SIEMENS

Data sheet

6ES7515-2TN03-0AB0



SIMATIC S7-1500T, CPU 1515T-2 PN, central processing unit with 1.5 MB work memory for program and 4.5 MB for data, 1st interface: PROFINET IRT with 2-port switch, 2nd interface: PROFINET RT, 6 ns bit performance, SIMATIC Memory Card required - - - approvals and certificates according to entry 109816881 at support.industry.siemens.com to be considered! - -

Figure similar

riguresiiiiia	
General information	
Product type designation	CPU 1515T-2 PN
HW functional status	FS05
Firmware version	V4.0
FW update possible	Yes
Product function	
● I&M data	Yes; I&M0 to I&M3
• Isochronous mode	Yes; Distributed and central; with minimum OB $6x$ cycle of $375~\mu s$ (distributed) and 1 ms (central)
SysLog	Yes
Engineering with	
STEP 7 TIA Portal configurable/integrated from version	V20 (FW V4.0) / V18 (FW V3.0) or higher; configurable with older TIA Portal versions as 6ES7515-2TM01-0AB0
Configuration control	
via dataset	Yes
Display	
Screen diagonal [cm]	6.1 cm
Control elements	
Number of keys	8
Mode buttons	2
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)	0.65 A
Current consumption, max.	1.03 A
Inrush current, max.	1.15 A; Rated value
l²t	0.6 A ² ·s
Power	
Infeed power to the backplane bus	12 W
Power consumption from the backplane bus (balanced)	6.2 W
Power loss	
Power loss, typ.	3.6 W
Memory	

Number of slots for SIMATIC memory card	1
SIMATIC memory card required	Yes
Work memory	
integrated (for program)	1.5 Mbyte
integrated (for data)	4.5 Mbyte
Load memory	
Plug-in (SIMATIC Memory Card), max.	32 Gbyte
Backup	02 05)t0
maintenance-free	Yes
	165
CPU processing times	
for bit operations, typ.	6 ns
for word operations, typ.	7 ns
for fixed point arithmetic, typ.	9 ns
for floating point arithmetic, typ.	37 ns
CPU-blocks	
Number of elements (total)	8 000; Blocks (OB, FB, FC, DB) and UDTs
DB	
Number range	1 60 999; subdivided into: number range that can be used by the user: 1
	59 999, and number range of DBs created via SFC 86: 60 000 60 999
• Size, max.	4.5 Mbyte; For DBs with absolute addressing, the max. size 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 250 µs
 Number of process alarm OBs 	50
 Number of DPV1 alarm OBs 	3
 Number of isochronous mode OBs 	2
 Number of technology synchronous alarm OBs 	2
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
·	163
S7 times	2.040
• Number	2 048
Retentivity	
— adjustable	Yes
IEC timer	
Number	Any (only limited by the main memory)
Retentivity	
— adjustable	Yes
Data areas and their retentivity	
	512 khyte: In total: available retentive memory for hit memories, timore
Retentive data area (incl. timers, counters, flags), max.	512 kbyte; In total; available retentive memory for bit memories, timers,

