SIEMENS

Data sheet

6ES7212-1HF40-0XB0



SIMATIC S7-1200, CPU 1212FC, compact CPU, DC/DC/relay, onboard I/O: 8 DI 24 V DC; 6 DO relay 2 A; 2 AI 0-10 V DC, Power supply: DC 20.4-28.8V DC, Program/data memory 100 KB

Product type designation Firmware version Firmware version Firmware version Programming package STEP 7 V17 or higher Supply voltage Rated value (DC) 424 V DC permissible range, lower limit (DC) permissible range, upper limit (DC) permissible ra	General information	
Engineering with Programming package STEP 7 V17 or higher Supply voltage Rated value (DC) 24 V DC permissible range, lower limit (DC) Permissible range, upper limit (DC) Permissible range, lower limit (DC) Permissible range, lower limit (DC) Permissible range, upper limit (DC) Permissible range, lower limit (DC) Permissible range, lower limit (DC) Permissible range, lower limit (DC) Permissible range, upper limit (DC) Permissible range, lower limit (DC) Permissible range,	Product type designation	CPU 1212FC DC/DC/relay
Programming package Supply voltage Rated value (DC)	Firmware version	V4.5
Rated value (DC) • 24 V DC permissible range, lower limit (DC) permissible range, lower limit (DC) permissible range, upper limit (DC) 28.8 V Load voltage L+ • Rated value (DC) • permissible range, wer limit (DC) permissible range, wer limit (DC) • permissible range, upper limit (DC) 28.8 V Input current Current consumption (rated value) Current consumption, max. 1 200 mA; CPU only Current consumption, max. 1 200 mA; CPU with all expansion modules linrush current, max. Pit 0.8 A*-s Output current for backplane bus (5 V DC), max. 1 1 000 mA; Max. 5 V DC for SM and CM Encoder supply 24 V encoder supply • 24 V	Engineering with	
Rated value (DC) • 24 V DC permissible range, lower limit (DC) permissible range, upper limit (DC) 28.8 V Load voltage L+ • Rated value (DC) • permissible range, lower limit (DC) 28.8 V Load voltage L+ • Rated value (DC) • permissible range, lower limit (DC) • permissible range, lower limit (DC) • permissible range, upper limit (DC) 28.8 V Input current Current consumption (rated value) Current consumption, max. 1 200 mA; CPU only Current consumption, max. 1 1200 mA; CPU with all expansion modules Inrush current, max. 1² A; at 28.8 V 1² B. A²-s Cutput current for backplane bus (5 V DC), max. 1 1000 mA; Max. 5 V DC for SM and CM Encoder supply 24 V encoder supply 24 V encoder supply • 24 V 24 V 1 L+ minus 4 V DC min. Power loss Power loss, typ. 9 W Memory Work memory • integrated • no kbyte • expandable No Load memory • integrated • Plug-in (SIMATIC Memory Card), max. Backup • present • res • maintenance-free • res • maintenance-free • res • maintenance-free • res • maintenance-free • res • minus 4 vinstruction	 Programming package 	STEP 7 V17 or higher
e 24 V DC permissible range, lower limit (DC) 20.4 V permissible range, upper limit (DC) 28.8 V Load voltage L+ • Rated value (DC) 24 V • permissible range, lower limit (DC) 20.4 V • permissible range, lower limit (DC) 20.4 V • permissible range, upper limit (DC) 28.8 V Input current Current consumption (rated value) 400 mA; CPU only Current consumption, max. 1200 mA; CPU with all expansion modules Inrush current, max. 12 A; at 28.8 V IPt 0.8 A*s Output current for backplane bus (5 V DC), max. 1 000 mA; Max. 5 V DC for SM and CM Encoder supply 24 V L+ minus 4 V DC min. Power loss Power loss, typ. 9 W Memory Work memory • integrated 100 kbyte • expandable No Load memory • integrated 2 Mbyte • expandable No Load memory • integrated 2 Mbyte • Plug-in (SIMATIC Memory Card), max. with SIMATIC memory card Backup • present Yes • maintenance-free Yes • without battery Yes for bit operations, typ. 0.08 µs; / instruction	Supply voltage	
