## Data sheet



\*\*\* SPARE PART\*\*\* SIMATIC S7-300, CPU 317F-2DP, CENTRAL PROCESSING UNIT WITH 1024 KBYTE WORKING MEMORY, 1. INTERFACE MPI/DP 12MBIT/S, 2. INTERFACE DP-MASTER/SLAVE, MICRO MEMORY CARD NECESSARY FOR USE WITH SOFTWARE OPTION S7 DISTRIBUTED SAFETY V5.2 SP1 AND HIGHER

Figure similar

General information	
Hardware product version	01
Firmware version	V2.6
Engineering with	
Programming package	STEP 7 V5.2 SP1 or higher with hardware update; S7 Distributed Safety V5.2 SP1 or higher
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 (in no-load operation), typ.	100 mA
Inrush current, typ.	2.5 A
I²t	1 A <sup>2</sup> ·s

Power loss	
Power loss, typ.	4 W
Memory	
Work memory	
• integrated	1 024 kbyte
• expandable	No
Load memory	
• Plug-in (MMC)	Yes
● Plug-in (MMC), max.	8 Mbyte
Data management on MMC (after last)	10 y
programming), min.	
Backup	
• present	Yes; Guaranteed by MMC (maintenance-free)
• without battery	Yes; Program and data
CPU processing times	
for bit operations, typ.	0.05 μs
for bit operations, max.	0.05 µs
for word operations, typ.	0.2 µs
for fixed point arithmetic, typ.	0.2 μs
for floating point arithmetic, typ.	1 μs
CPU-blocks	
Number of blocks (total)	2 048; (DBs, FCs, FBs); the maximum number of loadable blocks
	can be reduced by the MMC used.
DB	
<ul><li>Number, max.</li></ul>	2 047; Number band: 1 to 2047
• Size, max.	64 kbyte
FB	
<ul><li>Number, max.</li></ul>	2 048; Number range: 0 to 2047
• Size, max.	64 kbyte
FC	
<ul><li>Number, max.</li></ul>	2 048; Number range: 0 to 2047
• Size, max.	64 kbyte
ОВ	
Description	see instruction list
• Size, max.	64 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
	0. OR 00. 04
<ul> <li>Number of delay alarm OBs</li> </ul>	2; OB 20, 21
<ul><li>Number of delay alarm OBs</li><li>Number of cyclic interrupt OBs</li></ul>	4; OB 32, 33, 34, 35
•	
Number of cyclic interrupt OBs	4; OB 32, 33, 34, 35

<ul> <li>Number of isochronous mode OBs</li> </ul>	1; OB 61
<ul> <li>Number of startup OBs</li> </ul>	1; OB 100
<ul> <li>Number of asynchronous error OBs</li> </ul>	5; OB 80, 82, 85, 86, 87
<ul> <li>Number of synchronous error OBs</li> </ul>	2; OB 121, 122
Nesting depth	
• per priority class	16
<ul> <li>additional within an error OB</li> </ul>	4

Counters, timers and their retentivity	
S7 counter	
Number	512
Retentivity	
— adjustable	Yes
— lower limit	0
— upper limit	511
— 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	512
Retentivity	
— adjustable	Yes
— lower limit	0
— upper limit	511
— preset	No retentivity
Time range	
— lower limit	10 ms
— upper limit	9 990 s
IEC timer	
• present	Yes
• Type	SFB
• Number	Unlimited (limited only by RAM capacity)
Data and all all and all it.	

Data areas and their retentivity	
retentive data area in total	All, max. 256 KB
Flag	
Number, max.	4 096 byte
Retentivity available	Yes; From MB 0 to MB 4095
Retentivity preset	MB 0 to MB 15

Number of clock memories	8; 1 memory byte
Data blocks	
• Number, max.	2 047; from DB 1 to DB 2047
• Size, max.	64 kbyte
Retentivity adjustable	Yes; via non-retain property on DB
Retentivity preset	Yes
Local data	
• per priority class, max.	1 024 byte
Address area	
I/O address area	
• Inputs	8 kbyte
<ul><li>Outputs</li></ul>	8 kbyte
of which distributed	
— Inputs	8 kbyte
— Outputs	8 kbyte
Process image	
• Inputs	1 024 byte
<ul><li>Outputs</li></ul>	1 024 byte
Digital channels	
• Inputs	65 536
— of which central	1 024
<ul><li>Outputs</li></ul>	65 536
— of which central	1 024
Analog channels	
• Inputs	4 096
— of which central	256
Outputs	4 096
— of which central	256
Hardware configuration	
Number of expansion units, max.	3
Number of DP masters	
• integrated	2
• via CP	4
Number of operable FMs and CPs (recommended)	
• FM	8
• CP, PtP	8
• CP, LAN	10
Rack	
• Racks, max.	4
<ul> <li>Modules per rack, max.</li> </ul>	8