Stock mean of the process images Stock mean of the process image Stock mean of the process im		assistant DDs and tacking large data (see a): 470 MD
### Size max	Futured advertises data area (incl. times as assumtant flores) may	counters, DBs, and technology data (axes): 472 KB
Size, max. 16 kbyte Activation of the content		4.5 Mbyte, When using PS 6 OW 24/46/60 V DC HP
A Winther of dock memories 8.8 dock memory bit, grouped into one clock memory byte	-	16 khyto
Bath Incides Retentivity project Retentivity		
Peterbrity adjustable Yes No		o, o clock memory bit, grouped into one clock memory byte
Februariety preset No		Vac
September Controller		
• per priority class, max. Number of 10 modules **Number of 10 modules **Part of Modules \$192, max. number of modules / submodules **Part of Modules \$192, max. number of modules / submodules **Part of Modules \$192, max. number of modules / submodules **Part of Modules \$192, max. number of modules / submodules **Part of Modules \$192, max. number of per priority of modules **Part of Modules \$192, max. number of per priority of modules **Part of Modules \$192, max. number of local per priority of modules **Part of Modules \$192, max. number of local per priority of modules **Part of Modules \$192, max. number of local per priority of modules **Part of Modules \$192, max. number of local per priority of modules **Part of Modules \$192, max. number of local per priority of modules **Part of Modules \$192, max. number of local per priority of modules **Part of Modules \$192, max. number of local per priority of modules **Part of Modules \$192, max. number of local per priority of modules **Part of Modules \$192, max. number of local per priority of modules **Part of Modules \$192, max. number of local per priority of modules **Part of Modules \$192, max. number of local per priority of modules **Part of Modules \$192, max. number of local per priority **Part of Modules \$192, max. number of local per priority **Part of Modules \$192, max. number of local per priority **Part of Modules \$192, max. number of local per priority **Part of Modules \$192, max. number of local per priority **Part of Modules \$192, max. number of local per priority **Part of Modules \$192, max. number of local per priority **Part of Modules \$192, max. number of local per priority **Part of Modules \$192, max. number of local per priority **Part of Modules \$192, max. number of local per priority **Part of Modules \$192, max. number of local per priority **Part of local per priority **Part of local per priority **Par		NU
Number of IO modules Number of ID modules Number of Individual (Note Individual IO System is characterized not only by the integration of fundations but also by the connection of I/O via AS-i master modules or links (e.g. IE/PB-Link) Number of distributed IO systems Number of IO Controller Number of IO Controllers Number of		64 khyte: may 16 KR per block
Number of IO modules No siddress areas		04 kbyte, max. To Kb per block
Floration State		8 102: may number of modules / submodules
• Outputs 32 kbyte; All inputs are in the process image 2 kbyte; All outputs are in the process image 2 kbyte; All outputs are in the process image 2 kbyte; All outputs are in the process image 2 kbyte; All outputs (volume) 8 kbyte 2 kbyte; All outputs (volume) 9		0 102, max. number of modules / submodules
outputs (outputs) per integrated IO subsystem		32 kbyte: All inputs are in the process image
Per integrated IO subsystem S kbyte	·	
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Por CMICP - Inputs (volume)	· · · · · ·	8 kbyte
Inputs (volume)		
- Inputs (volume)		
- Outputs (volume) 8 kbyte Subprocess images		8 kbyte
Subprocess images • Number of subprocess images, max. • Al Adistributed I/O system is characterized not only by the integration of distributed I/O via PROFINET or PROFIBUS communication modules, but also by the connection of I/O via AS-I master modules or links (e.g., IEPP4-Link) by the connection of I/O via AS-I master modules or links (e.g., IEPP4-Link) by the connection of I/O via AS-I master modules or links (e.g., IEPP4-Link) by the connection of I/O via AS-I master modules or links (e.g., IEPP4-Link) by the connection of I/O via AS-I master modules or links (e.g., IEPP4-Link) by the connection of I/O via AS-I master modules or links (e.g., IEPP4-Link) by the connection of I/O via AS-I master connection of I/O via AS-I master modules or links (e.g., IEPP4-Link) by the connection of I/O via AS-I master via AS-I modules • Integrated • Via CM • Number of Innes, max. 1 1 PIP CM • Number of IPP CMs • Number of PIP CMs • Hardware clock • Type • Backup time • Deviation per day, max. 10 s; Typ: 2 s Operating hours counter • Number • Number • Supported • Yes, via PROFIBUS CM / CP • In AS, master • on DP, device • Yes • in AS, device • on Element via NTP • Yes • Interfaces Interface Interface Interface lines Interface lines • Interface oppose • Interface of ports		
Number of subprocess images, max. Number of distributed IO systems 64; A distributed I/O system is characterized not only by the integration of distributed I/O via PRCPINET or PROFIBUS communication modules, but also by the connection of I/O via AS-4 master modules or links (e.g. IE/PB-Link) Number of DP masters • Via CM 8; A maximum of 8 CMs/CPs (PROFIBUS, PROFINET, Ethernet) can be inserted in total Number of IO Controllers • Integrated • Via CM 8; A maximum of 8 CMs/CPs (PROFIBUS, PROFINET, Ethernet) can be inserted in total Rack • Modules per rack, max. • Number of lines, max. • Number of Iines, max. • Number of PIP CMs • Number of PIP CMs • Backup time • Deviation per day, max. • Deviation per day, max. • Operating hours counter • Number • In AS, master • New Cick • Tyes • In AS, master • Yes • In AS, device • on DP, device • on DP, device • on Ethernet via NTP • Yes • Interfaces Number of PROFINET interfaces • 2 • Interface Interface Interface types • Ru 45 (Ethernet) • Number of ports • Su 45 (Ethernet) • Number of ports • Su 45 (Ethernet) • Number of ports • Number of PROFINET interfaces • A 45 (Ethernet) • Number of PROFINET interfaces • 2 • Interface types • Interface types • Integrated switch • Number of ports • Number of ports • Number of ports • Number of PROFINET interfaces • 2 • Interface types • Integrated switch • Number of ports • Number of ports • Number of PROFINET interfaces • 2 • Number of PROFINET interfaces • 2 • Interface types • Integrated switch • Number of ports • Number of ports • Number of ports • Number of ports		
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Rack • Modules per rack, max. • Number of lines, max. • Number of PtP CMs • Hardware clock • Type • Backup time • Deviation per day, max. Operating hours counter • Number • N	integrated	2
Modules per rack, max. • Number of lines, max. • Number of PtP CMs • Type • Backup time • Gwk, At 40 °C ambient temperature, typically • Deviation per day, max. Operating hours counter • Number • Number • Number • Number • Supported • yes • to DP, master • on DP, device • in AS, master • in AS, device • on Ethernet via NTP Yes • on Ethernet via NTP Yes Interfaces Number of PROFINET interfaces • RJ 45 (Ethernet) • RJ 45 (Ethernet) • Number of ports • integrated switch • integrated switch	• Via CM	8; A maximum of 8 CMs/CPs (PROFIBUS, PROFINET, Ethernet) can be
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Time of day Clock Type Backup time Swix, At 40 °C ambient temperature, typically Deviation per day, max. Swix, Typ.: 2 s Operating hours counter Number Supported S	Number of PtP CMs	
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Operating hours counter 16 Clock synchronization Yes ● supported Yes; via PROFIBUS CM / CP ● to DP, master Yes; via PROFIBUS CM / CP ● on DP, device Yes; via PROFIBUS CM / CP ● in AS, master Yes ● on Ethernet via NTP Yes Interfaces Number of PROFINET interfaces 2 1. Interface types PRJ 45 (Ethernet) ● RJ 45 (Ethernet) Yes; X1 ● Number of ports 2 ● integrated switch Yes	•	
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Interface types • RJ 45 (Ethernet) • Number of ports • integrated switch Yes; X1 2 • yes	1. Interface	
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 Number of ports integrated switch Yes 	• •	Yes: X1
• integrated switch Yes		
	•	
I I MANAGEM	Protocols	

