## **SIEMENS**

## Data sheet

## 6ES7315-2AG10-0AB0

\*\*\*Spare part\*\*\* SIMATIC S7-300, CPU 315-2DP Central processing unit with MPI Integr. power supply 24 V DC Work memory 128 KB 2nd interface DP master/slave Micro Memory Card required



General information	
HW functional status	01
Firmware version	V2.6
Engineering with	
<ul> <li>Programming package</li> </ul>	STEP 7 V5.2 + SP1 or higher with HW update
Supply voltage	
Rated value (DC)	
• 24 V DC	Yes
permissible range, lower limit (DC)	20.4 V
permissible range, upper limit (DC)	28.8 V
external protection for power supply lines	2 A min.
(recommendation)	
Input current	
Current consumption (rated value)	0.8 A
Current consumption (in no-load operation), typ.	60 mA
Inrush current, typ.	2.5 A
l²t	0.5 A <sup>2</sup> ·s
Power loss	

Power loss, typ.	2.5 W
Memory	
Work memory	
• integrated	128 kbyte; For program and data
• expandable	No
Load memory	
• Plug-in (MMC)	Yes
<ul> <li>Plug-in (MMC), max.</li> </ul>	8 Mbyte
<ul> <li>Data management on MMC (after last programming), min.</li> </ul>	10 y
Backup	
• present	Yes; Guaranteed by MMC (maintenance-free)
• without battery	Yes; Program and data
CPU processing times	
for bit operations, typ.	0.1 µs
for word operations, typ.	0.2 µs
for fixed point arithmetic, typ.	2 µs
for floating point arithmetic, typ.	3 µs
CPU-blocks	
Number of blocks (total)	1 024; (DBs, FCs, FBs OBs, SDBs); the maximum number of loadable blocks can be reduced by the MMC being used.
DB	
• Number, max.	1 023; Number band: 1 to 1023
• Size, max.	16 kbyte
FB	
• Number, max.	1 024; Number range: 0 to 2047
• Size, max.	16 kbyte
FC	
• Number, max.	1 024; Number range: 0 to 2047
• Size, max.	16 kbyte
OB	
• Size, max.	16 kbyte
<ul> <li>Number of free cycle OBs</li> </ul>	1; OB 1
<ul> <li>Number of time alarm OBs</li> </ul>	1; OB 10
<ul> <li>Number of delay alarm OBs</li> </ul>	1; OB 20
<ul> <li>Number of cyclic interrupt OBs</li> </ul>	1; OB 35
<ul> <li>Number of process alarm OBs</li> </ul>	1; OB 40
<ul> <li>Number of DPV1 alarm OBs</li> </ul>	3; OB 55, 56, 57
Number of startup OBs	1; OB 100
<ul> <li>Number of asynchronous error OBs</li> </ul>	1; OB 80
<ul> <li>Number of synchronous error OBs</li> </ul>	2; OB 121, 122

Nesting depth	
• per priority class	8
<ul> <li>additional within an error OB</li> </ul>	4
Counters, timers and their retentivity	
S7 counter	
• Number	256
Retentivity	
— adjustable	Yes
— lower limit	0
— upper limit	255
— preset	8
Counting range	
— can be set	Yes
— lower limit	0
— upper limit	999
IEC counter	
• Number	Unlimited (limited only by RAM capacity)
S7 times	
• Number	256
Retentivity	
— adjustable	Yes
— lower limit	0
— upper limit	255
— preset	No retentivity
Time range	
— lower limit	10 ms
— upper limit	9 990 s
IEC timer	
• present	Yes
• Туре	SFB
Number	Unlimited (limited only by RAM capacity)
Data areas and their retentivity	
retentive data area in total	all
Flag	
• Number, max.	2 048 byte
Retentivity available	Yes; MB 0 to MB 2047
Retentivity preset	MB 0 to MB 15
Number of clock memories	8; 1 memory byte
Data blocks	
Retentivity adjustable	Yes; via non-retain property on DB
<ul> <li>Retentivity preset</li> </ul>	Yes

