## **SIEMENS**

## **Data sheet**

## 6ES7414-2XL07-0AB0



SIMATIC S7-400, CPU 414-2 Central processing unit with: Work memory 2 MB, (1 MB code, 1 MB data), 1st interface MPI/DP 12 Mbit/s, 2nd interface PROFIBUS DP.

General information	
Product type designation	CPU 414-2
HW functional status	01
Firmware version	V7.0
Product function	
<ul> <li>Isochronous mode</li> </ul>	Yes; For PROFIBUS only
Engineering with	
<ul> <li>Programming package</li> </ul>	STEP 7 V5.4 or higher with HSP 261
CiR - Configuration in RUN	
CiR synchronization time, basic load	100 ms
CiR synchronization time, time per I/O byte	15 µs
Supply voltage	
Rated value (DC)	Power supply via system power supply
Input current	
from backplane bus 5 V DC, typ.	0.9 A
from backplane bus 5 V DC, max.	1.1 A
from backplane bus 24 V DC, max.	300 mA; 150 mA per DP interface
from interface 5 V DC, max.	90 mA; At each DP interface
Power loss	
Power loss, typ.	4.5 W
Power loss, max.	5.5 W
Memory	
Type of memory	RAM
Work memory	
<ul><li>integrated</li></ul>	2 Mbyte
<ul><li>integrated (for program)</li></ul>	1 Mbyte
<ul><li>integrated (for data)</li></ul>	1 Mbyte
expandable	No
Load memory	
<ul><li>expandable FEPROM</li></ul>	Yes; with Memory Card (FLASH)
<ul> <li>expandable FEPROM, max.</li> </ul>	64 Mbyte
<ul><li>integrated RAM, max.</li></ul>	512 kbyte
<ul><li>expandable RAM</li></ul>	Yes; with Memory Card (RAM)
expandable RAM, max.	64 Mbyte
Backup	
• present	Yes
<ul><li>with battery</li></ul>	Yes; all data
without battery	No
Battery	
Backup battery	

<ul> <li>Backup current, typ.</li> </ul>	180 μA; up to 40 °C
Backup current, max.	850 μΑ
Backup time, max.	Dealt with in the module data manual with the secondary conditions and the factors of influence
<ul> <li>Feeding of external backup voltage to CPU</li> </ul>	5 V DC to 15 V DC
CPU processing times	
for bit operations, typ.	18.75 ns
for word operations, typ.	18.75 ns
for fixed point arithmetic, typ.	18.75 ns
for floating point arithmetic, typ.	37.5 ns
CPU-blocks	
DB	
<ul><li>Number, max.</li></ul>	6 000; Number range: 1 to 16000
• Size, max.	64 kbyte
FB	
Number, max.	3 000; Number range: 0 to 7999
• Size, max.	64 kbyte
FC	2 000: Number range: 0 to 7000
Number, max.     Size may.	3 000; Number range: 0 to 7999
• Size, max.	64 kbyte
OB  • Number may	see instruction list
<ul><li>Number, max.</li><li>Size, max.</li></ul>	see instruction list
<ul><li>Size, max.</li><li>Number of free cycle OBs</li></ul>	64 kbyte 1; OB 1
Number of time alarm OBs	4; OB 10-13
Number of delay alarm OBs	4; OB 20-23
Number of cyclic interrupt OBs	4; OB 32-35 (shortest cycle that can be set = 500 μs)
Number of cyclic interrupt OBs     Number of process alarm OBs	4; OB 40-43
·	
Number of DPV1 alarm OBs  A Number of isophyspania mode OBs	3; OB 55-57
Number of isochronous mode OBs	3; OB 61-63
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	04
per priority class     additional within an array OR	24
additional within an error OB  Counters, timers and their retentivity	1
· · · · · · · · · · · · · · · · · · ·	
S7 counter  • Number	2 048
Retentivity	2 040
·	Von
— adjustable — lower limit	Yes 0
— upper limit	2 047
— upper limit — preset	Z 0 to Z 7
— preset  Counting range	L V IV L I
— lower limit	0
— upper limit	999
— upper innit	
• present	Yes
• Type	SFB
Number	Unlimited (limited only by RAM capacity)
S7 times	S. Antimod Citing by TV Will Capacity)
Number	2 048
Retentivity	- 7.0
— adjustable	Yes
— lower limit	0
— upper limit	2 047
— preset	No times retentive
Time range	1.0 unio rotonaro
Time range	

— lower limit	10 ms
— upper limit	9 990 s
IEC timer	0 000 0
• present	Yes
• Type	SFB
Number	Unlimited (limited only by RAM capacity)
Data areas and their retentivity	Chiminod (minod Chiry by 10 am capacity)
Retentive data area (incl. timers, counters, flags), max.	Total working and load memory (with backup battery)
Flag	rotal norming and rotal monory (man backup backet)
• Size, max.	8 kbyte; Size of bit memory address area
Retentivity available	Yes
Retentivity preset	MB 0 to MB 15
Number of clock memories	8; in 1 memory byte
Local data	
adjustable, max.	16 kbyte
• preset	8 kbyte
Address area	
I/O address area	
• Inputs	8 kbyte
Outputs	8 kbyte
Process image	
• Inputs, adjustable	8 kbyte
Outputs, adjustable	8 kbyte
<ul> <li>Inputs, default</li> </ul>	256 byte
<ul> <li>Outputs, default</li> </ul>	256 byte
<ul> <li>consistent data, max.</li> </ul>	244 byte
<ul> <li>Access to consistent data in process image</li> </ul>	Yes
Subprocess images	
<ul> <li>Number of subprocess images, max.</li> </ul>	15
Digital channels	
• Inputs	65 536
— of which central	65 536
<ul><li>Outputs</li></ul>	65 536
— of which central	65 536
Analog channels	
• Inputs	4 096
— of which central	4 096
Outputs	4 096
— of which central	4 096
Hardware configuration	
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.      Number of connectable IM 463s, max.	6
Number of connectable IM 463s, max.  Number of DP masters	4; IM 463-2
	2
<ul><li>• integrated</li><li>• via CP</li></ul>	2 10; CP 443-5 Extended
via IM 467	10; CP 443-5 Extended 4
<ul> <li>Via IM 467</li> <li>Mixed mode IM + CP permitted</li> </ul>	No; IM 467 cannot be used jointly with CP 443-5 Ext. or CP 443-1 in
• wince mode in to permitted	PROFINET IO mode
via interface module	0
<ul> <li>Number of pluggable S5 modules (via adapter capsule in central device), max.</li> </ul>	6
Number of IO Controllers	
• integrated	0
• via CP	4; Max. 4 in the central controller; no mixed operation of different CP 443-1 types in PROFINET IO mode
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; In total max. 10 CPs as DP master and PROFINET controller, of which up to 10 IMs or CPs as DP master and up to 4 CPs as PROFINET controller
Slots	
required slots	1
Time of day	
Clock	
<ul> <li>Hardware clock (real-time)</li> </ul>	Yes
<ul> <li>retentive and synchronizable</li> </ul>	Yes
<ul> <li>Resolution</li> </ul>	1 ms
<ul> <li>Deviation per day (buffered), max.</li> </ul>	1.7 s; Power off
Deviation per day (unbuffered), max.	8.6 s; For power On
Operating hours counter	
Number	16
<ul> <li>Number/Number range</li> </ul>	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
<ul><li>◆ to MPI, slave</li></ul>	Yes
• to DP, master	Yes
<ul> <li>◆ to DP, slave</li> </ul>	Yes
<ul><li>• in AS, master</li></ul>	Yes
• in AS, slave	Yes
on Ethernet via NTP	No; Via CP
to IF 964 DP	No
Time difference in system when synchronizing via	
- MDI mov	
• MPI, max.	200 ms
nterfaces	
nterfaces Interfaces/bus type	1 x MPI/PROFIBUS DP, 1 x PROFIBUS DP
Interfaces/bus type Number of RS 485 interfaces	
nterfaces Interfaces/bus type	1 x MPI/PROFIBUS DP, 1 x PROFIBUS DP  2; Combined MPI / PROFIBUS DP and PROFIBUS DP
Interfaces/bus type Number of RS 485 interfaces	1 x MPI/PROFIBUS DP, 1 x PROFIBUS DP
Interfaces Interfaces/bus type Number of RS 485 interfaces I. Interface Interface type Isolated	1 x MPI/PROFIBUS DP, 1 x PROFIBUS DP  2; Combined MPI / PROFIBUS DP and PROFIBUS DP
