Data sheet

6ES7515-2FN03-0AB0

Siemens EcoTech



SIMATIC S7-1500F, CPU 1515F-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 109817466 at to be considered! - -

General information		
Product type designation	CPU 1515F-2 PN	
HW functional status	FS01	
Firmware version	V3.0	
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)	
Engineering with		
STEP 7 TIA Portal configurable/integrated from version	V18 (FW V3.0); with older TIA Portal versions configurable as 6ES7515-2FM02-0AB0	
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)	0.83 A	
Current consumption, max.	1.03 A	
Inrush current, max.	1.15 A; Rated value	
l²t	0.6 A²·s	
Power		
nfeed 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	163	
• integrated (for program)	1.5 Mbyte	
• integrated (for data)	4.5 Mbyte	
Load memory	T.O MIDYC	
Plug-in (SIMATIC Memory Card), max.	32 Gbyte	
Backup	02 00).0	
maintenance-free	Yes	
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	0.10	
Number of elements (total)	8 000; Blocks (OB, FB, FC, DB) and UDTs	
DB	0 000, 210010 (02, 12, 10, 22) and 02.10	
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	04.11.4.0	
per priority class	24; Up to 8 possible for F-blocks	
Counters, timers and their retentivity		
S7 counter	0.040	
Number Petentivity	2 048	
Retentivity	Von	
— adjustable	Yes	
IEC counter	Any (only limited by the main memory)	
Number Petentivity	Any (only limited by the main memory)	
Retentivity — adjustable	Yes	
— adjustable S7 times	103	
Number	2 048	
Retentivity		
— adjustable	Yes	
IEC timer		
Number	Any (only limited by the main memory)	
Retentivity	, (only mines by the fillin memory)	
— adjustable	Yes	
Data areas and their retentivity		
Data aroae and their retentivity		