Yes; IPv4 • IP protocol • PROFINET IO Controller Yes PROFINET IO Device Yes • SIMATIC communication Yes • Open IE communication Yes; Optionally also encrypted Web server Yes Media redundancy Yes PROFINET IO Controller Services - Isochronous mode Yes Yes; Requirement: IRT and isochronous mode (MRPD optional) Direct data exchange — IRT Yes - PROFlenergy Yes; per user program - Prioritized startup Yes; Max. 32 PROFINET devices 256; in total, up to 1024 distributed I/O devices can be connected via AS-i, - Number of connectable IO Devices, max. PROFIBUS or PROFINET - Of which IO devices with IRT, max. - Number of connectable IO Devices for RT, max. 256 - of which in line, max. 256 Number of IO Devices that can be simultaneously 8: in total across all interfaces activated/deactivated, max. Number of IO Devices per tool, max. 8 — Updating times 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 - PROFINET Security Class Update time for IRT $250\ \mu s$ to 4 ms; Note: In the case of IRT with isochronous mode, the minimum — for send cycle of 250 µs update time of 375 μs of the isochronous OB is decisive — for send cycle of 500 µs 500 us to 8 ms - for send cycle of 1 ms 1 ms to 16 ms - for send cycle of 2 ms 2 ms to 32 ms - for send cycle of 4 ms 4 ms to 64 ms — With IRT and parameterization of "odd" send cycles Update time = set "odd" send clock (any multiple of 125 μ s: 375 μ s, 625 μ s ... 3 Update time for RT 250 µs to 128 ms — for send cycle of 250 μs - for send cycle of 500 μs 500 µs to 256 ms - for send cycle of 1 ms 1 ms to 512 ms - for send cycle of 2 ms 2 ms to 512 ms - for send cycle of 4 ms 4 ms to 512 ms **PROFINET IO Device** Services - Isochronous mode Nο -- IRT Yes — PROFlenergy Yes; per user program - Shared device Yes - Number of IO Controllers with shared device, max. - activation/deactivation of I-devices Yes; per user program - Asset management record Yes; per user program - PROFINET Security Class SNMP Configuration and DCP Read Only Interface types • RJ 45 (Ethernet) Yes; X2 Number of ports 1 • integrated switch Nο Protocols • IP protocol Yes: IPv4 • PROFINET IO Controller Yes • PROFINET IO Device Yes Yes • SIMATIC communication • Open IE communication Yes; Optionally also encrypted

