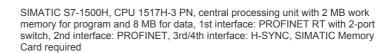
6ES7517-3HP00-0AB0

Data sheet





General information	
Product type designation	CPU 1517H-3 PN
HW functional status	FS06
Firmware version	V3.1
FW update possible	Yes
Product function	
● I&M data	Yes; I&M0 to I&M3
 Isochronous mode 	No
SysLog	Yes
Engineering with	
STEP 7 TIA Portal configurable/integrated from version	V19 (FW V3.1) / V15.1 (FW V2.6) or higher
Display	
Screen diagonal [cm]	6.1 cm
Control elements	
Number of keys	6
Mode selector switch	1
Supply voltage	
Rated value (DC)	24 V
permissible range, lower limit (DC)	19.2 V
permissible range, upper limit (DC)	28.8 V
Reverse polarity protection	Yes
Mains buffering	
 Mains/voltage failure stored energy time 	5 ms
 Repeat rate, min. 	1/s
Input current	
Current consumption (rated value)	1.5 A
Current consumption, max.	1.9 A
Inrush current, max.	1.9 A; Rated value
I²t	0.4 A ² ·s
Power	
Infeed power to the backplane bus	12 W
Power consumption from the backplane bus (balanced)	30 W
Power loss	
Power loss, typ.	24 W
Memory	
Number of slots for SIMATIC memory card	1
SIMATIC memory card required	Yes
Work memory	
• integrated (for program)	2 Mbyte
• integrated (for data)	8 Mbyte

Load momeny	
Load memory • Plug in (SIMATIC Memory Card) may	32 Chyte
Plug-in (SIMATIC Memory Card), max. Backup	32 Gbyte
maintenance-free	Yes
CPU processing times	165
for bit operations, typ.	4 ns
for word operations, typ.	6 ns
for fixed point arithmetic, typ.	6 ns
for floating point arithmetic, typ.	24 ns
CPU-blocks	2110
Number of elements (total)	12 000; Blocks (OB, FB, FC, DB) and UDTs
DB	
Number range	Number range: 1 to 59 999
• Size, max.	8 Mbyte; For non-optimized block accesses, the max. size of the DB is 64 KB
FB	
Number range	0 65 535
• Size, max.	1 Mbyte
FC	
Number range	0 65 535
• Size, max.	1 Mbyte
OB	
• Size, max.	1 Mbyte
 Number of free cycle OBs 	100
 Number of time alarm OBs 	20
 Number of delay alarm OBs 	20
 Number of cyclic interrupt OBs 	20; with minimum OB 3x cycle of 1 ms
 Number of process alarm OBs 	50
 Number of DPV1 alarm OBs 	3
 Number of startup OBs 	100
 Number of asynchronous error OBs 	4
 Number of synchronous error OBs 	2
 Number of diagnostic alarm OBs 	1
Nesting depth	
 per priority class 	24
Counters, timers and their retentivity	
S7 counter	
Number	2 048
Retentivity	
— adjustable	Yes
IEC counter	
Number	Any (only limited by the main memory)
Retentivity	
— adjustable	Yes
S7 times	
Number	2 048
Retentivity	
— adjustable	Yes
IEC timer	
Number	Any (only limited by the main memory)
Retentivity	
— adjustable	Yes
Data areas and their retentivity	
Retentive data area (incl. timers, counters, flags), max.	768 kbyte; In total; available retentive memory for bit memories, timers, counters, DBs, and technology data (axes): 700 KB
Flag	
• Size, max.	16 kbyte
Number of clock memories	8; 8 clock memory bit, grouped into one clock memory byte
Data blocks	, a second side of the second
Retentivity adjustable	Yes
Retentivity preset	No
Local data	
Loodi data	

• per priority class, max.	64 kbyte; max. 16 KB per block
Address area	o ritugio, max. To tto por blook
Number of IO modules	8 192; max. number of modules / submodules
I/O address area	o 192, max. number of modules / submodules
• Inputs	32 kbyte; All inputs are in the process image
Outputs Per integrated IO subsystem	32 kbyte; All outputs are in the process image
per integrated IO subsystem	16 khuto
— Inputs (volume)	16 kbyte
— Outputs (volume)	16 kbyte
Subprocess images	04
Number of subprocess images, max.	31
Hardware configuration	
Number of distributed IO systems	64; A distributed I/O system is characterized not only by the integration of distributed I/O via PROFINET, but also by the connection of I/O via IE/PB-Links.