Extended retentive data area (incl. timers, counters, flags), max. Flag • Size, max. • Number of clock memories Bata blocks • Retentivity adjustable • Retentivity preset Local data • per priority class, max. 64 kbyte; max. 16 KB per block Address area • Inputs • Outputs per integrated IO subsystem — Inputs (volume) — Outputs (volume) per CM/CP — Inputs (volume) — Outputs (volume) — Ou	Retentive data area (incl. timers, counters, flags), max.	512 kbyte; In total; available retentive memory for bit memories, timers, counters, DBs, and technology data (axes): 472 KB
Field Size, max Size	Extended retentive data area (incl. timers, counters, flags), max	
Size, max. Number of lock memories Size, dock memory bit, grouped into one clock memory byte Patenthisty adjustable • Retentisty preset No Local data • Per prority class, max. Address area • Inputs • Outputs — Inputs — Cutputs — Inputs — Cutputs — Inputs — In		4.5 Mbyte, When using 1 5 0 0W 24/40/00 V DC 111
Number of dock memories 6,8 dock memory bit, grouped into one clock memory byte	-	16 khyte
Data blocks Retentivity adjustable Retentivity adjustable Retentivity prosest Rocal data Per priority class, max. 64 kbyte; max. 16 kB per block Addross area Number of ID modules 8 192; max. number of modules / submodules Vo address area Inputs Subyte; All inputs are in the process image Outputs (O subsystem Inputs (volume) Retention of Subprocess images Retention of Subprocess images Retention of distributed ID systems All number of distributed ID systems All number of distributed ID systems All number of subprocess images, max. 32 Aumber of distributed ID systems All number of subprocess images, max. 32 Aumber of distributed ID systems All number of distributed ID systems in characterized not only by the integration of distributed ID via PROFINET or PROFIBUS communication modules, but also by the connection of ID via ASI master modules on links (e.g. IEPB-Link) Number of IDP masters Via CM Retention of IDP Controllers Integration Number of IDP CMs Retention of IDP CMs Retention of IDP CMs Retention of IDP CMs Retention of IDP CMs Integration of IDP CMs Retention of IDP CMs Integration of IDP CMs Retention of IDP CMs Integration of IDP CMs Integration of IDP CMs is only limited by the number of available sides IDP CMs Number of IDP CMs Integration of IDP CMs is only limited by the number of available sides IDP CMs Integration of IDP CMs Integration of IDP CMs is only limited by the number of available sides IDP CMs I		
Retentivity prosest Retentivity Reten		o, o clock memory bit, grouped into one clock memory byte
Recentify preset Local data - per priority class, max. Address area Number of ID modules ID address area - inputs - inputs (Volume) -		Van
Decad data		
per priority class, max. Address areas Number of Cl modules 8 192; max. number of modules / submodules 9 clupts • Inputs (volume) — Inputs (volume) — Outputs (volume) — Outp		NO
Number of IO modules Number of		0444
Number of IO modules IIO address area IIO address area IIO address area III puts Outputs Outputs Outputs Outputs Physic (Volume) Outputs (volume) III puts (vo		64 kbyte; max. 16 KB per block
Popular Section Popular Popu		
Inputs Outputs Outputs Outputs Outputs Outputs Outputs Outputs (volume)	Number of IO modules	8 192; max. number of modules / submodules
Outputs per integrated IO subsystem Inputs (volume) Outputs (volume) Out	I/O address area	
per integrated IO subsystem - Inputs (volume)	• Inputs	32 kbyte; All inputs are in the process image
- Inputs (volume) 8 kbyte - Outputs (volume) 8 kbyte - Outputs (volume) 8 kbyte - Outputs (volume) 8 kbyte - Inputs (volume) 8 kbyte - Inputs (volume) 8 kbyte - Outputs (volume)	Outputs	32 kbyte; All outputs are in the process image
Per CM/CP Inputs (volume) Per CM/CP Inputs (volume) Poutputs (vo	per integrated IO subsystem	
per CM/CP	— Inputs (volume)	8 kbyte
Inputs (volume) Outputs (volume) Outp	— Outputs (volume)	8 kbyte
- Outputs (volume) Subprocess images Number of subprocess images, max. 132 Hardware configuration Number of distributed I/O systems 64; A distributed I/O system is characterized not only by the integration of distributed I/O via PROFIBUS communication modules, but also by the connection of I/O via AS-i 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. 1 PIP CM • Number of PIP CMs • Number of PIP CMs • Number of PIP CMs • Type • Backup time • Deviation per day, max. Operating hours counter • Number • Deviation per day, max. Operating hours counter • Number • Supported • Yes • in AS, master • Yes • in AS, master • Yes • on Ethernet via NTP Yes Interfaces Number of PROFINET interfaces 1. Interface Interface types • RJ 45 (Ethernet) • Number of ports • Integrated switch Ves • Integrated switch Ves • Integrated switch Ves	per CM/CP	
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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 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. 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 I/O 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. 1 PIP CM • Number of PtP CMs • Number of PtP CMs the number of connectable PtP CMs is only limited by the number of available slots Time of day Clock • Type • Backup time • Deviation per day, max. Operating hours counter • Number • In AS, master • In AS, master • In AS, device • on Ethemet via NTP Yes Interfaces Number of PROFINET interfaces • RJ 45 (Ethemet) • Number of ports	— Outputs (volume)	8 kbyte
Number of distributed IO systems 64; A distributed 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. IE/PB-Link) Number of ID P 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. 1 PIP CM • Number of lines, max. 1 PIP CM • Number of PIP CMs the number of connectable PIP CMs is only limited by the number of available slots Time of day Clock • Type • Backup time • Deviation per day, max. 10 s; Typ.: 2 s Operating hours counter • Number • PROFINET interfaces • Yes • on Ethernet via NTP Ves Interface Interface Interface Interface Interface Interface lypes • RJ 45 (Ethernet) • Number of profs • integrated switch Ves • integrated switch Ves • integrated switch • Ves	Subprocess images	
