## **SIEMENS**

## **Data sheet**

## 6AG1414-3EM07-7AB0



SIPLUS S7-400 CPU 414-3 PN/DP based on 6ES7414-3EM07-0AB0 with conformal coating, -25...+70 °C, central processing unit with: work memory 4 MB, (2 MB code, 2 MB data), interfaces 1st interface MPI/DP 12 Mbps, (X1), 2nd interface ETHERNET/PROFINET (X5) 3rd interface IF 964-DP plug-in (IF1)

Figure similar

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General information	
Product type designation	CPU 414-3 PN/DP
HW functional status	01
Firmware version	V7.0
based on	6ES7414-3EM07-0AB0
Product function	
Isochronous mode	Yes; Via PROFIBUS DP or PROFINET interface
Engineering with	
<ul> <li>Programming package</li> </ul>	STEP 7 V5.5 or higher with HSP 262
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.	1.3 A
from backplane bus 5 V DC, max.	1.6 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.	6.5 W
Memory	
Type of memory	RAM
Work memory	
<ul><li>integrated</li></ul>	4 Mbyte
<ul><li>integrated (for program)</li></ul>	2 Mbyte
<ul><li>integrated (for data)</li></ul>	2 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	
<ul><li>present</li></ul>	Yes
<ul><li>with battery</li></ul>	Yes; all data
<ul><li>without battery</li></ul>	No
Battery	

Poelsun hettens	
Backup battery  Backup current typ	180 μA; up to 40 °C
<ul><li>Backup current, typ.</li><li>Backup current, max.</li></ul>	850 μA
Backup current, max.      Backup time, max.	Dealt with in the module data manual with the secondary conditions and the
• backup time, max.	factors of influence
<ul> <li>Feeding of external backup voltage to CPU</li> </ul>	5 V DC to 15 V DC
PU 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
PU-blocks	
DB	
Number, max.	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	
Number, max.	3 000; 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	4; OB 10-13
Number of delay alarm OBs	4; OB 20-23
Number of cyclic interrupt OBs	4; OB 32, 33, 34, 35 (shortest cycle that can be set = 500 μs)
Number of process alarm OBs	4; OB 40-43
Number of DPV1 alarm OBs	3; OB 55-57
<ul> <li>Number of isochronous mode OBs</li> </ul>	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	2, 55 .2., .22
per priority class	24
additional within an error OB	1
Counters, timers and their retentivity	
S7 counter	
Number	2 048
Retentivity	2 040
— adjustable	Yes
— aujustable — preset	Z 0 to Z 7
Counting range	201021
— lower limit	0
— upper limit	999
— upper limit IEC counter	000
	Yes
<ul><li>present</li><li>Type</li></ul>	SFB
Number	
• Number S7 times	Unlimited (limited only by RAM capacity)
	2.048
Number  Potentivity	2 048
Retentivity	V
— adjustable	Yes
— preset	No times retentive
T:	
Time range	40
— lower limit	10 ms
	10 ms 9 990 s

	v
• present	Yes
• Type	SFB
Number	Unlimited (limited only by RAM capacity)
Data areas and their retentivity	
Retentive data area (incl. timers, counters, flags), max.	Total working and load memory (with backup battery)
Flag	
• 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	AU .
• Inputs, adjustable	8 kbyte
Outputs, adjustable	8 kbyte
• Inputs, default	256 byte
Outputs, default	256 byte
• consistent data, max.	244 byte
Access to consistent data in process image	Yes
Subprocess images	
Number of subprocess images, max.	15
Digital channels	05 500
• Inputs	65 536
— of which central	65 536
Outputs	65 536
— of which central	65 536
Analog channels	4.006
• Inputs	4 006
— of which central	4 006
Outputs     — of which central	4 096 4 096
Hardware configuration	4 090
Number of expansion units, max.	21
connectable OPs	63
Multicomputing	Yes; 4 CPUs max. (with UR1 or UR2)
Interface modules	165, 4 GI OS IIIAX. (WILLI OKT OF OKZ)
Number of connectable IMs (total), max.	6
Number of connectable list (total), max.     Number of connectable list 460s, max.	6
Number of connectable IM 463s, max.	4; IM 463-2
Number of DP masters	., 100 <b>2</b>
• integrated	1
• via CP	10; CP 443-5 Extended
• via IM 467	4
Mixed mode IM + CP permitted	No; IM 467 cannot be used jointly with CP 443-5 Ext. or CP 443-1 in PROFINET IO mode
• via interface module	1; IF 964-DP
Number of pluggable S5 modules (via adapter capsule in central device), max.	6
Number of IO Controllers	
• integrated	1
• 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 slots and
a DDOCIDUS and Ethernet ODe	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	
<ul> <li>required slots</li> </ul>	2
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
<ul> <li>Deviation per day (unbuffered), max.</li> </ul>	8.6 s; For power On
Operating hours counter	
Number	16
<ul> <li>Number/Number range</li> </ul>	0 to 15
<ul> <li>Range of values</li> </ul>	SFCs 2, 3 and 4: 0 to 32767 hours SFC 101: 0 to 2^31 - 1 hours
<ul> <li>Granularity</li> </ul>	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
<ul> <li>on Ethernet via NTP</li> </ul>	Yes; As client
• to IF 964 DP	Yes
Time difference in system when synchronizing via	
<ul><li>Ethernet, max.</li></ul>	10 ms
• MPI, max.	200 ms
Interfaces	
Interfaces/bus type	1 x MPI/PROFIBUS DP, 1 x PROFINET (2 ports), 1 x PROFIBUS DP (optionally pluggable)
Number of RS 485 interfaces	1; Combined MPI / PROFIBUS DP
Number of other interfaces	1; PROFIBUS DP with IF 964-DP (plug-in option; MLFB: 6ES7964-2AA04-
	0AB0)
1. Interface	
Interface type	MPI/PROFIBUS DP
Isolated	Yes
Interface types	
• RS 485	Yes
Output current of the interface, max.	150 mA
Protocols	
• MPI	Yes
<ul> <li>PROFIBUS DP master</li> </ul>	Yes
PROFIBUS DP device	Yes
MPI	
Number of connections	32; If a diagnostics repeater is used on the line, the number of connection resources on the line is reduced by 1
Transmission rate, max.	12 Mbit/s
Services	
— PG/OP communication	Yes
— Routing	Yes
Global data communication	Yes
<ul> <li>S7 basic communication</li> </ul>	Yes
— S7 communication	Yes
<ul> <li>S7 communication, as client</li> </ul>	Yes
— S7 communication, as server	Yes
PROFIBUS DP master	
Number of connections, max.	16; If a diagnostics repeater is used on the line, the number of connection resources on the line is reduced by 1
Transmission rate, max.	12 Mbit/s
max. number of DP devices	32
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Convince	
Services	Von
— PG/OP communication	Yes C7 routing
— Routing	Yes; S7 routing
— Global data communication	No
— S7 basic communication	Yes
— S7 communication	Yes
<ul> <li>— S7 communication, as client</li> </ul>	Yes
<ul> <li>— S7 communication, as server</li> </ul>	Yes
— Equidistance	Yes
— Isochronous mode	Yes
— SYNC/FREEZE	Yes
<ul> <li>activation/deactivation of DP devices</li> </ul>	Yes
<ul> <li>Direct data exchange (slave-to-slave communication)</li> </ul>	Yes
— DPV1	Yes
Address area	Tes .