Time of day	
Clock	
Hardware clock (real-time)	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	4
<ul><li>Number/Number range</li></ul>	0 to 3
<ul> <li>Range of values</li> </ul>	0 to 2^31 hours (when using SFC 101)
<ul> <li>Granularity</li> </ul>	1 hour
• retentive	Yes; Must be restarted at each restart
Clock synchronization	
• supported	Yes
• to MPI, master	Yes
● to MPI, slave	Yes
• to DP, master	Yes; With DP slave only slave clock
• to DP, slave	Yes
● in AS, master	Yes
• in AS, slave	Yes
Digital inputs	
integrated channels (DI)	0
Digital outputs	
integrated channels (DO)	0
Analog inputs integrated channels (AI)	0
integrated charmers (Al)	U
Analog outputs	
integrated channels (AO)	0
Interfaces	
Number of industrial Ethernet interfaces	0
Number of RS 485 interfaces	2
Number of RS 422 interfaces	0
1. Interface	
Interface type	Integrated RS 485 interface
Physics	RS 485
Isolated	Yes
Power supply to interface (15 to 30 V DC), max.	200 mA
Functionality	
• MPI	Yes
PROFIBUS DP master	Yes

Point-to-point connection  No MPI  Number of connections Transmission rate, max.  22 PGOP communication PGO	PROFIBUS DP slave	Yes
MPI              • Number of connections             • Transmission rate, max.             • Transmission rate, max.             • Transmission rate, max.             • PG/OP communication	Point-to-point connection	No
Transmission rate, max.  Services  - PC/OP communication Yes - Routing Yes - Global data communication Yes - S7 basic communication Yes - S7 communication, as server Yes - S7 communication, as server Yes - Transmission rate, max Number of DP slaves, max.  Services - PG/OP communication Yes - Routing Yes - Routing Yes - S7 communication No - S7 basic communication No - S7 basic communication Yes - S7 communication, as server Yes - Equidistance Yes - Lequidistance Yes - Lequidistance Yes - Activation/deactivation of DP slaves Yes - DPV1 Yes - Address area - Inputs, max Outputs, max Outputs, max Outputs, max Outputs, max User data per address area, max.  Services - Routing Yes: Only with active interface - Global data communication		
Services  - PG/OP communication Yes - Routing Yes - Global data communication Yes - S7 basic communication Yes - S7 communication, as client No - S7 communication, as server Yes  DP master  - Transmission rate, max. 124 Mbil/s - Number of DP slaves, max. 124  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 - SYNO/FREEZE Yes - Activation/deactivation of DP slaves Yes - DPV1 Yes  Address area - Inputs, max. 244 byte - Outputs, max. 244 byte - Transmission rate, max. 12 Mbil/s - Transmission rate, max. 32 - User data per address area, max. 32 - User data per address area, max. 32 - Global data communication No - Services - Routing Yes: Only with active interface - Routing - Global data communication	Number of connections	32
— PG/OP communication — Routing — Global data communication — S7 basic communication — S7 communication — S7 communication — S7 communication, as client — S7 communication, as server  DP master  ● Transmission rate, max.  • Number of DP slaves, max.  Services  — PG/OP communication — S7 basic communication — S7 communication — S7 communication — S7 communication, as client — S7 communication, as server — Equidistance — Isochronous mode — SYNC/FREEZE — Activation/deactivation of DP slaves — DPV1  Address area — Inputs, max. — Outputs, max. — Outputs, max. — 244 byte  1 Transmission rate, max.  • automatic baud rate search • Address area, max.  • User data per address area, max.  32 byte  Services — Routing — Global data communication No	• Transmission rate, max.	12 Mbit/s
— Routing Yes — Global data communication Yes — S7 basic communication Yes — S7 communication, as client No — S7 communication, as server Yes — S7 communication, as server Yes  DP master  ● Transmission rate, max. 12 Mbit/s ● Number of DP slaves, max. 124  Services  — PG/OP communication Yes — Routing Yes — Global data communication No — S7 basic communication Yes — S7 communication Yes — S7 communication Yes — S7 communication Yes — S7 communication Yes — Equidistance Yes — Lequidistance Yes — Isochronous mode No — SYNC/FREZE Yes — Activation/deactivation of DP slaves Yes — DPV1 Yes  Address area — Inputs, max. 244 byte  DP slave  ● Transmission rate, max. 12 Mbit/s ● automatic baud rate search Yes; only with passive interface ● Address area, max. 32 ● User data per address area, max. 32  Services — Routing Yes: Only with active interface	Services	
Global data communication  Global data communication  S7 basic communication  S7 communication  S7 communication, as client  S7 communication, as server  Pes  DP master  Transmission rate, max.  No  Number of DP slaves, max.  124  Services  PG/OP communication  Routing  Global data communication  S7 basic communication  S7 communication  S7 communication  S7 communication  S7 communication, as client  S7 communication, as server  Equidistance  S7 communication, as server  Equidistance  SYNC/FREEZE  Activation/deactivation of DP slaves  DPV1  Address area  Inputs, max.  Outputs, max.  12 Mbit/s  Transmission rate, max.  12 Mbit/s  Transmission rate, max.  12 Mbit/s  Pes; only with passive interface  Address area, max.  User data per address area, max.  Services  Routing  Yes; Only with active interface  Routing  Global data communication  No	— PG/OP communication	Yes