Number of IO Controllers	
• integrated	1
Rack	
Modules per rack, max.	9; CPU + 2 PS + 6 CP
Time of day	
Clock	
• Type	Hardware clock
Backup time	6 wk; At 40 °C ambient temperature, typically
Deviation per day, max.	10 s; Typ.: 2 s
Operating hours counter	0, 1,p = 0
Number	16
Clock synchronization	10
• supported	Yes
on Ethernet via NTP	Yes
Interfaces	
Number of PROFINET interfaces	2
Interface	2
Interface types	Voc. VA
• RJ 45 (Ethernet)	Yes; X1
Number of ports	2
 integrated switch 	
	Yes
Protocols	
Protocols • IP protocol	Yes; IPv4
Protocols • IP protocol • PROFINET IO Controller	Yes; IPv4 Yes
Protocols • IP protocol • PROFINET IO Controller • PROFINET IO Device	Yes; IPv4 Yes No
Protocols • IP protocol • PROFINET IO Controller • PROFINET IO Device • SIMATIC communication	Yes; IPv4 Yes No Yes; Only Server
Protocols • IP protocol • PROFINET IO Controller • PROFINET IO Device • SIMATIC communication • Open IE communication	Yes; IPv4 Yes No Yes; Only Server Yes; Optionally also encrypted
Protocols • IP protocol • PROFINET IO Controller • PROFINET IO Device • SIMATIC communication • Open IE communication • Web server	Yes; IPv4 Yes No Yes; Only Server Yes; Optionally also encrypted Yes
Protocols • IP protocol • PROFINET IO Controller • PROFINET IO Device • SIMATIC communication • Open IE communication • Web server • Media redundancy	Yes; IPv4 Yes No Yes; Only Server Yes; Optionally also encrypted
Protocols • IP protocol • PROFINET IO Controller • PROFINET IO Device • SIMATIC communication • Open IE communication • Web server	Yes; IPv4 Yes No Yes; Only Server Yes; Optionally also encrypted Yes
Protocols • IP protocol • PROFINET IO Controller • PROFINET IO Device • SIMATIC communication • Open IE communication • Web server • Media redundancy PROFINET IO Controller Services	Yes; IPv4 Yes No Yes; Only Server Yes; Optionally also encrypted Yes
Protocols • IP protocol • PROFINET IO Controller • PROFINET IO Device • SIMATIC communication • Open IE communication • Web server • Media redundancy PROFINET IO Controller	Yes; IPv4 Yes No Yes; Only Server Yes; Optionally also encrypted Yes
Protocols • IP protocol • PROFINET IO Controller • PROFINET IO Device • SIMATIC communication • Open IE communication • Web server • Media redundancy PROFINET IO Controller Services	Yes; IPv4 Yes No Yes; Only Server Yes; Optionally also encrypted Yes Yes
Protocols • IP protocol • PROFINET IO Controller • PROFINET IO Device • SIMATIC communication • Open IE communication • Web server • Media redundancy PROFINET IO Controller Services — Isochronous mode	Yes; IPv4 Yes No Yes; Only Server Yes; Optionally also encrypted Yes Yes
Protocols • IP protocol • PROFINET IO Controller • PROFINET IO Device • SIMATIC communication • Open IE communication • Web server • Media redundancy PROFINET IO Controller Services — Isochronous mode — IRT	Yes; IPv4 Yes No Yes; Only Server Yes; Optionally also encrypted Yes Yes No No
Protocols • IP protocol • PROFINET IO Controller • PROFINET IO Device • SIMATIC communication • Open IE communication • Web server • Media redundancy PROFINET IO Controller Services — Isochronous mode — IRT — PROFIenergy	Yes; IPv4 Yes No Yes; Only Server Yes; Optionally also encrypted Yes Yes No No No No Yes; per user program
Protocols • IP protocol • PROFINET IO Controller • PROFINET IO Device • SIMATIC communication • Open IE communication • Web server • Media redundancy PROFINET IO Controller Services — Isochronous mode — IRT — PROFIenergy — Number of connectable IO Devices, max.	Yes; IPv4 Yes No Yes; Only Server Yes; Optionally also encrypted Yes Yes Yes No No No Yes; per user program 256 The minimum value of the update time also depends on communication share set for PROFINET IO, on the number of IO devices, and on the quantity of
Protocols • IP protocol • PROFINET IO Controller • PROFINET IO Device • SIMATIC communication • Open IE communication • Web server • Media redundancy PROFINET IO Controller Services — Isochronous mode — IRT — PROFIenergy — Number of connectable IO Devices, max. — Updating times	Yes; IPv4 Yes No Yes; Only Server Yes; Optionally also encrypted Yes Yes Yes No No No Yes; per user program 256 The minimum value of the update time also depends on communication share set for PROFINET IO, on the number of IO devices, and on the quantity of configured user data
