SIEMENS

Data sheet

6ES7315-6TH13-0AB0

Spare part SIMATIC S7-300, CPU 315T-2 DP, Central processing unit for PLC and Technology tasks, 256 KB work memory, 1st interface MPI/DP 12 Mbit/s, 2nd interface DP (drive), Integr. I/O for technology, Front connector (1x 40-pole) and Micro Memory Card min. 8 MB required



General information	
HW functional status	01
Firmware version	CPU: V2.7, integrated technology: V4.1.5
Engineering with	
Programming package	STEP 7 V5.4 + SP5 (and higher) and Optional package S7- Technology V4.2
Supply voltage	
Rated value (DC)	24 V
permissible range, lower limit (DC)	20.4 V
permissible range, upper limit (DC)	28.8 V
external protection for power supply lines (recommendation)	2 A min.
Load voltage L+	
Rated value (DC)	24 V
 Reverse polarity protection 	Yes
Digital outputs	
— Rated value (DC)	24 V; (2L+)
 Reverse polarity protection 	No; (2L+)

Input current	
Current consumption (in no-load operation), typ.	200 mA
Inrush current, typ.	2.5 A
l²t	1 A ² ·s
Power loss	
Power loss, typ.	6 W
Memory	
Work memory	
• integrated	256 kbyte
• expandable	No
Load memory	
• Plug-in (MMC)	Yes
Plug-in (MMC), max.	8 Mbyte
 Data management on MMC (after last programming), min. 	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 bit operations, max.	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); the maximum number of loadable blocks can be reduced by the MMC used.
DB	
• Number, max.	1 023; Number band: 1 to 1023
• Size, max.	64 kbyte
FB	
• Number, max.	1 024; Number range: 0 to 2047
• Size, max.	64 kbyte
FC	
Number, max.	1 024; Number range: 0 to 2047
• Size, max.	64 kbyte
OB	
Description	see instruction list
• Size, max.	64 kbyte
Number of free cycle OBs	1; OB 1
Number of time alarm OBs	1; OB 10
- Number of time dialiff ODS	1, 50 10

 Number of delay alarm OBs 	1; OB 20
 Number of cyclic interrupt OBs 	1; OB 35
 Number of process alarm OBs 	1; OB 40
 Number of DPV1 alarm OBs 	3; OB 55, 56, 57
 Number of isochronous mode OBs 	1; OB 61
 Number of technology synchronous alarm OBs 	1; OB 65
 Number of startup OBs 	1; OB 100
 Number of asynchronous error OBs 	5; OB 80, 82, 85, 86, 87
 Number of synchronous error OBs 	2; OB 121, 122
Nesting depth	
per priority class	8
 additional within an error OB 	4
Countary timers and their retentivity	

Counters, timers and their retentivity	
S7 counter	
Number	256; Number range: 0 to 255
Retentivity	
— adjustable	Yes
— preset	8
Counting range	
— adjustable	Yes
— lower limit	0
— upper limit	999
IEC counter	
• present	Yes
• Type	SFB
Number	Unlimited (limited only by RAM capacity)
S7 times	
Number	256; Number range: 0 to 255
Retentivity	
— adjustable	Yes
— 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 areas and their retentivity	
retentive data area in total	all DBs, max. 128 KB
Flag	

Number, max.	2 048 byte
Retentivity available	Yes; MB 0 to MB 2 047
·	MB 0 to MB 15
Retentivity presetNumber of clock memories	8; 1 memory byte
Data blocks	o, i memory byte
	Yes; via non-retain property on DB
Retentivity adjustable	Yes
Retentivity preset	165
Local data	4 024 buto
● per priority class, max.	1 024 byte
Address area	
I/O address area	
• Inputs	2 048 byte
Outputs	2 048 byte
of which distributed	
— Inputs	2 048 byte
— Outputs	2 048 byte
Process image	
● Inputs, adjustable	2 048 byte
 Outputs, adjustable 	2 048 byte
• Inputs, default	128 byte
Outputs, default	128 byte
Default addresses of the integrated channels	
— Digital inputs	66
— Digital outputs	66
Subprocess images	
Number of subprocess images, max.	1
Digital channels	
● Inputs	16 384
— of which central	512
Outputs	16 384
— of which central	512
Analog channels	
• Inputs	1 024
— of which central	64
Outputs	1 024
— of which central	64
Hardware configuration	
Number of expansion units, max.	0
Number of DP masters	
• integrated	2; 1 DP and 1 DP (drive)
• via CP	2; for DP
0.	,