S7 basic communication S7 communication S7 communication S7 communication, as client S7 communication, as server  Pes  DP master  • Transmission rate, max. • Number of DP slaves, max.  Services  — PG/OP communication — Routing — Global data communication — S7 basic communication — S7 basic communication — S7 communication — S7 communication — S7 communication — S7 communication, as client — S7 communication, as server — Equidistance — Isochronous mode — SYNC/FREEZE — Activation/deactivation of DP slaves — DPV1  Address area — Inputs, max. — Outputs, max. — Outputs, max.  PD slave  • Transmission rate, max. • automatic baud rate search — Address area, max. • User data per address area, max.  S7 comly with active interface — Routing — Global data communication No	— Routing	Yes
— \$7 communication as client No Fransmission rate, max. 12 Mbit/s — \$7 communication, as server Yes  DP master  • Transmission rate, max. 12 Mbit/s • Number of DP slaves, max. 124  Services  — PG/OP communication Yes — Routing Yes — Global data communication No S7 basic communication Yes — \$7 communication Yes — \$7 communication Yes — \$7 communication, as client No S7 communication, as server Yes — Equidistance Yes — Lacchivation/deactivation of DP slaves Yes — DPV1 Yes  Address area — Inputs, max. 244 byte  DP slave  • Transmission rate, max. 12 Mbit/s • Address area, max. 32 • User data per address area, max. 32 byte  Services — Routing Yes; Only with active interface — Global data communication No	<ul> <li>Global data communication</li> </ul>	Yes
— S7 communication, as client — S7 communication, as server  P master  • Transmission rate, max. • Number of DP slaves, max.  PG/OP communication Yes — PG/OP communication — Routing — Global data communication — S7 basic communication — S7 basic communication — S7 communication — S7 communication — S7 communication, as client — S7 communication, as server — Equidistance — Isochronous mode — SYNC/FREZE — Activation/deactivation of DP slaves — DPV1  Address area — Inputs, max. — Outputs, max. — Outputs, max.  • Address area, max. • Address area, max. • Address area, max. • Address area, max. • Address area, max. • Global data communication  No  Services — Routing — Global data communication No	<ul> <li>— S7 basic communication</li> </ul>	Yes
— S7 communication, as server  PP master  ● Transmission rate, max.  ● Number of DP slaves, max.  124  Services  — PG/OP communication — Routing — Global data communication — S7 basic communication — S7 basic communication — S7 communication — S7 communication — S7 communication — S7 communication, as client — S7 communication, as server — Equidistance — Isochronous mode — SYNC/FREZE — Activation/deactivation of DP slaves — DPV1  Address area — Inputs, max. — Outputs, max. — Outputs, max.  ● automatic baud rate search ● Address area, max.  ● automatic baud rate search ● Address area, max.  ● User data per address area, max.  32  ● User data per address area, max.  Services — Routing — Global data communication  12 Mbit/s  Pes; Only with active interface  No	— S7 communication	Yes
P master  • Transmission rate, max. • Number of DP slaves, max.  • Number of DP slaves, max.  124  Services  - PG/OP communication Yes - Routing Yes - Global data communication No - S7 basic communication Yes - S7 communication Yes - S7 communication, as client No - S7 communication, as server Yes - Equidistance Yes - Isochronous mode No - SYNC/FREEZE Yes - Activation/deactivation of DP slaves Yes - DPV1 Yes  Address area - Inputs, max Outputs, max.  DP slave  • Transmission rate, max. • automatic baud rate search Yes; only with passive interface • Address area, max. • User data per address area, max.  Services - Routing Yes; Only with active interface - Global data communication No	— S7 communication, as client	No
Transmission rate, max.  Number of DP slaves, max.  PG/OP communication Routing Global data communication S7 basic communication S7 communication S7 communication S7 communication S7 communication S7 communication S7 communication, as client S7 communication, as server Equidistance Isochronous mode SYNC/FREEZE Activation/deactivation of DP slaves DPV1 Yes  Address area Inputs, max. Outputs, max. Address area, max. Address area	<ul> <li>S7 communication, as server</li> </ul>	Yes
<ul> <li>Number of DP slaves, max.</li> <li>Services</li> <li>— PG/OP communication</li> <li>— Routing</li> <li>— Global data communication</li> <li>— S7 basic communication</li> <li>— S7 communication</li> <li>— S7 communication</li> <li>— S7 communication, as client</li> <li>— S7 communication, as server</li> <li>— Equidistance</li> <li>— Isochronous mode</li> <li>— No</li> <li>— SYNC/FREEZE</li> <li>— Activation/deactivation of DP slaves</li> <li>— DPV1</li> <li>Address area</li> <li>— Inputs, max.</li> <li>— Outputs, max.</li> <li>— Outputs, max.</li> <li>■ 124</li> <li>Services</li> <li>— Routing</li> <li>— Yes</li> <li>Only with passive interface</li> <li>● Address area, max.</li> <li>32</li> <li>Ouser data per address area, max.</li> <li>Services</li> <li>— Routing</li> <li>— Global data communication</li> </ul>	DP master	