Protocols • IP protocol • PROFINET IO Controller • PROFINET IO Device • SIMATIC communication • Open IE communication • Web server • Media redundancy PROFINET IO Controller Services — Isochronous mode — IRT — PROFIenergy — Number of connectable IO Devices, max. — Updating times — PROFINET Security Class Update time for RT	Yes; IPv4 Yes No Yes; Only Server Yes; Optionally also encrypted Yes Yes Yes No No No Yes; per user program 256 The minimum value of the update time also depends on communication share set for PROFINET IO, on the number of IO devices, and on the quantity of configured user data
Protocols • IP protocol • PROFINET IO Controller • PROFINET IO Device • SIMATIC communication • Open IE communication • Web server • Media redundancy PROFINET IO Controller Services — Isochronous mode — IRT — PROFIenergy — Number of connectable IO Devices, max. — Updating times — PROFINET Security Class Update time for RT — for send cycle of 1 ms	Yes; IPv4 Yes No Yes; Only Server Yes; Optionally also encrypted Yes Yes Yes No No No Yes; per user program 256 The minimum value of the update time also depends on communication share set for PROFINET IO, on the number of IO devices, and on the quantity of configured user data 1
Protocols • IP protocol • PROFINET IO Controller • PROFINET IO Device • SIMATIC communication • Open IE communication • Web server • Media redundancy PROFINET IO Controller Services — Isochronous mode — IRT — PROFIenergy — Number of connectable IO Devices, max. — Updating times — PROFINET Security Class Update time for RT — for send cycle of 1 ms 2. Interface	Yes; IPv4 Yes No Yes; Only Server Yes; Optionally also encrypted Yes Yes Yes No No No Yes; per user program 256 The minimum value of the update time also depends on communication share set for PROFINET IO, on the number of IO devices, and on the quantity of configured user data 1
Protocols • IP protocol • PROFINET IO Controller • PROFINET IO Device • SIMATIC communication • Open IE communication • Web server • Media redundancy PROFINET IO Controller Services — Isochronous mode — IRT — PROFIenergy — Number of connectable IO Devices, max. — Updating times — PROFINET Security Class Update time for RT — for send cycle of 1 ms 2. Interface Interface types	Yes; IPv4 Yes No Yes; Only Server Yes; Optionally also encrypted Yes Yes Yes No No No Yes; per user program 256 The minimum value of the update time also depends on communication share set for PROFINET IO, on the number of IO devices, and on the quantity of configured user data 1 1 ms to 512 ms
Protocols • IP protocol • PROFINET IO Controller • PROFINET IO Device • SIMATIC communication • Open IE communication • Web server • Media redundancy PROFINET IO Controller Services — Isochronous mode — IRT — PROFIenergy — Number of connectable IO Devices, max. — Updating times — PROFINET Security Class Update time for RT — for send cycle of 1 ms 2. Interface Interface types • RJ 45 (Ethernet)	Yes; IPv4 Yes No Yes; Only Server Yes; Optionally also encrypted Yes Yes Yes No No No Yes; per user program 256 The minimum value of the update time also depends on communication share set for PROFINET IO, on the number of IO devices, and on the quantity of configured user data 1 1 ms to 512 ms
Protocols • IP protocol • PROFINET IO Controller • PROFINET IO Device • SIMATIC communication • Open IE communication • Web server • Media redundancy PROFINET IO Controller Services — Isochronous mode — IRT — PROFIenergy — Number of connectable IO Devices, max. — Updating times — PROFINET Security Class Update time for RT — for send cycle of 1 ms 2. Interface Interface types	Yes; IPv4 Yes No Yes; Only Server Yes; Optionally also encrypted Yes Yes Yes No No No Yes; per user program 256 The minimum value of the update time also depends on communication share set for PROFINET IO, on the number of IO devices, and on the quantity of configured user data 1 1 ms to 512 ms

• IP protocol	Yes; IPv4
PROFINET IO Controller	No
PROFINET IO Device	No
 SIMATIC communication 	Yes; Only Server
Open IE communication	Yes; Optionally also encrypted
Web server	Yes
Media redundancy	No
3. Interface	