Interfaces Interfaces/bus type Number of RS 485 interfaces I. Interface Interface type Isolated Interface types	1 x MPI/PROFIBUS DP, 1 x PROFIBUS DP  2; Combined MPI / PROFIBUS DP and PROFIBUS DP  MPI/PROFIBUS DP
Interfaces Interfaces/bus type Number of RS 485 interfaces Interface Interface type Isolated	1 x MPI/PROFIBUS DP, 1 x PROFIBUS DP  2; Combined MPI / PROFIBUS DP and PROFIBUS DP  MPI/PROFIBUS DP
Interfaces Interfaces/bus type Number of RS 485 interfaces Interface Interface type Isolated Interface types	1 x MPI/PROFIBUS DP, 1 x PROFIBUS DP  2; Combined MPI / PROFIBUS DP and PROFIBUS DP  MPI/PROFIBUS DP  Yes
Interfaces Interfaces/bus type Number of RS 485 interfaces I. Interface Interface type Isolated Interface types  • RS 485  • Output current of the interface, max. Protocols	1 x MPI/PROFIBUS DP, 1 x PROFIBUS DP  2; Combined MPI / PROFIBUS DP and PROFIBUS DP  MPI/PROFIBUS DP  Yes  Yes
Interfaces Interfaces/bus type Number of RS 485 interfaces Interface Interface type Isolated Interface types  • RS 485  • Output current of the interface, max.  Protocols  • MPI	1 x MPI/PROFIBUS DP, 1 x PROFIBUS DP  2; Combined MPI / PROFIBUS DP and PROFIBUS DP  MPI/PROFIBUS DP  Yes  150 mA
Interfaces Interfaces/bus type Number of RS 485 interfaces Interface Interface Interface type Isolated Interface types  • RS 485  • Output current of the interface, max.  Protocols  • MPI  • PROFIBUS DP master	1 x MPI/PROFIBUS DP, 1 x PROFIBUS DP  2; Combined MPI / PROFIBUS DP and PROFIBUS DP  MPI/PROFIBUS DP  Yes  Yes  150 mA  Yes  Yes
Interfaces Interfaces/bus type Number of RS 485 interfaces Interface Interface Interface type Isolated Interface types  • RS 485  • Output current of the interface, max.  Protocols  • MPI  • PROFIBUS DP master  • PROFIBUS DP slave	1 x MPI/PROFIBUS DP, 1 x PROFIBUS DP  2; Combined MPI / PROFIBUS DP and PROFIBUS DP  MPI/PROFIBUS DP  Yes  150 mA
Interfaces Interfaces/bus type Number of RS 485 interfaces Interface Interface Interface type Isolated Interface types  • RS 485  • Output current of the interface, max.  Protocols  • MPI  • PROFIBUS DP master	1 x MPI/PROFIBUS DP, 1 x PROFIBUS DP  2; Combined MPI / PROFIBUS DP and PROFIBUS DP  MPI/PROFIBUS DP  Yes  Yes  150 mA  Yes  Yes
Interfaces Interfaces/bus type Number of RS 485 interfaces I. Interface Interface Interface type Isolated Interface types  • RS 485  • Output current of the interface, max.  Protocols  • MPI  • PROFIBUS DP master  • PROFIBUS DP slave	1 x MPI/PROFIBUS DP, 1 x PROFIBUS DP  2; Combined MPI / PROFIBUS DP and PROFIBUS DP  MPI/PROFIBUS DP  Yes  Yes  150 mA  Yes  Yes
Interfaces Interfaces/bus type Number of RS 485 interfaces Interface Interface Interface type Isolated Interface types  • RS 485  • Output current of the interface, max.  Protocols  • MPI  • PROFIBUS DP master  • PROFIBUS DP slave  MPI  • Number of connections	1 x MPI/PROFIBUS DP, 1 x PROFIBUS DP  2; Combined MPI / PROFIBUS DP and PROFIBUS DP  MPI/PROFIBUS DP  Yes  Yes  150 mA  Yes  Yes  Yes  Yes  Yes
Interfaces Interfaces/bus type Number of RS 485 interfaces Interface Interface Interface type Isolated Interface types  • RS 485  • Output current of the interface, max.  Protocols  • MPI  • PROFIBUS DP master  • PROFIBUS DP slave  MPI	1 x MPI/PROFIBUS DP, 1 x PROFIBUS DP  2; Combined MPI / PROFIBUS DP and PROFIBUS DP  MPI/PROFIBUS DP  Yes  Yes  150 mA  Yes  Yes  Yes  Yes  Yes  Yes  Yes  Ye
Interfaces Interfaces/bus type Number of RS 485 interfaces Interface Interface Interface type Isolated Interface types  • RS 485  • Output current of the interface, max.  Protocols  • MPI  • PROFIBUS DP master  • PROFIBUS DP slave  MPI  • Number of connections  • Transmission rate, max.	1 x MPI/PROFIBUS DP, 1 x PROFIBUS DP  2; Combined MPI / PROFIBUS DP and PROFIBUS DP  MPI/PROFIBUS DP  Yes  Yes  150 mA  Yes  Yes  Yes  Yes  Yes  Yes  Yes  Ye
Interfaces Interfaces/bus type Number of RS 485 interfaces Interface Interface Interface type Isolated Interface types  • RS 485  • Output current of the interface, max.  Protocols  • MPI  • PROFIBUS DP master  • PROFIBUS DP slave  MPI  • Number of connections  • Transmission rate, max.  Services  — PG/OP communication	1 x MPI/PROFIBUS DP, 1 x PROFIBUS DP  2; Combined MPI / PROFIBUS DP and PROFIBUS DP  MPI/PROFIBUS DP  Yes  Yes  150 mA  Yes  Yes  Yes  Yes  Yes  Yes  Yes  Ye
Interfaces Interfaces/bus type Number of RS 485 interfaces Interface Interface Interface type Isolated Interface types  • RS 485  • Output current of the interface, max.  Protocols  • MPI  • PROFIBUS DP master  • PROFIBUS DP slave  MPI  • Number of connections  • Transmission rate, max.  Services	1 x MPI/PROFIBUS DP, 1 x PROFIBUS DP  2; Combined MPI / PROFIBUS DP and PROFIBUS DP  MPI/PROFIBUS DP  Yes  Yes  150 mA  Yes  Yes  Yes  Yes  Yes  Yes  Yes  Ye
Interfaces Interfaces/bus type Number of RS 485 interfaces Interface Interface Interface type Isolated Interface types  • RS 485  • Output current of the interface, max.  Protocols  • MPI  • PROFIBUS DP master  • PROFIBUS DP slave  MPI  • Number of connections  • Transmission rate, max.  Services  — PG/OP communication  — Routing	1 x MPI/PROFIBUS DP, 1 x PROFIBUS DP  2; Combined MPI / PROFIBUS DP and PROFIBUS DP  MPI/PROFIBUS DP  Yes  Yes  150 mA  Yes  Yes  Yes  Yes  Yes  Yes  Yes  Ye
Interfaces Interfaces/bus type Number of RS 485 interfaces Interface Interface Interface type Isolated Interface types  • RS 485  • Output current of the interface, max.  Protocols  • MPI  • PROFIBUS DP master  • PROFIBUS DP slave  MPI  • Number of connections  • Transmission rate, max.  Services  — PG/OP communication  — Routing  — Global data communication	1 x MPI/PROFIBUS DP, 1 x PROFIBUS DP 2; Combined MPI / PROFIBUS DP and PROFIBUS DP  MPI/PROFIBUS DP Yes  Yes 150 mA  Yes Yes Yes Yes Yes Yes Yes Yes Yes Ye
Interfaces/bus type Number of RS 485 interfaces Interface Interface type Isolated Interface types  • RS 485  • Output current of the interface, max.  Protocols  • MPI  • PROFIBUS DP master  • PROFIBUS DP slave  MPI  • Number of connections  • Transmission rate, max.  Services  — PG/OP communication — Routing — Global data communication — S7 basic communication — S7 communication	1 x MPI/PROFIBUS DP, 1 x PROFIBUS DP 2; Combined MPI / PROFIBUS DP and PROFIBUS DP  MPI/PROFIBUS DP Yes  Yes 150 mA  Yes Yes Yes Yes Yes Yes Yes Yes Yes Ye
Interfaces/bus type Number of RS 485 interfaces Interface Interface Interface type Isolated Interface types  • RS 485  • Output current of the interface, max.  Protocols  • MPI  • PROFIBUS DP master  • PROFIBUS DP slave  MPI  • Number of connections  • Transmission rate, max.  Services  — PG/OP communication  — Routing  — Global data communication  — S7 basic communication  — S7 communication  — S7 communication, as client	1 x MPI/PROFIBUS DP, 1 x PROFIBUS DP 2; Combined MPI / PROFIBUS DP and PROFIBUS DP  MPI/PROFIBUS DP Yes  Yes 150 mA  Yes Yes Yes Yes Yes Yes Yes Yes Yes Ye