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distributed I/O via PROFIBUS communication modules, but also by the connection of I/O via AS-I master modules or links (e.g. IE/PB-Link) Number of I/O Controllers • Integrated • Via CM **Rack** • Modules per rack, max. • Number of lines, max. • Number of lines, max. • Number of PIP CMs • Number of PIP CMs • Type • Backup time • Deviation per day, max. • Deviation per day, max. • Operating hours counter • Number • Number • Number • Number • Deviation per day, max. • Type • Deviation per day, max. Operating hours counter • Number • President interfaces • Number • President interfaces • Number • Number • Number • President interfaces • Number • Number • Number • President interfaces • Number • President interfac	Hardware configuration	
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inserted in total Number of IO Controllers integrated integrated integrated inserted in total 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 PtP CMs Number of PtP CMs Number of PtP CMs Hardware clock inserted in total Arch of Cambient temperature, typically beviation per day, max. Operating hours counter Number Number Number Number Supported	Number of DP masters	
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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 lines, max. • Number of PtP CMs • Number of PtP CMs • Number of PtP CMs • Type • Backup time • Deviation per day, max. Operating hours counter • Number • Number • Number • Number	Number of IO Controllers	
Rack • Modules per rack, max. • Number of lines, max. • Number of PP CMs • Number of PP CMs • Number of PP CMs • Type • Backup time • Deviation per day, max. Operating hours counter • Number • Number • Number • Number • Number • Number • Deviation per day, max. Operating hours counter • Number • Supported • in AS, master • in AS, device • on Ethernet via NTP Interfaces Number of PROFINET interfaces • RJ 45 (Ethernet) • RJ 45 (Ethernet) • Number of ports • Integrated switch • Yes • integrated switch	• integrated	2
Modules per rack, max. Number of lines, max. Number of PtP CM Number of PtP CMs Time of day Clock Type Backup time Deviation per day, max. Operating hours counter Number Number Number Number Time of day Clock Pardware clock Sackup time temperature, typically Sackup time time temperature, typically Sackup time time temperature, typically Sackup time time time time time time time time	• Via CM	
Number of lines, max. PtP CM Number of PtP CMs the number of connectable PtP CMs is only limited by the number of available slots Number of day Clock Time of day Clock A Type Backup time O With a to a	Rack	
PtP CM Number of PtP CMs the number of connectable PtP CMs is only limited by the number of available slots Time of day Clock Type Backup time Sucy and an	 Modules per rack, max. 	32; CPU + 31 modules
 Number of PtP CMs the number of connectable PtP CMs is only limited by the number of available slots Time of day Clock Type Backup time Deviation per day, max. Operating hours counter Number Number Clock synchronization supported in AS, master in AS, device on Ethernet via NTP Interfaces Number of PROFINET interfaces Interface types RJ 45 (Ethernet) Number of ports in Lagrated switch 	 Number of lines, max. 	1
Time of day Clock Type Backup time Backup time Deviation per day, max. Operating hours counter Number Number Clock synchronization supported in AS, master in AS, device on Ethernet via NTP Interfaces Number of PROFINET interfaces RJ 45 (Ethernet) Number of ports integrated switch Yes integrated switch Yes Integrated switch Yes Yes; X1 Number of ports 2 integrated switch Yes	PtP CM	
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 • Number • Number 16 Clock synchronization Yes • in AS, master Yes • in AS, device Yes • on Ethernet via NTP Yes Interfaces Number of PROFINET interfaces 2 1. Interface Interface types • RJ 45 (Ethernet) Yes; X1 • Number of ports 2 • integrated switch Yes	Number of PtP CMs	·
 Type Backup time 6 wk; At 40 °C ambient temperature, typically Deviation per day, max. 10 s; Typ.: 2 s Operating hours counter Number 16 Clock synchronization supported in AS, master in AS, device on Ethernet via NTP Yes Interfaces Number of PROFINET interfaces 1 Interface types RJ 45 (Ethernet) Number of ports Number of ports integrated switch Yes Yes; X1 Number of ports integrated switch 	Time of day	
Backup time Deviation per day, max. Operating hours counter Number Number Clock synchronization supported in AS, master in AS, device on Ethernet via NTP Interfaces Number of PROFINET interfaces RJ 45 (Ethernet) Number of ports integrated switch Swi, At 40 °C ambient temperature, typically 6 wk; At 40 °C ambient temperature, typically 7 % which are in temperature, typically 10 s; Typ.: 2 s 16 Clock synchronization Yes Yes in AS, device Yes On Ethernet via NTP Yes Interfaces Number of PROFINET interfaces 2 1. Interface Interface types RJ 45 (Ethernet) Number of ports Switch Yes Integrated switch Yes	Clock	
Backup time Deviation per day, max. Operating hours counter Number Number Supported Supported Sup As, device Sun As, devi	• Type	Hardware clock
■ Deviation per day, max. Operating hours counter ■ Number		6 wk; At 40 °C ambient temperature, typically
Operating hours counter 16 Clock synchronization Yes ● supported Yes ● in AS, master Yes ● in AS, device Yes ● on Ethernet via NTP Yes Interfaces 2 Number of PROFINET interfaces 2 1. Interface types PRJ 45 (Ethernet) Yes; X1 ● Number of ports 2 ● integrated switch Yes		
Number		
Clock synchronization • supported • in AS, master • in AS, device • on Ethernet via NTP Interfaces Number of PROFINET interfaces Interface types • RJ 45 (Ethernet) • Number of ports • integrated switch Yes Yes Yes Yes Yes Yes Yes Ye	·	16
 supported in AS, master in AS, device on Ethernet via NTP Yes Interfaces Number of PROFINET interfaces 1. Interface Interface types RJ 45 (Ethernet) Number of ports integrated switch Yes 		
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Interfaces Number of PROFINET interfaces 2 1. Interface Interface types • RJ 45 (Ethernet) • Number of ports • Number of ports • integrated switch Yes; X1 Yes		
Number of PROFINET interfaces 2 1. Interface Interface types • RJ 45 (Ethernet) Yes; X1 • Number of ports 2 • integrated switch Yes		
1. Interface Interface types • RJ 45 (Ethernet) Yes; X1 • Number of ports 2 • integrated switch Yes		2
Interface types • RJ 45 (Ethernet) • Number of ports • integrated switch Yes; X1 2 • yes		4
 RJ 45 (Ethernet) Number of ports integrated switch Yes; X1 Yes 		
 Number of ports integrated switch Yes	• •	
• integrated switch Yes		
· · · · · · · · · · · · · · · · · · ·		2
Protocols	integrated switch	Yes
	Protocols	
• IP protocol Yes; IPv4	IP protocol	Yes; IPv4