Interface type	Pluggable synchronization submodule (FO)
Plug-in interface modules	Synchronization module 6ES7960-1CB00-0AA5, 6ES7960-1FB00-0AA5 or 6ES7 960-1FE00-0AA5
4. Interface	
Interface type	Pluggable synchronization submodule (FO)
Plug-in interface modules	Synchronization module 6ES7960-1CB00-0AA5, 6ES7960-1FB00-0AA5 or 6ES7960-1FE00-0AA5
Interface types	
RJ 45 (Ethernet)	
• 100 Mbps	Yes
 Autonegotiation 	Yes
Autocrossing	Yes
Industrial Ethernet status LED	Yes
Protocols	
PROFIsafe	No
Number of connections	
Number of connections, max.	320; via integrated interfaces of the CPU and connected CPs
Number of connections reserved for ES/HMI/web	10
Number of connections via integrated interfaces	288
Number of softmeetons via integrated interfaces Number of S7 routing paths	64
Redundancy mode	04
•	Yes
PROFINET system redundancy (S2) PROFINET system redundancy (D4)	
PROFINET system redundancy (R1) Marking redundancy (R1)	Yes
Media redundancy	V ABB 4 / 150 00 / 00 5 111 00 0
— MRP	Yes; MRP Automanager according to IEC 62439-2 Edition 2.0
MRP interconnection, supported	Yes; as MRP ring node according to IEC 62439-2 Edition 3.0
— MRPD	No
 Switchover time on line break, typ. 	200 ms; PROFINET MRP
Number of stations in the ring, max.	50
SIMATIC communication	
 PG/OP communication 	Yes; encryption with TLS V1.3 pre-selected
• S7 routing	Yes
 S7 communication, as server 	Yes
S7 communication, as client	No
Open IE communication	
• TCP/IP	Yes
— Data length, max.	64 kbyte
 several passive connections per port, supported 	Yes
• ISO-on-TCP (RFC1006)	Yes
— Data length, max.	64 kbyte
• UDP	Yes
— Data length, max.	2 kbyte; 1 472 bytes for UDP broadcast
— UDP multicast	Yes; 128 multicast circuits (of which max. 5 via X1)
• DHCP	No
• DNS	Yes
• SNMP	Yes
• DCP	Yes
• LLDP	Yes
• Encryption	Yes; Optional
Web server	166, Optional
HTTP	No
• HTTPS	Yes; only via Web API
• web API	Yes

— Number of sessions, max.	200
Number of sessions, max. number of simultaneous HTTP calls, max.	4
HTTP request body, max.	131 072 byte
OPC UA	131 0/2 byte
Runtime license required	Yes; "Large" license required per CPU
OPC UA Client	No
OPC UA Server	Yes; Data access (read, write, subscribe), method call, custom address space
	Yes
Application authentication Security policies	
— Security policies	available security policies: None, Basic128Rsa15, Basic256Rsa15, Basic256Sha256, Aes128Sha256RsaOaep, Aes256Sha256RsaPss
 User authentication 	"anonymous" or by user name & password
 — GDS support (certificate management) 	No
 Number of sessions, max. 	32
 Number of subscriptions per session, max. 	25
— Sampling interval, min.	25 ms
— Publishing interval, min.	25 ms
 Number of server methods, max. 	100
 Number of inputs/outputs per server method, max. 	20
 Number of monitored items, recommended max. 	5 000; for 1 s sampling interval and 1 s send interval
Number of server interfaces, max.	10 of each "Server interfaces" / "Companion specification" type and 20 of the type "Reference namespace"
 Number of nodes for user-defined server interfaces, 	30 000
max.	00 000
Alarms and Conditions	No
Further protocols	
• MODBUS	Yes; MODBUS TCP
S7 message functions	
Number of login stations for message functions, max.	64
number of subscriptions, max.	750
number of tags/attributes for subscriptions, max.	20 000
Program alarms	Yes
Number of configurable program messages, max.	10 000; Program messages are generated by the "Program_Alarm" block, ProDiag or GRAPH
Number of loadable program messages in RUN, max.	10 000
Number of simultaneously active program alarms	
Number of program alarms	2 000
 Number of alarms for system diagnostics 	1 000
Test commissioning functions	
Joint commission (Team Engineering)	No
Status block	Yes; Up to 16 simultaneously
Single step	No
Number of breakpoints	20; Breakpoints are only supported in RUN-Solo status
Status/control	
Status/control variable	Yes
Variables	Inputs/outputs, memory bits, DBs, distributed I/Os, timers, counters
Number of variables, max.	, , , , , , , , , , , , , , , , , , , ,
— of which status variables, max.	200; per job
of which control variables, max.	200; per job
Forcing	, 100
• Forcing	Yes
• Forcing, variables	Peripheral inputs/outputs
Number of variables, max.	200
Diagnostic buffer	