	2 khyta
— Inputs, max.	2 kbyte
— Outputs, max.	2 kbyte
User data per DP device	244 byte
— 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	
<ul> <li>Number of connections</li> </ul>	16
• GSD file	http://support.automation.siemens.com/WW/view/en/113652
<ul> <li>Transmission rate, max.</li> </ul>	12 Mbit/s
automatic baud rate search	No
<ul> <li>Address area, max.</li> </ul>	32; Virtual slots
<ul> <li>User data per address area, max.</li> </ul>	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</li> </ul>	No
communication)	
— DPV1	No
Transfer memory	
— Inputs	244 byte
— Outputs	244 byte
2. Interface	
Interface type	PROFINET
Isolated	Yes
automatic detection of transmission rate	Yes; Autosensing
Autonegotiation	Yes
Autocrossing	Yes
Change of IP address at runtime, supported	Yes; Assignment by higher-level IO-Controller or by the user program with
Interfere true	SFB104 "IP_CONF"
Interface types	Ven
• RJ 45 (Ethernet)	Yes
Number of ports	2
integrated switch	Yes
Protocols	
PROFINITIO C	V/
PROFINET IO Controller	Yes
<ul> <li>PROFINET IO Controller</li> <li>PROFINET IO Device</li> <li>PROFINET CBA</li> </ul>	Yes Yes

PROFIBUS DP master	No
PROFIBUS DP device	No
Open IE communication	Yes
Web server	Yes
Point-to-point connection	No
Media redundancy	Yes
PROFINET IO Controller	
Transmission rate, max.	100 Mbit/s
Services	
— PG/OP communication	Yes
— S7 communication	Yes
— Isochronous mode	Yes; Only with IRT and the High Performance option
— Shared device	Yes
— Prioritized startup	Yes
<ul> <li>Number of IO devices with prioritized startup, max.</li> </ul>	32
<ul> <li>Number of connectable IO Devices, max.</li> </ul>	256
<ul><li>Of which IO devices with IRT, max.</li></ul>	64
— of which in line, max.	64
<ul> <li>Number of IO Devices with IRT and the option "high flexibility"</li> </ul>	256
— of which in line, max.	61
<ul> <li>Number of connectable IO Devices for RT, max.</li> </ul>	256
— of which in line, max.	256
<ul> <li>Activation/deactivation of IO Devices</li> </ul>	Yes
<ul> <li>Number of IO Devices that can be simultaneously activated/deactivated, max.</li> </ul>	8
<ul> <li>IO Devices changing during operation (partner ports), supported</li> </ul>	Yes
Number of IO Devices per tool, max.	8; 8 parallel calls of the SFC 12 "D_ACT_DP" possible per line. Max. 32 IO Devices changing during operation (partner ports) are supported
Device replacement without swap medium	Yes
— Send cycles	250 µs, 500 µs, 1 ms, 2 ms, 4 ms additionally with IRT with high performance: 250 µs to 4 ms in 125 µs frame
— Updating time	250 µs to 512 ms; minimum value depends on preset communication share for PROFINET IO, on the number of IO Devices and on the amount of configured user data, see PROFINET system description
Address area	
— Inputs, max.	8 kbyte
— Outputs, max.	8 kbyte
— User data consistency, max.	1 024 byte
PROFINET IO Device	
Services	
— PG/OP communication	Yes
— S7 communication	Yes
— Isochronous mode	No
— IRT	Yes
— Prioritized startup	Yes
— Shared device	Yes
— Number of IO Controllers with shared device, max.	2
Transfer memory	
— Inputs, max.	1 440 byte; Per IO Controller with shared device
— Outputs, max.	1 440 byte; Per IO Controller with shared device
Submodules	
— Number, max.	64
— User data per submodule, max.	1 024 byte
PROFINET CBA	
PROFINET CBA  • acyclic transmission	Yes
	Yes Yes
acyclic transmission	
acyclic transmission     cyclic transmission	
acyclic transmission     cyclic transmission  Open IE communication	Yes

. Interface	
Interface type	Pluggable interface module (IF)
Plug-in interface modules	IF 964-DP (MLFB: 6ES7964-2AA04-0AB0)
Isolated	Yes
automatic detection of transmission rate	No
Interface types	
• RS 485	Yes
<ul> <li>Output current of the interface, max.</li> </ul>	150 mA
Protocols	
• MPI	No
PROFIBUS DP master	Yes
PROFIBUS DP device	Yes
PROFIBUS DP master	
Number of connections, max.	16
Transmission rate, max.  Transmission rate, max.	12 Mbit/s
max. number of DP devices	96
Services	90
	Voc
— PG/OP communication	Yes
— Routing	Yes; S7 routing
— Global data communication	No
— S7 basic communication	Yes
— S7 communication	Yes
<ul> <li>S7 communication, as client</li> </ul>	Yes
<ul> <li>S7 communication, as server</li> </ul>	Yes
— Equidistance	Yes
<ul> <li>Isochronous mode</li> </ul>	Yes
— SYNC/FREEZE	Yes
<ul> <li>activation/deactivation of DP devices</li> </ul>	Yes
<ul> <li>Direct data exchange (slave-to-slave</li> </ul>	Yes
communication)	
— DPV0	Yes
— DPV1	Yes
Address area	
— Inputs, max.	6 kbyte
— Outputs, max.	6 kbyte
User data per DP device	
<ul><li>user data per DP device, max.</li></ul>	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	16
DP slave	
GSD file	http://support.automation.siemens.com/WW/view/en/113652
• transfer rate / at the 3rd interface / as DP slave /	12 Mbit/s
maximum	
automatic baud rate search	No
<ul> <li>Address area, max.</li> </ul>	32; Virtual slots
<ul> <li>data volume / at the 3rd interface / as DP slave / as user data per address range / maximum</li> </ul>	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
	1 63
	Voc
S7 communication     S7 communication, as client     S7 communication, as server	Yes Yes

Direct data exchange (slave-to-slave	No
communication)	
— DPV1	No
Transfer memory	
— Inputs	244 byte
— Outputs	244 byte
Protocols	
Redundancy mode	
Media redundancy	
<ul> <li>Switchover time on line break, typ.</li> </ul>	200 ms
Number of stations in the ring, max.	50
SIMATIC communication	
S7 routing	Yes
Open IE communication	
• TCP/IP	Yes; via integrated PROFINET interface and loadable FBs
— Number of connections, max.	62
— Data length, max.	32 kbyte
— several passive connections per port, supported	Yes
• ISO-on-TCP (RFC1006)	Yes; Via integrated PROFINET interface or CP 443-1 Adv. and loadable FBs
Number of connections, max.	62
— Data length, max.	32 kbyte; 1 452 bytes via CP 443-1 Adv.