Web server	Yes
Media redundancy	No
PROFINET IO Controller	
Services	
— Isochronous mode	No
Direct data exchange	No
— IRT	No
— PROFlenergy	
Prioritized startup	Yes; per user program No
Number of connectable IO Devices, max.	
,	32; in total, up to 1024 distributed I/O devices can be connected via AS-i, PROFIBUS or PROFINET
 Number of connectable IO Devices for RT, max. 	32
— of which in line, max.	32
 Number of IO Devices that can be simultaneously activated/deactivated, max. 	8; in total across all interfaces
 Number of IO Devices per tool, max. 	8
— Updating times	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
— PROFINET Security Class	1
Update time for RT	
— for send cycle of 1 ms	1 ms to 512 ms
PROFINET IO Device	
Services	
— Isochronous mode	No
— IRT	No
— PROFlenergy	Yes; per user program
— Prioritized startup	No
— Shared device	Yes
Number of IO Controllers with shared device, max.	4
activation/deactivation of I-devices	Yes; per user program
Asset management record	Yes; per user program
PROFINET Security Class	SNMP Configuration and DCP Read Only
Interface types	Only Configuration and Bot Read Only
RJ 45 (Ethernet)	
• 100 Mbps	Yes
'	Yes
Autoropoia	
Autocrossing Autocrossing	Yes
Industrial Ethernet status LED	Yes
Protocols	
PROFIsafe	No
Number of connections	
 Number of connections, max. 	256; via integrated interfaces of the CPU and connected CPs / CMs
 Number of connections reserved for ES/HMI/web 	10
Number of connections via integrated interfaces	128
Number of S7 routing paths	16
Redundancy mode	
H-Sync forwarding	Yes
Media redundancy	
— Media redundancy	only via 1st interface (X1)
— MRP	Yes; MRP Automanager according to IEC 62439-2 Edition 2.0, MRP Manager; MRP Client
 MRP interconnection, supported 	Yes; as MRP ring node according to IEC 62439-2 Edition 3.0
— MRPD	Yes; Requirement: IRT
 Switchover time on line break, typ. 	200 ms; For MRP, bumpless for MRPD
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 routing Data record routing	
Data record routing	Yes

User data per job, max.	See online help (S7 communication, user data size)
Open IE communication	coo orinino noip (or communication, acor data size)
• 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; max. 118 multicast circuits
DHCP	Yes
• DNS	Yes
• SNMP	Yes
• DCP	Yes
• LLDP	Yes
• Encryption	Yes; Optional
Web server	roo, Optional
• HTTP	Yes; Standard and user pages
• HTTPS	Yes; Standard and user pages
• web API	,
Number of sessions, max.	100
— number of simultaneous HTTP calls, max.	4
— HTTP request body, max.	131 072 byte
OPC UA	101 012 byte
Runtime license required	Yes; "Medium" license required
OPC UA Client	Yes; Data Access (registered Read/Write), Method Call
Application authentication	Yes
— Security policies	Available security policies: None, Basic128Rsa15, Basic256Rsa15, Basic256Sha256
— User authentication	"anonymous" or by user name & password
 Number of connections, max. 	10
 Number of nodes of the client interfaces, recommended max. 	2 000
 Number of elements for one call of OPC_UA_NodeGetHandleList/OPC_UA_ReadList/OPC_I max. 	300
 Number of elements for one call of OPC_UA_NameSpaceGetIndexList, max. 	20
 Number of elements for one call of OPC_UA_MethodGetHandleList, max. 	100
 Number of simultaneous calls of the client instructions for session management, per connection, max. 	1
 Number of simultaneous calls of the client instructions for data access, per connection, max. 	5
 Number of registerable nodes, max. 	5 000
 Number of registerable method calls of OPC_UA_MethodCall, max. 	100
— Number of inputs/outputs when calling OPC_UA_MethodCall, max.	20
OPC UA Server	Yes; data access (read, write, subscribe), method call, alarms & condition (A&C), custom address space, role-based access control
Application authentication	Yes
— Security policies	available security policies: None, Basic128Rsa15, Basic256Rsa15, Basic256Sha256, Aes128Sha256RsaOaep, Aes256Sha256RsaPss
— User authentication	"anonymous" or by user name & password
GDS support (certificate management)	Yes
— Number of sessions, max.	48
Number of accessible variables, max.	100 000
Number of registerable nodes, max.	20 000
Number of subscriptions per session, max.	50
— Sampling interval, min.	100 ms
— Publishing interval, min.	100 ms
Number of server methods, max.	50; max. 20 concurrently running jobs each for asynchronous instructions OPC_UA_ServerMethodPre and OPC_UA_ServerMethodPost