Local data	
● per priority class, max.	1 024 byte; per block max. 510
Address area	
I/O address area	
• Inputs	2 kbyte
Outputs	2 kbyte
of which distributed	
— Inputs	2 kbyte
— Outputs	2 kbyte
Process image	
• Inputs	128 byte
Outputs	128 byte
Digital channels	
• Inputs	16 384
— of which central	1 024
Outputs	16 384
— of which central	1 024
Analog channels	
• Inputs	1 024
— of which central	256
Outputs	1 024
— of which central	256
Hardware configuration	
Number of expansion units, max.	3
Number of DP masters	
● integrated	1
● via CP	4
Number of operable FMs and CPs (recommended)	
• FM	8
• CP, PtP	8
• CP, LAN	10
Rack	
<ul> <li>Racks, max.</li> </ul>	4
<ul> <li>Modules per rack, max.</li> </ul>	8
Time of day	
Clock	
<ul> <li>Hardware clock (real-time)</li> </ul>	Yes
<ul> <li>retentive and synchronizable</li> </ul>	Yes
Backup time	6 wk; At 40 °C ambient temperature
<ul> <li>Deviation per day, max.</li> </ul>	10 s
Operating hours counter	

• Number	1
<ul> <li>Number/Number range</li> </ul>	0
<ul> <li>Range of values</li> </ul>	0 to 2^31 hours (when using SFC 101)
retentive	Yes; Must be restarted at each restart
Clock synchronization	
<ul> <li>supported</li> </ul>	Yes
• to MPI, master	Yes
● to MPI, slave	Yes
• to DP, master	Yes; With DP slave only slave clock
• to DP, slave	Yes
• in AS, master	Yes
● in AS, slave	No
<ul> <li>on Ethernet via NTP</li> </ul>	No
Digital inputs integrated channels (DI)	0
	0
Digital outputs	
integrated channels (DO)	0
Analog inputs	
integrated channels (AI)	0
Analog outputs	
integrated channels (AO)	0
Interfaces	
Number of industrial Ethernet interfaces	0
Number of PROFINET interfaces	0
Number of RS 485 interfaces	1
Number of RS 422 interfaces	0
1. Interface	
Interface type	Integrated RS 485 interface
Physics	RS 485
Isolated	No
Power supply to interface (15 to 30 V DC), max.	200 mA
Functionality	
• MPI	Yes
PROFIBUS DP master	No
PROFIBUS DP slave	No
Point-to-point connection	No
MPI	
Number of connections	16
• Transmission rate, max.	187.5 kbit/s
Services	

— PG/OP communication	Yes
— Routing	Yes
— Global data communication	Yes
— S7 basic communication	Yes
— S7 communication	Yes
— S7 communication, as client	No
— S7 communication, as server	Yes