	Number of operable FMs and CPs (recommended)	
CP, LAN Rack Racks, max. Adodules per rack, max. Modules per rack, max. Firme of day Clock Hardware clock (real-time) Fetentive and synchronizable Backup time Deviation per day, max. Poperating hours counter Number Number 1 Number/Number ange Range of values Granularity Fetentive Clock synchronization Supported Now MPI, master No MPI, slave No DP, slave	• FM	8
Racks, max. Racks, max. Racks, max. Modules per rack, max. Racks, max. Modules per rack, max. Racks, max. Rack, 40°C ambient temperature Rack, 44°C amb	• CP, PtP	8
Racks, max. Modules per rack, max. Modules per rack, max. Time of day Clock Hardware clock (real-time) Peretentive and synchronizable Backup time Deviation per day, max. Disable of the max of	• CP, LAN	10
Modules per rack, max. Firme of day Clock Hardware clock (real-time) retentive and synchronizable Backup time Deviation per day, max. Operating hours counter Number Number 1 Number 0 Range of values Granularity retentive Yes; Must be restarted at each restart Clock synchronization Supported Supported Yes To MPI, slave To DP, slave To DP, slave To DP, slave To DS, slave To MS, slave Pigital inputs Number of digital inputs of which inputs usable for technological functions Input characteristic curve in accordance with IEC 61131, type 1 Number of Simultaneously controllable inputs horizontal installation — up to 40 °C, max. — up to 60 °C, max. 4 vertical installation — up to 40 °C, max. 4 vertical installation — up to 40 °C, max. 4 vertical installation — up to 40 °C, max. 4 vertical installation — up to 40 °C, max. 4 vertical installation — up to 40 °C, max. 4 vertical installation — up to 40 °C, max. 4 vertical installation — up to 40 °C, max. 4 vertical installation — up to 40 °C, max. 4 vertical installation — up to 40 °C, max. 4 vertical installation — up to 40 °C, max. 4 vertical installation — up to 40 °C, max. 4 vertical installation — up to 40 °C, max. 4 Input voltage	Rack	
Clock Hardware clock (real-time) retentive and synchronizable Backup time Deviation per day, max. Operating hours counter Number Number Range of values Granularity retentive Supported Oby, master Oby, master Oby, master Oby, master Oby, master Oby, master Oby, save Oby, save Oby, save Oby, save Objetal inputs Digital inputs Number of simultaneously controllable inputs Norizontal installation — up to 40 °C, max. — up to 60 °C, max. — up to 60 °C, max. Vest Must de restarted at each restart Yes Wes Oby, master	• Racks, max.	1
Clock Hardware clock (real-time) retentive and synchronizable Backup time Deviation per day, max. Operating hours counter Number Number 1 Number/Number range Range of values Granularity retentive retentive Ves; Must be restarted at each restart Clock synchronization supported Ves	 Modules per rack, max. 	8
Clock Hardware clock (real-time) retentive and synchronizable Backup time Devation per day, max. Operating hours counter Number Number 1 Number/Number range Range of values Granularity retentive retentive Yes, Must be restarted at each restart Clock synchronization supported Yes Ob Pl, master Ob Pl, slave Ob DP, slave Ob	Time of day	
retentive and synchronizable Backup time Deviation per day, max. Operating hours counter Number Number range Range of values Granularity retentive to MPI, slave to DP, slave in AS, slave Digital inputs Number of digital inputs or which inputs usable for technological functions Input characteristic curve in accordance with IEC 61131, type 1 Number of simultaneously controllable inputs horizontal installation up to 40 °C, max. lopt was to to to the sum of th		
Backup time Deviation per day, max. Operating hours counter Number Number	Hardware clock (real-time)	Yes
Deviation per day, max. Operating hours counter Number Number Number/Number range Range of values O to 2^31 hours (when using SFC 101) Granularity retentive Yes; Must be restarted at each restart Clock synchronization supported to MPI, master to MPI, slave to DP, master to DP, slave in AS, master in AS, slave Pes Number of digital inputs Number of digital inputs Input characteristic curve in accordance with IEC 61131, type 1 Number of 90 °C, max. — up to 40 °C, max. — up to 40 °C, max. Vertical installation — up to 40 °C, max. 4 Input voltage	 retentive and synchronizable 	Yes
Operating hours counter Number Number Number	Backup time	6 wk; At 40 °C ambient temperature
Number Number/Number range Number/Number range Range of values Granularity retentive Yes; Must be restarted at each restart Clock synchronization supported to MPI, master to DP, master Yes to DP, slave Fin AS, slave Pigital inputs Number of digital inputs Number of simultaneously controllable inputs horizontal installation — up to 40 °C, max up to 60 °C, max. Ves 0 to 2^31 hours (when using SFC 101) 1 h Yes; Must be restarted at each restart Yes Yes Yes Yes Yes Yes Yes Yes	 Deviation per day, max. 	10 s
Number/Number range Range of values O to 2^31 hours (when using SFC 101) Granularity I h retentive Yes; Must be restarted at each restart Clock synchronization supported Yes Oto MPI, master Oto MPI, slave Oto DP, master Yes Oto DP, slave Oto DP, slave Oto DP, slave Oto AB, slave Yes Oto MPI, slave Yes Oto DP, slave Yes Oto DP, slave Oto DP, slave Oto DP, slave Oto DP, slave Yes Oto DP, slave Oto DP, slave Yes Oto DP, slave Oto DP, slave Yes Oto DP, slave Yes Oto DP, slave Oto DP,	Operating hours counter	
Range of values Granularity retentive Yes; Must be restarted at each restart Clock synchronization supported to MPI, master to DP, master Yes to DP, slave Fin AS, slave Poligital inputs Number of digital inputs usable for technological functions Input characteristic curve in accordance with IEC 61131, type 1 Number of 0°C, max up to 40°C, max.	• Number	1