• UDP	Yes; via integrated PROFINET interface and loadable FBs
Number of connections, max.	62
— Data length, max.	1 472 byte
Web server	
<ul><li>supported</li></ul>	Yes
<ul> <li>User-defined websites</li> </ul>	Yes
Number of HTTP clients	5
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	Yes
<ul> <li>Number of connectable OPs without message processing</li> </ul>	63
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	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
Size of GD packet (of which consistent), max.	1 variable
S7 basic communication	
• supported	Yes
User data per job, max.	76 byte
<ul><li>User data per job, max.</li><li>User data per job (of which consistent), max.</li></ul>	
<ul> <li>User data per job, max.</li> <li>User data per job (of which consistent), max.</li> <li>S7 communication</li> </ul>	76 byte 1 variable
<ul> <li>User data per job, max.</li> <li>User data per job (of which consistent), max.</li> <li>S7 communication</li> <li>supported</li> </ul>	76 byte 1 variable Yes
<ul> <li>User data per job, max.</li> <li>User data per job (of which consistent), max.</li> <li>S7 communication</li> <li>supported</li> <li>as server</li> </ul>	76 byte 1 variable Yes Yes
<ul> <li>User data per job, max.</li> <li>User data per job (of which consistent), max.</li> <li>S7 communication</li> <li>supported</li> <li>as server</li> <li>as client</li> </ul>	76 byte 1 variable  Yes Yes Yes
<ul> <li>User data per job, max.</li> <li>User data per job (of which consistent), max.</li> <li>S7 communication</li> <li>supported</li> <li>as server</li> <li>as client</li> <li>User data per job, max.</li> </ul>	76 byte 1 variable Yes Yes
<ul> <li>User data per job, max.</li> <li>User data per job (of which consistent), max.</li> <li>S7 communication</li> <li>supported</li> <li>as server</li> <li>as client</li> <li>User data per job, max.</li> <li>User data per job (of which consistent), max.</li> </ul>	76 byte 1 variable  Yes Yes Yes
<ul> <li>User data per job, max.</li> <li>User data per job (of which consistent), max.</li> <li>S7 communication</li> <li>supported</li> <li>as server</li> <li>as client</li> <li>User data per job, max.</li> </ul>	76 byte 1 variable  Yes Yes Yes 64 kbyte
<ul> <li>User data per job, max.</li> <li>User data per job (of which consistent), max.</li> <li>S7 communication</li> <li>supported</li> <li>as server</li> <li>as client</li> <li>User data per job, max.</li> <li>User data per job (of which consistent), max.</li> </ul>	76 byte 1 variable  Yes Yes Yes 64 kbyte
User data per job, max.  User data per job (of which consistent), max.  7 communication  usupported  as server  as client  User data per job, max.  User data per job (of which consistent), max.	76 byte 1 variable  Yes Yes Yes 64 kbyte 462 byte; 1 variable
User data per job, max.  User data per job (of which consistent), max.  7 communication  supported  as server  as client  User data per job, max.  User data per job (of which consistent), max.  S5 compatible communication  supported	76 byte 1 variable  Yes Yes Yes 64 kbyte 462 byte; 1 variable  Yes; Via FC AG_SEND and AG_RECV, max. via 10 CP 443-1 or 443-5

**Support of the CPU communication (RMS)**  **Support for the CPU communication to ad 20 %  **Support for the CPU communication partners 32  **In under of mastericeve's functions 150  **In under of mastericeve's functions 150  **In under of mastericeve's functions 150  **In under of all incoming masteridevice connections 45000 byte 150  **In under of all ulugining masteridevice connections 150  **In under of all victoring masteridevice connections 150  **In under of device infermal and PROFIBIUS 15000 byte 15000	CPU, max.	
Section for the CPU communication load 20 % Number of remote inferconnection partiess 32 number of masteridevice functions 150 Load of all masteridevice connections 45000 byte data length of all incoming masteridevice connections, nax. data length of all functioning masteridevice connections, and the connection of t		
Separat for the CPUL communication load   Number of masteridevice functions   150	• supported	Yes; Via CP and loadable FB
Number of material evice from the interconnection partners     Interconnections	communication functions / PROFINET CBA (with set target commu	unication load) / header
It total of all masteridevice connections     It total of all masteridevice connections     It did all incrining masteridevice connections,     It did not be all incrining masteridevice connections,     It did not be all incrining interconnections,     It did not be all incrining interconnections, max.     It did not be all incrining interconnection	<ul> <li>Setpoint for the CPU communication load</li> </ul>	20 %
• Idata length of all autigning masteridevice connections, and the length of all autigning masteridevice connections, and the length of all autigning masteridevice connections, max.     • Number of device-internal and PROFIBUS interconnections.     • Data length per connection, max.     • Number of outgoing interconnections.     • Number of outgoing interconnections.     • Number of outgoing interconnections.     • Data length of all outgoing interconnections, max.     • Data length of all outgoing interconnections and data length used  Profitable of Air Profitable CEAN remote interconnections in the length of all outgoing interconnections and data length used  **Transmission frequency: Transmission interval, min.**  Putting of incoming interconnections and data length used  **Data length of all outgoing interconnections and data length used  **Data length of all outgoing interconnections and data length used  **Data length of all outgoing interconnections and data length used  **Data length of all outgoing interconnections and data length used  **Data length of all outgoing interconnections and data length used  ***Data length of all outgoing interconnections and data length used  ***Data length of all outgoing interconnections, max.  ***Data length of all outgoing interconnections, max.  ***Data length of all proving interconnections, max.  ***Data length of all proving interconnections, max.  ***Data length of all morning interconnections, max.  ***Data length of all his variables with proving length of the proving length of the proving length of the pr	<ul> <li>Number of remote interconnection partners</li> </ul>	32
a data length of all incoming master/device connections, max.  b Unather of device-internal and PROFIBUS interconnections, max.  c) Data length of device-internal and PROFIBUS interconnections, max.  c) Data length of device-internal and PROFIBUS interconnections, max.  c) Data length per connection, max.  c) Data length per connection, max.  d) Data length of all incoming interconnections interval, min.  Data length of all coupling interconnections, max.  Data length of all coupling interconnections interval, min.  Transmission frequency. Transmission interval, min.  Number of incoming interconnections  Number of incoming interconnections  Number of incoming interconnections  Number of upon price interconnections, max.  Data length of all coupling interconnections, max.  Data length of all maximal protections of a service interconnection interval, min.  performance data / RPOFINET CBA / per connection, max.  Data length of all interval	<ul> <li>number of master/device functions</li> </ul>	150