Interface type         Integrated RS 485 interface           Physics         RS 485           Isolated         Yes           Power supply to interface (15 to 30 V DC), max.         200 mA           Functionality         200 mA           Functionality         No           • PROFIBUS DP master         Yes           • PROFIBUS DP slave         Yes           • Point-to-point connection         No           DP master         16           • Transmission rate, max.         12 Mbit/s           • Number of De slaves, max.         12 Mbit/s           • Number of DP slaves, max.         12 Mbit/s           • Number of DP slaves, max.         12 Mbit/s           • PG/CP communication         Yes           - Routing         Yes           - Global data communication         No           - S7 communication         Yes           - S7 communication         Yes           - S7 communication, as client         No           - S7 communication, as server         Yes           - Equidistance         Yes           - Isochronous mode         No           - S7 NO/FREEZE         Yes           - DrV1         Yes           - Inputs, max.         2048	2. Interface	
Isolated         Yes           Power supply to interface (15 to 30 V DC), max.         200 mA           Functionality         No           • MPI         No           • PROFIBUS DP master         Yes           • PROFIBUS DP slave         Yes           • PROFIDUS DP slave         Yes           • PROFIDUS DP slave         Yes           • Protonction         No           DP master         16           • Transmission rate, max.         12 Mbit/s           • Number of DP slaves, max.         12 Mbit/s           • Number of DP slaves, max.         12 Mbit/s           • Number of DP slaves, max.         12 Mbit/s           • PG/CP communication         Yes           - Routing         Yes           - Global data communication         No           - S7 communication         Yes           - S7 communication         Yes           - S7 communication, as client         No           - S7 communication, as server         Yes           - Lequidistance         Yes           - Soutornous mode         No           - SYNC/FREEZE         Yes           - DrPv1         Yes           Address area         2048 byte	Interface type	
Power supply to interface (15 to 30 V DC), max.         200 mA           Functionality         No           • MPI         No           • PROFIBUS DP master         Yes           • PROFIBUS DP slave         Yes           • Promaster         16           • Transmission rate, max.         12 Mbit/s           • Number of DP slaves, max.         124; Per station           Services         -           - PG/OP communication         Yes           - Global data communication         No           - S7 basic communication         Yes           - S7 communication         Yes           - S7 communication, as client         No           - S7 communication, as server         Yes           - Equidistance         Yes           - S7 NC/FREEZE         Yes           - DPV1         Yes           - Inputs, max.         2 048 byte           - Outputs, max.         2 048 byte           User data per DP slave         -           - Inputs, max.         244 byte <td>Physics</td> <td>RS 485</td>	Physics	RS 485
Functionality         No           • MPI         No           • PROFIBUS DP master         Yes           • PROFIBUS DP slave         Yes           • Point-to-point connection         No           DP master         16           • Transmission rate, max.         12 Mbit/s           • Number of DP slaves, max.         124; Per station           Services         -           - PG/OP communication         Yes           - Routing         Yes           - Global data communication         No           - S7 basic communication         Yes           - S7 communication, as client         No           - S7 communication, as server         Yes           - Equidistance         Yes           - Isochronous mode         No           - S7 Nori/FREEZE         Yes           - DPV1         Yes           Address area         -           - Inputs, max.         2 048 byte           - Outputs, max.         24 dyte           - Outputs, max.		
• MPINo• PROFIBUS DP masterYes• PROFIBUS DP slaveYes• Point-to-point connectionNoDP master• Number of connections, max.16• Transmission rate, max.12 Mbit/s• Number of DP slaves, max.124; Per stationServices- PG/OP communicationYes- RoutingYes- Global data communicationNo- S7 basic communicationYes; I blocks only- S7 communicationYes- S7 communication, as clientNo- S7 communication, as serverYes- EquidistanceYes- EquidistanceYes- Isochronous modeNo- SYNC/FREEZEYes- Inputs, max.2 048 byte- Unputs, max.2 048 byte- Outputs, max.244 byte- Outputs, max.244 byte- Dutputs, max.244 byte- Dutputs, max.244 byte		200 mA