Interfaces Interfaces/bus type Number of RS 485 interfaces Interface Interface Interface type Isolated Interface types  • RS 485  • Output current of the interface, max.  Protocols  • MPI  • PROFIBUS DP master  • PROFIBUS DP slave  MPI  • Number of connections  • Transmission rate, max.  Services  — PG/OP communication  — Routing  — Global data communication  — S7 basic communication  — S7 communication, as client  — S7 communication, as server	1 x MPI/PROFIBUS DP, 1 x PROFIBUS DP 2; Combined MPI / PROFIBUS DP and PROFIBUS DP  MPI/PROFIBUS DP Yes  Yes 150 mA  Yes Yes Yes Yes Yes Yes Yes Yes Yes Ye
Interfaces Interfaces/bus type Number of RS 485 interfaces Interface Interface Interface type Isolated Interface types  • RS 485  • Output current of the interface, max.  Protocols  • MPI  • PROFIBUS DP master  • PROFIBUS DP slave  MPI  • Number of connections  • Transmission rate, max.  Services  — PG/OP communication — Routing — Global data communication — S7 basic communication — S7 communication — S7 communication, as client	1 x MPI/PROFIBUS DP, 1 x PROFIBUS DP  2; Combined MPI / PROFIBUS DP and PROFIBUS DP  MPI/PROFIBUS DP  Yes  Yes  150 mA  Yes  Yes  Yes  Yes  Yes  Yes  Yes  Ye
Interfaces Interfaces/bus type Number of RS 485 interfaces Interface Interface Interface type Isolated Interface types  • RS 485  • Output current of the interface, max.  Protocols  • MPI  • PROFIBUS DP master  • PROFIBUS DP slave  MPI  • Number of connections  • Transmission rate, max.  Services  — PG/OP communication — Routing — Global data communication — S7 basic communication — S7 communication — S7 communication, as client — S7 communication, as server  PROFIBUS DP master	1 x MPI/PROFIBUS DP, 1 x PROFIBUS DP 2; Combined MPI / PROFIBUS DP and PROFIBUS DP  MPI/PROFIBUS DP Yes  Yes 150 mA  Yes Yes Yes Yes Yes Yes Yes Yes Yes Ye

Services	
— PG/OP communication	Yes
PG/OP communication      Routing	Yes; S7 routing
— Global data communication	No Yes
— S7 basic communication	
— S7 communication	Yes
— S7 communication, as client	Yes
— S7 communication, as server	Yes
— Equidistance	Yes
— Isochronous mode	Yes
— SYNC/FREEZE	Yes
Activation/deactivation of DP slaves	Yes
<ul> <li>Direct data exchange (slave-to-slave communication)</li> </ul>	Yes
— DPV1	Yes
Address area	
— Inputs, max.	2 kbyte
— Outputs, max.	2 kbyte
User data per DP slave	Lingto
User data per DP slave, max.	244 byte
— Oser data per DF slave, max. — Inputs, max.	244 byte
— Inputs, max. — Outputs, max.	244 byte
— Outputs, max. — Slots, max.	244 byte 244
— per slot, max. PROFIBUS DP slave	128 byte
	40
Number of connections	16
GSD file  Transposition and a many	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
<ul> <li>Global data communication</li> </ul>	No
<ul> <li>S7 basic communication</li> </ul>	No
— S7 communication	Yes
<ul> <li>— S7 communication, as client</li> </ul>	Yes
<ul> <li>S7 communication, as server</li> </ul>	Yes
<ul> <li>Direct data exchange (slave-to-slave communication)</li> </ul>	No
— DPV1	No
	INU
Transfer memory	244 hyta
— Inputs	244 byte
— Outputs	244 byte
2. Interface	DDOCIDLIC DD
Interface type	PROFIBUS DP
Isolated	Yes
Number of connection resources	16
Interface types	
• RS 485	Yes
Output current of the interface, max.	150 mA
Protocols	
PROFIBUS DP master	Yes
PROFIBUS DP slave	Yes
PROFIBUS DP master	
<ul> <li>Number of connections, max.</li> </ul>	16
• Transmission rate, max.	12 Mbit/s
N 1 (DD 1	••
Number of DP slaves, max.	96

Routing Yes, \$7 routing Yes, \$7 routing On	<ul> <li>PG/OP communication</li> </ul>	Yes
- Clobal data communication - ST communication - ST communication - ST communication, as client - ST communication - Incordinate As server - Equipation as server - Equipation as server - Incordinate Assertion of DP staves - Direct data exchange (stave-to-slave communication) - DIVI Yes - DIVI Yes - DIVID Address area - Ingust, max Outputs, max Outputs, max Outputs, max User data per DP stave, max User data per do connections - Number of connections - Number of connections - Routing - Yes, with interface active - Transmission rate, max User data per address area, max User data per address area, max User data per address area, max User data per domestion as area, max User data per domestion as area, max User data per domestion - ST routing - Yes - Routing - Yes, with interface active - Transmission rate, max Stave data per domestic per domes		
- SY basic communication - SY communication - SY communication, as client - SY communication, as server - Equidatance - Equidatance - Equidatance - Equidatance - Isochronous mode - SYNC/FREZE - Activation/Seachtworth of DP staves - SHOK/FREZE - Activation/Seachtworth of DP staves - Deed talk acxidance (stave-to-stave communication) - DPV1 - Yes - Address area - Outputs, max Inequis, max - 244 byte - User data per DP stave, max Inequis, max - 244 byte - Outputs, max Stots, max 245 byte - Stots, max 246 byte - Stots, max 247 byte - Stots, max Outputs, max 248 byte - Stots, max 249 byte - Stots, max 240 byte - Stots, max 340 byte - 340 byt	-	
S7 communication. as client S7 communication, as client S7 communication, as server Equidistance Inactivenous mode Inactivenous mode Inactivenous mode SYNGF REEZE Activation/deachvator of DP slaves Direct data exchange (aluve-to-slave communication) DIPV1 Yes Direct data exchange (aluve-to-slave communication) DIPV1 Yes Address area Inputs, max Inputs, max Outputs, max Outputs, max User data per DP slave Inputs, max 244 byte User data per DP slave Slave Inputs, max 244 byte Slave Per slot. max 128 byte Per slot. max 128 byte Per slot. max 128 byte Slave Slave Slave Slave Slave Routing Yes; with interface active Inputs Liputs		
S7 communication, as alrent S7 communication, as server Equidistance Equidistance Equidistance Equidistance Equidistance Equidistance Equidistance SYNOF REEZE Activation/deschallor of DP staves Direct data exchange (slave-lo-slave communication) DPV1 Ves Activation/deschallor of DP staves Direct data exchange (slave-lo-slave communication) DPV1 Ves Outputs, max Outputs, max Outputs, max Outputs, max User data per DP slave User data per DP slave User data per DP slave User data per DP slave, max Stay Stave Outputs, max Stay Stave Outputs, max Stay Stave Stay		
- ST communication, as server Yes - Equidistance Yes - Equidistance Yes - Inactivarous mode Yes - Inactivarous mode Yes - STNLOFREEZE Yes - Activatoriceactivation of DP slaves Yes - Direct data exchange (slave-to-slave communication)		
Equidistance Isochronous mode Isochronous mode SYNC-PREEZE Activatoricequivation of DP slaves STRC-PREEZE Activatoricequivation of DP slaves Direct data exchange (slave-b-slave Communication) DPV1 Yes Address area Inputs, max Outputs, max Outputs, max Outputs, max User data per DP slave Outputs, max User data per donnections (Sab file Transmission rate, max User data per donnections (Sab file Transmission rate, max Outputs deats per address area, max Outputs donnections (Sab file Transmission rate, max Outputs donnections (Sab file Transmission rate, max Outputs donnections (Sab file Transmission rate, max Outputs donnection file (Sab fi		