max.  • data length of all outgoing masteridevice connections, max.  • Number of device-internal and PROFIBUS interconnections.  • Data length of device-internal und PROFIBUS interconnections, max.  • Data length of device-internal und PROFIBUS interconnections, max.  • Data length per connection, max.  • Data length of incoming interconnections  — Number of incoming interconnections  — Number of incending interconnections.  — Number of outgoing interconnections.  — Data length of all incoming interconnections. max.  — data volume? as user data for remote interconnection. Max.  — data volume? as user data for remote interconnection. Max.  — data volume? as user data for remote interconnection. Max.  — Transmission frequency: Transmission interval, min.  — Transmission frequency: Transmission interval, min.  — Number of incoming interconnections. max.  — Data length of all incoming interconnections. max.  — data volume? as user data for remote interconnection. Max volume? as user data for remote interconnections. With optical transfer / header  — Data length of all undergoin interconnections. max.  — data volume? as user data for remote interconnections. Max volume? as user data for remote interconnections. With optical transfer / with PROFINET CBA / per connection in with optical transfer / with PROFINET CBA / per connection in with optical transfer / with PROFINET CBA / per connection in with optical transfer / with PROFINET CBA / per connection in with optical transfer / with PROFINET CBA / per connection in with optical transfer / with PROFINET CBA / per connection in with optical transfer / with PROFINET CBA / per connection in with optical transfer / with PROFINET CBA / per connection in with optical transfer / per connection in with optical transfer / per connection in with optical transfer /	<ul> <li>total of all master/device connections</li> </ul>	4 500
max.  • Number of device-internal and PROFIBUS interconnections.  • Data length of device-internal und PROFIBUS interconnections, max.  • Data length per connection, max.  • Data length per connection, max.  — Sampling interval, min.  — Number of incoming interconnections.  • Number of incoming interconnections.  — Number of outgoing interconnections.  — Number of outgoing interconnections.  — Data length of all undergin interconnections.  — Data length of all undergin interconnections.  — Data length of all undergin interconnections.  — data valume / as user data for remote interconnections in the case of acyclic transmission / with PROFINET DBA / per connection / maximum performance data / PROFINET DBA / per connection / maximum performance data / PROFINET DBA / per connections.  — Transmission frequency: Transmission interval, min.  — Number of inoming interconnections.  — Number of inoming interconnections.  — Number of outgoing interconnections.  — Number of stations that fair or more interconnection / maximum.  Profirmer of stations that can log on for HMI variables.  (PN OPC/in/lap)  — HMI variable updating  — Number of HMI variables.  — Supported  — usable for PG communication  — adjustable for PG communication  — adjustable for PG communication  — reserved for PG communication  — adjustable for PG bear communication  — adjustable for PG communication	· · · · · · · · · · · · · · · · · · ·	45 000 byte
interconnections  **O bata length of device-internal und PROFIBUS interconnections, max.  **Postal reinity per connection, max.  **Postal reinity per connection, max.  - Sampling interval, min.  - Number of incoming interconnections and a site length used and a length used a site length used and site length used a site length used and site length used a site length used and site length used a		45 000 byte
### Ozata length per connection, max.  * Ozata length per connection, max.  — Sampling interval, min. — Number of incoming interconnections — Number of ordinging interconnections. — Number of ordinging interconnections. — Number of ordinging interconnections. — Data length of all outgoing interconnections, max. — data volume / as user data for remote. — Transmission frequency: Transmission interval, min. — Number of incoming interconnections and data length of all outgoing interconnections, max. — data volume / as user data for remote. — Transmission frequency: Transmission interval, min. — Number of incoming interconnections. — Number of incoming interconnections. — Number of upgoing interconnections. — Number of upgoing interconnections. — Number of incoming interconnections. — Data length of all outgoing interconnections, max. — data volume / as user data for remote interconnections / with — Collab length of all incoming interconnections, max. — data volume / as user data for remote interconnections / with PROPINIET CGA/ per connection / with PROPINIET CGA/ per con		1 000
performance data / PROFINET CBA / remote interconnection / with acyclic transfer / header  - Sampling interval, min Number of incoming interconnections - Number of outgoing interconnections, max Number of outgoing interconnections, max Data length of all incoming interconnections, max Data length of all outgoing interconnections, max data volume / as user data for remote interconnections of the search of		16 000 byte
	Data length per connection, max.	2 000 byte
Number of incoming interconnections 250 Number of outgoing interconnections 250 Data length of all incoming interconnections, max. 250 Data length of all incoming interconnections, max. 250 Data length of all outgoing interconnections, max. 250 data volume / as user data for remote interconnections / with PROFINET CBA / per connection / maximum performance data / PROFINET CBA / per connection / maximum performance data / PROFINET CBA / remote interconnection / with cyclic transfer / header  Transmission frequency: Transmission interval, min. 250 Number of incoming interconnections 300 Number of incoming interconnections 300 Number of incoming interconnections 300 Data length of all outgoing interconnections, max. 300 Data length of all outgoing interconnections, max. 4800 byte 450 byte 360 byt	performance data / PROFINET CBA / remote interconnection	/ with acyclic transfer / header
- Number of outgoing interconnections	— Sampling interval, min.	
Data length of all incoming interconnections, max Data length of all outgoing interconnections / with preCINET CBA / per connection / maximum  performance data / PROFINET CBA / remote interconnection / with vyclic transfer / header  Transmission frequency: Transmission interval, min Number of incoming interconnections 300  Number of incoming interconnections 300  Number of outgoing interconnections 300  Data length of all incoming interconnections, max Data length of all outgoing interconnections, max Data length of all outgoing interconnections, max Data length of all outgoing interconnections, max Data length of all incoming interconnections, max Number of stations that can log on for HMI variables with PROFINET CBA / PROFIBUS proxy functionality / header  Supported Data length of all HMI variables, max Data length of all HMI variables, max Overall Ove	<ul> <li>Number of incoming interconnections</li> </ul>	250
Data length of all outgoing interconnections, max data volume / as user data for remote interconnections / inthe case of acyclic transmission / with PROFINET GBA / per connection / maximum performance data / PROFINET GBA / remote interconnections / with cyclic transfer / header  Transmission frequency: Transmission interval, min Number of incoming interconnections Number of outgoing interconnections Number of outgoing interconnections Number of outgoing interconnections, max Data length of all incoming interconnections, max Data length of all outgoing interconnections, max Data length of all outgoing interconnections, max Data volume / as user data for remote interconnections / with cyclical transfer / with PROFINET GBA / per connection / maximum performance data / PROFINET CBA / HMI variables with PROFINET / acyclic / header  Number of stations that can log on for HMI variables with PROFINET OBA / PROFINET CBA	<ul> <li>Number of outgoing interconnections</li> </ul>	250