permissible range, lower limit (DC) permissible range, upper limit (DC) 28.8 V Load voltage L+ Rated value (DC) permissible range, lower limit (DC) permissible range, lower limit (DC) permissible range, lower limit (DC) permissible range, upper limit (DC) permissible range, lower limit (DC) permissible range, lower limit (DC) permissible range, lower limit (DC) permissible range, upper	Rated value (DC)	
permissible range, upper limit (DC) Load voltage L+ Rated value (DC) permissible range, lower limit (DC) permissible range, upper limit (DC) permissible r	• 24 V DC	Yes
Load voltage L+ • Rated value (DC) • permissible range, lower limit (DC) • permissible range, upper limit (DC) 28.8 V Input current Current consumption (rated value) Current consumption, max. 1 200 mA; CPU only Current consumption, max. 12 A; at 28.8 V Pt 0.8 A²-s Output current for backplane bus (5 V DC), max. 1 000 mA; Max. 5 V DC for SM and CM Encoder supply 24 V encoder supply • 24 V L+ minus 4 V DC min. Power loss Power loss, typ. Wemory Work memory integrated • expandable No Load memory • integrated • Plug-in (SIMATIC Memory Card), max. Backup present • Present • maintenance-free • without battery for bit operations, typ. 0.08 µs; / instruction	permissible range, lower limit (DC)	20.4 V
Rated value (DC) permissible range, lower limit (DC) permissible range, upper limit (DC) permissible range, upper limit (DC) 28.8 V Input current Current consumption (rated value) Current consumption, max. 1 200 mA; CPU only Current consumption, max. 1 2 A; at 28.8 V Pt Output current for backplane bus (5 V DC), max. 1 000 mA; Max. 5 V DC for SM and CM Encoder supply 24 V encoder supply 24 V L+ minus 4 V DC min. Power loss Power loss, typ. 9 W Memory Work memory integrated expandable No Load memory integrated Plug-in (SIMATIC Memory Card), max. Backup present yes with out battery Yes cPU processing times for bit operations, typ. 0.08 μs; / instruction	permissible range, upper limit (DC)	28.8 V
permissible range, lower limit (DC) permissible range, upper limit (DC) permissible range, upper limit (DC) 28.8 V Input current	Load voltage L+	
permissible range, upper limit (DC) Input current	 Rated value (DC) 	24 V
Input current Current consumption (rated value) Current consumption, max. Inrush current, max. Invish current, max. Invish current for backplane bus (5 V DC), max. Invish current for backplane bus (5 V DC), max. Invish current In	 permissible range, lower limit (DC) 	20.4 V
Current consumption (rated value) Current consumption, max. Inrush current, max. It 2 A; at 28.8 V It 0.8 A2-s Output current for backplane bus (5 V DC), max. Inrush current Inrush cu	 permissible range, upper limit (DC) 	28.8 V
Current consumption, max. Inrush current, max. It is at 28.8 V It is at 28.8 V Output current for backplane bus (5 V DC), max. Inrush current Inrush current, max. Inrush current Inrush current Inrush current, max. Inrush current Inrush curren	Input current	
Inrush current, max. It is a construct to the state of t	Current consumption (rated value)	400 mA; CPU only
IPt 0.8 Å2-s Output current for backplane bus (5 V DC), max. 1 000 mA; Max. 5 V DC for SM and CM Encoder supply 24 V encoder supply • 24 V	Current consumption, max.	1 200 mA; CPU with all expansion modules