 Number of inputs/outputs per server method, max. 	20
Number of monitored items, recommended max.	4 000; 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, max. 	30 000
Alarms and Conditions	Yes
— Number of program alarms	200
 Number of alarms for system diagnostics 	100
Further protocols	
• MODBUS	Yes; MODBUS TCP
S7 message functions	
Number of login stations for message functions, max.	64
number of subscriptions, max.	500
number of tags/attributes for subscriptions, max.	8 000
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 	1 000
 Number of alarms for system diagnostics 	200
 Number of alarms for motion technology objects 	160
Test commissioning functions	
Joint commission (Team Engineering)	Yes; Parallel online access possible for up to 8 engineering systems
Status block	Yes; Up to 8 simultaneously (in total across all ES clients)
Single step	No
Number of breakpoints	8
Profiling	Yes
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	
• Forcing	Yes
 Forcing, variables 	Peripheral inputs/outputs
Number of variables, max.	200
Diagnostic buffer	
• present	Yes
Number of entries, max.	3 200
— of which powerfail-proof	500
Traces	
Number of configurable Traces	4
Memory size per trace, max.	512 kbyte
Interrupts/diagnostics/status information	
Diagnostics indication LED	
• RUN/STOP LED	Yes
• ERROR LED	Yes
MAINT LED	Yes
STOP ACTIVE LED	Yes
 Connection display LINK TX/RX 	Yes
Supported technology objects	
Motion Control	Yes; Note: The number of technology objects affects the cycle time of the PLC program; selection guide via the TIA Selection Tool
 Number of available Motion Control resources for technology objects 	2 400
Required Motion Control resources	
per speed-controlled axis	40
— per positioning axis	80
— per synchronous axis	160