Yes PROFINET IO Controller PROFINET IO Device Yes • SIMATIC communication Yes • Open IE communication Yes; Optionally also encrypted Yes • Web server Media redundancy Yes **PROFINET IO Controller** Services - PG/OP communication Yes Yes - Isochronous mode 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 1 000 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 Update time for IRT — for send cycle of 250 µs 250 µs to 4 ms; Note: In the case of IRT with isochronous mode, the minimum update time of 375 μs of the isochronous OB is decisive — for send cycle of 500 μs $500 \mu s$ 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 ... 3 875 us) Update time for RT - for send cycle of 250 µs 250 µs to 128 ms — 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 - PG/OP communication Yes 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 Interface types • RJ 45 (Ethernet) Yes; X2 Number of ports integrated switch No Protocols • IP protocol Yes; IPv4 • PROFINET IO Controller Yes • PROFINET IO Device Yes • SIMATIC communication Yes • Open IE communication Yes; Optionally also encrypted • Web server Yes

Media redundancy	No	
PROFINET IO Controller		
Services		
— PG/OP communication	Yes	
	No	
— Direct data exchange	No	
— IRT	No	
— PROFlenergy	Yes; per user program	
 Prioritized startup 	No	
 Number of connectable IO Devices, max. 	32; In total, up to 1 000 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	
Update time for RT		
— for send cycle of 1 ms	1 ms to 512 ms	
PROFINET IO Device	0 12 110	
Services		
— PG/OP communication	Yes	
— 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	
Interface types		
RJ 45 (Ethernet)		
• 100 Mbps	Yes	
Autonegotiation	Yes	
Autoregoliation Autoregoliation	Yes	
Industrial Ethernet status LED		
	Yes	
Protocols		
PROFIsafe	Yes; V2.4 / V2.6	
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		
·	only via 1st interface (X1)	
Media redundancy MRP	only via 1st interface (X1) Yes; MRP Automanager according to IEC 62439-2 Edition 2.0, MRP Manager;	
— Media redundancy — MRP	Yes; MRP Automanager according to IEC 62439-2 Edition 2.0, MRP Manager; MRP Client	
Media redundancy MRP MRP interconnection, supported	Yes; MRP Automanager according to IEC 62439-2 Edition 2.0, MRP Manager; MRP Client Yes; as MRP ring node according to IEC 62439-2 Edition 3.0	
Media redundancy MRP MRP interconnection, supported MRPD	Yes; MRP Automanager according to IEC 62439-2 Edition 2.0, MRP Manager; MRP Client Yes; as MRP ring node according to IEC 62439-2 Edition 3.0 Yes; Requirement: IRT	
Media redundancy MRP MRP interconnection, supported MRPD Switchover time on line break, typ.	Yes; MRP Automanager according to IEC 62439-2 Edition 2.0, MRP Manager; MRP Client Yes; as MRP ring node according to IEC 62439-2 Edition 3.0 Yes; Requirement: IRT 200 ms; For MRP, bumpless for MRPD	
Media redundancy MRP MRP interconnection, supported MRPD	Yes; MRP Automanager according to IEC 62439-2 Edition 2.0, MRP Manager; MRP Client Yes; as MRP ring node according to IEC 62439-2 Edition 3.0 Yes; Requirement: IRT	
Media redundancy MRP MRP interconnection, supported MRPD Switchover time on line break, typ.	Yes; MRP Automanager according to IEC 62439-2 Edition 2.0, MRP Manager; MRP Client Yes; as MRP ring node according to IEC 62439-2 Edition 3.0 Yes; Requirement: IRT 200 ms; For MRP, bumpless for MRPD	
Media redundancy MRP MRP interconnection, supported MRPD Switchover time on line break, typ Number of stations in the ring, max.	Yes; MRP Automanager according to IEC 62439-2 Edition 2.0, MRP Manager; MRP Client Yes; as MRP ring node according to IEC 62439-2 Edition 3.0 Yes; Requirement: IRT 200 ms; For MRP, bumpless for MRPD	
Media redundancy MRP MRP interconnection, supported MRPD Switchover time on line break, typ Number of stations in the ring, max. SIMATIC communication	Yes; MRP Automanager according to IEC 62439-2 Edition 2.0, MRP Manager; MRP Client Yes; as MRP ring node according to IEC 62439-2 Edition 3.0 Yes; Requirement: IRT 200 ms; For MRP, bumpless for MRPD 50	
Media redundancy MRP MRP interconnection, supported MRPD Switchover time on line break, typ Number of stations in the ring, max. SIMATIC communication • PG/OP communication	Yes; MRP Automanager according to IEC 62439-2 Edition 2.0, MRP Manager; MRP Client Yes; as MRP ring node according to IEC 62439-2 Edition 3.0 Yes; Requirement: IRT 200 ms; For MRP, bumpless for MRPD 50 Yes; encryption with TLS V1.3 pre-selected	
- Media redundancy - MRP - MRP interconnection, supported - MRPD - Switchover time on line break, typ Number of stations in the ring, max. SIMATIC communication • PG/OP communication • S7 routing • Data record routing	Yes; MRP Automanager according to IEC 62439-2 Edition 2.0, MRP Manager; MRP Client Yes; as MRP ring node according to IEC 62439-2 Edition 3.0 Yes; Requirement: IRT 200 ms; For MRP, bumpless for MRPD 50 Yes; encryption with TLS V1.3 pre-selected Yes	
- Media redundancy - MRP - MRP interconnection, supported - MRPD - Switchover time on line break, typ Number of stations in the ring, max. SIMATIC communication • PG/OP communication • S7 routing • Data record routing • S7 communication, as server	Yes; MRP Automanager according to IEC 62439-2 Edition 2.0, MRP Manager; MRP Client Yes; as MRP ring node according to IEC 62439-2 Edition 3.0 Yes; Requirement: IRT 200 ms; For MRP, bumpless for MRPD 50 Yes; encryption with TLS V1.3 pre-selected Yes Yes Yes	
- Media redundancy - MRP - MRP interconnection, supported - MRPD - Switchover time on line break, typ Number of stations in the ring, max. SIMATIC communication • PG/OP communication • S7 routing • Data record routing	Yes; MRP Automanager according to IEC 62439-2 Edition 2.0, MRP Manager; MRP Client Yes; as MRP ring node according to IEC 62439-2 Edition 3.0 Yes; Requirement: IRT 200 ms; For MRP, bumpless for MRPD 50 Yes; encryption with TLS V1.3 pre-selected Yes Yes	