Services  - PG/OP communication Yes - Routing Yes - Global data communication No - S7 basic communication Yes - S7 communication Yes - S7 communication Yes - S7 communication, as client No - S7 communication, as server Yes - Equidistance Yes - Isochronous mode No - SYNC/FREEZE Yes - Activation/deactivation of DP slaves Yes - DPV1 Yes  Address area - Inputs, max. 244 byte - Outputs, max. 244 byte  DP slave  1 Transmission rate, max. 12 Mbit/s 1 automatic baud rate search Yes; only with passive interface Address area, max. 32 1 User data per address area, max. 32 Services - Routing Yes; Only with active interface - Global data communication No	Transmission rate, max.	12 Mbit/s
PG/OP communication Yes Routing Yes Global data communication No S7 basic communication Yes S7 communication Yes S7 communication Yes S7 communication, as client No S7 communication, as server Yes Equidistance Yes Isochronous mode No SYNC/FREEZE Yes Activation/deactivation of DP slaves Yes DPV1 Yes  Address area Inputs, max. 244 byte Outputs, max. 244 byte  DP slave  Transmission rate, max. 12 Mbit/s automatic baud rate search Yes; only with passive interface Address area, max. 32 User data per address area, max. 32 byte  Services Routing Yes; Only with active interface Global data communication No	<ul> <li>Number of DP slaves, max.</li> </ul>	124
- Routing Yes - Global data communication No - S7 basic communication Yes - S7 communication Yes - S7 communication Yes - S7 communication, as client No - S7 communication, as server Yes - Equidistance Yes - Isochronous mode No - SYNC/FREEZE Yes - Activation/deactivation of DP slaves Yes - DPV1 Yes  Address area - Inputs, max. 244 byte - Outputs, max. 244 byte  DP slave  1 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 - Routing Yes; Only with active interface - Global data communication No	Services	
- Global data communication No - S7 basic communication Yes - S7 communication Yes - S7 communication, as client No - S7 communication, as client No - S7 communication, as server Yes - Equidistance Yes - Isochronous mode No - SYNC/FREEZE Yes - Activation/deactivation of DP slaves Yes - DPV1 Yes  Address area - Inputs, max. 244 byte - Outputs, max. 244 byte  DP slave  1 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 - Routing Yes; Only with active interface - Global data communication No	— PG/OP communication	Yes
S7 basic communication S7 communication Yes S7 communication, as client S7 communication, as client S7 communication, as server S7 communication, as server Yes Equidistance Yes Isochronous mode No SYNC/FREEZE Yes Activation/deactivation of DP slaves DPV1 Yes  Address area Inputs, max. Outputs, max. 244 byte  DP slave  Transmission rate, max. 12 Mbit/s automatic baud rate search Address area, max. User data per address area, max. 32 User data per address area, max. 32 byte  Services Routing Yes; Only with active interface No	— Routing	Yes
- S7 communication Yes - S7 communication, as client No - S7 communication, as server Yes - Equidistance Yes - Isochronous mode No - SYNC/FREEZE Yes - Activation/deactivation of DP slaves Yes - DPV1 Yes  Address area - Inputs, max. 244 byte - Outputs, max. 244 byte  DP slave  • Transmission rate, max. 12 Mbit/s • automatic baud rate search Yes; only with passive interface • Address area, max. 32 • User data per address area, max. 32 byte  Services - Routing Yes; Only with active interface - Global data communication No	<ul> <li>Global data communication</li> </ul>	No
- S7 communication, as client - S7 communication, as server - Equidistance - Isochronous mode - SYNC/FREEZE - Activation/deactivation of DP slaves - DPV1 - No  Address area - Inputs, max Outputs, max Outputs, max Outputs, max 12 Mbit/s - automatic baud rate search - Address area, max Wes; only with passive interface - Address area, max User data per address area, max Routing - Global data communication - No - Yes; Only with active interface - No	<ul> <li>S7 basic communication</li> </ul>	Yes
— S7 communication, as server — Equidistance — Isochronous mode — SYNC/FREEZE — Activation/deactivation of DP slaves — DPV1 — Yes  Address area — Inputs, max. — Outputs, max. — Outputs, max. — Outputs, max.  12 Mbit/s  • automatic baud rate search • Address area, max.  • User data per address area, max.  Services — Routing — Global data communication  Yes  Yes  Yes  Yes  Yes  Yes  Yes  Ye	— S7 communication	Yes
<ul> <li>Equidistance</li> <li>Isochronous mode</li> <li>No</li> <li>SYNC/FREEZE</li> <li>Activation/deactivation of DP slaves</li> <li>DPV1</li> <li>Yes</li> <li>Address area</li> <li>Inputs, max.</li> <li>Outputs, max.</li> <li>Outputs, max.</li> <li>12 Mbit/s</li> <li>automatic baud rate search</li> <li>Address area, max.</li> <li>4 Wes; only with passive interface</li> <li>Address area, max.</li> <li>User data per address area, max.</li> <li>Services</li> <li>Routing</li> <li>Global data communication</li> <li>Yes; Only with active interface</li> </ul>	<ul> <li>S7 communication, as client</li> </ul>	No