Output current for backplane bus (5 V DC), max. Encoder supply 24 V encoder supply • 24 V L+ minus 4 V DC min. Power loss Power loss, typ. 9 W Memory Work memory • integrated • expandable Load memory • integrated • Plug-in (SIMATIC Memory Card), max. Backup • present • maintenance-free • without battery For bit operations, typ. 1 000 mA; Max. 5 V DC for SM and CM L+ minus 4 V DC min. 1 000 mA; Max. 5 V DC for SM and CM 1 000 mA; Max. 5 V DC for SM and CM 1 000 mA; Max. 5 V DC for SM and CM 1 000 mA; Max. 5 V DC for SM and CM 1 000 mA; Max. 5 V DC for SM and CM 1 000 mA; Max. 5 V DC for SM and CM 1 000 mA; Max. 5 V DC for SM and CM 1 000 mA; Max. 5 V DC for SM and CM 1 000 mA; Max. 5 V DC for SM and CM 1 000 mA; Max. 5 V DC for SM and CM 1 000 mA; Max. 5 V DC for SM and CM 2 My DC min. 9 W Power loss 9 W Memory • integrated • xpandable •	Inrush current, max.	12 A; at 28.8 V
for backplane bus (5 V DC), max. Encoder supply 24 V encoder supply • 24 V	l²t	0.8 A ² ·s
Encoder supply 24 V encoder supply 24 V L+ minus 4 V DC min. Power loss Power loss, typ. 9 W Memory Work memory integrated expandable No Load memory integrated Plug-in (SIMATIC Memory Card), max. Backup present maintenance-free without battery For bit operations, typ. 100 kbyte 100 kbyte 2 Mbyte 2 Mbyte with SIMATIC memory card Yes Yes Yes Yes O.08 \music / instruction	Output current	
24 V encoder supply • 24 V L+ minus 4 V DC min. Power loss Power loss, typ. 9 W Memory Work memory • integrated • expandable Load memory • integrated • Plug-in (SIMATIC Memory Card), max. Backup • present • maintenance-free • without battery For bit operations, typ. 1	for backplane bus (5 V DC), max.	1 000 mA; Max. 5 V DC for SM and CM
• 24 V L+ minus 4 V DC min. Power loss Power loss, typ. 9 W Memory Work memory • integrated 100 kbyte • expandable No Load memory • integrated 2 Mbyte • Plug-in (SIMATIC Memory Card), max. with SIMATIC memory card Backup • present Yes • maintenance-free Yes • without battery Yes CPU processing times for bit operations, typ. 0.08 µs; / instruction	Encoder supply	
Power loss Power loss, typ. Memory Work memory integrated expandable No Load memory integrated Plug-in (SIMATIC Memory Card), max. Backup present maintenance-free without battery Yes CPU processing times for bit operations, typ. 9 W Memory 9 W Me	24 V encoder supply	
Power loss, typ. Memory Work memory integrated expandable Load memory integrated Plug-in (SIMATIC Memory Card), max. Backup present maintenance-free without battery For bit operations, typ. 9 W Memory 9 W Memory 100 kbyte No 2 Mbyte No 4 Mbyte Ves With SIMATIC memory card Yes Ves Ves Ves Ves Ves Ves Ves Ves O.08 µs; / instruction	• 24 V	L+ minus 4 V DC min.
Memory Work memory • integrated • expandable • no Load memory • integrated • Plug-in (SIMATIC Memory Card), max. Backup • present • maintenance-free • without battery CPU processing times for bit operations, typ. 100 kbyte No 100 kbyte No 2 Mbyte with SIMATIC memory card Yes Yes Yes Yes 0.08 μs; / instruction 0.08 μs; / instruction **Time Time Time Time Time Time Time Time	Power loss	
Work memory	Power loss, typ.	9 W
 integrated expandable No Load memory integrated Plug-in (SIMATIC Memory Card), max. Backup present maintenance-free without battery CPU processing times for bit operations, typ. 100 kbyte No Ye Without No Yes Yes Yes Yes Yes Yes Yes O.08 \mus; / instruction 	Memory	
 expandable Load memory integrated Plug-in (SIMATIC Memory Card), max. Backup present maintenance-free without battery CPU processing times for bit operations, typ. No No Ye Wibyte with SIMATIC memory card Yes Yes Yes O.08 µs; / instruction 	Work memory	