Open IE communication		
TCP/IP	Yes	
— Data length, max.	64 kbyte	
several passive connections per port, supported	Yes	
Several passive conflections per port, supported ISO-on-TCP (RFC1006)	Yes	
	64 kbyte	
— Data length, max. ● 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	res, optional	
• HTTP	Yes; Standard and user pages	
• HTTPS	Yes; Standard and user pages	
OPC UA	100, oldindira and door pages	
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	
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	
 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	
	200	
Number of program alarms		
Number of alarms for system diagnostics	100	
Further protocols • MODBUS	Yes; MODBUS TCP	
S7 message functions	Tes, WODBOS TOP	
	64	
Number of login stations for message functions, max.	Yes	
Program alarms 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.	5 000	
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	
Status/control		
Status/control variable	Yes; without fail-safe	
• Variables	inputs/outputs, bit memories, DBs, peripheral I/Os (without fail-safe), times, counters	
 Number of variables, max. 		
of which status variables, max.	200; per job	
— of which control variables, max.	200; per job	
Forcing		
Forcing	Yes; without fail-safe	
 Forcing, variables 	peripheral inputs/outputs (without fail-safe)	
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; Up to 512 KB of data per trace are possible	
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	
Number of available Motion Control resources for	program; selection guide via the TIA Selection Tool 2 400	
technology objects		
Required Motion Control resources		
— per speed-controlled axis		
per positioning axis		
— per synchronous axis		
— per external encoder	80	
— per output cam	20	
— per cam track	160	
— per probe		
 Positioning axis Number of positioning axes at motion control cycle 	11	
of 4 ms (typical value) — Number of positioning axes at motion control cycle	20	
of 8 ms (typical value)		