Granularity retentive Pres; Must be restarted at each restart Clock synchronization supported supported Yes to MPI, master Yes to DP, master Yes in AS, master in AS, slave Pof which inputs usable for technological functions Input characteristic curve in accordance with IEC 61131, type 1 Number of simultaneously controllable inputs horizontal installation — up to 40 °C, max. — up to 60 °C, max. 4 Input voltage	Number/Number range	0
retentive Yes; Must be restarted at each restart Clock synchronization supported Yes to MPI, master Yes to DP, master Yes to DP, slave in AS, master in AS, slave Pigital inputs Number of digital inputs A of which inputs usable for technological functions Input characteristic curve in accordance with IEC 81131, type 1 Number of simultaneously controllable inputs horizontal installation — up to 40 °C, max. — up to 60 °C, max. 4 Vertical installation — up to 40 °C, max. 4 Input voltage	Range of values	0 to 2^31 hours (when using SFC 101)
Clock synchronization • supported • to MPI, master • to MPI, slave • to MPI, slave • to DP, master • to DP, slave • in AS, master • in AS, slave Pigital inputs Number of digital inputs A • of which inputs usable for technological functions Input characteristic curve in accordance with IEC 61131, type 1 Number of simultaneously controllable inputs horizontal installation — up to 40 °C, max. — up to 60 °C, max. 4 Vertical installation — up to 40 °C, max. 4 Input voltage	Granularity	1 h
supported to MPI, master to MPI, slave to DP, master to DP, master to DP, slave to DP, slave in AS, master in AS, slave Pigital inputs Number of digital inputs Input characteristic curve in accordance with IEC 61131, type 1 Number of simultaneously controllable inputs horizontal installation — up to 40 °C, max. — up to 60 °C, max. vertical installation — up to 40 °C, max. 4 Input voltage	• retentive	Yes; Must be restarted at each restart
• to MPI, master • to MPI, slave • to DP, master • to DP, slave • to DP, slave • in AS, master • in AS, slave Digital inputs Number of digital inputs Input characteristic curve in accordance with IEC 61131, type 1 Number of simultaneously controllable inputs horizontal installation — up to 40 °C, max. — up to 60 °C, max. 4 Input voltage	Clock synchronization	
to MPI, slave to DP, master to DP, slave in AS, master in AS, slave Pes Digital inputs Number of digital inputs A of which inputs usable for technological functions Input characteristic curve in accordance with IEC 61131, type 1 Number of simultaneously controllable inputs horizontal installation — up to 40 °C, max. — up to 60 °C, max. Vertical installation — up to 40 °C, max. 4 Input voltage	• supported	Yes
• to DP, master • to DP, slave • in AS, master • in AS, slave Digital inputs Number of digital inputs • of which inputs usable for technological functions Input characteristic curve in accordance with IEC 61131, type 1 Number of simultaneously controllable inputs horizontal installation — up to 40 °C, max. — up to 60 °C, max. 4 vertical installation — up to 40 °C, max. 4 Input voltage	● to MPI, master	Yes
• to DP, slave • in AS, master • in AS, slave Digital inputs Number of digital inputs • of which inputs usable for technological functions Input characteristic curve in accordance with IEC 61131, type 1 Number of simultaneously controllable inputs horizontal installation — up to 40 °C, max. — up to 60 °C, max. vertical installation — up to 40 °C, max. 4 Input voltage	● to MPI, slave	Yes
in AS, master in AS, slave Pigital inputs Number of digital inputs of which inputs usable for technological functions Input characteristic curve in accordance with IEC 61131, type 1 Number of simultaneously controllable inputs horizontal installation — up to 40 °C, max. — up to 60 °C, max. vertical installation — up to 40 °C, max. Input voltage	• to DP, master	Yes
● in AS, slave Pigital inputs Number of digital inputs	• to DP, slave	Yes
Digital inputs Number of digital inputs 4 ● of which inputs usable for technological functions 4 Input characteristic curve in accordance with IEC 61131, type 1 Yes Number of simultaneously controllable inputs horizontal installation 4 — up to 40 °C, max. 4 vertical installation 4 — up to 40 °C, max. 4 Input voltage 4	• in AS, master	Yes
Number of digital inputs ● of which inputs usable for technological functions Input characteristic curve in accordance with IEC 61131, type 1 Number of simultaneously controllable inputs horizontal installation — up to 40 °C, max. — up to 60 °C, max. vertical installation — up to 40 °C, max. Input voltage	• in AS, slave	Yes
Number of digital inputs ● of which inputs usable for technological functions Input characteristic curve in accordance with IEC Yes 61131, type 1 Number of simultaneously controllable inputs horizontal installation — up to 40 °C, max. — up to 60 °C, max. vertical installation — up to 40 °C, max. Input voltage	Digital inputs	
Input characteristic curve in accordance with IEC 61131, type 1 Number of simultaneously controllable inputs horizontal installation — up to 40 °C, max. 4 — up to 60 °C, max. 4 vertical installation — up to 40 °C, max. 4 Input voltage		4
Input characteristic curve in accordance with IEC 61131, type 1 Number of simultaneously controllable inputs horizontal installation — up to 40 °C, max. — up to 60 °C, max. vertical installation — up to 40 °C, max. 4 Input voltage	•	4
Number of simultaneously controllable inputs horizontal installation — up to 40 °C, max. — up to 60 °C, max. vertical installation — up to 40 °C, max. 4 Input voltage		Voe
horizontal installation — up to 40 °C, max. — up to 60 °C, max. vertical installation — up to 40 °C, max. 4 Input voltage	•	res
 — up to 40 °C, max. — up to 60 °C, max. vertical installation — up to 40 °C, max. Input voltage 	Number of simultaneously controllable inputs	
— up to 60 °C, max. Vertical installation — up to 40 °C, max. 4 Input voltage	horizontal installation	
vertical installation — up to 40 °C, max. Input voltage	— up to 40 °C, max.	4
— up to 40 °C, max. Input voltage	— up to 60 °C, max.	4
Input voltage	vertical installation	
	— up to 40 °C, max.	4
Rated value (DC) 24 V	Input voltage	
	Rated value (DC)	24 V

