MPI • PROFIBUS DP master • PROFIBUS DP device	pluggable interface module (IF), technical data as for 2nd interface IF 964-DP (MLFB: 6ES7964-2AA04-0AB0) Yes No Yes 150 mA
Services	Services	— Outputs 3. Interface Interface type Plug-in interface modules Isolated automatic detection of transmission rate Interface types • RS 485 • Output current of the interface, max. Protocols • MPI • PROFIBUS DP master • PROFIBUS DP device PROFIBUS DP master	pluggable interface module (IF), technical data as for 2nd interface IF 964-DP (MLFB: 6ES7964-2AA04-0AB0) Yes No Yes 150 mA No Yes Yes
 — PG/OP communication — Routing — Global data communication — S7 basic communication — S7 communication — S7 communication — S7 communication — S7 communication, as client Yes 	 — PG/OP communication — Routing — Global data communication — S7 basic communication — S7 communication — S7 communication — S7 communication, as client — S7 communication, as server — S7 communication, as server — Equidistance — Isochronous mode — SYNC/FREEZE Yes 	— Outputs 3. Interface Interface type Plug-in interface modules Isolated automatic detection of transmission rate Interface types • RS 485 • Output current of the interface, max. Protocols • MPI • PROFIBUS DP master • PROFIBUS DP device PROFIBUS DP master • Number of connections, max.	pluggable interface module (IF), technical data as for 2nd interface IF 964-DP (MLFB: 6ES7964-2AA04-0AB0) Yes No Yes 150 mA No Yes Yes
 Routing Global data communication S7 basic communication No S7 communication Yes S7 communication, as client Yes 	 Routing Global data communication S7 basic communication No S7 communication S7 communication Yes S7 communication, as client S7 communication, as server Equidistance Isochronous mode SYNC/FREEZE Yes 	— Outputs 3. Interface Interface type Plug-in interface modules Isolated automatic detection of transmission rate Interface types • RS 485 • Output current of the interface, max. Protocols • MPI • PROFIBUS DP master • PROFIBUS DP device PROFIBUS DP master • Number of connections, max. • Transmission rate, max.	pluggable interface module (IF), technical data as for 2nd interface IF 964-DP (MLFB: 6ES7964-2AA04-0AB0) Yes No Yes 150 mA No Yes Yes Yes Yes Yes
 Global data communication S7 basic communication S7 communication Yes S7 communication, as client Yes 	 Global data communication S7 basic communication S7 communication S7 communication, as client S7 communication, as server S7 communication, as server Equidistance Isochronous mode SYNC/FREEZE Yes 	— Outputs 3. Interface Interface type Plug-in interface modules Isolated automatic detection of transmission rate Interface types • RS 485 • Output current of the interface, max. Protocols • MPI • PROFIBUS DP master • PROFIBUS DP device PROFIBUS DP master • Number of connections, max. • Transmission rate, max. • max. number of DP devices	pluggable interface module (IF), technical data as for 2nd interface IF 964-DP (MLFB: 6ES7964-2AA04-0AB0) Yes No Yes 150 mA No Yes Yes Yes Yes Yes
 S7 basic communication S7 communication S7 communication, as client Yes Yes 	 S7 basic communication S7 communication S7 communication, as client S7 communication, as server S7 communication, as server Equidistance Isochronous mode SYNC/FREEZE Yes 	— Outputs 3. Interface Interface type Plug-in interface modules Isolated automatic detection of transmission rate Interface types • RS 485 • Output current of the interface, max. Protocols • MPI • PROFIBUS DP master • PROFIBUS DP device PROFIBUS DP master • Number of connections, max. • Transmission rate, max. • max. number of DP devices Services	pluggable interface module (IF), technical data as for 2nd interface IF 964-DP (MLFB: 6ES7964-2AA04-0AB0) Yes No Yes 150 mA No Yes Yes 125