- Isochronous mode - SYNC/FREEZE - Activation/deactivation of DP slaves - DPV1 Yes  Address area - Inputs, max Outputs, max. 244 byte  DP slave  • Transmission rate, max. • automatic baud rate search • Address area, max. • Address area, max.  12 Mbit/s • uniomatic baud rate search • Address area, max. 32 • User data per address area, max. 32 byte  Services - Routing - Global data communication No	<ul> <li>S7 communication, as server</li> </ul>	Yes
- SYNC/FREEZE - Activation/deactivation of DP slaves - DPV1 Yes  Address area - Inputs, max Outputs, max. 244 byte  DP slave  • Transmission rate, max. • automatic baud rate search • Address area, max. • User data per address area, max.  Services - Routing - Global data communication  Yes Yes Yes Yes Yes Yes Yes Yes Yes Ye	— Equidistance	Yes
- Activation/deactivation of DP slaves - DPV1 Yes  Address area - Inputs, max Outputs, max. 244 byte  DP slave  • Transmission rate, max. • automatic baud rate search • Address area, max. • User data per address area, max.  Services - Routing - Global data communication  Yes Yes Yes Yes Yes Yes Yes Yes Yes Ye	— Isochronous mode	No
- DPV1 Yes  Address area - Inputs, max. 244 byte - Outputs, max. 244 byte  DP slave  • Transmission rate, max. 12 Mbit/s • automatic baud rate search Yes; only with passive interface • Address area, max. 32 • User data per address area, max. 32 byte  Services - Routing Yes; Only with active interface - Global data communication No	— SYNC/FREEZE	Yes
Address area  — Inputs, max. — Outputs, max. 244 byte  DP slave  • Transmission rate, max. • automatic baud rate search • Address area, max. • User data per address area, max.  Services  — Routing — Global data communication  244 byte  244 byte  244 byte  246 byte  247 byte  248 byte  249 byte  249 byte  249 byte  249 byte  240 byte  240 byte  240 byte  241 byte  242 byte  243 byte  Yes; only with passive interface  Address area, max. 32 byte  Services  No	<ul> <li>Activation/deactivation of DP slaves</li> </ul>	Yes
<ul> <li>— Inputs, max.</li> <li>— Outputs, max.</li> <li>DP slave</li> <li>Transmission rate, max.</li> <li>• automatic baud rate search</li> <li>• Address area, max.</li> <li>• User data per address area, max.</li> <li>Services</li> <li>— Routing</li> <li>— Global data communication</li> <li>244 byte</li> <li>244 byte</li> <li>244 byte</li> <li>248 byte</li> <li>Yes; only with passive interface</li> <li>32</li> <li>32 byte</li> <li>Services</li> <li>— Routing</li> <li>— Global data communication</li> </ul>	— DPV1	Yes
<ul> <li>— Outputs, max.</li> <li>DP slave</li> <li>● Transmission rate, max.</li> <li>● automatic baud rate search</li> <li>● Address area, max.</li> <li>● User data per address area, max.</li> <li>Services</li> <li>— Routing</li> <li>— Global data communication</li> </ul> Yes; Only with active interface No	Address area	
<ul> <li>Transmission rate, max.</li> <li>automatic baud rate search</li> <li>Address area, max.</li> <li>User data per address area, max.</li> <li>Services</li> <li>Routing</li> <li>Global data communication</li> <li>12 Mbit/s</li> <li>Yes; only with passive interface</li> <li>32</li> <li>32</li> <li>When the passive interface</li> <li>Address area, max.</li> <li>32 byte</li> <li>Services</li> <li>No</li> </ul>	— Inputs, max.	244 byte
<ul> <li>Transmission rate, max.</li> <li>automatic baud rate search</li> <li>Address area, max.</li> <li>User data per address area, max.</li> <li>Services</li> <li>Routing</li> <li>Global data communication</li> <li>12 Mbit/s</li> <li>Yes; only with passive interface</li> <li>32</li> <li>32 byte</li> <li>Services</li> <li>Routing</li> <li>Mo</li> </ul>	— Outputs, max.	244 byte
<ul> <li>automatic baud rate search</li> <li>Address area, max.</li> <li>User data per address area, max.</li> <li>Services</li> <li>Routing</li> <li>Global data communication</li> <li>Yes; only with passive interface</li> <li>32</li> <li>32 byte</li> <li>Yes; Only with active interface</li> <li>No</li> </ul>	DP slave	
<ul> <li>Address area, max.</li> <li>User data per address area, max.</li> <li>Services         <ul> <li>Routing</li> <li>Global data communication</li> </ul> </li> <li>Yes; Only with active interface</li> <li>No</li> </ul>	Transmission rate, max.	
<ul> <li>User data per address area, max.</li> <li>Services</li> <li>— Routing</li> <li>— Global data communication</li> <li>32 byte</li> <li>Yes; Only with active interface</li> <li>No</li> </ul>	automatic baud rate search	
Services  — Routing — Global data communication  Yes; Only with active interface  No	<ul> <li>Address area, max.</li> </ul>	32
<ul> <li>— Routing</li> <li>— Global data communication</li> <li>Yes; Only with active interface</li> <li>No</li> </ul>	<ul> <li>User data per address area, max.</li> </ul>	32 byte
— Global data communication No	Services	
	— Routing	Yes; Only with active interface
— S7 basic communication Yes	<ul> <li>Global data communication</li> </ul>	No
	<ul> <li>S7 basic communication</li> </ul>	Yes