● for signal "0"	-3 to +5V
● for signal "1"	+15 to +30 V
Input current	
• for signal "1", typ.	7 mA
Input delay (for rated value of input voltage)	
for technological functions	
— at "0" to "1", max.	10 μs; Typical
— at "1" to "0", max.	10 μs; Typical
Cable length	
• shielded, max.	1 000 m
Dividal autouta	
Digital outputs Number of digital outputs	8
of which high-speed outputs	8
Functions	for technology functions, e.g. high-speed cam switch signals
Short-circuit protection	Yes
Response threshold, typ.	1 A
Limitation of inductive shutdown voltage to	48 V
Controlling a digital input	No
Switching capacity of the outputs	
on lamp load, max.	5 W
Load resistance range	
• lower limit	48 Ω
• upper limit	4 kΩ
Output voltage	
● for signal "0", max.	3 V; (2L+)
● for signal "1", min.	Rated voltage -2.5 V
Output current	
● for signal "1" rated value	0.5 A
 for signal "1" permissible range for 0 to 60 °C, min. 	5 mA
 for signal "1" permissible range for 0 to 60 °C, max. 	0.6 A
• for signal "0" residual current, max.	0.3 mA
Parallel switching of two outputs	
• for uprating	No
 for redundant control of a load 	No
Switching frequency	
• with resistive load, max.	100 Hz
with inductive load, max.	0.2 Hz; According to IEC 60947-5-1, DC-13
● on lamp load, max.	100 Hz
Total current of the outputs (per group)	
horizontal installation	