enformance data / PROFINET CBA / per connection / maximum performance data / PROFINET CBA / per connection / maximum  Profine control of the case of acyclic transmission / with cyclic transfer / header  - Transmission frequency: Transmission interval, min Number of incoming interconnections - Number of outgoing interconnections - Number of outgoing interconnections - Number of outgoing interconnections, max Data length of all incoming interconnections, max data length of all outgoing interconnections, max data volume / as user data for remote interconnections / with cyclical transfer / with PROFINET CBA / per connection / with cyclical transfer / with PROFINET CBA / per connection / with cyclical transfer / with PROFINET CBA / PROFINET CBA / per connection / with variables (PRO PC/Map)  - HMI variable updating - Number of stations that can log on for HMI variables (PRO PC/Map) - HMI variable updating - Number of HMI variables, max supported - supported - supported - supported - versal   PROFINET CBA / PROFIBUS proxy functionality / header  - supported - Data length per connection, max.  • voveral   64  • usable for PG communication - dijustable for S7 basic communication - dijustable for S7 basic communication - dijustable for S7 basic communication - dijustable for S7 communication - dijustable for FS7 communication - dijus	<ul> <li>Data length of all incoming interconnections, max.</li> </ul>	8 000 byte
interconnections / in the case of acyclic transmission / with PROFINET CBA / per connection / maximum performance data / PROFINET CBA / remote interconnection / with cyclic transfer / header  — Transmission frequency: Transmission interval, min. — Number of incoming interconnections and data length used and length of all cutgoing interconnections, max.  — Data length of all cutgoing interconnections, max. — data volume / as user data for remote after or with profiner cells of your with cyclical transfer / with PROFINET CBA / per connection / maximum performance data / PROFINET CBA / price of your performance data / PROFINET CBA / price of your performance data / PROFINET CBA / PROFIBUS proxy functionance data / PROFIBUS proxy functional proxy functionance data / PROFIBUS proxy fun	<ul> <li>Data length of all outgoing interconnections, max.</li> </ul>	8 000 byte
performance data / PROFINET CBA / remote interconnection / with cyclic transfer / header  - Transmission frequency: Transmission interval, min Number of incoming interconnections and data length used and data volume / as user data for remote interconnections / with cyclical transfer / with PROFINET CBA / per connection / maximum performance data / PROFINET CBA / HMI variables via PROFINET / acyclic / header  - Number of stations that can log on for HMI variables (PN OPC/fMap)  - HMI variable updating 500 ms - Number of HMI variables, max. 32 000 byte  performance data / PROFINET CBA / PROFIBUS proxy functionality / header  - susported 7 progress of the	interconnections / in the case of acyclic transmission /	2 000 byte
- Transmission frequency: Transmission interval, min Number of incoming interconnections - Number of outgoing interconnections - Number of outgoing interconnections - Data length of all incoming interconnections, max Data length of all incoming interconnections, max data volume / as user data for remote interconnections / with cyclical transfer / with PROFINET CBA / Per connection / maximum performance data / PROFINET CBA / Per connection / maximum performance data / PROFINET CBA / HMI variables via PROFINET / acyclic / header - Number of stations that can log on for HMI variables (PN OPC/Map) - HMI variable updating - Number of HMI variables - Data length of all HMI variables, max Data length per connection, max.  • overall - Data length per connection, max.  • overall - Usuable for PG communication - adjustable for PG communication, max.  • usable for PG communication - adjustable for OP communication - adjustable for OP communication - adjustable for S7 basic communication - adjustable for S7 basic communication - adjustable for S7 communication - reserved for S7 communication - adjustable for routing	·	/ with cyclic transfer / header
- Number of outgoing interconnections and 4 800 byte  - Data length of all incoming interconnections, max. 4 800 byte  - data volume / as user data for remote interconnections / with cyclical transfer / with PROFINET CBA / per connection / maximum PROFINET CBA / HMI variables via PROFINET / acyclic / header  - Number of stations that can log on for HMI variables ≥ 2x PN OPC/1x iMap  - Number of HMI variable updating 500 ms  - Number of HMI variables 1000  - Data length of all HMI variables, max. 32 000 byte  performance data / PROFINET CBA / PROFIBUS proxy functionally / header  - supported 7 yes; 32 PROFIBUS slaves max. connectable 240 byte; Slave-dependent  Number of connections  • overall 64  • usable for PG communication 63  - reserved for PG communication, max. 0  • usable for PG communication, max. 0  • usable for OP communication 11  - adjustable for PG communication, max. 0  • usable for S7 basic communication 62  - reserved for S7 basic communication 62  - reserved for S7 basic communication, max. 0  • usable for S7 communication 62  - reserved for S7 communication 63  - reserved for S7 communication 62  - reserved for S7 communication 63  - reserved for S7 communication 64  - usable for S7 communication 65  - reserved for S7 communication 65  - reserved for S7 communication 65  - reserved for S7 communication 65	·	1 ms; Depending on preset communication load, number of interconnections
- Number of outgoing interconnections and 4 800 byte  - Data length of all incoming interconnections, max. 4 800 byte  - data volume / as user data for remote interconnections / with cyclical transfer / with PROFINET CBA / per connection / maximum PROFINET CBA / HMI variables via PROFINET / acyclic / header  - Number of stations that can log on for HMI variables ≥ 2x PN OPC/1x iMap  - Number of HMI variable updating 500 ms  - Number of HMI variables 1000  - Data length of all HMI variables, max. 32 000 byte  performance data / PROFINET CBA / PROFIBUS proxy functionally / header  - supported 7 yes; 32 PROFIBUS slaves max. connectable 240 byte; Slave-dependent  Number of connections  • overall 64  • usable for PG communication 63  - reserved for PG communication, max. 0  • usable for PG communication, max. 0  • usable for OP communication 11  - adjustable for PG communication, max. 0  • usable for S7 basic communication 62  - reserved for S7 basic communication 62  - reserved for S7 basic communication, max. 0  • usable for S7 communication 62  - reserved for S7 communication 63  - reserved for S7 communication 62  - reserved for S7 communication 63  - reserved for S7 communication 64  - usable for S7 communication 65  - reserved for S7 communication 65  - reserved for S7 communication 65  - reserved for S7 communication 65	<ul> <li>Number of incoming interconnections</li> </ul>	300
- Data length of all outgoing interconnections, max.  - data volume / as user data for remote interconnections / with cyclical transfer / with PROFINET CBA / per connection / maximum  performance data / PROFINET CBA / Hill variables via PROFINET / acyclic / header  - Number of stations that can log on for HMI variables (PN OPC/1x iMap)  - HMI variable updating - Number of HMI variables 1000  - Data length of all HMI variables, max. 32 000 byte  performance data / PROFINET CBA / PROFIBUS proxy functionally / leader - supported - Data length of connection, max. 240 byte; Slave-dependent  Number of connections  • overall • overall • usable for PG communication - adjustable for PG communication 1 - adjustable for PG communication 63 - reserved for FG communication 1 - adjustable for OP communication 5 - adjustable for OP communication 62 - reserved for S7 basic communication 0 - adjustable for S7 basic communication 0 - adjustable for S7 communication 62 - reserved for S7 basic communication 62 - reserved for S7 basic communication 62 - reserved for S7 communication 63 - reserved for S7 communication 64 - reserved for S7 communication 65 - reserved for routing 60 - adjustable for routing 60		300