Load memory integrated Plug-in (SIMATIC Memory Card), max. Backup present maintenance-free without battery CPU processing times for bit operations, typ. 2 Mbyte 2 Mbyte yet 4 With SIMATIC memory card Yes Yes Yes Yes Yes O.08 \mus; / instruction	integrated	100 kbyte
 integrated Plug-in (SIMATIC Memory Card), max. Backup present maintenance-free with SIMATIC memory card Yes without battery CPU processing times for bit operations, typ. 0.08 µs; / instruction	expandable	No
 Plug-in (SIMATIC Memory Card), max. Backup present maintenance-free with SIMATIC memory card Yes without battery Yes CPU processing times for bit operations, typ. 0.08 µs; / instruction 	Load memory	
Backup	integrated	2 Mbyte
 present maintenance-free without battery Yes CPU processing times for bit operations, typ. 0.08 µs; / instruction 	Plug-in (SIMATIC Memory Card), max.	with SIMATIC memory card
 maintenance-free without battery CPU processing times for bit operations, typ. 0.08 µs; / instruction 	Backup	
• without battery CPU processing times for bit operations, typ. 9.08 \mus; / instruction	present	Yes
CPU processing times for bit operations, typ. 0.08 µs; / instruction	 maintenance-free 	Yes
for bit operations, typ. 0.08 µs; / instruction	without battery	Yes
	CPU processing times	
for word operations, typ. 1.7 µs; / instruction	· · · · · · · · · · · · · · · · · · ·	0.08 µs; / instruction
	for word operations, typ.	1.7 μs; / instruction

for floating point grithmatic, typ	2.3 us. / instruction
for floating point arithmetic, typ. CPU-blocks	2.3 μs; / instruction
Number of blocks (total)	DBs, FCs, FBs, counters and timers. The maximum number of addressable blocks ranges from 1 to 65535. There is no restriction, the entire working memory can be used
OB	
Number, max.	Limited only by RAM for code
Data areas and their retentivity	
Retentive data area (incl. timers, counters, flags), max.	14 kbyte
Flag	
• Size, max.	4 kbyte; Size of bit memory address area
Local data	
per priority class, max.	16 kbyte; Priority class 1 (program cycle): 16 KB, priority class 2 to 26: 6 KB
Address area	
Process image	
 Inputs, adjustable 	1 kbyte
Outputs, adjustable	1 kbyte
Hardware configuration	
Number of modules per system, max.	3 comm. modules, 1 signal board, 2 signal modules
Time of day	
Clock	
 Hardware clock (real-time) 	Yes
Backup time	480 h; Typical
Deviation per day, max.	±60 s/month at 25 °C
Digital inputs	
Number of digital inputs	8; Integrated
of which inputs usable for technological functions	4; HSC (High Speed Counting)
Source/sink input	Yes
Number of simultaneously controllable inputs	
all mounting positions	0
— up to 40 °C, max. Input voltage	8
Rated value (DC)	24 V
• for signal "0"	5 V DC at 1 mA
• for signal "1"	15 V DC at 2.5 mA
Input delay (for rated value of input voltage)	
for standard inputs	
— parameterizable	$0.2~\mathrm{ms},0.4~\mathrm{ms},0.8~\mathrm{ms},1.6~\mathrm{ms},3.2~\mathrm{ms},6.4~\mathrm{ms}$ and $12.8~\mathrm{ms},\mathrm{selectable}$ in groups of four
— at "0" to "1", min.	0.2 ms
— at "0" to "1", max.	12.8 ms
for interrupt inputs	V
— parameterizable	Yes
for technological functions	Single phase: 2 @ 100 kHz 9 2 @ 20 kHz differential: 2 @ 00 kHz 9 2
— parameterizable	Single phase: 3 @ 100 kHz & 3 @ 30 kHz, differential: 3 @ 80 kHz & 3 @ 30 kHz
Cable length	
shielded, max.	500 m; 50 m for technological functions
• unshielded, max.	300 m; for technological functions: No
Digital outputs	
Number of digital outputs	6; Relays
Switching capacity of the outputs	
with resistive load, max.	2 A
on lamp load, max.	30 W with DC, 200 W with AC
Output delay with resistive load	
• "0" to "1", max.	10 ms; max.
• "1" to "0", max.	10 ms; max.