— per external encoder	80
— per output cam	20
— per cam track	160
— per probe	40
 Number of available Extended Motion Control resources for technology objects 	120
 Required Extended Motion Control resources 	
per cam (1 000 points and 50 segments)	2
per cam (10 000 points and 50 segments)	20
— per cam (50 points and 600 segments)	2
per cam (50 points and 6 000 segments)	20
— for each set of kinematics	30
— per Interpreter	60
 Per leading axis proxy 	3
 Positioning axis 	
 Number of positioning axes at motion control cycle of 4 ms (typical value) 	11
 Number of positioning axes at motion control cycle of 8 ms (typical value) 	20
Controller	
PID_Compact	Yes; Universal PID controller with integrated optimization
PID_3Step	Yes; PID controller with integrated optimization for valves
PID-Temp	Yes; PID controller with integrated optimization for temperature
Counting and measuring	
High-speed counter	Yes
Standards, approvals, certificates	
Ecological footprint	
Global warming potential	
global warming potential, (total) [CO2 eq]	100 kg
 global warming potential, (during production) [CO2 eq] 	25.8 kg
alphal warming notantial (during anarctical) 1000	75.0 km
— global warming potential, (during operation) [CO2 eq]	75.2 kg
	-0.83 kg
eq] — global warming potential, (after end of life cycle)	
eq] — global warming potential, (after end of life cycle) [CO2 eq]	
eq] — global warming potential, (after end of life cycle) [CO2 eq] Ambient conditions	
eq] — global warming potential, (after end of life cycle) [CO2 eq] Ambient conditions Ambient temperature during operation	-0.83 kg
eq] — global warming potential, (after end of life cycle) [CO2 eq] Ambient conditions Ambient temperature during operation • horizontal installation, min.	-30 °C; No condensation 60 °C; Display: 50 °C, at an operating temperature of typically 50 °C, the
eq] — global warming potential, (after end of life cycle) [CO2 eq] Ambient conditions Ambient temperature during operation • horizontal installation, min. • horizontal installation, max.	-30 °C; No condensation 60 °C; Display: 50 °C, at an operating temperature of typically 50 °C, the display is switched off
eq] — global warming potential, (after end of life cycle) [CO2 eq] Ambient conditions Ambient temperature during operation • horizontal installation, min. • horizontal installation, max. • vertical installation, min.	-30 °C; No condensation 60 °C; Display: 50 °C, at an operating temperature of typically 50 °C, the display is switched off -30 °C; No condensation 40 °C; Display: 40 °C, at an operating temperature of typically 40 °C, the
eq] — global warming potential, (after end of life cycle) [CO2 eq] Ambient conditions Ambient temperature during operation • horizontal installation, min. • horizontal installation, max. • vertical installation, min. • vertical installation, max.	-30 °C; No condensation 60 °C; Display: 50 °C, at an operating temperature of typically 50 °C, the display is switched off -30 °C; No condensation 40 °C; Display: 40 °C, at an operating temperature of typically 40 °C, the
eq] — global warming potential, (after end of life cycle) [CO2 eq] Ambient conditions Ambient temperature during operation • horizontal installation, min. • horizontal installation, max. • vertical installation, min. • vertical installation, max. Ambient temperature during storage/transportation	-30 °C; No condensation 60 °C; Display: 50 °C, at an operating temperature of typically 50 °C, the display is switched off -30 °C; No condensation 40 °C; Display: 40 °C, at an operating temperature of typically 40 °C, the display is switched off
eq] — global warming potential, (after end of life cycle) [CO2 eq] Ambient conditions Ambient temperature during operation • horizontal installation, min. • horizontal installation, max. • vertical installation, min. • vertical installation, max. Ambient temperature during storage/transportation • min.	-30 °C; No condensation 60 °C; Display: 50 °C, at an operating temperature of typically 50 °C, the display is switched off -30 °C; No condensation 40 °C; Display: 40 °C, at an operating temperature of typically 40 °C, the display is switched off -40 °C
eq] — global warming potential, (after end of life cycle) [CO2 eq] Ambient conditions Ambient temperature during operation • horizontal installation, min. • horizontal installation, max. • vertical installation, min. • vertical installation, max. Ambient temperature during storage/transportation • min. • max.	-30 °C; No condensation 60 °C; Display: 50 °C, at an operating temperature of typically 50 °C, the display is switched off -30 °C; No condensation 40 °C; Display: 40 °C, at an operating temperature of typically 40 °C, the display is switched off -40 °C
eq] — global warming potential, (after end of life cycle) [CO2 eq] Ambient conditions Ambient temperature during operation • horizontal installation, min. • horizontal installation, max. • vertical installation, min. • vertical installation, max. Ambient temperature during storage/transportation • min. • max. Altitude during operation relating to sea level	-30 °C; No condensation 60 °C; Display: 50 °C, at an operating temperature of typically 50 °C, the display is switched off -30 °C; No condensation 40 °C; Display: 40 °C, at an operating temperature of typically 40 °C, the display is switched off -40 °C 70 °C
eq] — global warming potential, (after end of life cycle) [CO2 eq] Ambient conditions Ambient temperature during operation • horizontal installation, min. • horizontal installation, max. • vertical installation, min. • vertical installation, max. Ambient temperature during storage/transportation • min. • max. Altitude during operation relating to sea level • Installation altitude above sea level, max.	-30 °C; No condensation 60 °C; Display: 50 °C, at an operating temperature of typically 50 °C, the display is switched off -30 °C; No condensation 40 °C; Display: 40 °C, at an operating temperature of typically 40 °C, the display is switched off -40 °C 70 °C
eq] — global warming potential, (after end of life cycle) [CO2 eq] Ambient conditions Ambient temperature during operation • horizontal installation, min. • horizontal installation, max. • vertical installation, min. • vertical installation, max. Ambient temperature during storage/transportation • min. • max. Altitude during operation relating to sea level • Installation altitude above sea level, max. configuration / header	-30 °C; No condensation 60 °C; Display: 50 °C, at an operating temperature of typically 50 °C, the display is switched off -30 °C; No condensation 40 °C; Display: 40 °C, at an operating temperature of typically 40 °C, the display is switched off -40 °C 70 °C
eq] — global warming potential, (after end of life cycle) [CO2 eq] Ambient conditions Ambient temperature during operation • horizontal installation, min. • horizontal installation, max. • vertical installation, min. • vertical installation, max. Ambient temperature during storage/transportation • min. • max. Altitude during operation relating to sea level • Installation altitude above sea level, max. configuration / programming / header	-30 °C; No condensation 60 °C; Display: 50 °C, at an operating temperature of typically 50 °C, the display is switched off -30 °C; No condensation 40 °C; Display: 40 °C, at an operating temperature of typically 40 °C, the display is switched off -40 °C 70 °C
eq] — global warming potential, (after end of life cycle) [CO2 eq] Ambient conditions Ambient temperature during operation • horizontal installation, min. • horizontal installation, max. • vertical installation, min. • vertical installation, max. Ambient temperature during storage/transportation • min. • max. Altitude during operation relating to sea level • Installation altitude above sea level, max. configuration / header configuration / programming / header Programming language	-30 °C; No condensation 60 °C; Display: 50 °C, at an operating temperature of typically 50 °C, the display is switched off -30 °C; No condensation 40 °C; Display: 40 °C, at an operating temperature of typically 40 °C, the display is switched off -40 °C 70 °C 5 000 m; Restrictions for installation altitudes > 2 000 m, see manual
eq] — global warming potential, (after end of life cycle) [CO2 eq] Ambient conditions Ambient temperature during operation • horizontal installation, min. • horizontal installation, max. • vertical installation, min. • vertical installation, max. Ambient temperature during storage/transportation • min. • max. Altitude during operation relating to sea level • Installation altitude above sea level, max. configuration / header configuration / programming / header Programming language — LAD	-30 °C; No condensation 60 °C; Display: 50 °C, at an operating temperature of typically 50 °C, the display is switched off -30 °C; No condensation 40 °C; Display: 40 °C, at an operating temperature of typically 40 °C, the display is switched off -40 °C 70 °C 5 000 m; Restrictions for installation altitudes > 2 000 m, see manual