- Data length of all outgoing interconnections, max.  - data volume / as user data for remote interconnections / with cyclical transfer / with PROFINET CBA / per connection / maximum  performance data / PROFINET CBA / Hill variables via PROFINET / acyclic / header  - Number of stations that can log on for HMI variables / EVPO PC/1x iMap  - Number of HMI variable updating  - HMI variable updating  - Number of HMI variables  - Data length of all HMI variables, max.  2x PN OPC/1x iMap  - Data length of all HMI variables, max.  2x PN OPC/1x iMap  - Data length of all HMI variables, max.  2x PN OPC/1x iMap  - Data length of all HMI variables, max.  2x PN OPC/1x iMap  - Data length of all HMI variables, max.  2x PN OPC/1x iMap  - Data length of all HMI variables, max.  2x PN OPC/1x iMap  - Data length of all HMI variables, max.  2x PN OPC/1x iMap  - Data length of all HMI variables, max.  2x PN OPC/1x iMap  - Data length of all HMI variables, max.  2x PN OPC/1x iMap  - Data length of all HMI variables, max.  2x PN OPC/1x iMap  - Data length of all HMI variables, max.  2x PN OPC/1x iMap  - Data length of all HMI variables, max.  2x PN OPC/1x iMap  - Data length of all HMI variables, max.  2x PN OPC/1x iMap  - Data length of all HMI variables, max.  2x PN OPC/1x iMap  - Data length of all HMI variables, max.  2x PN OPC/1x iMap  - Data length of all HMI variables, max.  2x PN OPC/1x iMap  - Sy PN OPC/1x iMap  - Sy PN OPC/1x iMap  - All Map  - All M		4 800 byte
- data volume / as user data for remote interconnections / with cyclical transfer / with PROFINET CBA / per connection / maximum  performance data / PROFINET CBA / HMI variables via PROFINET / acyclic / header  - Number of stations that can log on for HMI variables (PN OPC/IMap)  - HMI variable updating 500 ms  - Number of HMI variables 1000  - Data length of all HMI variables, max. 2000 byte  performance data / PROFINET CBA / PROFIBUS proxy functionality / header  - supported Yes; 32 PROFIBUS slaves max. connectable  - Data length per connection, max. 240 byte; Slave-dependent  Number of connections  • overall 64  • usable for PG communication 63  - reserved for PG communication, max. 0  • usable for OP communication, max. 0  • usable for OP communication 1  - adjustable for PG communication 5  - reserved for OP communication 5  - usable for S7 basic communication 62  - reserved for S7 basic communication 0  - adjustable for S7 basic communication, max. 0  • usable for S7 communication 0  - adjustable for Touting 0  - reserved for routing 0  - reserved for routing 0  - adjustable for routing 0  - reserved for routing 0  - adjustable for routing 0  - reserved for routing 0  - reserved for routing 0  - reserved for routing 0  - adjustable		
- Number of stations that can log on for HMI variables (PN OPC/IMap) - HMI variable updating - Number of HMI variables - Data length of all HMI variables, max. 32 000 byte  performance data / PROFINET CBA / PROFIBUS proxy functionality / header - supported - Data length per connection, max. 240 byte; Slave-dependent  Number of connections  • overall • usable for PG communication - adjustable for PG communication - adjustable for OP communication - adjustable for OP communication - adjustable for OP communication - adjustable for S7 basic communication - adjustable for S7 communication - adjustable for S	interconnections / with cyclical transfer / with	450 byte
(PN OPC/Map)  - HMI variable updating - Number of HMI variables - Data length of all HMI variables, max. 32 000 byte  performance data / PROFINET CBA / PROFIBUS proxy functionality / header - supported - Data length per connection, max.  - Supported - Data length per connection, max.  **Overall**  • overall** • usable for PG communication - adjustable for PG communication - adjustable for PG communication - reserved for PC communication - adjustable for OP communication - adjustable for ST basic communication - adjustable for ST communication - adjustable for routing - reserved for routing - adjustable for PG communication - adjustable	performance data / PROFINET CBA / HMI variables via PROF	FINET / acyclic / header
- Number of HMI variables 1000 - Data length of all HMI variables, max. 32 000 byte  performance data / PROFINET CBA / PROFIBUS proxy functionality / header - supported		2x PN OPC/1x iMap
- Data length of all HMI variables, max. 32 000 byte  performance data / PROFINET CBA / PROFIBUS proxy functionality / header  - supported Yes; 32 PROFIBUS slaves max. connectable - Data length per connection, max. 240 byte; Slave-dependent  Number of connections  • overall 64 • usable for PG communication 1 - reserved for PG communication 1 - adjustable for PG communication 63 - reserved for PG communication 1 - adjustable for OP communication 1 - adjustable for OP communication 1 - adjustable for S7 basic communication 1 - adjustable for S7 basic communication 62 - reserved for S7 basic communication 0 - adjustable for S7 basic communication 62 - reserved for S7 basic communication max. 0  • usable for S7 communication 62 - reserved for S7 communication 0 - adjustable for S7 communication 0 - adjustable for S7 communication 31 - reserved for S7 communication, max. 0  • usable for routing 31 - reserved for routing 31 - reserved for routing, max. 0	<ul> <li>HMI variable updating</li> </ul>	500 ms
performance data / PROFINET CBA / PROFIBUS proxy functionality / header	<ul> <li>Number of HMI variables</li> </ul>	1 000
- supported - Data length per connection, max.  240 byte; Slave-dependent  Number of connections  • overall • usable for PG communication - adjustable for OP communication - adjustable for OP communication - adjustable for S7 basic communication - adjustable for S7 basic communication - adjustable for S7 basic communication - adjustable for S7	<ul> <li>Data length of all HMI variables, max.</li> </ul>	32 000 byte
Potal length per connection, max.  Number of connections  ● overall  ● usable for PG communication  — reserved for PG communication  — adjustable for PG communication  — adjustable for OP communication  — adjustable for S7 basic communication  — adjustable for S7 basic communication  — adjustable for S7 communication, max.  ● usable for routing  — reserved for routing  — reserved for routing  — adjustable for routing, max.  0	performance data / PROFINET CBA / PROFIBUS proxy functi	onality / header
Number of connections         ● overall       64         ● usable for PG communication       63         — reserved for PG communication       1         — adjustable for PG communication, max.       0         ● usable for OP communication       63         — reserved for OP communication       1         — adjustable for OP communication, max.       0         ● usable for S7 basic communication       62         — reserved for S7 basic communication       0         — adjustable for S7 communication       62         — reserved for S7 communication       62         — reserved for S7 communication       0         — adjustable for S7 communication, max.       0         ● usable for routing       31         — reserved for routing, max.       0	— supported	Yes; 32 PROFIBUS slaves max. connectable