Relay outputs	
Number of relay outputs	6
Number of operating cycles, max.	mechanically 10 million, at rated load voltage 100 000
Cable length	F00
• shielded, max.	500 m

• unshielded, max.	150 m
Analog inputs	
Number of analog inputs	2
Input ranges	
Voltage	Yes
Input ranges (rated values), voltages	
• 0 to +10 V	Yes
— Input resistance (0 to 10 V)	≥100k ohms
Cable length	100 ms huisted and shielded
• shielded, max.	100 m; twisted and shielded
Analog outputs	
Number of analog outputs	0
Analog value generation for the inputs	
Integration and conversion time/resolution per channel	40.1%
Resolution with overrange (bit including sign), max. Integration time parameterizable.	10 bit Yes
Integration time, parameterizableConversion time (per channel)	625 µs
Encoder	023 μ8
Connectable encoders	
• 2-wire sensor	Yes
1. Interface	
	PROFINET
Interface type Isolated	Yes
automatic detection of transmission rate	Yes
Autonegotiation	Yes
Autocrossing	Yes
Interface types	
 Number of ports 	1
integrated switch	No
Protocols	
PROFINET IO Controller	Yes
PROFINET IO Device NATIO assessment in the second	Yes
SIMATIC communication Open IF communication	Yes Yes; Optionally also encrypted
Open IE communication Web server	Yes
Media redundancy	No
PROFINET IO Controller	
Transmission rate, max.	100 Mbit/s
Services	
— PG/OP communication	Yes; encryption with TLS V1.3 pre-selected
— Isochronous mode	No
— IRT	No
— PROFlenergy	No V
— Prioritized startup	Yes
 Number of IO devices with prioritized startup, max. 	16
Number of connectable IO Devices, max.	16
 Number of connectable IO Devices for RT, 	16
max.	
— of which in line, max.	16
Activation/deactivation of IO Devices Number of IO Devices that any ha	Yes
 Number of IO Devices that can be simultaneously activated/deactivated, max. 	8
— Updating time	The minimum value of the update time also depends on the communication component set for PROFINET IO, on the number of IO devices and the quantity of configured user data.
PROFINET IO Device	, , ,
Services	
— PG/OP communication	Yes; encryption with TLS V1.3 pre-selected
— Isochronous mode	No
— IRT	No
— PROFlenergy	Yes
— Shared device	Yes
 — Number of IO Controllers with shared device. 	2

max.	
Protocols	
<u> </u>	Yes
Supports protocol for PROFINET IO PROFIsafe	Yes
PROFIBUS	Yes; CM 1243-5 (master) or CM 1242-5 (slave) required
OPC UA	Yes: OPC UA Server
AS-Interface	
	Yes; CM 1243-2 required
Protocols (Ethernet)	V
• TCP/IP	Yes
• DHCP	No
• SNMP	Yes
• DCP	Yes
• LLDP	Yes
Redundancy mode	
Media redundancy	
— MRP	No
— MRPD	No
Open IE communication	
• TCP/IP	Yes
— Data length, max.	8 kbyte
• ISO-on-TCP (RFC1006)	Yes
— Data length, max.	8 kbyte
• UDP	Yes
— Data length, max.	1 472 byte
Web server	
• supported	Yes
User-defined websites	Yes
OPC UA	
Runtime license required	Yes; "Basic" license required
OPC UA Server	Yes; data access (read, write, subscribe), method call, runtime license
• OF C OA Server	required
 Application authentication 	Available security policies: None, Basic128Rsa15, Basic256Rsa15,
Application authoritisation	Basic256Sha256
User authentication	"anonymous" or by user name & password
 Number of sessions, max. 	10
Number of subscriptions per session, max.	5
— Sampling interval, min.	100 ms
— Publishing interval, min.	200 ms
9	
Number of server methods, max.	20
 Number of monitored items, recommended max. 	1 000
Number of server interfaces, max.	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
 Number of nodes for user-defined server interfaces, max. 	2 000
Further protocols • MODBUS	Von
	Yes
communication functions / header	
S7 communication	
supported	Yes
• as server	Yes
• as client	Yes
 User data per job, max. 	See online help (S7 communication, user data size)
Number of connections	
overall	PG Connections: 4 reserved / 4 max; HMI Connections: 12 reserved /
	18 max; S7 Connections: 8 reserved / 14 max; Open User Connections:
	8 reserved / 14 max; Web Connections: 2 reserved / 30 max; OPC UA
	Connections: 0 reserved / 10 max; Total Connections: 34 reserved / 64
	max
Test commissioning functions	
Status/control	
Status/control variable	Yes
 Variables 	inputs/outputs, bit memories, DBs, peripheral I/Os (without fail-safe),
	times, counters
Forcing	
Forcing	Yes; peripheral inputs/outputs (without fail-safe)