Controller PID. Oranpott PID. Step PID controller with integrated optimization PID. Step PID controller with integrated optimization for valves PID. Step PI		
PID. Silep PID. Silep PID. Silep PID. Silep PID. Silep Pip. Silep	Controller	
Per Pip Camp	PID_Compact	Yes; Universal PID controller with integrated optimization
Counting and measuring I High appeal counter Semens Ex Profile (SEP) Semens Ex Profile (SEP) Or information product declaration Or appeal warming potential (stat) [CO2 eq] Optical warming potential (stat) [CO2 eq] Optical warming potential (stat) [CO2 eq] Optical warming potential (stating potential) [CO2 eq] Optical warming potential [CO2 eq] Optical warming po	PID_3Step	Yes; PID controller with integrated optimization for valves
A High-speed counter Yes	PID-Temp	Yes; PID controller with integrated optimization for temperature
Standards, approvals, circlificates	Counting and measuring	
Siemens Eco Profile (SEP) Eoological flootafriot - environmental product declaration - Note demand moder properties (after end of life cycle) - Eligh demandicontinuous mode: PFD in accordance with SL3 - High demandicontinuous mode: PFD in accordance with SL3 - High demandicontinuous mode: PFD in accordance with SL3 - High demandicontinuous mode: PFD in accordance with SL3 - High demandicontinuous mode: PFD in accordance with SL3 - We reficial installation, min. - Noticontelli installation, min. - Noticontelli installation, min. - Noticontelli installation, min. - Vertical ins	High-speed counter	Yes
Siemens Eco Profile (SEP) Eoological flootafriot - environmental product declaration - Note demand moder properties (after end of life cycle) - Eligh demandicontinuous mode: PFD in accordance with SL3 - High demandicontinuous mode: PFD in accordance with SL3 - High demandicontinuous mode: PFD in accordance with SL3 - High demandicontinuous mode: PFD in accordance with SL3 - High demandicontinuous mode: PFD in accordance with SL3 - We reficial installation, min. - Noticontelli installation, min. - Noticontelli installation, min. - Noticontelli installation, min. - Vertical ins	Standards, approvals, certificates	
environmental product declaration		Siemens EcoTech
e-environmental product declaration Yes		0.0
Global warming potential, (total) (CO2 eq) 100 kg 25.8 kg 25	- · ·	Yes
global warming potential, (during production) [COZ eg] global warming potential, (during production) [COZ eg] global warming potential, (during operation) [COZ eg] global warming potential, (during operation) [COZ eg] global warming potential, (after end of life cycle) - 8.8 kg		100
eql ploate warming potential, (during production) [CO2 eql ploate warming potential, (during operation) [CO2 eql ploate warming potential, (after end of life cycle) policy and potential, (after end of life cycle) policy and warming potential, (after end of life cycle) [CO2 eql ploate warming potential, (after end of life cycle) policy as a safety class achievable in safety mode • Performance level according to ISO 13349-1		100 kg
eg		
eg] — global warming potential, (after end of life cycle) — global warming potential, (after end of life cycle) — global warming potential, (after end of life cycle) — Performance level according to ISO 13849-1 — \$11. acc. to IEC 61508 — S11. acc. to IEC 61508 — Low demand mode: PFDavg in accordance with S11.3 — High demandcontinuous mode: PFH in accordance with S11.3 — High demandcontinuous mode: PFH in accordance with S11.3 — High demandcontinuous mode: PFH in accordance with S11.3 — Ambient temperature during operation — * horizontal installation, min. — * horizontal installation, min. — * overtical installation, min. — * vertical installation, min. — * overtical installation overtical during storageltransportation — * onlin. — * o		25.0 kg
global warming potential, (after end of life cycle) [CO2 et] Highest safety class achievable in safety mode • Performance level according to ISQ1 1349-1 SIL 3 Probability of failure for service life of 20 years and repair time of 100 hours) Low demand mode: PFDary in accordance with SIL 3 High demand/continuous mode: PFH in accordance with SIL 3 Ambient conditions **Ambient temperature during operation • horizontal installation, min.		75.2 kg
### Pipe	global warming potential, (after end of life cycle)	-0.83 kg
Performance level according to ISO 13849-1 SIL acc. to IEC 91508 SIL 3 Probability of failure (for service life of 20 years and repair time of 100 hours) —Low demand mode: PFDavg in accordance with SIL3 —High demand/continuous mode: PFH in accordance with SIL3 Ambient conditions Ambient temperature during operation ◆ horizontal installation, min. ◆ horizontal installation, max. ◆ horizontal installation, max. ◆ vertical installation, max. ◆ 10° °C; No condensation ◆ vertical installation, max. ◆ vertical installation, max. ◆ 20° °C; No condensation ◆ vertical installation, max. ◆ 20° °C; No condensation ◆ vertical installation, max. ◆ 20° °C; No condensation ◆ vertical installation, max. ◆ 20° °C; No condensation ◆ 20° °C; No condensation ◆		
SIL acc. to IEC 61508 Probability of failure (for service life of 20 years and repair time of 100 hours) Low demand mode: PFDavg in accordance with SIL3 High demandicontinuous mode: PFH in accordance with SIL3 Ambient temperature during operation • horizontal installation, min. • horizontal installation, min. • horizontal installation, min. • vertical installation min. • min. • vertical installation min. • min. • min. • min. • Installation appearation relating to sea level. • Installation altitude above sea level, max. • To "C Altitude during operation relating to sea level. • Installation altitude above sea level, max. • To "C Altitude during operation relating to sea level. • Installation altitude above sea level, max. • To "C Altitude during operation relating to sea level. • Installation altitude above sea level, max. • To "C Altitude during operation relating to sea level. • Installation altitude above sea level, max. • To "C Altitude during operation relating to sea level. • LAD • PEBD • Yes; incl. failsafe • Yes • Copy protection • User program protection/password protection • Yes • Protection of confidential configuration data • Protection level: Write protection • Protection level: Write protection • Protec		
Probability of failure (for service life of 20 years and repair time of 100 hours) - Low demand mode: PFDavg in accordance with SL3 - High demand/continuous mode: PFH in accordance with SL3 Ambient temperature during operation • horizontal installation, min. • horizontal installation, max. • horizontal installation, min. • horizontal installation, max. • horizontal installation, min. • vertical installation, max. • vertical installation on max. • vertical	<u> </u>	