SYNC/FREEZE Activation/deactivation of DP slaves Direct data exchange (plave-to-slave) CPV1 PDF1 Yes Communication) DPF1 Yes Couptus, max Outputs, max Outputs, max Outputs, max Outputs, max User data par DP slave User data par DP slave, max User data par DP slave User data par DP slave, max Outputs, max Outputs, max Outputs, max Outputs, max Outputs, max Outputs, max Det slow, max Outputs, max Outputs, max Outputs, max Det slow, max Det slo	·	
- Direct date exchange (slave-to-slave communication) - DPV1  Address area - Inputs, max Outputs, max Outputs, max User data per DP slave - User data per DP slave - User data per Stave - User data per DP slave - User data per Stave - Outputs, max 244 byte - Stots, max 244 byte - PROCEBUS DP slave - Number of connections - 16 - USD Tile - Transmission rate, max 12 Motrs - Valories area, max 12 Motrs - Valories area, max User data per address area, max User data per address area, max Owinhot consistent, max 32 byte - Outputs - Noutring - Ves, with interface active - Transmission rate, max User data per address area, max Outputs - Utputs - Utputs - Utputs - Utputs - Utputs - Ves, With interface active - Utputs - Utputs - Ves, With interface active - Ves, With interface active - Utputs - Utputs - Ves, With interface active - Ves, Ves, With interface active - Ves, Ves, Ves, Ves, Ves, Ves, Ves,		
communication)  - DPV1 Yes  Address area - Inputs, max.		
Address area   Inputs, max		res
- Inputs, max	— DPV1	Yes
Services	Address area	
User data per OP slave	— Inputs, max.	6 kbyte
User data per DP slave, max Inputs, max Inputs, max Outputs, max Slots, max.	— Outputs, max.	6 kbyte
Inputs, max. 244 byte   Outputs, max. 244 type   Stots, max. 244   per slot, max. 128 byte   PROFIBUS DP slave   Number of connections 16   Stot Research   Transmission rate, max. 128 byte   Paramission rate, max. 128 byte   Transmission rate, max. 128 bits   Address area, max. 32   User data per address area, max. 32 byte   Owthich consistent, max 32 byte   Routing   Routing   Routing   Routing   Routing   Cuputs   Cuputs   Cuputs   Cuputs   Cuputs   Cuputs   Cuputs   Cuputs   Cuputs   ST routing   ST routing   ST routing   Data length, max. 1452 bytes was CP 443-1 and loadable FB   Data length, max. 1452 bytes was CP 443-1 Adv. Web server   Supported	User data per DP slave	
- Outputs, max.	— User data per DP slave, max.	244 byte
Slots, max.	— Inputs, max.	244 byte
— per slot, max. 128 byte  PROFIBUS DP slave  • Number of connectable OPs with our sesage processing e Number of DD packets, transmission and packets, transmitter, max. 12 Mbits  • Sapported the Note of Connectable OPs without message processing e Number of OD packets, transmitter, max. 12 Mbits  • Tansmission rate, max. 22 byte	— Outputs, max.	244 byte
PROFIBUS DP slave  • Number of connections • (SD file • Transmission rate, max. • Address area, max. • Address area, max. • Use ridata per address area, max. • Use ridata per address area, max. • User data per address area, max. • Of which consistent, max.  Services  — Routing • Yes; with interface active  Transfer memory  — Inputs — Outputs • 244 byte  Protocols  SIMATIC communication • S7 routing • Yes  Open IE communication • ISO-on-TCP (RFC1006) — Data length, max.  Web server • Supported • No  Seochronous mode  Equidistance Number of DP masters with isochronous mode 2 Luser data per isochronous slave, max. 244 byte  shortest clock pulse  Transfer memory  1 452 bytes via CP 443-1 Adv.  Yes  Number of DP masters with isochronous mode 2 1 Luser data per isochronous slave, max. 244 byte  shortest clock pulse 1 ms; 0.5 ms without use of SFC 126, 127  max. cycle 0 32 ms  communication functions / header  PG/OP communication • Number of connectable OPs without message processing 0 4 Number of connectable OPs with message processing 0 5; When using Alarm_S/SQ and Alarm_D/DQ  Data record routing 1 Yes  • Number of GD packets, transmitter, max. • Number of GD packets, transmitter, max. • Number of GD packets, receiver, max. • Size of GD packets, receiver, max.	— Slots, max.	244
Number of connections SSD file SSD file STRANSSIGN rate, max. Address area, max. Address area, max. Address area, max. Subset data per address area, max. Address area, max. Services Routing Transfer memory Inputs Cutputs Cutputs Protocols SIMATIC communication STRANSSIGN FUNCTIONSSIGN Subset Su	— per slot, max.	128 byte
GSD file  Transmission rate, max. Address area, max. Olser data per address area, max. Savices  — Routing Transfer memory — Inputs — Outputs — Outputs — Outputs — Outputs — Other Communication  • 87 routing  Yes  Open IE communication  • 180-on-TCP (RFC1006) — Data length, max.  1 452 bytes via CP 443-1 Adv.  Web server  • supported  Equidistance  Routing Equidistance  Routing  Protocos  Simulation  Inputs — Other of DP masters with isochronous mode  User data per sections slave, max.  \$ 244 byte  Adv.  Web server  • supported  For masters with isochronous mode  Equidistance  Per masters with isochronous slave, max.  \$ 244 byte  \$ 25 ms  Communication  Per Sorting  Per Sorting  Per Sorting  Per Sorting  Per Sorting  No  Sorting  Per So	PROFIBUS DP slave	
Transmission rate, max. Address area, max. User data per address area, max. Jab byte  of which consistent, max. Jab byte  Services  Routing Transfer memory  Inputs Outputs  SiMATIC communication SiSO-on-TCP (RPC1006) Data length, max. Jab bytes via CP 443-1 and loadable FB  Data length, max.  Ves  with interface active  Transfer memory  Ves  Simonum and loadable FB  Data length, max. Ves  Supported No  Sochronous mode  Equidistance  Yes  Number of DP masters with isochronous mode  2 User data per isochronous slave, max. As shortest clock pulse  Number of CP communication  Nesser  Simonum and in the simonum and in	Number of connections	16
• Address area, max.     • User data per address area, max.     — of which consistent, max.     Services     — Routing     Transfer memory     — Inputs     — Outputs	• GSD file	http://support.automation.siemens.com/WW/view/en/113652
User data per address area, max. — of which consistent, max.  Services — Routing — Routing — Ves; with interface active  Transfer memory — Inputs — Outputs	Transmission rate, max.	12 Mbit/s
of which consistent, max.  Services Routing Cutputs Unputs Outputs Out	Address area, max.	32
Services  — Routing Transfer memory  — Inputs — Outputs 244 byte — Outputs 244 byte  Protocols  SIMATIC communication • \$7 routing  Open IE communication • ISO-on-TCP (RFC1006) — Data length, max. 1 452 bytes 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 Equidistance Ves Number of DP masters with isochronous mode 2 User data per isochronous slave, max. 244 byte shortest clock pulse max. cycle 32 ms  communication functions / header  PG/OP communication • Number of connectable OPs with out message processing • Number of connectable OPs with message processing • Number of connectable OPs with message processing • Number of CD packets, transmitter, max. • Number of GD packets, transmitter, max. • Number of GD packets, receiver, max. • Size of GD packets, max.  54 byte	User data per address area, max.	32 byte