-	

Diagnostic buffer	
Diagnostic buffer	Yes
• present Traces	165
Number of configurable Traces	2
Memory size per trace, max.	512 kbyte
Interrupts/diagnostics/status information	
Diagnostics indication LED	
RUN/STOP LED	Yes
• ERROR LED	Yes
MAINT LED	Yes
Integrated Functions	
Frequency measurement	Yes
controlled positioning	Yes
Number of position-controlled positioning axes, max.	8
Number of positioning axes via pulse-direction interface	Up to 4 with SB 1222
PID controller	Yes
Number of alarm inputs	4
Potential separation	
Potential separation digital inputs	500V AC for 1 minute
 Potential separation digital inputs between the channels, in groups of 	500V AC for 1 minute
Detween the channels, in groups of Potential separation digital outputs	
Potential separation digital outputs	Relays
between the channels	No
 between the channels, in groups of 	2
EMC	
Interference immunity against discharge of static electricity	
Interference immunity against discharge of static	Yes
electricity acc. to IEC 61000-4-2	
Test voltage at air discharge	8 kV
Test voltage at contact discharge	6 kV
Interference immunity to cable-borne interference	Voo
 Interference immunity on supply lines acc. to IEC 61000-4-4 	Yes
Interference immunity on signal cables acc. to IEC	Yes
61000-4-4	
Interference immunity against voltage surge	
 Interference immunity on supply lines acc. to IEC 61000-4-5 	Yes
Interference immunity against conducted variable disturbance	e induced by high-frequency fields
Interference immunity against conducted variable disturbance Interference immunity against high-frequency	Yes
radiation acc. to IEC 61000-4-6	
Emission of radio interference acc. to EN 55 011	
 Limit class A, for use in industrial areas 	Yes; Group 1
 Limit class B, for use in residential areas 	Yes; When appropriate measures are used to ensure compliance with
Dograp and along of protection	the limits for Class B according to EN 55011
Degree and class of protection	IDOO
IP degree of protection	IP20
Standards, approvals, certificates	V
CE mark	Yes
UL approval	Yes Yes
cULus FM approval	Yes
RCM (formerly C-TICK)	Yes
KC approval	Yes
Marine approval	Yes
Highest safety class achievable in safety mode	
Performance level according to ISO 13849-1	PLe
• SIL acc. to IEC 61508	SIL 3
Ambient conditions	
Free fall	
● Fall height, max.	0.3 m; five times, in product package
Ambient temperature during operation	

• min.	0°C
• max.	55 °C; Number of simultaneously activated inputs or outputs 4 or 3 (no adjacent points) at 60 °C horizontal or 50 °C vertical, 8 or 6 at 55 °C horizontal or 45 °C vertical
 horizontal installation, min. 	0 °C
 horizontal installation, max. 	55 °C
 vertical installation, min. 	0 °C
vertical installation, max.	45 °C
Ambient temperature during storage/transportation	
• min.	-40 °C
• max.	70 °C
Air pressure acc. to IEC 60068-2-13	
Operation, min.	795 hPa
Operation, max.	1 080 hPa
Storage/transport, min.	660 hPa
Storage/transport, max.	1 080 hPa
Altitude during operation relating to sea level	
Installation altitude, min.	-1 000 m
Installation altitude, max.	5 000 m; Restrictions for installation altitudes > 2 000 m, see manual
Relative humidity	2 000 11, 1000 100 1100 1100 1100 1100 1
Operation, max.	95 %; no condensation
Vibrations	00 73, 110 00.100.100.1
Vibration resistance during operation acc. to IEC 60068-2-6	2 g (m/s²) wall mounting, 1 g (m/s²) DIN rail
 Operation, tested according to IEC 60068-2-6 	Yes
Shock testing	
• tested according to IEC 60068-2-27	Yes; IEC 68, Part 2-27 half-sine: strength of the shock 15 g (peak value), duration 11 ms
Pollutant concentrations	
 SO2 at RH < 60% without condensation 	S02: < 0.5 ppm; H2S: < 0.1 ppm; RH < 60% condensation-free
configuration / header	
configuration / programming / header	
configuration / programming / header	Yes; incl. failsafe
configuration / programming / header Programming language	Yes; incl. failsafe Yes; incl. failsafe
configuration / programming / header Programming language — LAD	
configuration / programming / header Programming language — LAD — FBD	Yes; incl. failsafe
configuration / programming / header Programming language — LAD — FBD — SCL	Yes; incl. failsafe
configuration / programming / header Programming language — LAD — FBD — SCL Know-how protection	Yes; incl. failsafe Yes