Low demand mode: PFDarg in accordance with SIL3 High demand/continuous mode; PFH in accordance with SIL3 High demand/continuous mode; PFH in accordance with SIL3 Ambient temperature during operation Nonizontal installation, max Nonizontal installation Nonizontal installatio		
Sil.3 - High demand/continuous mode: PFH in accordance with Sil.3 Ambient conditions Ambient conditions Ambient conditions • horizontal installation, min. • horizontal installation, min. • horizontal installation, min. • horizontal installation, min. • vertical installation min. • vertical insta	· · · · · · · · · · · · · · · · · · ·	·
### Ambient demand/continuous mode: PFH in accordance with Sil.3 Ambient temperature during operation • horizontal installation, min. • vertical installation, min. • vertical installation, min. • vertical installation, min. • vertical installation, max. ### Ambient temperature during storage/transportation • min. • max. Ambient temperature during storage/transportation • min. • max. 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 — Yes; incl. failsafe — FBD — Yes; incl. failsafe — SCL — GRAPH Know-how protection • User program protection/password protection • Copy protection • Copy protection • Copy protection • Protection level: Write protection •		< 2.00E-05
Ambient temperature during operation • horizontal installation, min. • horizontal installation, max. 60 °C; Display: 50 °C, at an operating temperature of typically 50 °C, the display is switched off • vertical installation, max. 60 °C; Display: 50 °C, at an operating temperature of typically 50 °C, the display is switched off • 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. • max. 70 °C Additude during operation relating to sea level • Installation allitude above sea level, max. 5 000 m; Restrictions for installation allitudes > 2 000 m; see manual configuration / header Programming language — LAD — FBD — STL — SCL — SCL — SCL — GRAPH Yes Know-how protection • User program protection/password protection • User program protection/password protection • User program protection/password protection • User program protection (Pes • Postoction level: Write protection • Protection level: Capad write protection • Protection level: Capad write protection • Protection level: Capad write protection • Prote	— High demand/continuous mode: PFH in accordance	< 1.00E-09
Ambient temperature during operation • horizontal installation, min. • horizontal installation, min. • horizontal installation, min. • vertical installation, vertically savitation of the vertical		
 horizontal installation, min. horizontal installation, max. 60 °C; Olsplay: 50 °C, at an operating temperature of typically 50 °C, the display is switched official installation, min. 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. max. 70 °C Altitude during operation relating to sea level Installation altitude above sea level, max. 5000 m; Restrictions for installation altitudes > 2000 m, see manual configuration / programming / header Programming language LAD FBD Yes; incl. fallsafe STL SCL GRAPH Yes GRAPH Yes Copy protection Slock protection Pes Access protection Protection level: Write protection Protection level: Write protection 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 Pes <		
	· • • •	00 °C: No see demonstrate
vertical installation, min. 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. 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 / header configuration / programming / header Programming language — LAD Yes; incl. failsafe — FBD Yes; incl. failsafe — STL — SCL — GRAPH Know-how protection User program protection/password protection Slock protection Block protection Copy protection Block 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		60 °C; Display: 50 °C, at an operating temperature of typically 50 °C, the
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.		
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. 5 000 m; Restrictions for installation altitudes > 2 000 m, see manual configuration / header configuration / programming / header Programming language — LAD — FBD — Yes; incl. failsafe — FBD — STL — Yes — SCL — SCL — GRAPH — Yes Know-how protection • User program protection/password protection • Block protection • Block 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: Complete protection • lower limit • upper limit • digustable maximum cycle time Dimensions		
• min. • max. • max. Altitude during operation relating to sea level • Installation altitude above sea level, max. • Installation altitude above sea level, max. • 5 000 m; Restrictions for installation altitudes > 2 000 m, see manual configuration / programming / header Programming language - LAD	vertical installation, 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 Forgramming / header Programming language - LAD - FBD - Yes; incl. failsafe - FBD - STL - SCL - GRAPH - Yes - GRAPH - Yes FROW-how protection - User program protection/password protection - Block protection - Block protection - protection of confidential configuration data - Password for display - Protection level: Write protection - Protection level: Complete protection - Installation altitudes > 2 000 m, see manual - Source manual	• min.	-40 °C
Installation altitude above sea level, max. Installation / header Installation / programming / programming / programming / header Installation / programming /	• max.	70 °C
configuration / header Programming language — LAD Yes; incl. failsafe — FBD Yes; incl. failsafe — STL Yes — SCL Yes — GRAPH Yes Know-how protection • User program protection/password protection Yes • Copy protection • Block 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: Complete protection • programming / cycle time monitoring / header • lower limit • upper limit • upper limit • User programming / beader Dimensions	Altitude during operation relating to sea level	
configuration / programming / header Programming language — LAD — FBD — Yes; incl. failsafe — STL — SCL — SCL — SCL — GRAPH Yes Know-how protection • User program protection/password protection • Slock protection • Block protection • Protection of confidential configuration data • Password for display • Protection level: Write protection • Programming / cycle time monitoring / header • lower limit • upper limit • upper limit • dijustable maximum cycle time	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 — Yes; incl. failsafe — STL — SCL — SCL — SCL — GRAPH Yes Know-how protection • User program protection/password protection • Slock protection • Block protection • Protection of confidential configuration data • Password for display • Protection level: Write protection	configuration / header	