eq] — global warming potential, (after end of life cycle) [CO2 eq] Ambient conditions Ambient temperature during operation • horizontal installation, min. • horizontal installation, max. • vertical installation, min. • vertical installation, max. Ambient temperature during storage/transportation • min. • max. Altitude during operation relating to sea level • Installation altitude above sea level, max. configuration / header configuration / programming / header Programming language — LAD — FBD — STL	-30 °C; No condensation 60 °C; Display: 50 °C, at an operating temperature of typically 50 °C, the display is switched off -30 °C; No condensation 40 °C; Display: 40 °C, at an operating temperature of typically 40 °C, the display is switched off -40 °C 70 °C 5 000 m; Restrictions for installation altitudes > 2 000 m, see manual Yes Yes Yes
eq] — global warming potential, (after end of life cycle) [CO2 eq] Ambient conditions Ambient temperature during operation • horizontal installation, min. • horizontal installation, max. • vertical installation, min. • vertical installation, max. Ambient temperature during storage/transportation • min. • max. Altitude during operation relating to sea level • Installation altitude above sea level, max. configuration / header configuration / programming / header Programming language — LAD — FBD — STL — SCL	-30 °C; No condensation 60 °C; Display: 50 °C, at an operating temperature of typically 50 °C, the display is switched off -30 °C; No condensation 40 °C; Display: 40 °C, at an operating temperature of typically 40 °C, the display is switched off -40 °C 70 °C 5 000 m; Restrictions for installation altitudes > 2 000 m, see manual Yes Yes Yes Yes
eq] — global warming potential, (after end of life cycle) [CO2 eq] Ambient conditions Ambient temperature during operation • horizontal installation, min. • horizontal installation, max. • vertical installation, min. • vertical installation, max. Ambient temperature during storage/transportation • min. • max. Altitude during operation relating to sea level • Installation altitude above sea level, max. configuration / header configuration / programming / header Programming language — LAD — FBD — STL — SCL — CFC	-30 °C; No condensation 60 °C; Display: 50 °C, at an operating temperature of typically 50 °C, the display is switched off -30 °C; No condensation 40 °C; Display: 40 °C, at an operating temperature of typically 40 °C, the display is switched off -40 °C 70 °C 5 000 m; Restrictions for installation altitudes > 2 000 m, see manual Yes Yes Yes Yes Yes
eq] — global warming potential, (after end of life cycle) [CO2 eq] Ambient conditions Ambient temperature during operation • horizontal installation, min. • horizontal installation, max. • vertical installation, min. • vertical installation, max. Ambient temperature during storage/transportation • min. • max. Altitude during operation relating to sea level • Installation altitude above sea level, max. configuration / header configuration / programming / header Programming language — LAD — FBD — STL — SCL — CFC — GRAPH	-30 °C; No condensation 60 °C; Display: 50 °C, at an operating temperature of typically 50 °C, the display is switched off -30 °C; No condensation 40 °C; Display: 40 °C, at an operating temperature of typically 40 °C, the display is switched off -40 °C 70 °C 5 000 m; Restrictions for installation altitudes > 2 000 m, see manual Yes Yes Yes Yes
eq] — global warming potential, (after end of life cycle) [CO2 eq] Ambient conditions Ambient temperature during operation • horizontal installation, min. • horizontal installation, max. • vertical installation, min. • vertical installation, max. Ambient temperature during storage/transportation • min. • max. Altitude during operation relating to sea level • Installation altitude above sea level, max. configuration / header configuration / programming / header Programming language — LAD — FBD — STL — SCL — CFC — GRAPH Know-how protection	-30 °C; No condensation 60 °C; Display: 50 °C, at an operating temperature of typically 50 °C, the display is switched off -30 °C; No condensation 40 °C; Display: 40 °C, at an operating temperature of typically 40 °C, the display is switched off -40 °C 70 °C 5 000 m; Restrictions for installation altitudes > 2 000 m, see manual Yes Yes Yes Yes Yes Yes Yes
eq] — global warming potential, (after end of life cycle) [CO2 eq] Ambient conditions Ambient temperature during operation • horizontal installation, min. • horizontal installation, max. • vertical installation, max. Ambient temperature during storage/transportation • min. • max. Altitude during operation relating to sea level • Installation altitude above sea level, max. configuration / header configuration / programming / header Programming language — LAD — FBD — STL — SCL — CFC — GRAPH Know-how protection • User program protection/password protection	-0.83 kg -30 °C; No condensation 60 °C; Display: 50 °C, at an operating temperature of typically 50 °C, the display is switched off -30 °C; No condensation 40 °C; Display: 40 °C, at an operating temperature of typically 40 °C, the display is switched off -40 °C 70 °C 5 000 m; Restrictions for installation altitudes > 2 000 m, see manual Yes Yes Yes Yes Yes Yes Yes
eq] — global warming potential, (after end of life cycle) [CO2 eq] Ambient conditions Ambient temperature during operation • horizontal installation, min. • horizontal installation, max. • vertical installation, min. • vertical installation, max. Ambient temperature during storage/transportation • min. • max. Altitude during operation relating to sea level • Installation altitude above sea level, max. configuration / header configuration / programming / header Programming language — LAD — FBD — STL — SCL — CFC — GRAPH Know-how protection • User program protection/password protection • Copy protection	-0.83 kg -30 °C; No condensation 60 °C; Display: 50 °C, at an operating temperature of typically 50 °C, the display is switched off -30 °C; No condensation 40 °C; Display: 40 °C, at an operating temperature of typically 40 °C, the display is switched off -40 °C 70 °C 5 000 m; Restrictions for installation altitudes > 2 000 m, see manual Yes Yes Yes Yes Yes Yes Yes Yes
eq] — global warming potential, (after end of life cycle) [CO2 eq] Ambient conditions Ambient temperature during operation • horizontal installation, min. • horizontal installation, max. • vertical installation, min. • vertical installation, max. Ambient temperature during storage/transportation • min. • max. Altitude during operation relating to sea level • Installation altitude above sea level, max. configuration / header configuration / programming / header Programming language — LAD — FBD — STL — SCL — CFC — GRAPH Know-how protection • User program protection/password protection • Copy protection • Block protection	-0.83 kg -30 °C; No condensation 60 °C; Display: 50 °C, at an operating temperature of typically 50 °C, the display is switched off -30 °C; No condensation 40 °C; Display: 40 °C, at an operating temperature of typically 40 °C, the display is switched off -40 °C 70 °C 5 000 m; Restrictions for installation altitudes > 2 000 m, see manual Yes Yes Yes Yes Yes Yes Yes
eq] — global warming potential, (after end of life cycle) [CO2 eq] Ambient conditions Ambient temperature during operation • horizontal installation, min. • horizontal installation, max. • vertical installation, min. • vertical installation, max. Ambient temperature during storage/transportation • min. • max. Altitude during operation relating to sea level • Installation altitude above sea level, max. configuration / header configuration / programming / header Programming language — LAD — FBD — STL — SCL — CFC — GRAPH Know-how protection • User program protection/password protection • Copy protection	-0.83 kg -30 °C; No condensation 60 °C; Display: 50 °C, at an operating temperature of typically 50 °C, the display is switched off -30 °C; No condensation 40 °C; Display: 40 °C, at an operating temperature of typically 40 °C, the display is switched off -40 °C 70 °C 5 000 m; Restrictions for installation altitudes > 2 000 m, see manual Yes Yes Yes Yes Yes Yes Yes Yes