<ul> <li>overall</li> <li>usable for PG communication</li> <li>— reserved for PG communication</li> <li>— adjustable for PG communication, max.</li> <li>usable for OP communication, max.</li> <li>usable for OP communication</li> <li>— reserved for OP communication</li> <li>— adjustable for OP communication, max.</li> <li>usable for S7 basic communication, max.</li> <li>usable for S7 basic communication</li> <li>— adjustable for S7 basic communication</li> <li>— adjustable for S7 basic communication</li> <li>— adjustable for S7 communication</li> <li>usable for S7 communication</li> <li>— reserved for S7 communication</li> <li>— adjustable for S7 communication, max.</li> <li>usable for routing</li> <li>— adjustable for routing</li> <li>— reserved for routing</li> <li>— reserved for routing</li> <li>— adjustable for routing, max.</li> </ul>	<ul> <li>Data length per connection, max.</li> </ul>	240 byte; Slave-dependent
<ul> <li>usable for PG communication</li> <li>— reserved for PG communication</li> <li>— adjustable for PG communication, max.</li> <li>usable for OP communication</li> <li>— reserved for OP communication</li> <li>— adjustable for OP communication, max.</li> <li>usable for S7 basic communication, max.</li> <li>usable for S7 basic communication</li> <li>— reserved for S7 basic communication</li> <li>— adjustable for S7 basic communication</li> <li>— adjustable for S7 communication, max.</li> <li>usable for S7 communication</li> <li>— reserved for S7 communication</li> <li>— adjustable for S7 communication, max.</li> <li>usable for S7 communication</li> <li>— adjustable for S7 communication, max.</li> <li>usable for routing</li> <li>— adjustable for routing</li> <li>— reserved for routing</li> <li>— adjustable for routing, max.</li> </ul>	Number of connections	
<ul> <li>reserved for PG communication</li> <li>adjustable for PG communication, max.</li> <li>usable for OP communication</li> <li>reserved for OP communication</li> <li>adjustable for OP communication, max.</li> <li>usable for S7 basic communication</li> <li>reserved for S7 basic communication</li> <li>adjustable for S7 basic communication</li> <li>adjustable for S7 communication</li> <li>usable for S7 communication</li> <li>adjustable for S7 communication</li> <li>adjustable for S7 communication, max.</li> <li>usable for routing</li> <li>reserved for routing</li> <li>adjustable for routing, max.</li> <li>adjustable for routing, max.</li> </ul>	• overall	64
<ul> <li>adjustable for PG communication, max.</li> <li>usable for OP communication</li> <li>reserved for OP communication</li> <li>adjustable for OP communication, max.</li> <li>usable for S7 basic communication</li> <li>reserved for S7 basic communication</li> <li>adjustable for S7 basic communication</li> <li>adjustable for S7 communication, max.</li> <li>usable for S7 communication</li> <li>reserved for S7 communication</li> <li>adjustable for S7 communication, max.</li> <li>usable for routing</li> <li>reserved for routing</li> <li>adjustable for routing, max.</li> <li>adjustable for routing, max.</li> </ul>	• usable for PG communication	63
<ul> <li>usable for OP communication</li> <li>— reserved for OP communication</li> <li>— adjustable for OP communication, max.</li> <li>usable for S7 basic communication</li> <li>— reserved for S7 basic communication</li> <li>— adjustable for S7 basic communication</li> <li>— adjustable for S7 communication, max.</li> <li>usable for S7 communication</li> <li>— reserved for S7 communication</li> <li>— adjustable for S7 communication, max.</li> <li>usable for routing</li> <li>— reserved for routing</li> <li>— reserved for routing</li> <li>— adjustable for routing</li> <li>— adjustable for routing</li> <li>— adjustable for routing, max.</li> </ul>	<ul> <li>reserved for PG communication</li> </ul>	1
<ul> <li>reserved for OP communication</li> <li>adjustable for OP communication, max.</li> <li>usable for S7 basic communication</li> <li>reserved for S7 basic communication</li> <li>adjustable for S7 basic communication, max.</li> <li>usable for S7 communication</li> <li>reserved for S7 communication</li> <li>adjustable for S7 communication</li> <li>adjustable for S7 communication</li> <li>adjustable for S7 communication, max.</li> <li>usable for routing</li> <li>reserved for routing</li> <li>adjustable for routing</li> <li>adjustable for routing, max.</li> </ul>	<ul> <li>adjustable for PG communication, max.</li> </ul>	0
<ul> <li>adjustable for OP communication, max.</li> <li>usable for S7 basic communication</li> <li>reserved for S7 basic communication</li> <li>adjustable for S7 basic communication, max.</li> <li>usable for S7 communication</li> <li>reserved for S7 communication</li> <li>adjustable for S7 communication, max.</li> <li>usable for routing</li> <li>reserved for routing</li> <li>reserved for routing</li> <li>adjustable for routing</li> <li>adjustable for routing</li> <li>adjustable for routing, max.</li> </ul>	<ul> <li>usable for OP communication</li> </ul>	63
<ul> <li>usable for S7 basic communication</li> <li>— reserved for S7 basic communication</li> <li>— adjustable for S7 basic communication, max.</li> <li>usable for S7 communication</li> <li>— reserved for S7 communication</li> <li>— adjustable for S7 communication, max.</li> <li>usable for routing</li> <li>— reserved for routing</li> <li>— reserved for routing</li> <li>— adjustable for routing</li> <li>— adjustable for routing, max.</li> </ul>	<ul> <li>reserved for OP communication</li> </ul>	1
<ul> <li>reserved for S7 basic communication</li> <li>adjustable for S7 basic communication, max.</li> <li>usable for S7 communication</li> <li>reserved for S7 communication</li> <li>adjustable for S7 communication, max.</li> <li>usable for routing</li> <li>reserved for routing</li> <li>adjustable for routing</li> <li>adjustable for routing, max.</li> </ul>	<ul> <li>adjustable for OP communication, max.</li> </ul>	0
<ul> <li>adjustable for S7 basic communication, max.</li> <li>usable for S7 communication</li> <li>reserved for S7 communication</li> <li>adjustable for S7 communication, max.</li> <li>usable for routing</li> <li>reserved for routing</li> <li>adjustable for routing</li> <li>adjustable for routing, max.</li> </ul>	<ul> <li>usable for S7 basic communication</li> </ul>	62
<ul> <li>usable for S7 communication</li> <li>reserved for S7 communication</li> <li>adjustable for S7 communication, max.</li> <li>usable for routing</li> <li>reserved for routing</li> <li>adjustable for routing</li> <li>adjustable for routing, max.</li> </ul>	<ul> <li>reserved for S7 basic communication</li> </ul>	0
<ul> <li>usable for S7 communication</li> <li>reserved for S7 communication</li> <li>adjustable for S7 communication, max.</li> <li>usable for routing</li> <li>reserved for routing</li> <li>adjustable for routing</li> <li>adjustable for routing, max.</li> </ul>	<ul> <li>adjustable for S7 basic communication, max.</li> </ul>	0
<ul> <li>reserved for S7 communication</li> <li>adjustable for S7 communication, max.</li> <li>usable for routing</li> <li>reserved for routing</li> <li>adjustable for routing, max.</li> </ul>	•	62
<ul> <li>adjustable for S7 communication, max.</li> <li>usable for routing</li> <li>reserved for routing</li> <li>adjustable for routing, max.</li> </ul>		0
<ul> <li>usable for routing</li> <li>reserved for routing</li> <li>adjustable for routing, max.</li> </ul>		
<ul> <li>reserved for routing</li> <li>adjustable for routing, max.</li> <li>0</li> </ul>	•	
— adjustable for routing, max. 0	5	
·	-	
	S7 message functions	

	20 14 00 19 14 0100
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
Status/control	
Status/control variable	Yes; Up to 16 variable tables
Variables	Inputs/outputs, memory bits, DBs, distributed I/Os, timers, counters
<ul> <li>Number of variables, max.</li> </ul>	70; Status/control
Forcing	
<ul><li>Forcing</li></ul>	Yes
<ul> <li>Forcing, variables</li> </ul>	Inputs/outputs, bit memories, distributed I/Os
<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	
— рісосі	120
Service data	120
· · · · · · · · · · · · · · · · · · ·	Yes
Service data  • can be read out	
Service data  • can be read out	
Service data  • can be read out  Standards, approvals, certificates	Yes