• present	Yes
Number of entries, max.	3 200
Number of entries, max. — of which powerfail-proof	1 000
— of which poweriali-proof	1 000
Number of configurable Traces	8
-	
Memory size per trace, max. Interpreted diagnostics (status information)	512 kbyte
Interrupts/diagnostics/status information	
Diagnostics indication LED	Voc
RUN/STOP LED	Yes

- MAINT IEED - Yes - MAINT IEED - Yes - Connection display LINK TX/RX - Yes - Motion Control - Controler - PID_Compact - PID_Co	• ERROR LED	Yes
Connection display LINKT TX/RX Supported technology edjects Motion Controller PID, Compact PID, Salsp PID, Sa		
Motion Control Motion Control No Controller		
Motion Control Controller PID_Compact PID_Step PID_Step PID_Step PID_controller with integrated optimization PID_Step PID_Step PID_controller with integrated optimization or valves PID_Controller with integrated optimization for valves PID_controller with integrated optimization for temperature Counting and measuring Ambient temperature during operation Portrorolal installation, min. Portrorolal installation, min. Portrorolal installation, max. Portrorolal inst	. ,	165
Controller PID_Compact Pid_Controller with integrated optimization for valves Pid_Controller with integrated optimization for temperature Counting and measuring Pass Ambient conditions Ambient temperature during operation Protection installation, min. Protection installation was. Protection installa		No
PID_Compact PID_Step		NO
PID. Skip PID. Temp Ves. PID controller with integrated optimization for valves PID. Temp Ves. PID controller with integrated optimization for temperature Ambient temperature during operation Portzontal installation, min. Portzontal installation min. Portzontal installation. Portzonta		V III IND III III II II II II II
PID-Temp Yes; PID controller with integrated optimization for temperature Counting and measuring Yes Ambient conditions Ambient temperature during operation • horizontal installation, min. • horizontal installation, min. • horizontal installation, max. • vertical installation and preparative of typically 50 °C, the display is switched off Ambient temperature during storagetized off • max. 70 °C Allitude during operation preparation telating to sea sevel • Installation altitude above sea level, max. • 70 °C Allitude during operation stallation altitudes > 2 000 m, see manual configuration / header • Programming language • LAD • F8D • Ves • CPC • Ves • CPC • Ves • CPC • Ves • CPC • Ves • Protection protection • Protection for confidential configuration data • Password for display • Protection fevel: Write protection • Protection fevel: Write protection • Ves • Protection fevel: Complete protection • Ves • Pr	_ :	
Counting and measuring Ambient conditions Ambient temperature during operation • horizontal installation, min. • horizontal installation, min. • horizontal installation, max. • vertical installation ins		· ·
Ambient conditions Ambient temperature during operation • horizontal installation, min. • horizontal installation, min. • horizontal installation, min. • vertical installation altiful temperature of typically 40 °C, the display is switched off Ambient temperature during storage/transportation • min. • min. • max. 70 °C Altitude during operation relating to sea level • Installation altitude above sea level, max. configuration / programming / header Programming language — LAD — LAD — Yes — STL — SCL — Yes — STL — SCL — Yes — SCL — CFC — GRAPH — Yes Know-how protection • User program protection/password protection • User program protection/password protection • User program protection yes • Protection level: Write protection • Protection level: Write protection • Protection level: Write protection • Yes • Protection level: Write p	·	
Ambient temperature during operation • horizontal installation, min. • vertical installation, max. display is switched off • vertical installation, max. display is switched off 40 °C, Display, 40 °C, at an operating temperature of typically 40 °C, the display is switched off Ambient temperature during storagetransportation • min. • max. 70 °C Allitude during operation relating to sea level • Installation allitude above sea level, max. for installation allitude above sea level, max. for installation allitudes > 2 000 m, see manual configuration / programming / header Programming language — LAD — FBD — STI. — SCL — CFC — GRAPH Yes Know-how protection • User program protection/password protection • User program protection/password protection • User program protection/password protection • Protection level: Write protection • Protection level: Write protection • Protection level: Write protection • Protection level: Readwrite protection • Protection level: Write		Yes