- Routing Yes; with interface active  Transfer memory - Inputs 244 byte - Outputs 244 byte  Protocols  SIMATIC communication  • \$7 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 2  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  • Number of connectable OPs without message processing • Number of connectable OPs with message processing • Number of connectable OPs with message processing • Number of GD packets, transmitter, max. 8 • Number of GD packets, transmitter, max. 8 • Number of GD packets, receiver, max. 16 • Size of GD packets, max. 54 byte	— of which consistent, max.	32 byte
Transfer memory	Services	
Inputs	— Routing	Yes; with interface active
Protocols  SIMATIC communication  S7 routing  Open IE communication  ISO-on-TCP (RFC1006)  Data length, max.  Via CP 443-1 and loadable FB  Data length, max.  Via CP 443-1 Adv.  Web server  supported  No  Isochronous mode  Equidistance  Number of DP masters with isochronous mode  User data per isochronous slave, max.  Sorted as a per isochronous slave, max.  PG/OP communication  Number of connectable OPs without message processing Number of connectable OPs without message processing Number of connectable OPs with message processing Number of connectable OPs without message processing Number of Connectable OPs without message processing Number of Connectable OPs without message processing Number of GD packets, transmitter, max. Number of GD packets, transmitter, max. Number of GD packets, transmitter, max. Number of GD packets, receiver, max. Number of GD packets, max.  Size of GD packets, max.	Transfer memory	
SIMATIC communication  S7 routing  Open IE communication  ISO-on-TCP (RFC1006)  Data length, max.  Veb server  supported  No  Isochronous mode  Equidistance  Number of DP masters with isochronous mode  2 User data per isochronous slave, max.  shortest clock pulse  max. cycle  Sommunication functions / header  PG/OP communication  Number of connectable OPs with message processing Number of connectable OPs with message processing Subventing Six When using Alarm_S/SQ and Alarm_D/DQ  Data record routing  Yes  Global data communication  supported  Yes  Number of GD packets, transmitter, max.  Number of GD packets, receiver, max.  Number of GD packets, receiver, max.  Size of GD packets, max	— Inputs	244 byte
SIMATIC communication  Solventing  Solvent	— Outputs	244 byte
ST routing  Open IE communication  ISO-on-TCP (RFC1006)  — Data length, max.  Via CP 443-1 and loadable FB  — Data length, max.  Veb server  Supported  No  Isochronous mode  Equidistance  Yes  Number of DP masters with isochronous mode  2  User data per isochronous slave, max.  shortest clock pulse  max. cycle  Communication functions / header  PG/OP communication  Number of connectable OPs without message processing Number of connectable OPs without message processing Number of connectable OPs with message processing Si, When using Alarm_S/SQ and Alarm_D/DQ  Data record routing  Global data communication  Supported  Number of GD loops, max.  Number of GD loops, max.  Number of GD packets, transmitter, max.  Number of GD packets, receiver, max.  Number of GD packets, max.  Size of GD packets, max.	Protocols	
Open IE communication  ISO-on-TCP (RFC1006) Data length, max.  Via CP 443-1 and loadable FB Data length, max.  Via CP 443-1 Adv.  Web server  Isochronous mode  Equidistance Yes Number of DP masters with isochronous mode User data per isochronous slave, max.  shortest clock pulse max. cycle Tommunication functions / header  PG/OP communication Number of connectable OPs without message processing Number of connectable OPs with message processing Number of connectable OPs with message processing Side at a communication  Supported Number of GD loops, max.  Number of GD packets, transmitter, max.  Number of GD packets, receiver, max.  Size of GD packets, max.  Size of GD packets, max.	SIMATIC communication	
IsoCon-TCP (RFC1006) Data length, max.  Via CP 443-1 and loadable FB 1 452 bytes via CP 443-1 Adv.  Web server  supported No  Isochronous mode  Equidistance Number of DP masters with isochronous mode 2 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 Number of connectable OPs without message processing Number of connectable OPs with message processing Number of connectable OPs with message processing Signal at a communication  supported Number of GD loops, max.  Number of GD packets, transmitter, max. Number of GD packets, receiver, max. Size of GD packets, max.  Size of GD packets, max.  Size of GD packets, max.  Size of GD packets, max.  Size of GD packets, max.  Size of GD packets, max.  Size of GD packets, max.  Size of GD packets, max.  Size of GD packets, max.  Size of GD packets, max.  Size of GD packets, max.	S7 routing	Yes
— Data length, max.  Web server  • supported  No  Isochronous mode  Equidistance  Number of DP masters with isochronous mode  User data per isochronous slave, max.  shortest clock pulse  max. cycle  communication functions / header  PG/OP communication  • Number of connectable OPs with message processing • Number of connectable OPs with message processing  Slobal data communication  • supported  • supported  • Number of GD loops, max.  • Number of GD packets, transmitter, max.  • Number of GD packets, receiver, max.  • Size of GD packets, max.	Open IE communication	
● supported No  Isochronous mode  Equidistance Yes  Number of DP masters with isochronous mode 2  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   ● Number of connectable OPs without message processing 63; When using Alarm_S/SQ and Alarm_D/DQ  Data record routing  Global data communication  ● supported Yes  ● Number of GD loops, max. 8  ● Number of GD packets, transmitter, max. 8  ● Number of GD packets, receiver, max. 16  ● Size of GD packets, max. 54 byte	• ISO-on-TCP (RFC1006)	Via CP 443-1 and loadable FB
• supported No    Sochronous mode	B + + - #	
Equidistance	— Data length, max.	1 452 bytes via CP 443-1 Adv.
Equidistance  Number of DP masters with isochronous mode  User data per isochronous slave, max.  shortest clock pulse  max. cycle  communication functions / header  PG/OP communication  Number of connectable OPs without message processing  Number of connectable OPs with message processing  Number of connectable OPs with message processing  Number of connectable OPs with message processing  Significant or supported  Number of GD loops, max.  Number of GD packets, transmitter, max.  Number of GD packets, receiver, max.  Size of GD packets, max.		1 452 bytes via CP 443-1 Adv.