— S7 communication	Yes
<ul> <li>S7 communication, as client</li> </ul>	No
<ul> <li>S7 communication, as server</li> </ul>	Yes
<ul> <li>Direct data exchange (slave-to-slave communication)</li> </ul>	Yes
— DPV1	No
Transfer memory	
— Inputs	244 byte
— Outputs	244 byte
2 Interface	

2. Interface	
Interface type	Integrated RS 485 interface
Physics	RS 485
Isolated	Yes
Power supply to interface (15 to 30 V DC), max.	200 mA
Functionality	
• MPI	No
<ul> <li>PROFIBUS DP master</li> </ul>	Yes
<ul> <li>PROFIBUS DP slave</li> </ul>	Yes
<ul> <li>Point-to-point connection</li> </ul>	No
DP master	
<ul> <li>Number of connections, max.</li> </ul>	32
<ul><li>Transmission rate, max.</li></ul>	12 Mbit/s
<ul><li>Number of DP slaves, max.</li></ul>	124
Services	
<ul><li>— PG/OP communication</li></ul>	Yes
— Routing	Yes
<ul> <li>Global data communication</li> </ul>	No
<ul> <li>S7 basic communication</li> </ul>	Yes
— S7 communication	Yes
<ul> <li>S7 communication, as client</li> </ul>	No
— S7 communication, as server	Yes
— Equidistance	Yes
— Isochronous mode	Yes; OB 61
— SYNC/FREEZE	Yes
<ul> <li>Activation/deactivation of DP slaves</li> </ul>	Yes
— DPV1	Yes
Address area	
— Inputs, max.	244 byte
— Outputs, max.	244 byte
DP slave	
Number of connections	32