horizontal installation, min. horizontal installation, max. horizontal installation, max. horizontal installation, min. vertical installation, min. vertical installation, max. do "C Display: 50 "C, at an operating temperature of typically 50 "C, the display is switched off vertical installation, max. do "C Display: 40 "C, at an operating temperature of typically 40 "C, the display is switched off Ambient temperature during storage.transportation min.		
Norizontal installation, max. vertical installation, min. vertical installation, min. vertical installation, min. vertical installation, max. All true designation of the display is switched off Ambient temperature during storage.transportation min. max. All true during operation relating to sea level Installation altitude above sea level, max. Solo my; Restrictions for installation altitudes > 2 000 m, see manual configuration / programming language — LAD — FBD — Yes — STL — SCL — CFC — GRAPH Know-how protection User program protection/password protection Block protection Protection leve: Write protection Protection leve: Write protection Protection leve: Write protection Protection leve: Write protection Programming in pader Protection leve: Write protection Protection leve: Capality of Capality (Sea Protection Programming) / Protection leve: Write protection Protection leve: Write protection Protection leve: Capality (Sea Protection Protection Programming) / Protection leve: Write protection Protection leve: Capality (Sea Protection Programming) / Protection leve: Write protection Protection Protection Protection Protection Protection Protect		
display is switched off or vertical installation, min. vertical installation, max. or CD isplay: 40 °C, at an operating temperature of typically 40 °C, the display is switched off Ambient temperature during storage/transportation min. min. min. min. max. 70 °C Altitude during operation relating to sea level installation altitude above sea level, max. 5 000 m; Restrictions for installation altitudes > 2 000 m, see manual configuration / programming / header Programming language LAD FED FED FED FED FES STL FED FES FER		
vertical installation, max. 40 °C; Display: 40 °C, at an operating temperature of typically 40 °C, the display is switched off Ambient temperature during storage/transportation min. min. 40 °C max. 70 °C Altitude during operation relating to sea level Installation altitude above sea level, max. 5 000 m; Restrictions for installation altitudes > 2 000 m, see manual configuration / programming / header Programming language LAD FBD STL SCL CFC GRAPH Yes ASCL CFC GRAPH Yes Know-how protection User program protection/password protection Block protection Protection fevel: Write protection Protection level: W		display is switched off
display is switched off Ambient temperature during storage/transportation • min. • max. 70 °C Altitude during operation relating to sea level • Installation altitude above sea level, max. • food mit the safer configuration / header configuration / header Programming language — LAD — FBD — Yes — STL — SCL — CFC — Yes — CFC — GRAPH — Yes Know-how protection • User program protection/password protection • Disck protection • Disck protection • protection of confidential configuration data Password for display • Protection level: Write protection • Protection level: Write protection • Protection level: Write protection • User protection evel: Read/write protection • Protection level: Write protection • Protection level: Write protection • User protection evel: Complete protection • Protection level: Complete protection • Protection level: Complete protection • User administration • Use		
min. max. max. max. max. max. max. max. max	vertical installation, max.	