Number of DP masters with isochronous mode  User data per isochronous slave, max.  244 byte  shortest clock pulse  max. cycle  communication functions / header  PG/OP communication  • Number of connectable OPs without message processing • Number of connectable OPs with message processing  Older a coord routing  Supported  Number of GD loops, max.  Number of GD packets, transmitter, max.  Number of GD packets, receiver, max.  Size of GD packets, max.	Web server	
User data per isochronous slave, max.  shortest clock pulse  max. cycle  244 byte  1 ms; 0.5 ms without use of SFC 126, 127  max. cycle  252 ms  communication functions / header  PG/OP communication  Number of connectable OPs without message processing Number of connectable OPs with message processing  Number of connectable OPs with message processing  Os; When using Alarm_S/SQ and Alarm_D/DQ  Pata record routing  Yes  Global data communication  supported  Number of GD loops, max.  Number of GD packets, transmitter, max.  Number of GD packets, receiver, max.  Size of GD packets, max.  Size of GD packets, max.	Web server  ● supported	
shortest clock pulse  max. cycle  communication functions / header  PG/OP communication  Number of connectable OPs without message processing Number of connectable OPs with message processing Slobal data communication  supported Number of GD loops, max. Number of GD packets, transmitter, max. Number of GD packets, receiver, max. Size of GD packets, max.	Web server  • supported  Isochronous mode	No
max. cycle  communication functions / header  PG/OP communication  Number of connectable OPs without message processing  Number of connectable OPs with message processing  Number of connectable OPs with message processing  Olobal data communication  supported  Number of GD loops, max.  Number of GD packets, transmitter, max.  Number of GD packets, receiver, max.  Size of GD packets, max.  32 ms  48  83  84  84  84  85  84  85  85  86  86  87  86  87  87  87  88  88  88	Web server  • supported  Isochronous mode  Equidistance	No Yes
Communication functions / header  PG/OP communication  • Number of connectable OPs without message processing  • Number of connectable OPs with message processing  • Number of connectable OPs with message processing  63; When using Alarm_S/SQ and Alarm_D/DQ  Data record routing  Yes  Global data communication  • supported  • Number of GD loops, max.  • Number of GD packets, transmitter, max.  • Number of GD packets, receiver, max.  • Number of GD packets, receiver, max.  • Size of GD packets, max.	Web server  • supported  Isochronous mode  Equidistance  Number of DP masters with isochronous mode	No Yes 2
PG/OP communication  Number of connectable OPs without message processing  Number of connectable OPs with message processing  Number of connectable OPs with message processing  63; When using Alarm_S/SQ and Alarm_D/DQ  Yes  Global data communication  supported  Number of GD loops, max.  Number of GD packets, transmitter, max.  Number of GD packets, receiver, max.  Number of GD packets, receiver, max.  Size of GD packets, max.	Web server  ● supported  Isochronous mode  Equidistance  Number of DP masters with isochronous mode  User data per isochronous slave, max.	Yes 2 244 byte
<ul> <li>Number of connectable OPs without message processing</li> <li>Number of connectable OPs with message processing</li> <li>Data record routing</li> <li>Yes</li> <li>Global data communication</li> <li>supported</li> <li>Number of GD loops, max.</li> <li>Number of GD packets, transmitter, max.</li> <li>Number of GD packets, receiver, max.</li> <li>Size of GD packets, max.</li> </ul>	Web server  ● supported  Isochronous mode  Equidistance  Number of DP masters with isochronous mode  User data per isochronous slave, max.  shortest clock pulse	Yes 2 244 byte 1 ms; 0.5 ms without use of SFC 126, 127
<ul> <li>Number of connectable OPs with message processing</li> <li>Data record routing</li> <li>Global data communication</li> <li>supported</li> <li>Number of GD loops, max.</li> <li>Number of GD packets, transmitter, max.</li> <li>Number of GD packets, receiver, max.</li> <li>Size of GD packets, max.</li> </ul>	Web server  ● supported  Isochronous mode  Equidistance  Number of DP masters with isochronous mode  User data per isochronous slave, max.  shortest clock pulse  max. cycle	Yes 2 244 byte 1 ms; 0.5 ms without use of SFC 126, 127
Data record routing  Global data communication  • supported  • Number of GD loops, max.  • Number of GD packets, transmitter, max.  • Number of GD packets, receiver, max.  • Size of GD packets, max.  Yes  8  6  16  54 byte	Web server  • supported  Isochronous mode  Equidistance  Number of DP masters with isochronous mode  User data per isochronous slave, max.  shortest clock pulse  max. cycle  communication functions / header	Yes 2 244 byte 1 ms; 0.5 ms without use of SFC 126, 127 32 ms
Global data communication  • supported  • Number of GD loops, max.  • Number of GD packets, transmitter, max.  • Number of GD packets, receiver, max.  • Size of GD packets, max.   Yes  8  6  16  54 byte	Web server  ● supported  Isochronous mode  Equidistance  Number of DP masters with isochronous mode  User data per isochronous slave, max.  shortest clock pulse  max. cycle  communication functions / header  PG/OP communication	Yes 2 244 byte 1 ms; 0.5 ms without use of SFC 126, 127 32 ms Yes
<ul> <li>supported</li> <li>Number of GD loops, max.</li> <li>Number of GD packets, transmitter, max.</li> <li>Number of GD packets, receiver, max.</li> <li>Size of GD packets, max.</li> </ul>	Web server  ● supported  Isochronous mode  Equidistance  Number of DP masters with isochronous mode  User data per isochronous slave, max.  shortest clock pulse  max. cycle  communication functions / header  PG/OP communication  ● Number of connectable OPs without message processing	Yes 2 244 byte 1 ms; 0.5 ms without use of SFC 126, 127 32 ms  Yes 63
<ul> <li>Number of GD loops, max.</li> <li>Number of GD packets, transmitter, max.</li> <li>Number of GD packets, receiver, max.</li> <li>Size of GD packets, max.</li> </ul>	Web server  ● supported  Isochronous mode  Equidistance  Number of DP masters with isochronous mode  User data per isochronous slave, max.  shortest clock pulse  max. cycle  communication functions / header  PG/OP communication  ● Number of connectable OPs without message processing  ● Number of connectable OPs with message processing	Yes 2 244 byte 1 ms; 0.5 ms without use of SFC 126, 127 32 ms  Yes 63 63; When using Alarm_S/SQ and Alarm_D/DQ
<ul> <li>Number of GD packets, transmitter, max.</li> <li>Number of GD packets, receiver, max.</li> <li>Size of GD packets, max.</li> <li>54 byte</li> </ul>	Web server  ● supported  Isochronous mode  Equidistance  Number of DP masters with isochronous mode  User data per isochronous slave, max.  shortest clock pulse  max. cycle  communication functions / header  PG/OP communication  ● Number of connectable OPs without message processing  ● Number of connectable OPs with message processing  Data record routing	Yes 2 244 byte 1 ms; 0.5 ms without use of SFC 126, 127 32 ms  Yes 63 63; When using Alarm_S/SQ and Alarm_D/DQ
<ul> <li>Number of GD packets, receiver, max.</li> <li>Size of GD packets, max.</li> <li>54 byte</li> </ul>	● supported  Isochronous mode  Equidistance  Number of DP masters with isochronous mode  User data per isochronous slave, max.  shortest clock pulse  max. cycle  communication functions / header  PG/OP communication  ● Number of connectable OPs without message processing  ● Number of connectable OPs with message processing  Data record routing  Global data communication	Yes 2 244 byte 1 ms; 0.5 ms without use of SFC 126, 127 32 ms  Yes 63 63; When using Alarm_S/SQ and Alarm_D/DQ Yes