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

S5 compatible communication

• User data per job, max.

• User data per job (of which consistent), max.

supported

as serveras client

160 byte; as server

Yes; Via CP and loadable FB 180 byte; With PUT/GET

Yes

Yes

6ES7317-6FF03-0AB0

• supported	Yes; via CP and loadable FC
Number of connections	
• overall	32
<ul> <li>usable for PG communication</li> </ul>	31
<ul> <li>reserved for PG communication</li> </ul>	1
<ul> <li>adjustable for PG communication, min.</li> </ul>	1
— adjustable for PG communication, max.	31
<ul> <li>usable for OP communication</li> </ul>	31
<ul> <li>reserved for OP communication</li> </ul>	1
— adjustable for OP communication, min.	1
— adjustable for OP communication, max.	31
<ul> <li>usable for S7 basic communication</li> </ul>	30
<ul> <li>reserved for S7 basic communication</li> </ul>	0
<ul> <li>adjustable for S7 basic communication,</li> </ul>	0
min.	
<ul> <li>adjustable for S7 basic communication,</li> </ul>	30
max.	
<ul><li>usable for routing</li></ul>	8
S7 message functions	
Number of login stations for message functions, max.	32; Depending on the configured connections for PG/OP and S7
	basic communication
Process diagnostic messages	Yes
simultaneously active Alarm-S blocks, max.	60
Test commissioning functions	
Status block	Yes
Single step	Yes
Number of breakpoints	2
Status/control	
Status/control variable	Yes
<ul> <li>Variables</li> </ul>	Inputs, outputs, memory bits, DB, times, counters
<ul> <li>Number of variables, max.</li> </ul>	30
<ul><li>of which status variables, max.</li></ul>	30
— of which control variables, max.	14
Forcing	
<ul><li>Forcing</li></ul>	Yes
• Forcing, variables	Inputs, outputs
Number of variables, max.	10
Diagnostic buffer	
• present	Yes
<ul> <li>Number of entries, max.</li> </ul>	100
— adjustable	No

Configuration	
Configuration software	
• STEP 7	Yes; V5.2 SP1 or higher
Programming	
Command set	see instruction list
<ul> <li>Nesting levels</li> </ul>	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	
User program protection/password protection	Yes
Dimensions	
Width	80 mm
Height	125 mm
Depth	130 mm
Weights	
Weight, approx.	460 g
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