— up to 40 °C, max.	4 A
— up to 60 °C, max.	3 A
all other mounting positions	
— up to 40 °C, max.	3 A
Cable length	
• shielded, max.	1 000 m
Analog inputs	
Number of analog inputs	0
<u> </u>	
Analog outputs	
Number of analog outputs	0
Encoder	
Connectable encoders	
• 2-wire sensor	No
Interfaces	
Number of industrial Ethernet interfaces	0
Number of PROFINET interfaces	0
Number of RS 485 interfaces	2
Number of RS 422 interfaces	0
1. Interface	Integrated DC 405 interface
Interface type	Integrated RS 485 interface
Interface type Isolated	Yes
Interface type Isolated Power supply to interface (15 to 30 V DC), max.	-
Interface type Isolated Power supply to interface (15 to 30 V DC), max. Interface types	Yes 200 mA
Interface type Isolated Power supply to interface (15 to 30 V DC), max. Interface types • RS 485	Yes
Interface type Isolated Power supply to interface (15 to 30 V DC), max. Interface types • RS 485 Protocols	Yes 200 mA Yes
Interface type Isolated Power supply to interface (15 to 30 V DC), max. Interface types • RS 485 Protocols • MPI	Yes 200 mA Yes Yes
Interface type Isolated Power supply to interface (15 to 30 V DC), max. Interface types • RS 485 Protocols • MPI • PROFIBUS DP master	Yes 200 mA Yes Yes Yes
Interface type Isolated Power supply to interface (15 to 30 V DC), max. Interface types • RS 485 Protocols • MPI • PROFIBUS DP master • PROFIBUS DP slave	Yes 200 mA Yes Yes Yes Yes Yes
Interface type Isolated Power supply to interface (15 to 30 V DC), max. Interface types • RS 485 Protocols • MPI • PROFIBUS DP master • PROFIBUS DP slave • Point-to-point connection	Yes 200 mA Yes Yes Yes
Interface type Isolated Power supply to interface (15 to 30 V DC), max. Interface types • RS 485 Protocols • MPI • PROFIBUS DP master • PROFIBUS DP slave • Point-to-point connection MPI	Yes 200 mA Yes Yes Yes Yes Yes No
Interface type Isolated Power supply to interface (15 to 30 V DC), max. Interface types RS 485 Protocols MPI PROFIBUS DP master PROFIBUS DP slave Point-to-point connection MPI Number of connections	Yes 200 mA Yes Yes Yes Yes Yes No
Interface type Isolated Power supply to interface (15 to 30 V DC), max. Interface types RS 485 Protocols MPI PROFIBUS DP master PROFIBUS DP slave Point-to-point connection MPI Number of connections Transmission rate, max.	Yes 200 mA Yes Yes Yes Yes Yes No
Interface type Isolated Power supply to interface (15 to 30 V DC), max. Interface types RS 485 Protocols MPI PROFIBUS DP master PROFIBUS DP slave Point-to-point connection MPI Number of connections Transmission rate, max. Services	Yes 200 mA Yes Yes Yes Yes Yes Yes Yes Ye
Interface type Isolated Power supply to interface (15 to 30 V DC), max. Interface types RS 485 Protocols MPI PROFIBUS DP master PROFIBUS DP slave Point-to-point connection MPI Number of connections Transmission rate, max. Services — PG/OP communication	Yes 200 mA Yes Yes Yes Yes Yes Yes No 32 12 Mbit/s
Interface type Isolated Power supply to interface (15 to 30 V DC), max. Interface types RS 485 Protocols MPI PROFIBUS DP master PROFIBUS DP slave Point-to-point connection MPI Number of connections Transmission rate, max. Services — PG/OP communication — Routing	Yes 200 mA Yes Yes Yes Yes Yes Yes Yes Ye
Interface type Isolated Power supply to interface (15 to 30 V DC), max. Interface types RS 485 Protocols MPI PROFIBUS DP master PROFIBUS DP slave Point-to-point connection MPI Number of connections Transmission rate, max. Services — PG/OP communication — Routing — Global data communication	Yes 200 mA Yes Yes Yes Yes Yes Yes Yes No 32 12 Mbit/s Yes Yes Yes Yes
Interface type Isolated Power supply to interface (15 to 30 V DC), max. Interface types RS 485 Protocols MPI PROFIBUS DP master PROFIBUS DP slave Point-to-point connection MPI Number of connections Transmission rate, max. Services — PG/OP communication — Routing — Global data communication — S7 basic communication	Yes 200 mA Yes Yes Yes Yes Yes No 32 12 Mbit/s Yes Yes Yes Yes Yes Yes Yes Y
Interface type Isolated Power supply to interface (15 to 30 V DC), max. Interface types RS 485 Protocols MPI PROFIBUS DP master PROFIBUS DP slave Point-to-point connection MPI Number of connections Transmission rate, max. Services PG/OP communication Routing Global data communication S7 basic communication S7 communication	Yes 200 mA Yes Yes Yes Yes Yes Yes No 32 12 Mbit/s Yes Yes Yes Yes Yes Yes Yes Y
Interface type Isolated Power supply to interface (15 to 30 V DC), max. Interface types RS 485 Protocols MPI PROFIBUS DP master PROFIBUS DP slave Point-to-point connection MPI Number of connections Transmission rate, max. Services — PG/OP communication — Routing — Global data communication — S7 basic communication	Yes 200 mA Yes Yes Yes Yes Yes No 32 12 Mbit/s Yes Yes Yes Yes Yes Yes Yes Y