PROFIBUS DP masterYesPROFIBUS DP slaveYesPoint-to-point connectionNoDP master12Number of connections, max.16Transmission rate, max.124, Per stationNumber of DP slaves, max.124; Per stationServices PG/OP communicationYes- RoutingYes- Global data communicationNo- S7 basic communicationYes; I blocks only- S7 communicationYes- S7 communication, as selientNo- S7 communication, as selientNo- S7 communication, as serverYes- EquidistanceYes- Isochronous modeNo- SYNC/FREEZEYes- Inputs, max.2048 byte- Outputs, max.2048 byte- User data per DP slave2u44 byte- Inputs, max.244 byte- Outputs, max.244 byte- Dupt, max.244 byte- Outputs, max.244 byte- No		
PROFIBUS DP slaveYesPoint-to-point connectionNoDP masterI• Number of connections, max.16• Transmission rate, max.12 Mbit/s• Number of DP slaves, max.124; Per stationServices PG/OP communicationYes- RoutingYes- Global data communicationNo- S7 basic communicationYes; I blocks only- S7 communicationYes- S7 communicationYes- S7 communicationYes- S7 communication, as clientNo- S7 communication, as serverYes- EquidistanceYes- Isochronous modeNo- SYNC/FREEZEYes- DPV1YesAddress area2 048 byte- Usputs, max.2 048 byte- Outputs, max.2 048 byte- DPV	• MPI	
Point-to-point connection         No           DP master <ul> <li>Number of connections, max.</li> <li>12 Mbit/s</li> <li>Number of DP slaves, max.</li> <li>12 Mbit/s</li> <li>Number of DP slaves, max.</li> <li>124; Per station</li> </ul> <ul> <li>Services</li> <li>PG/OP communication</li> <li>Services</li> </ul> <ul> <li>PG/OP communication</li> <li>Services</li> <li>Services</li> <li>Global data communication</li> <li>No</li> <li>S7 basic communication</li> <li>S7 communication, as client</li> <li>S7 communication, as client</li> <li>S7 communication, as client</li> <li>S7 communication, as server</li> <li>Yes</li> <li>S7 communication, as server</li> <li>Yes</li> <li>SYNC/FREEZE</li> <li>SYNC/FREEZE</li> <li>SYNC/FREEZE</li> <li>SYNC/FREEZE</li> <li>Outputs, max.</li></ul>	<ul> <li>PROFIBUS DP master</li> </ul>	Yes
DP master          • Number of connections, max.      16           • Transmission rate, max.      12 Mbit/s           • Number of DP slaves, max.      124; Per station       Services            - PG/OP communication      Yes           - Routing      Yes           - Global data communication      Yes; I blocks only           - S7 basic communication      Yes; I blocks only           - S7 communication      Yes           - S7 communication      Yes           - S7 communication, as client      No          Services                Services                Sr communication, as server          S7 communication, as server          S7 communication, as server          SYNC/FREEZE          Yes          SYNC/FREEZE          DPV1          Yes          Cutata per DP slave <td< td=""><td>PROFIBUS DP slave</td><td>Yes</td></td<>	PROFIBUS DP slave	Yes
• Number of connections, max.16• Transmission rate, max.12 Mbit/s• Number of DP slaves, max.124; Per stationServices PG/OP communicationYes- RoutingYes- Global data communicationNo- S7 basic communicationYes; I blocks only- S7 communicationYes- S7 communication, as clientNo- S7 communication, as serverYes- EquidistanceYes- Isochronous modeNo- SYNC/FREEZEYes- DPV1YesAddress area2 048 byte- Outputs, max.2 048 byte- Outputs, max.244 byte- Outputs, max.244 byte- Outputs, max.244 byte- DP Slave	<ul> <li>Point-to-point connection</li> </ul>	No
Interface of contraction matrix12 Mbit/s• Number of DP slaves, max.124; Per stationServices PG/OP communicationYes- RoutingYes- Global data communicationNo- S7 basic communicationYes; I blocks only- S7 communicationYes- S7 communication, as clientNo- S7 communication, as serverYes- EquidistanceYes- EquidistanceYes- DPV1Yes- DPV1Yes- Address area2 048 byte- Outputs, max.2 048 byte- Outputs, max.244 byte- Outputs, max.244 byte- Outputs, max.244 byte- DP Slave	DP master	
• Number of DP slaves, max.124; Per stationServices PG/OP communicationYes- RoutingYes- Global data communicationNo- S7 basic communicationYes; I blocks only- S7 communicationYes- S7 communication, as clientNo- S7 communication, as serverYes- EquidistanceYes- Isochronous modeNo- SYNC/FREEZEYes- DPV1Yes- Inputs, max.2 048 byte- Outputs, max.244 byte- Outputs, max.244 byte- Outputs, max.244 byte- Outputs, max.244 byte	<ul> <li>Number of connections, max.</li> </ul>	16