Programming language — LAD — FBD — Yes; incl. failsafe — STL — SCL — SCL — GRAPH Yes Copy protection User program protection/password protection User protection Protection of confidential configuration data Protection of confidential configuration Protection level: Write protection Programming / cycle time monitoring / header lower limit upper limit upper limit upger limit u		
- LAD Yes; incl. failsafe - FBD Yes; incl. failsafe - STL Yes - SCL Yes - GRAPH Yes Know-how protection • User program protection/password protection Yes • Copy protection Yes • Block protection • protection of confidential configuration data Yes • Protection fevel: Write protection Yes • Protection level: Read/write protection Yes • Protection level: Write protection Yes • Protection level: Write protection Yes • Protection level: Complete protection Yes • Protection level: Complete protection Yes • Protection level: Complete monitoring / header • lower limit adjustable minimum cycle time • upper limit • upper limit • upper limit • dijustable maximum cycle time • Dimensions		
- FBD Yes; incl. failsafe - STL Yes - SCL Yes - GRAPH Yes Know-how protection • User program protection/password protection Yes • Copy protection Yes • Block protection Yes • Block protection • protection of confidential configuration data Yes • Password for display Yes • Protection level: Write protection Yes • Protection level: Read/write protection Yes • Protection level: Write protection Yes • Protection level: Write protection Yes • Protection level: Complete protection Yes • Protection level: Mrite protection Yes • Protection level: Mrite protection Yes • Protection level: Complete protection Yes • Protection level: Mrite protection Yes		Yes: incl. failsafe
STL SCL GRAPH SCL GRAPH Yes Know-how protection User program protection/password protection Copy protection Block protection Block 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: Complete protection Protection level: Complete protection Programming / cycle time monitoring / header lower limit upper limit u		
SCL GRAPH Yes Know-how protection • User program protection/password protection • Copy protection • Block protection • 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: Complete protection • Protection level: Complete protection • Programming / cycle time monitoring / header • lower limit • upper limit • upper limit output display Yes Access protection Yes Yes Yes Protection level: Complete protection Yes Programming / cycle time monitoring / header • lower limit • upper limit • upper limit adjustable maximum cycle time		
Mow-how protection User program protection/password protection Copy protection Pes Block protection Protection Protection of confidential configuration data Password for display Protection level: Write protection Protection level: Read/write protection Protection level: Write protection for Failsafe Protection level: Complete protection Programming / cycle time monitoring / header I lower limit Upper limit Adjustable minimum cycle time Dimensions		
User program protection/password protection Yes		
User program protection/password protection Copy protection Block protection Pes 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 Programming / cycle time monitoring / header I lower limit Adjustable minimum cycle time Adjustable maximum cycle time Dimensions		res
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 Yes Protection level: Complete protection Protection level: Complete protection Protection level: Complete protection Adjustable minimum cycle time Adjustable maximum cycle time Dimensions	·	
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 Protection level: Write protection for Failsafe Protection level: Complete protection Programming / cycle time monitoring / header I lower limit Upper limit Adjustable minimum cycle time Adjustable maximum cycle time Adjustable maximum cycle time		
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 for Failsafe • Protection level: Complete protection programming / cycle time monitoring / header • lower limit • upper limit • upper limit adjustable maximum cycle time Dimensions		
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 Yes Protection level: Write protection for Failsafe Protection level: Complete protection Yes Programming / cycle time monitoring / header Iower limit upper limit adjustable minimum cycle time adjustable maximum cycle time		Yes
Password for display Protection level: Write protection Protection level: Read/write protection Protection level: Write protection	·	
Protection level: Write protection Protection level: Read/write protection Protection level: Write protection	 protection of confidential configuration data 	Yes
Protection level: Read/write protection Protection level: Write protection for Failsafe Protection level: Complete protection Programming / cycle time monitoring / header I lower limit upper limit upper limit Protection level: Complete protection Yes Adjustable minimum cycle time adjustable maximum cycle time Dimensions	 Password for display 	Yes
Protection level: Write protection for Failsafe Protection level: Complete protection Programming / cycle time monitoring / header Iower limit upper limit upper limit programming adjustable minimum cycle time adjustable maximum cycle time adjustable maximum cycle time	 Protection level: Write protection 	Yes
Protection level: Complete protection programming / cycle time monitoring / header lower limit upper limit upper limit Dimensions Yes adjustable minimum cycle time adjustable maximum cycle time	 Protection level: Read/write protection 	Yes
programming / cycle time monitoring / header • lower limit adjustable minimum cycle time • upper limit adjustable maximum cycle time Dimensions	 Protection level: Write protection for Failsafe 	Yes
programming / cycle time monitoring / header • lower limit adjustable minimum cycle time • upper limit adjustable maximum cycle time Dimensions	Protection level: Complete protection	Yes
lower limit upper limit adjustable minimum cycle time adjustable maximum cycle time Dimensions		
● upper limit adjustable maximum cycle time Dimensions	· · · · · · · · · · · · · · · · · · ·	adjustable minimum cycle time
Dimensions		
	· ·	
	Width	70 mm

Height 147 mm Depth 129 mm Weights 456 g

Weight, approx.

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

Approvals / Certificates

General Product Approval

Manufacturer Declara-<u>tion</u>







Miscellaneous



General Product Approval

For use in hazardous locations

<u>KC</u>



<u>FM</u>



<u>FM</u>



For use in hazardous locations

Functional Saftey

Marine / Shipping

Type Examination Certificate



IECEx

Miscellaneous



Type Examination Cer**tificate**



Marine / Shipping







NK / Nippon Kaiji Ky-okai



CCS (China Classification Society)

Marine / Shipping

other

Environment



PROFINET







last modified:

12/8/2024