PROFIBUS 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; I blocks only
— S7 communication	Yes
 S7 communication, as client 	No; but via CP and loadable FB
 S7 communication, as server 	Yes; Connection configured on one side only
— Equidistance	Yes
— Isochronous mode	Yes; OB 61
— SYNC/FREEZE	Yes
 Activation/deactivation of DP slaves 	Yes
— DPV1	Yes
Address area	
— Inputs, max.	2 048 byte
— Outputs, max.	2 048 byte
User data per DP slave	
— Inputs, max.	244 byte
— Outputs, max.	244 byte
PROFIBUS DP slave	
Transmission rate, max.	12 Mbit/s
automatic baud rate search	No
 Address area, max. 	32
 User data per address area, max. 	32 byte
Services	
— PG/OP communication	Yes
— Routing	Yes; Only with active interface
 Global data communication 	No
 S7 basic communication 	No
— S7 communication	Yes
 S7 communication, as client 	No; but via CP and loadable FB
 S7 communication, as server 	Yes; Connection configured on one side only
 Direct data exchange (slave-to-slave communication) 	Yes
— DPV1	No
Transfer memory	
— Inputs	244 byte
— Outputs	244 byte

2. Interface	
Interface type	Integrated RS 485 interface
Isolated	Yes
Power supply to interface (15 to 30 V DC), max.	200 mA
Interface types	
• RS 485	Yes
Protocols	
• MPI	No
 PROFIBUS DP master 	Yes; DP(DRIVE)-Master
 PROFIBUS DP slave 	No
 Point-to-point connection 	No
PROFIBUS DP master	
Transmission rate, max.	12 Mbit/s
 Number of DP slaves, max. 	64
Services	
— PG/OP communication	No
— Routing	No
 Global data communication 	No
— S7 basic communication	No
— S7 communication	No
— Equidistance	Yes
— Isochronous mode	Yes
— SYNC/FREEZE	No
 Activation/deactivation of DP slaves 	Yes
— DPV1	No
Address area	
— Inputs, max.	1 024 byte
— Outputs, max.	1 024 byte
User data per DP slave	
— Inputs, max.	244 byte
— Outputs, max.	244 byte
PROFIBUS DP slave	
Transmission rate, max.	12 Mbit/s
Communication functions	
PG/OP communication	Yes
Global data communication	
• supported	Yes
 Number of GD loops, max. 	8
 Number of GD packets, max. 	8
 Number of GD packets, transmitter, max. 	8
 Number of GD packets, receiver, max. 	8