Services PG/OP communicationYes RoutingYes Global data communicationNo S7 basic communicationYes; I blocks only S7 communicationYes S7 communication, as clientNo S7 communication, as erverYes EquidistanceYes EquidistanceYes Isochronous modeNo SYNC/FREEZEYes DPV1Yes Address area2 048 byte Inputs, max.2 048 byte Outputs, max.244 byte DP Slave	<ul> <li>Transmission rate, max.</li> </ul>	12 Mbit/s
PG/OP communicationYes RoutingYes Global data communicationNo S7 basic communicationYes; I blocks only S7 communicationYes S7 communication, as clientNo S7 communication, as serverYes S7 communication, as serverYes EquidistanceYes Isochronous modeNo SYNC/FREEZEYes DPV1YesAddress area2 048 byte Outputs, max.2 048 byte Outputs, max.244 byte Outputs, max.244 byte Outputs, max.244 byte Outputs, max.244 byte	<ul> <li>Number of DP slaves, max.</li> </ul>	124; Per station
- RoutingYes- Global data communicationNo- S7 basic communicationYes; I blocks only- S7 communicationYes- S7 communication, as clientNo- S7 communication, as serverYes- S7 communication, as serverYes- EquidistanceYes- Isochronous modeNo- SYNC/FREEZEYes- DPV1YesAddress area2048 byte- Inputs, max.2048 byte- Outputs, max.244 byte- Outputs, max.244 byte- Outputs, max.244 byte- Outputs, max.244 byte- DP Slave244 byte	Services	
InstanceNo- Global data communicationNo- S7 basic communicationYes; I blocks only- S7 communication, as clientNo- S7 communication, as serverYes- EquidistanceYes- Isochronous modeNo- SYNC/FREEZEYes- DPV1YesAddress area2 048 byte- Outputs, max.2 048 byte- User data per DP slave244 byte- DP slave244 byte	— PG/OP communication	Yes
S7 basic communicationYes; I blocks only- S7 communicationYes- S7 communication, as clientNo- S7 communication, as serverYes- EquidistanceYes- Isochronous modeNo- SYNC/FREEZEYes- DPV1YesAddress area2 048 byte- Outputs, max.2 048 byte- User data per DP slave244 byte- Outputs, max.244 byte- DP slave244 byte	— Routing	Yes
- S7 communicationYes- S7 communication, as clientNo- S7 communication, as serverYes- EquidistanceYes- Isochronous modeNo- SYNC/FREEZEYes- DPV1Yes- DPV1Yes- Inputs, max.2 048 byte- Outputs, max.2 048 byte- Inputs, max.2 44 byte- Outputs, max.244 byte- Outputs, max.244 byte- DP slave-	— Global data communication	No
S7 communication, as clientNo- S7 communication, as serverYes- EquidistanceYes- Isochronous modeNo- Isochronous modeYes- SYNC/FREEZEYes- DPV1YesAddress areaYes- Inputs, max.2 048 byte- Outputs, max.2 048 byte- User data per DP slave244 byte- Outputs, max.244 byte	— S7 basic communication	Yes; I blocks only
	— S7 communication	Yes
EquidistanceYes— EquidistanceNo— Isochronous modeNo— SYNC/FREEZEYes— DPV1YesAddress areaYes— Inputs, max.2 048 byte— Outputs, max.2 048 byteUser data per DP slave2048 byte— Inputs, max.244 byte— Outputs, max.244 byte— Outputs, max.244 byte	— S7 communication, as client	No
Isochronous modeNo- Isochronous modeYes- DPV1YesAddress area2 048 byte- Inputs, max.2 048 byte- Outputs, max.2 048 byteUser data per DP slave244 byte- Inputs, max.244 byte- Outputs, max.244 byte	— S7 communication, as server	Yes
SYNC/FREEZEYes DPV1YesAddress area2 048 byte Inputs, max.2 048 byte Outputs, max.2 048 byteUser data per DP slave2 048 byte Inputs, max.244 byte Outputs, max.244 byte Outputs, max.244 byte	— Equidistance	Yes
- DPV1     Yes       Address area     2 048 byte       - Inputs, max.     2 048 byte       Outputs, max.     2 048 byte       User data per DP slave     2 44 byte       - Outputs, max.     244 byte       DP slave     244 byte	— Isochronous mode	No
Address area       2 048 byte         - Inputs, max.       2 048 byte         - Outputs, max.       2 048 byte         User data per DP slave       2 048 byte         - Inputs, max.       2 44 byte         - Outputs, max.       2 44 byte         DP slave       2 44 byte	- SYNC/FREEZE	Yes
- Inputs, max.2 048 byte- Outputs, max.2 048 byteUser data per DP slave2 048 byte- Inputs, max.2 044 byte- Outputs, max.2 048 byteDP slave2 048 byte	— DPV1	Yes
- Outputs, max.     2 048 byte       User data per DP slave     244 byte       - Inputs, max.     244 byte       - Outputs, max.     244 byte	Address area	
- Outputs, max.     2 048 byte       User data per DP slave     244 byte       - Inputs, max.     244 byte       - Outputs, max.     244 byte	— Inputs, max.	2 048 byte
User data per DP slave       Inputs, max.       Outputs, max.       244 byte       244 byte		2 048 byte
— Inputs, max.     244 byte       — Outputs, max.     244 byte       DP slave     244 byte	·	
- Outputs, max. 244 byte DP slave		244 byte
DP slave		244 byte
Number of connections		
	Number of connections	16