Service data  • can be read out  Standards, approvals, certificates  CE mark  EAC (formerly Gost-R)	Yes
Service data  • can be read out  Standards, approvals, certificates  CE mark  EAC (formerly Gost-R)	Yes
Service data  • can be read out  Standards, approvals, certificates  CE mark  EAC (formerly Gost-R)  Ambient conditions	Yes
Service data  • can be read out  Standards, approvals, certificates  CE mark  EAC (formerly Gost-R)  Ambient conditions  Ambient temperature during operation	Yes Yes Yes
Service data  • can be read out  Standards, approvals, certificates  CE mark  EAC (formerly Gost-R)  Ambient conditions  Ambient temperature during operation  • min.	Yes Yes Yes Yes -25 °C; = Tmin
Service data  • can be read out  Standards, approvals, certificates  CE mark  EAC (formerly Gost-R)  Ambient conditions  Ambient temperature during operation  • min.  • max.	Yes Yes Yes Yes -25 °C; = Tmin
Service data  • can be read out  Standards, approvals, certificates  CE mark  EAC (formerly Gost-R)  Ambient conditions  Ambient temperature during operation  • min.  • max.  Altitude during operation relating to sea level	Yes Yes Yes -25 °C; = Tmin 70 °C; = Tmax
Service data  • can be read out  Standards, approvals, certificates  CE mark  EAC (formerly Gost-R)  Ambient conditions  Ambient temperature during operation  • min.  • max.  Altitude during operation relating to sea level  • Installation altitude above sea level, max.	Yes Yes Yes  -25 °C; = Tmin 70 °C; = Tmax  5 000 m  Tmin Tmax at 1 140 hPa 795 hPa (-1 000 m +2 000 m) // Tmin (Tmax -10 K) at 795 hPa 658 hPa (+2 000 m +3 500 m) // Tmin (Tmax -20 K)
Service data  • can be read out  Standards, approvals, certificates  CE mark  EAC (formerly Gost-R)  Ambient conditions  Ambient temperature during operation  • min.  • max.  Altitude during operation relating to sea level  • Installation altitude above sea level, max.  • Ambient air temperature-barometric pressure-altitude  Relative humidity  • With condensation, tested in accordance with IEC 60068-	Yes  Yes  Yes  -25 °C; = Tmin  70 °C; = Tmax  5 000 m  Tmin Tmax at 1 140 hPa 795 hPa (-1 000 m +2 000 m) // Tmin (Tmax - 10 K) at 795 hPa 658 hPa (+2 000 m +3 500 m) // Tmin (Tmax -20 K) at 658 hPa 540 hPa (+3 500 m +5 000 m)  100 %; RH incl. condensation / frost (no commissioning in bedewed state),
Service data  • can be read out  Standards, approvals, certificates  CE mark  EAC (formerly Gost-R)  Ambient conditions  Ambient temperature during operation  • min.  • max.  Altitude during operation relating to sea level  • Installation altitude above sea level, max.  • Ambient air temperature-barometric pressure-altitude  Relative humidity  • With condensation, tested in accordance with IEC 60068-2-38, max.	Yes  Yes  Yes  Yes  -25 °C; = Tmin  70 °C; = Tmax  5 000 m  Tmin Tmax at 1 140 hPa 795 hPa (-1 000 m +2 000 m) // Tmin (Tmax -10 K) at 795 hPa 658 hPa (+2 000 m +3 500 m) // Tmin (Tmax -20 K) at 658 hPa 540 hPa (+3 500 m +5 000 m)
Service data  • can be read out  Standards, approvals, certificates  CE mark  EAC (formerly Gost-R)  Ambient conditions  Ambient temperature during operation  • min.  • max.  Altitude during operation relating to sea level  • Installation altitude above sea level, max.  • Ambient air temperature-barometric pressure-altitude  Relative humidity  • With condensation, tested in accordance with IEC 60068-	Yes  Yes  Yes  -25 °C; = Tmin  70 °C; = Tmax  5 000 m  Tmin Tmax at 1 140 hPa 795 hPa (-1 000 m +2 000 m) // Tmin (Tmax - 10 K) at 795 hPa 658 hPa (+2 000 m +3 500 m) // Tmin (Tmax -20 K) at 658 hPa 540 hPa (+3 500 m +5 000 m)  100 %; RH incl. condensation / frost (no commissioning in bedewed state),
Service data  • can be read out  Standards, approvals, certificates  CE mark  EAC (formerly Gost-R)  Ambient conditions  Ambient temperature during operation  • min.  • max.  Altitude during operation relating to sea level  • Installation altitude above sea level, max.  • Ambient air temperature-barometric pressure-altitude  Relative humidity  • With condensation, tested in accordance with IEC 60068-2-38, max.  Resistance	Yes  Yes  Yes  -25 °C; = Tmin  70 °C; = Tmax  5 000 m  Tmin Tmax at 1 140 hPa 795 hPa (-1 000 m +2 000 m) // Tmin (Tmax - 10 K) at 795 hPa 658 hPa (+2 000 m +3 500 m) // Tmin (Tmax -20 K) at 658 hPa 540 hPa (+3 500 m +5 000 m)  100 %; RH incl. condensation / frost (no commissioning in bedewed state),
Service data  • can be read out  Standards, approvals, certificates  CE mark  EAC (formerly Gost-R)  Ambient conditions  Ambient temperature during operation  • min.  • max.  Altitude during operation relating to sea level  • Installation altitude above sea level, max.  • Ambient air temperature-barometric pressure-altitude  Relative humidity  • With condensation, tested in accordance with IEC 60068-2-38, max.  Resistance  Use in stationary industrial systems  — to biologically active substances according to EN	Yes  Yes  Yes  Yes  -25 °C; = Tmin  70 °C; = Tmax  5 000 m  Tmin Tmax at 1 140 hPa 795 hPa (-1 000 m +2 000 m) // Tmin (Tmax -10 K) at 795 hPa 658 hPa (+2 000 m +3 500 m) // Tmin (Tmax -20 K) at 658 hPa 540 hPa (+3 500 m +5 000 m)  100 %; RH incl. condensation / frost (no commissioning in bedewed state), horizontal installation  Yes; Class 3B2 mold, fungus and dry rot spores (with the exception of fauna);

60721-3-3	
Use on ships/at sea	
<ul> <li>to biologically active substances according to EN 60721-3-6</li> </ul>	Yes; Class 6B2 mold and fungal spores (excluding fauna); Class 6B3 on request
<ul> <li>to chemically active substances according to EN 60721-3-6</li> </ul>	· Ses; Class 6C3 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); *
<ul> <li>to mechanically active substances according to EN 60721-3-6</li> </ul>	Yes; Class 6S3 incl. sand, dust; *
Usage in industrial process technology	
<ul> <li>Against chemically active substances acc. to EN 60654-4</li> </ul>	Yes; Class 3 (excluding trichlorethylene)
<ul> <li>Environmental conditions for process, measuring and control systems acc. to ANSI/ISA-71.04</li> </ul>	Yes; Level GX group A/B (excluding trichlorethylene; harmful gas concentrations up to the limits of EN 60721-3-3 class 3C4 permissible); level LC3 (salt spray) and level LB3 (oil)
Remark	
<ul> <li>Note regarding classification of environmental conditions acc. to EN 60721, EN 60654-4 and ANSI/ISA-71.04</li> </ul>	* The supplied plug covers must remain in place over the unused interfaces during operation!
Conformal coating	
<ul> <li>Coatings for printed circuit board assemblies acc. to EN 61086</li> </ul>	Yes; Class 2 for high reliability
<ul> <li>Protection against fouling acc. to EN 60664-3</li> </ul>	Yes; Type 1 protection
Military testing according to MIL-I-46058C, Amendment 7	Yes; Discoloration of coating possible during service life
<ul> <li>Qualification and Performance of Electrical Insulating Compound for Printed Board Assemblies according to IPC- CC-830A</li> </ul>	Yes; Conformal coating, Class A
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	e SFC / header
— DPSYC_FR	2; SFC 11; per interface
— D_ACT_DP	8; SFC 12; per interface
— RD_REC	8; SFC 59; per interface
— WR_REC	8; SFC 58; per interface
— WR_PARM	8; SFC 55; per interface
— PARM_MOD	1; SFC 57; per interface
— WR_DPARM	2; SFC 56; per interface
— DPNRM_DG	8; SFC 13; per interface
— RDSYSST	8; SFC 51
— DP_TOPOL	1; SFC 103; per interface
configuration / programming / number of simultaneously active	
— RDREC	8; SFB 52; per interface, but not more than 32 across all external interfaces
— WRREC	8; SFB 53; per interface, but not more than 32 across all external interfaces
Know-how protection	
User program protection/password protection	Yes
Block encryption	Yes; With S7 block Privacy
Dimensions	
Width	50 mm
Height	290 mm
Depth	219 mm
p	=

Weights	
Weight, approx.	900 g
last modified:	E/20/2024 [7]