. 0: (0)	22 hita
• Size of GD packets, max.	22 byte
Size of GD packet (of which consistent), max.	22 byte
S7 basic communication	V
• supported	Yes
 User data per job, max. 	76 byte
 User data per job (of which consistent), max. 	76 byte; 76 bytes (with X_SEND or X_RCV), 76 bytes (with X_PUT or X_GET as server)
S7 communication	
• supported	Yes
• as server	Yes
• as client	Yes; Via CP and loadable FB
 User data per job, max. 	See online help of STEP 7 (shared parameters of the SFBs/FBs and of the SFCs/FCs of S7 Communication)
S5 compatible communication	
• supported	Yes; via CP and loadable FC
Number of connections	
• overall	16
 usable for PG communication 	15
 reserved for PG communication 	1
— adjustable for PG communication, min.	1
 adjustable for PG communication, max. 	15
usable for OP communication	15
 reserved for OP communication 	1
 adjustable for OP communication, min. 	1
 adjustable for OP communication, max. 	15
usable for S7 basic communication	12
 reserved for S7 basic communication 	0
 adjustable for S7 basic communication, 	0
min.	
— adjustable for S7 basic communication,	12
max.	
usable for routing	8; additional
S7 message functions	
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
 Variables 	Inputs, outputs, memory bits, DB, times, counters
Number of variables, max.	30
of which status variables, max.	30
of which control variables, max.	14
Forcing	
• Forcing	Yes
 Forcing, variables 	Inputs, outputs
 Number of variables, max. 	10
Diagnostic buffer	
• present	Yes
 Number of entries, max. 	100
— adjustable	No
Interrupto/diagnostics/status information	
Interrupts/diagnostics/status information Alarms	No
Diagnostics function	No
Diagnostics indication LED	
Status indicator digital input (green)	Yes
Status indicator digital output (green)	Yes
- Otatus indicator digital output (green)	1.00
Potential separation	
Potential separation digital inputs	V
between the channels and backplane bus	Yes
Potential separation digital outputs	V
 between the channels and backplane bus 	Yes
Isolation	
Isolation tested with	500 V DC
Ambient conditions	
Ambient temperature during operation	
• min.	0 °C
• max.	60 °C
Configuration	
Configuration software	Vest VE 2 CD4 or higher and C7 Technol.
• STEP 7	Yes; V5.2 SP1 or higher and S7 Technology option package
Programming	and the day of the Bad
Command set	see instruction list
Nesting levels	8
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
Know-how protection	
User program protection/password protection	Yes
Cycle time monitoring	
• lower limit	1 ms
• upper limit	6 000 ms
• adjustable	Yes
• preset	150 ms
Dimensions	
Width	160 mm
Height	125 mm
Depth	130 mm
Weights	
Weight, approx.	750 g
last modified:	12/10/2020