Yes · Password for display • Protection level: Write protection Yes • Protection level: Read/write protection Yes • Protection level: Write protection for Failsafe No • Protection level: Complete protection Yes • User administration Yes; device-wide and centralized • Number of users 100 • Number of groups 100 Number of roles 50 programming / cycle time monitoring / header • lower limit adjustable minimum cycle time • upper limit adjustable maximum cycle time Width 70 mm Height 147 mm Depth 129 mm Weights

456 g

Version Classification 27-24-22-07 eClass 14 eClass 12 27-24-22-07 eClass 9.1 27-24-22-07 eClass 27-24-22-07 eClass 8 27-24-22-07 27-24-22-07 eClass 7.1 27-24-22-07 eClass 6 **ETIM** 9 EC000236 ETIM 8 EC000236 EC000236 **ETIM** 7 **IDEA** 3565 4 UNSPSC 32-15-17-05 15

Approvals / Certificates

Weight, approx.

General Product Approval

Manufacturer Declaration







Miscellaneous



General Product Approval

For use in hazardous locations

<u>KC</u>



<u>FM</u>



Miscellaneous



For use in hazardous locations

Test Certificates

Marine / Shipping



CCC-Ex

Type Test Certificates/Test Report







Marine / Shipping

other





CCS (China Classification Society)



PROFINET

Environment





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