■ max. Altitude during operation relating to sea level ■ Installation altitude above sea level, max.	Ambient temperature during storage/transportation	
Altitude during operation relating to sea level Installation altitude above sea level, max. 5 000 m; Restrictions for installation altitudes > 2 000 m, see manual configuration / programming / header Programming language -LAD Yes -FBD Yes -STL Yes -SCL Yes -CFC Yes -GRAPH Yes Know-how protection User program protection/password protection Yes Copy protection Postop crotection Yes Protection for confidential configuration data Password for display Protection level: Write protection Protection level: Write protection Protection level: Write protection Yes User administration Yes Protection level: Write protection Yes Protection	• min.	-40 °C
Installation altitude above sea level, max. Configuration / header configuration / header Programming language — LAD Yes — FBD Yes — STL Yes — SCL Yes — GRAPH Yes Know-how protection • User program protection/password protection • Block protection • Protection level: Confidential configuration data Password for display • Protection level: Write protection • Protection level: Complete protection • Protection level: Mrite protection • Protection level: Mrite protection • Protection level: Mrite protection for Fallsafe • Protection level: Write protection for Fallsafe • Protection level: Write protection • Protecti	• max.	70 °C
configuration / programming / header Programming language	Altitude during operation relating to sea level	
configuration / programming / header Programming language — LAD Yes — FBD Yes — STL Yes — STL Yes — SCL Yes — CFC Yes — GRAPH Yes Know-how protection • User program protection/password protection Yes • Copy protection Yes • Copy protection Yes Access protection • protection of confidential configuration data Yes • Password for display Yes • Protection level: Write protection Yes • Protection level: Complete protection Yes • Protection level: Complete protection Yes • User administration Yes • User administration Yes • User administration Yes programming / cycle time monitoring / header • lower limit adjustable maximum cycle time • Upper limit		5 000 m; Restrictions for installation altitudes > 2 000 m, see manual
Programming language - LAD - FBD - FBD - Yes - STL - SCL - Yes - CFC - GRAPH - Yes Know-how protection • User program protection/password protection • Block protection • Block protection • protection for confidential configuration data • Protection of confidential configuration data • Protection level: Write protection • Protection level: Write protection • Protection level: Complete protection • Protection level: Access protection • Protection level: Write protection • Protection level: Write protection • Protection level: Write protection • Protection level: Complete protection • Yes • Protection level: Complete protection • Yes • User administration • Yes • Isomorphic display • Protection level: Omplete protection • Yes • User administration • Yes • Isomorphic Implication • Informations • Yes • Isomorphic Implication • Item Isomorphic Implica	configuration / header	
- LAD	configuration / programming / header	
FBD STL STL Yes SCL Yes CFC Yes CFC CFC Yes GRAPH Yes	Programming language	
STL SCL CFC CFC GRAPH Yes Know-how protection User program protection/password protection Copy protection Block protection Block protection Protection for display Protection level: Write protection Protection level: Complete protection Protection level: Complete protection Protection level: Complete protection Protection level: Write protection Protection le	— LAD	Yes
SCL CFC GRAPH Yes Know-how protection • User program protection/password protection • Copy protection • Block protection • protection of confidential configuration data • protection of confidential configuration data • Password for display • Protection level: Write protection • Protection level: Write protection • Protection level: Write protection for Failsafe • Protection level: Write protection • Protection level: Complete protection • Protection level: Complete protection • Protection level: Write protecti	— FBD	Yes
- CFC - GRAPH Yes Know-how protection User program protection/password protection Block protection Protection Protection Yes Access protection protection of confidential configuration data Password for display Protection level: Write protection Protection level: Complete protection Programming / cycle time monitoring / header I lower limit Upper limit Upper limit Pupper limit Depth Depth Depth Dimensions Yes Yes Yes Yes Yes Access protection Yes Protection level: Write protection Yes Access protection Protection level: Write protection Yes Protection level: Complete protection Yes User administration Yes Dimensions Width 210 mm Height Depth Depth Depth Depth Dimensions	— STL	Yes
However the second seco	— SCL	Yes
Know-how protection • User program protection/password protection • Copy protection • Copy protection • Block protection • protection of confidential configuration data • protection of confidential configuration data • protection level: Write protection • Protection level: Write protection • Protection level: Read/write protection • Protection level: Write protection for Failsafe • Protection level: Complete protection • User administration programming / cycle time monitoring / header • lower limit • upper limit • upper limit Dimensions Width 210 mm Height Depth 129 mm Weights	— CFC	Yes