• Size of GD packets, max. 54 byte	■ Supported  Isochronous mode  Equidistance  Number of DP masters with isochronous mode  User data per isochronous slave, max.  shortest clock pulse  max. cycle  communication functions / header  PG/OP communication  • Number of connectable OPs without message processing  • Number of connectable OPs with message processing  Data record routing  Global data communication  • supported	Yes 2 244 byte 1 ms; 0.5 ms without use of SFC 126, 127 32 ms  Yes 63 63; When using Alarm_S/SQ and Alarm_D/DQ Yes  Yes
		Yes 2 244 byte 1 ms; 0.5 ms without use of SFC 126, 127 32 ms  Yes 63 63; When using Alarm_S/SQ and Alarm_D/DQ Yes  Yes 8
Size of GD packet (of which consistent), max.  1 variable	● supported  Isochronous mode  Equidistance  Number of DP masters with isochronous mode  User data per isochronous slave, max.  shortest clock pulse  max. cycle  communication functions / header  PG/OP communication  ● Number of connectable OPs without message processing  ● Number of connectable OPs with message processing  Data record routing  Global data communication  ● supported  ● Number of GD loops, max.  ● Number of GD packets, transmitter, max.	Yes 2 244 byte 1 ms; 0.5 ms without use of SFC 126, 127 32 ms  Yes 63 63; When using Alarm_S/SQ and Alarm_D/DQ Yes  Yes 8 8
	● supported  Isochronous mode  Equidistance  Number of DP masters with isochronous mode  User data per isochronous slave, max.  shortest clock pulse  max. cycle  communication functions / header  PG/OP communication  ● Number of connectable OPs without message processing  ● Number of connectable OPs with message processing  Data record routing  Global data communication  ● supported  ● Number of GD loops, max.  ● Number of GD packets, transmitter, max.  ● Number of GD packets, receiver, max.	Yes 2 244 byte 1 ms; 0.5 ms without use of SFC 126, 127 32 ms  Yes 63 63; When using Alarm_S/SQ and Alarm_D/DQ Yes  Yes 8 8 8 16

O7 hasin assessmination	
S7 basic communication	
communication function / S7 basic communication	Yes
User data per job, max.	76 byte
User data per job (of which consistent), max.	1 variable
S7 communication	
<ul><li>supported</li></ul>	Yes
• as server	Yes
• as client	Yes
<ul> <li>User data per job, max.</li> </ul>	64 kbyte
<ul> <li>User data per job (of which consistent), max.</li> </ul>	462 byte; 1 variable
S5 compatible communication	
• supported	Yes; Via FC AG_SEND and AG_RECV, max. via 10 CP 443-1 or 443-5
<ul> <li>User data per job, max.</li> </ul>	8 kbyte
<ul> <li>User data per job (of which consistent), max.</li> </ul>	240 byte
<ul> <li>Number of simultaneous AG-SEND/AG-RECV orders per CPU, max.</li> </ul>	24/24
Standard communication (FMS)	
• supported	Yes; Via CP and loadable FB
Number of connections	
overall	64
usable for PG communication	63
— reserved for PG communication	1
<ul> <li>adjustable for PG communication, max.</li> </ul>	0
usable for OP communication	63
<ul> <li>reserved for OP communication</li> </ul>	1
<ul> <li>adjustable for OP communication, max.</li> </ul>	0
usable for S7 basic communication	62
<ul> <li>reserved for S7 basic communication</li> </ul>	0
<ul> <li>adjustable for S7 basic communication, max.</li> </ul>	0
usable for S7 communication	62
— reserved for S7 communication	0
adjustable for S7 communication, max.	0
usable for routing	31
— reserved for routing	0
adjustable for routing, max.	0
S7 message functions	
Number of login stations for message functions, max.	63; Max. 63 with Alarm_S/SQ and Alarm_D/DQ (OPs); max. 8 with Alarm,
	Alarm_8, Alarm_8P, Notify and Notify_8 (e.g. WinCC)
Symbol-related messages	Yes
SCAN procedure	Yes
Program alarms	Yes
Process diagnostic messages	Yes
simultaneously active Alarm-S blocks, max.	400; Simultaneously active alarm_S/SQ blocks or alarm_D/DQ blocks
Alarm 8-blocks	Yes
<ul> <li>Number of instances for alarm 8 and S7 communication blocks, max.</li> </ul>	1 200
• preset, max.	300
Process control messages	Yes
Number of archives that can log on simultaneously (SFB 37 AR_SEND)	16
Number of messages	
• overall, max.	512
● in 100 ms grid, max.	128
● in 500 ms grid, max.	256
● in 1000 ms grid, max.	512
Number of additional values	
• with 100 ms grid, max.	1
• with 500, 1000 ms grid, max.	10
Test commissioning functions	
Status block	Yes; Up to 16 simultaneously
Single step	Yes
Number of breakpoints	16

0	V
Status/control variable	Yes; Up to 16 variable tables
<ul> <li>Variables</li> </ul>	Inputs/outputs, memory bits, DBs, distributed I/Os, timers, counters
Number of variables, max.	70; Status/control
Forcing	
<ul><li>Forcing</li></ul>	Yes
<ul> <li>Forcing, variables</li> </ul>	Inputs, outputs, bit memories, peripheral inputs, peripheral outputs
<ul> <li>Number of variables, max.</li> </ul>	256
Diagnostic buffer	
• present	Yes
<ul> <li>Number of entries, max.</li> </ul>	3 200
— adjustable	Yes
— preset	120
Service data	
• can be read out	Yes
tandards, approvals, certificates	
CE mark	Yes
CSA approval	Yes
UL approval	Yes
cULus	Yes
FM approval	Yes
· ·	Yes
RCM (formerly C-TICK)	Yes
KC approval	
EAC (formerly Gost-R)	Yes
Use in hazardous areas	ATEVILOR F. A HOTA O
• ATEX	ATEX II 3G Ex nA IIC T4 Gc
ambient conditions	
Ambient temperature during operation	
• min.	0 °C
• max.	60 °C
onfiguration / header	
Configuration software	
• STEP 7	Yes
configuration / programming / header	
configuration / programming / header  • Command set	see instruction list
	see instruction list
Command set	
<ul><li>Command set</li><li>Nesting levels</li><li>Access to consistent data in process image</li></ul>	7
<ul> <li>Command set</li> <li>Nesting levels</li> <li>Access to consistent data in process image</li> <li>System functions (SFC)</li> </ul>	7 Yes
<ul> <li>Command set</li> <li>Nesting levels</li> <li>Access to consistent data in process image</li> <li>System functions (SFC)</li> <li>System function blocks (SFB)</li> </ul>	7 Yes see instruction list
<ul> <li>Command set</li> <li>Nesting levels</li> <li>Access to consistent data in process image</li> <li>System functions (SFC)</li> </ul>	7 Yes see instruction list
<ul> <li>Command set</li> <li>Nesting levels</li> <li>Access to consistent data in process image</li> <li>System functions (SFC)</li> <li>System function blocks (SFB)</li> <li>Programming language  — LAD</li> </ul>	7 Yes see instruction list see instruction list
<ul> <li>Command set</li> <li>Nesting levels</li> <li>Access to consistent data in process image</li> <li>System functions (SFC)</li> <li>System function blocks (SFB)</li> <li>Programming language</li> <li>LAD</li> <li>FBD</li> </ul>	7 Yes see instruction list see instruction list Yes Yes
<ul> <li>Command set</li> <li>Nesting levels</li> <li>Access to consistent data in process image</li> <li>System functions (SFC)</li> <li>System function blocks (SFB)</li> <li>Programming language</li> <li>LAD</li> <li>FBD</li> <li>STL</li> </ul>	7 Yes see instruction list see instruction list Yes Yes Yes
<ul> <li>Command set</li> <li>Nesting levels</li> <li>Access to consistent data in process image</li> <li>System functions (SFC)</li> <li>System function blocks (SFB)</li> </ul> Programming language <ul> <li>LAD</li> <li>FBD</li> <li>STL</li> <li>SCL</li> </ul>	7 Yes see instruction list see instruction list  Yes Yes Yes Yes Yes
<ul> <li>Command set</li> <li>Nesting levels</li> <li>Access to consistent data in process image</li> <li>System functions (SFC)</li> <li>System function blocks (SFB)</li> <li>Programming language</li> <li>LAD</li> <li>FBD</li> <li>STL</li> <li>SCL</li> <li>CFC</li> </ul>	7 Yes see instruction list see instruction list  Yes Yes Yes Yes Yes Yes Yes