• GSD file	The latest GSD file is available at:
	http://www.siemens.com/profibus-gsd
• Transmission rate, max.	12 Mbit/s
automatic baud rate search	Yes; only with passive interface
• Address area, max.	32
• User data per address area, max.	32 byte
Services	
— PG/OP communication	Yes
— Routing	Yes; with interface active
— Global data communication	No
— S7 basic communication	No
— S7 communication	Yes
— S7 communication, as client	No
— S7 communication, as server	Yes
<ul> <li>— Direct data exchange (slave-to-slave communication)</li> </ul>	Yes
— DPV1	No
Transfer memory	
— Inputs	244 byte
— Outputs	244 byte
Communication functions	
Communication functions PG/OP communication	Yes
	Yes
PG/OP communication	Yes Yes
PG/OP communication Global data communication	
PG/OP communication Global data communication • supported	Yes
PG/OP communication Global data communication • supported • Number of GD loops, max.	Yes 8
PG/OP communication Global data communication • supported • Number of GD loops, max. • Number of GD packets, max.	Yes 8 8
PG/OP communication Global data communication • supported • Number of GD loops, max. • Number of GD packets, max. • Number of GD packets, transmitter, max.	Yes 8 8 8
<ul> <li>PG/OP communication</li> <li>Global data communication</li> <li>supported</li> <li>Number of GD loops, max.</li> <li>Number of GD packets, max.</li> <li>Number of GD packets, transmitter, max.</li> <li>Number of GD packets, receiver, max.</li> </ul>	Yes 8 8 8 8
PG/OP communication Global data communication • supported • Number of GD loops, max. • Number of GD packets, max. • Number of GD packets, transmitter, max. • Number of GD packets, receiver, max. • Size of GD packets, max.	Yes 8 8 8 8 8 22 byte
PG/OP communication Global data communication • supported • Number of GD loops, max. • Number of GD packets, max. • Number of GD packets, transmitter, max. • Number of GD packets, receiver, max. • Size of GD packets, max. • Size of GD packets, max.	Yes 8 8 8 8 8 22 byte
PG/OP communication Global data communication • supported • Number of GD loops, max. • Number of GD packets, 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 packet (of which consistent), max. S7 basic communication	Yes 8 8 8 8 22 byte 22 byte
PG/OP communication Global data communication • supported • Number of GD loops, max. • Number of GD packets, 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 packet (of which consistent), max. S7 basic communication • supported	Yes 8 8 8 8 8 22 byte 22 byte 22 byte 76 byte 76 byte; 76 bytes (with X_SEND or X_RCV); 64 bytes (with
<ul> <li>PG/OP communication</li> <li>Global data communication <ul> <li>supported</li> <li>Number of GD loops, max.</li> <li>Number of GD packets, 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> <li>Size of GD packets, max.</li> </ul> </li> <li>Size of GD packet (of which consistent), max.</li> <li>S7 basic communication <ul> <li>supported</li> <li>User data per job, max.</li> <li>User data per job (of which consistent), max.</li> </ul> </li> </ul>	Yes 8 8 8 8 8 22 byte 22 byte 22 byte
PG/OP communication Global data communication • supported • Number of GD loops, max. • Number of GD packets, 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 packet (of which consistent), max. S7 basic communication • supported • User data per job, max. • User data per job (of which consistent), max. S7 communication	Yes 8 8 8 8 22 byte 22 byte 22 byte Yes 76 byte 76 byte; 76 bytes (with X_SEND or X_RCV); 64 bytes (with X_PUT or X_GET as server)
PG/OP communication Global data communication • supported • Number of GD loops, max. • Number of GD packets, 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 packet (of which consistent), max. S7 basic communication • supported • User data per job, max. • User data per job (of which consistent), max. S7 communication • supported	Yes 8 8 8 8 8 22 byte 22 byte 22 byte 76 byte 76 byte; 76 bytes (with X_SEND or X_RCV); 64 bytes (with X_PUT or X_GET as server)
PG/OP communication Global data communication • supported • Number of GD loops, max. • Number of GD packets, 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 packet (of which consistent), max. S7 basic communication • supported • User data per job, max. • User data per job (of which consistent), max. S7 communication • supported • as server	Yes 8 8 8 8 8 22 byte 22 byte 22 byte 76 byte 76 bytes (with X_SEND or X_RCV); 64 bytes (with X_PUT or X_GET as server)
PG/OP communication Global data communication • supported • Number of GD loops, max. • Number of GD packets, 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 packet (of which consistent), max. S7 basic communication • supported • User data per job, max. • User data per job (of which consistent), max. S7 communication • supported • as server • as client	Yes 8 8 8 8 8 22 byte 22 byte 22 byte 22 byte 76 byte; 76 bytes (with X_SEND or X_RCV); 64 bytes (with X_PUT or X_GET as server) Yes Yes Yes
PG/OP communication Global data communication • supported • Number of GD loops, max. • Number of GD packets, 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 packet (of which consistent), max. S7 basic communication • supported • User data per job, max. • User data per job (of which consistent), max. S7 communication • supported • as server	Yes 8 8 8 8 8 22 byte 22 byte 22 byte 76 byte 76 bytes (with X_SEND or X_RCV); 64 bytes (with X_PUT or X_GET as server)