configuration / programming / header Programming language — LAD — FBD — SCL Know-how protection • User program protection/password protection	Yes; incl. failsafe Yes Yes
configuration / programming / header Programming language — LAD — FBD — SCL Know-how protection • User program protection/password protection • Copy protection	Yes; incl. failsafe Yes Yes Yes
configuration / programming / header Programming language — LAD — FBD — SCL Know-how protection • User program protection/password protection • Copy protection • Block protection	Yes; incl. failsafe Yes Yes Yes
configuration / programming / header Programming language — LAD — FBD — SCL Know-how protection • User program protection/password protection • Copy protection • Block protection Access protection	Yes; incl. failsafe Yes Yes Yes Yes Yes
configuration / programming / header Programming language — LAD — FBD — SCL Know-how protection • User program protection/password protection • Copy protection • Block protection Access protection • Protection level: Write protection • Protection level: Read/write protection • Protection level: Complete protection	Yes; incl. failsafe Yes Yes Yes Yes Yes Yes
configuration / programming / header Programming language — LAD — FBD — SCL Know-how protection • User program protection/password protection • Copy protection • Block protection Access protection • Protection level: Write protection • Protection level: Read/write protection	Yes; incl. failsafe Yes Yes Yes Yes Yes Yes Yes
configuration / programming / header Programming language — LAD — FBD — SCL Know-how protection • User program protection/password protection • Copy protection • Block protection Access protection • Protection level: Write protection • Protection level: Read/write protection • Protection level: Complete protection	Yes; incl. failsafe Yes Yes Yes Yes Yes Yes Yes
configuration / programming / header Programming language — LAD — FBD — SCL Know-how protection • User program protection/password protection • Copy protection • Block protection Access protection • Protection level: Write protection • Protection level: Read/write protection • Protection level: Complete protection programming / cycle time monitoring / header	Yes; incl. failsafe Yes Yes Yes Yes Yes Yes Yes Yes Yes
configuration / programming / header Programming language — LAD — FBD — SCL Know-how protection • User program protection/password protection • Copy protection • Block protection Access protection • Protection level: Write protection • Protection level: Write protection • Protection level: Complete protection • Protection level: Complete protection programming / cycle time monitoring / header • adjustable Dimensions	Yes; incl. failsafe Yes Yes Yes Yes Yes Yes Yes Yes Yes Ye
configuration / programming / header Programming language — LAD — FBD — SCL Know-how protection • User program protection/password protection • Copy protection • Block protection Access protection • Protection level: Write protection • Protection level: Read/write protection • Protection level: Complete protection programming / cycle time monitoring / header • adjustable Dimensions Width	Yes; incl. failsafe Yes Yes Yes Yes Yes Yes Yes Yes Yes Ye
configuration / programming / header Programming language — LAD — FBD — SCL Know-how protection • User program protection/password protection • Copy protection • Block protection Access protection • Protection level: Write protection • Protection level: Read/write protection • Protection level: Complete protection programming / cycle time monitoring / header • adjustable Dimensions Width Height	Yes; incl. failsafe Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes You Yes Yes Yes
configuration / programming / header Programming language — LAD — FBD — SCL Know-how protection	Yes; incl. failsafe Yes Yes Yes Yes Yes Yes Yes Yes Yes Ye
configuration / programming / header Programming language — LAD — FBD — SCL Know-how protection	Yes; incl. failsafe Yes Yes Yes Yes Yes Yes Yes Yes Yes Ye
configuration / programming / header Programming language — LAD — FBD — SCL Know-how protection	Yes; incl. failsafe Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes You Yes Yes Yes