— S7 communication— S7 communication, as clientYes	 S7 communication S7 communication, as client S7 communication, as server Equidistance Isochronous mode SYNC/FREEZE Yes 	— Outputs 3. Interface Interface type Plug-in interface modules Isolated automatic detection of transmission rate Interface types • RS 485 • Output current of the interface, max. Protocols • MPI • PROFIBUS DP master • PROFIBUS DP device PROFIBUS DP master • Number of connections, max. • Transmission rate, max. • max. number of DP devices Services — PG/OP communication	pluggable interface module (IF), technical data as for 2nd interface IF 964-DP (MLFB: 6ES7964-2AA04-0AB0) Yes No Yes 150 mA No Yes Yes Yes 125 Yes
— S7 communication, as client	 S7 communication, as client S7 communication, as server Equidistance Isochronous mode SYNC/FREEZE Yes 	— Outputs 3. Interface Interface type Plug-in interface modules Isolated automatic detection of transmission rate Interface types • RS 485 • Output current of the interface, max. Protocols • MPI • PROFIBUS DP master • PROFIBUS DP device PROFIBUS DP master • Number of connections, max. • Transmission rate, max. • max. number of DP devices Services — PG/OP communication — Routing	pluggable interface module (IF), technical data as for 2nd interface IF 964-DP (MLFB: 6ES7964-2AA04-0AB0) Yes No Yes 150 mA No Yes Yes 125 Yes Yes Yes Yes Yes Yes Yes Yes Yes Ye
	 S7 communication, as server Equidistance Isochronous mode SYNC/FREEZE Yes Yes 	— Outputs 3. Interface Interface type Plug-in interface modules Isolated automatic detection of transmission rate Interface types • RS 485 • Output current of the interface, max. Protocols • MPI • PROFIBUS DP master • PROFIBUS DP device PROFIBUS DP master • Number of connections, max. • Transmission rate, max. • max. number of DP devices Services — PG/OP communication — Routing — Global data communication	pluggable interface module (IF), technical data as for 2nd interface IF 964-DP (MLFB: 6ES7964-2AA04-0AB0) Yes No Yes 150 mA No Yes Yes Yes Yes Yes 725 Yes Yes Yes Yes Yes Yes Yes Yes Yes Ye
— S7 communication, as server	 Equidistance Isochronous mode SYNC/FREEZE Yes 	- Outputs 3. Interface Interface type Plug-in interface modules Isolated automatic detection of transmission rate Interface types • RS 485 • Output current of the interface, max. Protocols • MPI • PROFIBUS DP master • PROFIBUS DP device PROFIBUS DP master • Number of connections, max. • Transmission rate, max. • max. number of DP devices Services - PG/OP communication - Routing - Global data communication - S7 basic communication	pluggable interface module (IF), technical data as for 2nd interface IF 964-DP (MLFB: 6ES7964-2AA04-0AB0) Yes No Yes 150 mA No Yes Yes Yes Yes Yes 725 Yes Yes Yes Yes Yes Yes Yes Yes Yes Ye
	— Isochronous mode— SYNC/FREEZEYes	— Outputs 3. Interface Interface type Plug-in interface modules Isolated automatic detection of transmission rate Interface types • RS 485 • Output current of the interface, max. Protocols • MPI • PROFIBUS DP master • PROFIBUS DP device PROFIBUS DP master • Number of connections, max. • Transmission rate, max. • max. number of DP devices Services — PG/OP communication — Routing — Global data communication — S7 basic communication — S7 communication — S7 communication	pluggable interface module (IF), technical data as for 2nd interface IF 964-DP (MLFB: 6ES7964-2AA04-0AB0) Yes No Yes 150 mA No Yes Yes Yes Yes Yes 725 Yes Yes Yes Yes Yes Yes Yes Yes Yes Ye
— Equidistance Yes	— SYNC/FREEZE Yes	Outputs 3. Interface Interface type Plug-in interface modules Isolated automatic detection of transmission rate Interface types • RS 485 • Output current of the interface, max. Protocols • MPI • PROFIBUS DP master • PROFIBUS DP device PROFIBUS DP master • Number of connections, max. • Transmission rate, max. • max. number of DP devices Services PG/OP communication Routing Global data communication S7 basic communication S7 communication S7 communication, as client	pluggable interface module (IF), technical data as for 2nd interface IF 964-DP (MLFB: 6ES7964-2AA04-0AB0) Yes No Yes 150 mA No Yes Yes 125 Yes Yes Yes Yes Yes Yes Yes Yes Yes Ye
— Isochronous mode Yes		Outputs 3. Interface Interface type Plug-in interface modules Isolated automatic detection of transmission rate Interface types • RS 485 • Output current of the interface, max. Protocols • MPI • PROFIBUS DP master • PROFIBUS DP device PROFIBUS DP master • Number of connections, max. • Transmission rate, max. • max. number of DP devices Services PG/OP communication Routing Global data communication S7 basic communication S7 communication S7 communication, as client S7 communication, as server	pluggable interface module (IF), technical data as for 2nd interface IF 964-DP (MLFB: 6ES7964-2AA04-0AB0) Yes No Yes 150 mA No Yes
— SYNC/FREEZE Yes		Outputs 3. Interface Interface type Plug-in interface modules Isolated automatic detection of transmission rate Interface types • RS 485 • Output current of the interface, max. Protocols • MPI • PROFIBUS DP master • PROFIBUS DP device PROFIBUS DP master • Number of connections, max. • Transmission rate, max. • max. number of DP devices Services PG/OP communication Routing Global data communication S7 basic communication S7 communication S7 communication, as client S7 communication, as server Equidistance	pluggable interface module (IF), technical data as for 2nd interface IF 964-DP (MLFB: 6ES7964-2AA04-0AB0) Yes No Yes 150 mA No Yes
	— activation/deactivation of DP devices Yes	Outputs 3. Interface Interface type Plug-in interface modules Isolated automatic detection of transmission rate Interface types • RS 485 • Output current of the interface, max. Protocols • MPI • PROFIBUS DP master • PROFIBUS DP device PROFIBUS DP master • Number of connections, max. • Transmission rate, max. • max. number of DP devices Services PG/OP communication Routing Global data communication S7 basic communication S7 communication S7 communication, as client S7 communication, as server Equidistance Isochronous mode	pluggable interface module (IF), technical data as for 2nd interface IF 964-DP (MLFB: 6ES7964-2AA04-0AB0) Yes No Yes 150 mA No Yes

	·
 — Direct data exchange (slave-to-slave communication) 	Yes
— DPV0	Yes
— DPV1	Yes
Address area	
— Inputs, max.	8 kbyte
— Outputs, max.	8 kbyte
3rd interface / DP master / payload data per DP Device / heade	·
— user data per DP device, max.	244 byte
— Inputs, max.	244 byte
— Outputs, max.	244 byte
— Slots, max.	244
— per slot, max.	128 byte
3rd interface / PROFIBUS DP device / header	
number of possible connections / at the 3rd interface / as	32
DP slave	
GSD file	http://support.automation.siemens.com/WW/view/en/113652
 transfer rate / at the 3rd interface / as DP slave / maximum 	12 Mbit/s
automatic baud rate search	No
 Address area, max. 	32
 data volume / at the 3rd interface / as DP slave / as user data per address range / maximum 	32 byte
 data volume / at the 3rd interface / as DP slave / as consistent reference data per address range / maximum 	32 byte
Services	
— PG/OP communication	Yes
— Routing	Yes; with interface active
Global data communication	No
 S7 basic communication 	No
— S7 communication	Yes
 — S7 communication, as client 	Yes
— S7 communication, as server	Yes
Direct data exchange (slave-to-slave)	No
communication)	
— DPV1	No
Transfer memory	
— Inputs	244 byte
— Outputs	244 byte
4. Interface	
Interface type	pluggable interface module (IF), technical data as for 2nd interface
Plug-in interface modules	IF 964-DP (MLFB: 6ES7964-2AA04-0AB0)
Protocols	
SIMATIC communication	
S7 routing	Yes
Open IE communication	
• ISO-on-TCP (RFC1006)	Via CP 443-1 and loadable FB
— Data length, max.	1 452 bytes via CP 443-1 Adv.
Web server	
• supported	No
Isochronous mode	
Equidistance	Yes
Number of DP masters with isochronous mode	4
User data per isochronous slave, max.	244 byte
shortest clock pulse	1 ms; 0.5 ms without use of SFC 126, 127
max. cycle	32 ms
communication functions / header	
PG/OP communication	Yes
 Number of connectable OPs without message processing 	63
Number of connectable OPs with message processing	63; When using alarm_S and alarm_D
Data record routing	Yes
Global data communication	

_	
• supported Ye	es
• Number of GD loops, max.	
 Number of GD packets, transmitter, max. 	
 Number of GD packets, receiver, max. 	2
• Size of GD packets, max. 54	l byte
• Size of GD packet (of which consistent), max.	variable
S7 basic communication	
• supported Ye	es
• User data per job, max. 76	5 byte
• User data per job (of which consistent), max.	variable
S7 communication	
• supported Ye	es
• as server	es
• as client	es
	ł kbyte
	S2 byte; 1 variable
S5 compatible communication	2 5)10, 1 validato
·	es; Via FC AG_SEND and AG_RECV, max. via 10 CP 443-1 or 443-5
	kbyte
	10 byte
	1/64
CPU, max.	HO 4
Standard communication (FMS)	
	es; Via CP and loadable FB
Number of connections	
• overall 64	
usable for PG communication	
— reserved for PG communication 1	
— adjustable for PG communication, max.	
usable for OP communication	
— reserved for OP communication 1	
— adjustable for OP communication, max.	
·	
usable for S7 basic communication	
— reserved for S7 basic communication 0	
— adjustable for S7 basic communication, max.	
usable for S7 communication	
— reserved for S7 communication 0	
— adjustable for S7 communication, max.	
usable for routing	
— reserved for routing 0	
— adjustable for routing, max.	
S7 message functions	
	B; Max. 63 with ALARM_S and ALARM_D (OPs); max. 12 with ALARM_8 and LARM_P (e.g. WinCC)
Symbol-related messages Ye	es
SCAN procedure Ye	es
Program alarms Ye	es
Process diagnostic messages Ye	es
simultaneously active Alarm-S blocks, max.	000; Simultaneously active alarm_S/SQ blocks or alarm_D/DQ blocks
Alarm 8-blocks	es
 Number of instances for alarm 8 and S7 communication blocks, max. 	0 000
• preset, max.	200
Process control messages Ye	es
Number of archives that can log on simultaneously (SFB 37 AR_SEND) 64	
Number of messages	
• overall, max.	024
• in 100 ms grid, max. 12	28
 • in 100 ms grid, max. • in 500 ms grid, max. 51 	
• in 500 ms grid, max. 51	

• with 100 ms grid, max.	1
with 100 ms grid, max.with 500, 1000 ms grid, max.	10
Test commissioning functions	10
Status block	Yes; Up to 2 simultaneously
Single step	Yes
	4
Number of breakpoints Status/control	4
Status/control variable	Yes; Up to 16 variable tables
Variables	Inputs/outputs, memory bits, DBs, distributed I/Os, timers, counters
Number of variables, max.	70; Status/control
	70, Status/Control
Forcing • Forcing	Yes
Forcing Forcing, variables	Inputs, outputs, bit memories, peripheral inputs, peripheral outputs
Number of variables, max.	512
Diagnostic buffer	312
-	Yes
Present Number of antrice, may	3 200
Number of entries, max.	
— adjustable	Yes
— preset	120
EMC	
Emission of radio interference acc. to EN 55 011	V
Limit class A, for use in industrial areas	Yes
Limit class B, for use in residential areas	No
configuration / header	
Configuration software	
• STEP 7	Yes
configuration / programming / header	
Command set	see instruction list
Nesting levels	7
 Access to consistent data in process image 	Yes
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
configuration / programming / number of simultaneously active	SFC / header
— DPSYC_FR	2
— D_ACT_DP	8
— RD_REC	8
— WR_REC	8
— WR_PARM	8
— PARM_MOD	1
— WR_DPARM	2
— DPNRM_DG	8
— RDSYSST	8
— DP_TOPOL	1
configuration / programming / number of simultaneously active	SFB / header
— RDREC	8
— WRREC	8
Know-how protection	
User program protection/password protection	Yes
Dimensions	
Width	50 mm
Height	290 mm
Depth	219 mm
Deput	Z I V IIIII

Weights	
Weight, approx.	0.9 kg
last modified:	5/22/2024 🖸
	0/22/2027