Yes; via CP and loadable FC supported Number of connections 16 overall • usable for PG communication 15 1 - reserved for PG communication - adjustable for PG communication, min. 1 15 - adjustable for PG communication, max. 15 • usable for OP communication 1 - reserved for OP communication 1 - adjustable for OP communication, min. 15 - adjustable for OP communication, max. 12 usable for S7 basic communication 0 - reserved for S7 basic communication - adjustable for S7 basic communication, 0 min. 12 adjustable for S7 basic communication, max. 4 • usable for routing Number of login stations for message functions, max. 16; Depending on the configured connections for PG/OP and S7 basic communication Process diagnostic messages Yes simultaneously active Alarm-S blocks, max. 40 Test commissioning functions Status block Yes Single step Yes Number of breakpoints 2 Status/control • Status/control variable Yes Inputs, outputs, memory bits, DB, times, counters Variables 30 • Number of variables, max. 30 - of which status variables, max. 14 - of which control variables, max. Forcing Yes Forcing Inputs, outputs · Forcing, variables 10 • Number of variables, max. **Diagnostic buffer** Yes • present 100 • Number of entries, max. No - adjustable

Configuration	
Configuration software	
• STEP 7	Yes; V5.2 SP1 or higher with HW update
Programming	
Command set	see instruction list
Nesting levels	8
<ul> <li>System functions (SFC)</li> </ul>	see instruction list
<ul> <li>System function blocks (SFB)</li> </ul>	see instruction list
Programming language	
— LAD	Yes
— FBD	Yes
— STL	Yes
— SCL	Yes
— CFC	Yes
— GRAPH	Yes
— HiGraph®	Yes
Know-how protection	
<ul> <li>User program protection/password protection</li> </ul>	Yes
Dimensions	
Width	40 mm
Height	125 mm
Depth	130 mm
Weights	
Weight, approx.	290 g
last modified:	04/19/2018