<ul> <li>Command set</li> <li>Nesting levels</li> <li>Access to consistent data in process image</li> <li>System functions (SFC)</li> <li>System function blocks (SFB)</li> <li>Programming language</li> <li>LAD</li> <li>FBD</li> <li>STL</li> <li>SCL</li> <li>CFC</li> <li>GRAPH</li> </ul>	7 Yes see instruction list see instruction list  Yes Yes Yes Yes Yes Yes Yes Yes Yes
Command set     Nesting levels     Access to consistent data in process image     System functions (SFC)     System function blocks (SFB)  Programming language     LAD     FBD     STL     SCL     CFC     GRAPH     HiGraph®	7 Yes see instruction list see instruction list  Yes Yes Yes Yes Yes Yes Yes Yes Yes Ye
Command set     Nesting levels     Access to consistent data in process image     System functions (SFC)     System function blocks (SFB)  Programming language     LAD     FBD     STL     SCL     CFC     GRAPH     HiGraph®  configuration / programming / number of simultaneously as	7 Yes see instruction list see instruction list  Yes Yes Yes Yes Yes Yes Yes Yes Yes Ye
Command set     Nesting levels     Access to consistent data in process image     System functions (SFC)     System function blocks (SFB)  Programming language     LAD     FBD     STL     SCL     CFC     GRAPH     HiGraph®  configuration / programming / number of simultaneously a DPSYC_FR	7 Yes see instruction list see instruction list  Yes Yes Yes Yes Yes Yes Yes Yes Yes Ye
Command set     Nesting levels     Access to consistent data in process image     System functions (SFC)     System function blocks (SFB)  Programming language     LAD     FBD     STL     SCL     CFC     GRAPH     HiGraph®  configuration / programming / number of simultaneously as a considerable of the constant	7 Yes see instruction list see instruction list  Yes Yes Yes Yes Yes Yes Yes Yes Yes Ye
Command set     Nesting levels     Access to consistent data in process image     System functions (SFC)     System function blocks (SFB)  Programming language     — LAD     — FBD     — STL     — SCL     — CFC     — GRAPH     — HiGraph®  configuration / programming / number of simultaneously as more considerable.  DPSYC_FR     — D_ACT_DP     — RD_REC	7 Yes see instruction list see instruction list  Yes Yes Yes Yes Yes Yes Yes Yes Yes Ye
Command set     Nesting levels     Access to consistent data in process image     System functions (SFC)     System function blocks (SFB)  Programming language     — LAD     — FBD     — STL     — SCL     — CFC     — GRAPH     — HiGraph®  configuration / programming / number of simultaneously are configuration / Programming / Progra	7 Yes see instruction list see instruction list  Yes Yes Yes Yes Yes Yes Yes Yes Yes Ye
Command set     Nesting levels     Access to consistent data in process image     System functions (SFC)     System function blocks (SFB)  Programming language     — LAD     — FBD     — STL     — SCL     — CFC     — GRAPH     — HiGraph®  configuration / programming / number of simultaneously as more data.	7 Yes see instruction list see instruction list  Yes Yes Yes Yes Yes Yes Yes Yes Yes Ye
Command set     Nesting levels     Access to consistent data in process image     System functions (SFC)     System function blocks (SFB)  Programming language     — LAD     — FBD     — STL     — SCL     — CFC     — GRAPH     — HiGraph®  configuration / programming / number of simultaneously are configuration / Programming / Progra	7 Yes see instruction list see instruction list  Yes Yes Yes Yes Yes Yes Yes Yes Yes Ye
Command set     Nesting levels     Access to consistent data in process image     System functions (SFC)     System function blocks (SFB)  Programming language     LAD     FBD     STL     SCL     CFC     GRAPH     HiGraph®  configuration / programming / number of simultaneously as DPSYC_FR     D_ACT_DP     RD_REC     WR_REC     WR_PARM	7 Yes see instruction list see instruction list  Yes Yes Yes Yes Yes Yes Yes Yes Yes Ye
Command set  Nesting levels  Access to consistent data in process image  System functions (SFC)  System function blocks (SFB)  Programming language  LAD  FBD  STL  SCL  CFC  GRAPH  HiGraph®  configuration / programming / number of simultaneously a DPSYC_FR  D_ACT_DP  RD_REC  WR_REC  WR_REC  WR_PARM  PARM_MOD	7 Yes see instruction list see instruction list  Yes Yes Yes Yes Yes Yes Yes Yes Yes Ye
Command set     Nesting levels     Access to consistent data in process image     System functions (SFC)     System function blocks (SFB)  Programming language     LAD     FBD     STL     SCL     CFC     GRAPH     HiGraph®  configuration / programming / number of simultaneously as DPSYC_FR     D_ACT_DP     RD_REC     WR_REC     WR_PARM     PARM_MOD     WR_DPARM	7 Yes see instruction list see instruction list  Yes Yes Yes Yes Yes Yes Yes Yes Yes Ye
Command set     Nesting levels     Access to consistent data in process image     System functions (SFC)     System function blocks (SFB)  Programming language     — LAD     — FBD     — STL     — SCL     — CFC     — GRAPH     — HiGraph®  configuration / programming / number of simultaneously at more standard process.  — DPSYC_FR — D_ACT_DP — RD_REC — WR_REC — WR_PARM — PARM_MOD — WR_DPARM — DPNRM_DG — RDSYSST	7 Yes see instruction list  Yes Yes Yes Yes Yes Yes Yes Yes Yes Ye
Command set     Nesting levels     Access to consistent data in process image     System functions (SFC)     System function blocks (SFB)  Programming language     — LAD     — FBD     — STL     — SCL     — CFC     — GRAPH     — HiGraph®  configuration / programming / number of simultaneously among the configuration / programming / number of simultaneously among the configuration / programming / number of simultaneously among the configuration / programming / number of simultaneously among the configuration / programming / number of simultaneously among the configuration / programming / number of simultaneously among the configuration / programming / number of simultaneously among the configuration / programming / number of simultaneously among the configuration / programming / number of simultaneously among the configuration / programming / number of simultaneously among the configuration / programming / number of simultaneously among the configuration / programming / number of simultaneously among the configuration / programming / number of simultaneously among the configuration / programming / number of simultaneously among the configuration / programming / number of simultaneously among the configuration / programming / number of simultaneously among the configuration / programming / number of simultaneously among the configuration / programming / number of simultaneously among the configuration / programming / number of simultaneously among the configuration / programming / number of simultaneously among the configuration / programming / number of simultaneously among the configuration / programming / number of simultaneously among the configuration / programming / number of simultaneously among the configuration / programming / number of simultaneously among the configuration / programming / number of simultaneously among the configuration / programming / number of simultaneously among the configuration / programming / number of simultaneously among the configuration / programming / number of simultan	Yes see instruction list see instruction list  Yes Yes Yes Yes Yes Yes Yes Yes Yes Ye

— WRREC	8; SFB 53; per interface, but not more than 32 across all external interfaces
Know-how protection	
<ul> <li>User program protection/password protection</li> </ul>	Yes
<ul> <li>Block encryption</li> </ul>	Yes; With S7 block Privacy
Dimensions	
Width	25 mm
Height	290 mm
Depth	219 mm
Weights	
Weight, approx.	700 g

last modified:

9/7/2023