User program protection/password protection Copy protection No Block protection Yes Access protection protection of confidential configuration data Password for display Protection level: Write protection Protection level: Complete protection Protection level: Complete protection Ves Protection level: Complete protection Ves Ouser administration Ves programming / cycle time monitoring / header No 10 wer limit Adjustable minimum cycle time Adjustable maximum cycle time Dimensions Width 117 mm Depth 129 mm Weights	— GRAPH	Yes
Copy protection Block protection Yes Access protection protection of confidential configuration data Password for display Protection level: Write protection Protection level: Read/write protection Protection level: Write protection Protection level: Write protection Protection level: Write protection Protection level: Write protection Protection level: Complete protection Protection level: Complete protection Protection level: Complete protection Programming / cycle time monitoring / header I lower limit Dimensions Width Pight Dimensions Width Pepth Dimensions Weights	Know-how protection	
Block protection Access protection protection of confidential configuration data Password for display Protection level: Write protection Protection level: Read/write protection Protection level: Write protection Protection level: Write protection Protection level: Write protection for Failsafe Protection level: Complete protection Protection level: Write protecti	 User program protection/password protection 	Yes
Access protection • protection of confidential configuration data • Password for display • Protection level: Write protection • Protection level: Read/write protection • Protection level: Read/write protection • Protection level: Write protection for Failsafe • Protection level: Complete protection • Protection level: Complete protection • User administration • User administration Programming / cycle time monitoring / header • lower limit • upper limit • upper limit Dimensions Width 210 mm Height 147 mm Depth Weights	Copy protection	No
protection of confidential configuration data Password for display Protection level: Write protection Protection level: Read/write protection Protection level: Read/write protection Protection level: Write protection Protection level: Write protection for Failsafe Protection level: Complete protection Ves User administration Programming / cycle time monitoring / header Iower limit Adjustable minimum cycle time Adjustable maximum cycle time Dimensions Width Pathom Service	Block protection	Yes
Password for display Protection level: Write protection Protection level: Read/write protection Protection level: Read/write protection Protection level: Write protection for Failsafe Protection level: Write protection for Failsafe Protection level: Complete protection Protection level: Complete protection User administration Programming / cycle time monitoring / header I lower limit Upper limit U	Access protection	
Protection level: Write protection Protection level: Read/write protection Protection level: Write protection Protection level: Write protection for Failsafe Protection level: Complete protection Ves User administration Yes programming / cycle time monitoring / header lower limit upper limit adjustable minimum cycle time upper limit adjustable maximum cycle time Dimensions Width 210 mm Height Depth 129 mm Weights	-	Yes
Protection level: Read/write protection Protection level: Write protection for Failsafe Protection level: Complete protection User administration Programming / cycle time monitoring / header I lower limit Upper limit Uppe		Yes
 Protection level: Write protection for Failsafe Protection level: Complete protection User administration Programming / cycle time monitoring / header lower limit upper limit adjustable minimum cycle time upper limit adjustable maximum cycle time Dimensions Width 210 mm Height Depth 147 mm Depth Weights 	 Protection level: Write protection 	Yes
Protection level: Complete protection User administration Programming / cycle time monitoring / header I lower limit Upper limit Upper limit Dimensions Width Height Depth Depth 129 mm Weights	 Protection level: Read/write protection 	Yes
User administration Programming / cycle time monitoring / header I lower limit Upper limit Upper limit Upper limit Dimensions Width 210 mm Height 147 mm Depth Depth 129 mm Weights	 Protection level: Write protection for Failsafe 	No
programming / cycle time monitoring / header	 Protection level: Complete protection 	Yes
● lower limit ● upper limit Dimensions Width Height Depth		Yes
● upper limit adjustable maximum cycle time Dimensions Width 210 mm Height 147 mm Depth 129 mm Weights	programming / cycle time monitoring / header	
Dimensions Width 210 mm Height 147 mm Depth 129 mm Weights	• lower limit	
Width 210 mm Height 147 mm Depth 129 mm Weights	• •	adjustable maximum cycle time
Height 147 mm Depth 129 mm Weights	Dimensions	
Depth 129 mm Weights	Width	210 mm
Weights	Height	147 mm
	Depth	129 mm
Weight, approx. 2 094 g; Interface modules: 2x 18 g	Weights	
	Weight, approx.	2 094 g; Interface modules: 2x 18 g

last modified:

