## SIEMENS

## Data sheet

## 6ES7513-1FM03-0AB0



SIMATIC S7-1500F, CPU 1513F-1 PN, central processing unit with work memory 900 KB for program and 2.5 MB for data, 1st interface: PROFINET IRT with 2-port switch, 25 ns bit performance, SIMATIC Memory Card required - - approvals and certificates according to entry 109815653 at support.industry.siemens.com to be considered! - -

General information	
Product type designation	CPU 1513F-1 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 500 $\mu s$ (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 6ES7513-1FL02- 0AB0
Configuration control	
via dataset	Yes
Display	
Screen diagonal [cm]	3.45 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	
<ul> <li>Mains/voltage failure stored energy time</li> </ul>	5 ms
Repeat rate, min.	1/s
Input current	
Current consumption (rated value)	0.73 A
Current consumption, max.	0.9 A
Inrush current, max.	1.15 A; Rated value
l²t	0.5 A <sup>2</sup> ·s
Power	
Infeed power to the backplane bus	10 W
Power consumption from the backplane bus (balanced)	5.5 W
Power loss	
Power loss, typ.	3.4 W
Memory	
Number of slots for SIMATIC memory card	1
SIMATIC memory card required	Yes

Work memory	
Work memory  • integrated (for program)	900 kbyte
integrated (for data)	2.5 Mbyte
Load memory	
Plug-in (SIMATIC Memory Card), max.	32 Gbyte
Backup	
maintenance-free	Yes
CPU processing times	
for bit operations, typ.	25 ns
for word operations, typ.	32 ns
for fixed point arithmetic, typ.	42 ns
for floating point arithmetic, typ.	170 ns
CPU-blocks	
Number of elements (total)	4 000; 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.	2.5 Mbyte; For DBs with absolute addressing, the max. size is 64 KB
FB	
Number range	0 65 535
• Size, max.	900 kbyte
FC	
Number range	0 65 535
• Size, max.	900 kbyte
OB	
• Size, max.	900 kbyte
<ul> <li>Number of free cycle OBs</li> </ul>	100
<ul> <li>Number of time alarm OBs</li> </ul>	20
<ul> <li>Number of delay alarm OBs</li> </ul>	20
<ul> <li>Number of cyclic interrupt OBs</li> </ul>	20; With minimum OB 3x cycle of 250 µs
<ul> <li>Number of process alarm OBs</li> </ul>	50
<ul> <li>Number of DPV1 alarm OBs</li> </ul>	3
<ul> <li>Number of isochronous mode OBs</li> </ul>	2
<ul> <li>Number of technology synchronous alarm OBs</li> </ul>	2
<ul> <li>Number of startup OBs</li> </ul>	100
<ul> <li>Number of asynchronous error OBs</li> </ul>	4
Number of synchronous error OBs	2
Number of diagnostic alarm OBs	1
Nesting depth	
• per priority class	24; Up to 8 possible for F-blocks
Counters, timers and their retentivity	
S7 counter	
Number	2 048
Retentivity	
— adjustable	Yes
IEC counter	
Number	Any (only limited by the main memory)
Retentivity	Yes
— adjustable	
S7 times	2.049
Number	2 048
Retentivity	Vez
— adjustable	Yes
IEC timer	
Number	Any (only limited by the main memory)
Retentivity	
— adjustable	Yes
Data areas and their retentivity	
Retentive data area (incl. timers, counters, flags), max.	256 kbyte; in total; available retentive memory for bit memories, timers, counters, DBs, and technology data (axes): 216 KB
Extended retentive data area (incl. timers, counters, flags), max.	2.5 Mbyte; When using PS 6 0W 24/48/60 V DC HF

• SiZe, max,18 kbyte• Sk dock memory bit, grouped into one clock memory byte• Retentivity adjustableYas• Retentivity presetNo• Retentivity preset64 kbyte; max. 18 KB per block• Retentivity preset64 kbyte; max. 18 KB per block• Retentivity preset2 448, max. 18 KB per block• Retentivity preset2 48, kbyte; All inputs are in the process image• Outputs2 2 kbyte; All inputs are in the process image• Outputs (volume)8 kbyte• Per Integrated (0 subsystem Outputs (volume)8 kbyte• - Outputs (volume)8 kbyte• Outputs (volume)8 kbyte• Number of distributed (D systems are	Flag	
• Number of lock memory bilg grouped into one clock memory by Deta biologyDeta biology• Retentiny grouped and squares• Retentiny grouped and squares• Retentiny grouped and squares• Partoniky closk, max.• Index squares• Undex squares• Retentiny grouped and squares• Retentiny grouped and squares• Index squares• Index squares• Index squares• Index squares• Index squares• Outputs• Outputs<		16 khyte
Data books		
Protection by adjustable NoYes NoLocal datee per profing class, max.64 kbyle, max. 16 KB per block.More of Df modules64 kbyle, max. 16 KB per block.Versa areaUit dated areae lopda32 kbyte, All inputs are in the process image 32 kbyte, All inputs are in the process imagee lopda32 kbyte, All inputs are in the process imagee lopda32 kbyte, All inputs are in the process imagee lopda32 kbyte, All inputs are in the process imagee lopda (volume)8 kbyte- Outputs (volume)8 kbyte- Number of distributed IO systems32 characterized for analy type key process incluss, process inclus		o, o clock memory bit, grouped into one clock memory byte
endentioning prevailNonLocal data• per printing class, max.64 kbyte, max. 16 KB per block.Momber of D modules.204K max. number of modules./ submodules.10 address area3 kbyte, All inputs are in the process image.• Inputs.3 kbyte, All outputs are in the process image.• Outputs.8 kbyte.• Outputs (colume)8 kbyte.• Number of Indisributed IO systems\$ colume on the system is charaterized net on only by the integration of the system is charaterized net on only by the integration of the system is charaterized net on only colume.• Number of Ideatibuted IO systems\$ colume of G Kbyte.FI + PROFIBUS) can be inserted in total the figurated is colume.• Number of Ideatibutes per ake, max.1 colume of Colume of Colume of the system is charaterized net on only colume.• Number of Ideatibutes per ake, max.1 colume of Colume of Colume of Colume of the system is charaterized net on only colume. </td <td></td> <td>Vee</td>		Vee
Local data         94 priority data, max.         64 kBp er block.           Liderates area         2048; max. 16 KB per block.           Unider of 10 modules         2048; max. number of modules / submodules           In pluts         32 kbyle, All inputs are in the process image           In pluts (solume)         32 kbyle, All inputs are in the process image           - Outputs (solume)         34 kbyle           - Outputs (solume)         8 kbyle           - Number of ubsprocess images, max.         32           - Monther of subprocess images, max.         32           - Monther of De yaterns         32.4 distributed ID system is characterized not only by Be integration of distributed ID system is characterized not only by Be integration of distributed ID system is characterized not only by Be integration of distributed ID system is characterized not only by Be integration of distributed ID system is characterized not only by Be integration of distributed ID system is characterized not only by Be integration of distributed ID system is characterized not only by Be integration of distributed ID system is characterized not only by Be integration of distributed ID system is characterized not only Dy Be integration of dintegration of distributed ID system is characteriz		
• epi pionly dass, max.Ø4 kbgs; max. 16 KB per blocktdirest sursUnder of modules / submodules /		NO
defense arise         2 448; max. number of modules / submodules           Number of ID modules         2 kbyle; All inputs are in the process image           • Inputs         32 kbyle; All inputs are in the process image           • Outputs         32 kbyle; All inputs are in the process image           • Inputs (volume)         8 kbyle           • Outputs (volume)         8 kbyle           • Number of subprocess images, max.         32           • Number of subprocess images, max.         32           • Number of De masters         • Via CM           • Via CM         6, A maximum of 6 CMs (PROFINET + PROFIBUS) can be inserted in total           Number of Do Controllers         1           • Via CM         6, A maximum of 6 CMs (PROFINET + PROFIBUS) can be inserted in total           Number of IDP CMs         1           • Number of IDP CMs         <		
Number of IO modules         2 048; max. number of modules / submodules           I/D address area         32 kbyte; All inputs are in the process image           - Inputs         32 kbyte; All inputs are in the process image           - Outputs         32 kbyte; All outputs are in the process image           - Outputs (volume)         8 kbyte           - Number of adstributed IO systems are configuration         32           Varia CM         6, A maximum of 8 CMs (PROFINET = PROFIBUS) communication modules, but also byte noncentron of IO va AS I- naster modules or Inks (e.g. (EPR-Link)           Number of IO Controllers         1           • integrated         1           • Va CM         6, A maximum of 8 CMs (PROFINET + PROFIBUS) can be inserted in total           Rack         1           • Number of FIP CMs         be number of connectable FIP CMs is only imited by the number of available side           • Number of FIP CMs         bit Answire clock           Buspring         Superi		64 kbyte; max. 16 KB per block
I/O address areaI routs22 kbyte; Al inputs are in the process image0 uputs32 kbyte; Al inputs are in the process image0 rindge (volume)8 kbyte Outputs (volume)8 kbyte- Number of subprocess images, max.32- Number of distributed IO systems32- Number of distributed IO systems32- Number of distributed IO systems32- Number of IO Controles Via C.M6; A maximum of 6 CMs (PROFINET + PROFIBUS) can be inserted in total- Number of IO Controles1- Via C.M6; A maximum of 6 CMs (PROFINET + PROFIBUS) can be inserted in total- Number of IO Controles Number of IO Controles Number of ID Controles Number of IP CMs32; CPU + 31 modules- Number of IP CMs1- Number of IP CMs1 </td <td></td> <td></td>		
Inputs32 kbyte: Ali inputs are in the process image• Ordputs32 kbyte: Ali ordputs are in the process image• Inputs (volume)8 kbyte• Ordputs (volume)8 kbyte• Number of of distributed IO systems32Supprocess images92• Number of of distributed IO systems32• Number of Ord distributed IO systems32• Number of Ord distributed IO systems32• Number of Ordofores9• Number of Ordofores1• Via CM6. A maximum of 6 CMs (PROFINET + PROFIBUS) can be inserted in totalNumber of IDC Controles1• Via CM6. A maximum of 6 CMs (PROFINET + PROFIBUS) can be inserted in totalReak1• Number of IDC Systems32 (CPU + 31 modules• Number of Ines, max.1• Number of Ines, max.10• Number of Ines, max.		2 048; max. number of modules / submodules
• olupuis32 kbyte, All outputs are in the process imageper chargeHoly (olume)• Outputs (volume)8 kbyte• Number of subprocess images, max.32• Number of subprocess images, max.32• Number of distributed IO systems32 kbyte connection of I/O via AS-i master modules or inks (e.g. IE/PS-Link).Number of distributed IO systems6 (A maximum of 6 CMs (PROFINET + PROFIBUS) can be inserted in total by the connection of I/O via AS-i master modules or inks (e.g. IE/PS-Link).Number of IO Controllers1• Via CM6 (A maximum of 6 CMs (PROFINET + PROFIBUS) can be inserted in total extract and the system is characterized into any inserted into any ins		
per integrated (0 subsystem         8 kbyte           - Inputs (volume)         8 kbyte           per GMCP         8 kbyte           - Outputs (volume)         8 kbyte           Subprocess images, max.         32           Subprocess images, max.         32           Anter outputs (volume)         32 (A distributed VO system is characterized not only by the integration of distributed I/O via AS-I master modules or links (e.g. IE/PB-Link)           Number of DP masters         -           • Via CM         6. A maximum of 6 CMs (PROFINET + PROFIBUS) cam be inserted in total           Number of DP masters         1           • Via CM         6. A maximum of 6 CMs (PROFINET + PROFIBUS) can be inserted in total           Number of IO Controllers         1           • Via CM         5. A maximum of 6 CMs (PROFINET + PROFIBUS) can be inserted in total           Rack         1           • Via CM         6. A maximum of 6 CMs (s only limited by the number of available stots           • Number of IDP CMs         1           • Number of PIP CMs         1           • Number of PIP CMs         6 wk: At 40 "C ambient temperature, typically           • Deviation per day, max.         1           PIP CM         1           • Number of PIP CMs         6 wk: At 40 "C ambient temperature, typically <td></td> <td></td>		
- Inputs (volume)8 kbyte- Outputs (volume)8 kbyte- Outputs (volume)8 kbyte- Outputs (volume)8 kbyteSubpracess images2- Number of subpracess images, max.3 (2 kdistinuted I/O system is characterized nationally by the integration of 10 via AS-1 master modules of tilts of the output set outpu	Outputs	32 kbyte; All outputs are in the process image
- Outputs (volume)8 kbyteper CMCP8 kbyte- Outputs (volume)8 kbyte- Outputs (volume)8 kbyte- Number of subprocess images, max.32arconser32karconser33karconser33karconser34<		
per CM/CP         Inputs (volume)           — Inputs (volume)         8 kbyte           — Ouguds (volume)         8 kbyte           Subprocess images         32           Interfer of subprocess images, max.         32           Interfer of subprocess images, max.         32           Interfer of subprocess images, max.         32           Interfer of DP masters         32.4 distributed I/O system is characterized not only by the integration of distributed I/O via PE/OFINET 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         •           • Va CM         6: A maximum of 6 CMs (PROFINET + PROFIBUS) can be inserted in total           Number of I/O Controllers         1           • Integrated         1           • Va CM         6: A maximum of 6 CMs (PROFINET + PROFIBUS) can be inserted in total           Number of Ines, max.         12           • Number of Ines, max.         1           • Number of PIP CMs         side is           • Number of PIP CMs         beakup time           • Number of PIP CMs         10 s; Typ. 2 s           Operating buuts counter         10 s; Typ. 2 s           • Number of PIP CINET interfaces         1           • In AS, master         Yes	— Inputs (volume)	8 kbyte
- Inputs (volume) 8 kbyte - Outputs (volume) 8 kbyte Suburber of subprocess images • Number of subprocess images, max. 32 tardware configuration Number of distributed IO systems 24 distributed IO system is characterized not only by the integration of distributed IO systems 25 distributed IO system is characterized not only by the integration of distributed IO systems 25 distributed IO system is characterized not only by the integration of distributed IO systems 25 distributed IO system is characterized not only by the integration of distributed IO system 25 distributed IO system is characterized not only by the integration of distributed IO system 35 distributed IO system is characterized not only by the integration of distributed IO controllers • via COM •	— Outputs (volume)	8 kbyte
Outputs (volume)8 kbyteSubprocess images32fertware configuration32Number of distributed IO system is characterized not only by the integration of distributed IO via PROFINET or PROFIBUS communication modules, but also or distributed IO via PROFINET or PROFIBUS communication modules, but also or distributed IO via PROFINET or PROFIBUS communication modules, but also or distributed IO via PROFINET or PROFIBUS communication modules, but also or distributed IO via PROFINET or PROFIBUS) can be inserted in totalNumber of DP masters•• Via CM6. A maximum of 6 CMs (PROFINET + PROFIBUS) can be inserted in totalNumber of IO Controllers1• Via CM6. A maximum of 6 CMs (PROFINET + PROFIBUS) can be inserted in totalRak1• Modules per rack, max.32: CPU + 31 modules• Number of lines, max.32: CPU + 31 modules• Number of PIP CMs32: CPU + 31 modules• Number of PIP CMs32: CPU + 31 modules• Number of PIP CMs32: CPU + 31 modules• Number of PIP CMs50 wk; At 40 "C ambient temperature, typically• Number of PIP CMs60 wk; At 40 "C ambient temperature, typically• Number of algo per day, max.10 setimperature, typically• Overation hours was.10 setimperature, typically• Number of PIP CMs10 setimperature, typically• Number of algo per day, max.10 setimperature, typically• Number of Adge per day, max.10 setimperature, typically• Number of Adge per day, max.10 setimperature, typically• Number of PIP CMS10 setimperature, typically	per CM/CP	
Subprocess images         32           • Number of subprocess images, max.         32           Refavar configuration         32. 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 system is characterized not only by the integration of 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 system is characterized not only by the integration of 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 system is characterized not only by the integration of 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 system is characterized not only by the integration of distributed I/O system is characterized not only by the integration of distributed I/O system is characterized in total           Number of I/O Controllers         1           • Via CM         6: A maximum of 6 CMs (PROFINET + PROFIBUS) can be inserted in total           Reak         1           • Via CM         6: A maximum of 6 CMs (PROFINET + PROFIBUS) can be inserted in total           Reak         1           • Number of IIPO CMs         12: CPU + 31 modules           • Number of IIPO CMs         14 and ware clock           • Number of PIP CMs         6 wk, A140 °C ambient temperature, typically           • evalation per day, max.	— Inputs (volume)	8 kbyte
• Number of subprocess images, max.         32           tardware configuration         32.4 distributed I/O system is characterized not only by the integration of distributed I/O via PROFINET or PROFINED 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         6: A naximum of 6 CMs (PROFINET + PROFIBUS) can be inserted in total           Number of IO controllers         1           • Integrated         1           • Via CM         6: A naximum of 6 CMs (PROFINET + PROFIBUS) can be inserted in total           Number of Iocontrollers         2: CPU + 31 modules           • Number of fines, max.         3: 2: CPU + 31 modules           • Number of PROFIBUS)         the number of connectable PIP CMs is only limited by the number of available stots           • PP OM	— Outputs (volume)	8 kbyte
tardware configuration           Number of distributed I/O systems         32; 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 system is characterized not only by the integration of 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 system is characterized not only by the integration of distributed I/O via AS in master modules or links (e.g. IE/P8-Link)           Number of I/O controllers         6: A maximum of 6 CMs (PROFINET + PROFIBUS) can be inserted in total           Integrated         1           • Via CM         6: A maximum of 6 CMs (PROFINET + PROFIBUS) can be inserted in total           Rack         1           • Monber of I/O controllers         1           • Monber of PIP CMs         1           • Number of PIP CMs         1           • Number of PIP CMs         1           • Number of PIP CMs         10 is type: 2 is 0           • Number of PIP CMs         10 is type: 2 is 0           • Number of PIP CMs         10 is type: 2 is 0           • Number of PIP CMs         10 is type: 2 is 0           • Number of PIP CMs         10 is type: 2 is 0           • Number of pIP CMs         10 is type: 2 is 0           • Number of PIP CMs         10 is type: 2 is 0           • Number of paday, m	Subprocess images	
Number of distributed I/O system is characterized and only by the integration of distributed I/O system is characterized and only by the integration of distributed I/O system is characterized and only by the integration of distributed I/O system is characterized and only by the integration of distributed I/O system is characterized and only by the integration of distributed I/O system is characterized by the connection of I/O via AS-i master modules or links (e.g. IE/PS-Link)           Number of DO masters         6; A maximum of 6 CMs (PROFINET + PROFIBUS) can be inserted in total           Number of IO Controllers         1           • Na CM         6; A maximum of 6 CMs (PROFINET + PROFIBUS) can be inserted in total           Rack         1           • Na CM         6; A maximum of 6 CMs (PROFINET + PROFIBUS) can be inserted in total           Rack         1           • Nodules per track, max.         32; CPU + 31 modules           • Number of Ines, max.         1           PIP CM         4           • Number of IPIC Ms         the number of connectable PIP CMs is only limited by the number of available sols           ime of day         5           Clock         6           • Type         Hardware clock           • ackup time         6 wk; At 40 °C ambient temperature, typically           • Devision per day, max.         10 s; Typ: 2 s           Operating hours counter         1           • Interfaces	<ul> <li>Number of subprocess images, max.</li> </ul>	32
distributed I/0 via PROFINET or PROFINES communication modules, but also by the connection of I/O Via AS-i master modules or links (e.g. IE/PB-Link)           • Via CM         6, A maximum of 6 CMs (PROFINET + PROFIBUS) can be inserted in total           • Number of IO Controllers         6, A maximum of 6 CMs (PROFINET + PROFIBUS) can be inserted in total           • Na CM         6, A maximum of 6 CMs (PROFINET + PROFIBUS) can be inserted in total           • Nodules per rack, max.         32, CPU + 31 modules           • Number of Ines, max.         1           • Number of PIP CMs         the number of connectable PIP CMs is only limited by the number of available also           • Number of PIP CMs         the number of connectable PIP CMs is only limited by the number of available also           • Number of PIP CMs         6 Wk; At 40 "C ambient temperature, typically           • Deviation per day, max.         10 s; Typ: 2 s           Operating hours counter            • Number of PROFINET interfaces         Yes           • In AS, master         Yes           • In AS, master         Yes           • In AS, master         2           • In AS, master         Yes           • Inferace types         Yes; Y1     <	Hardware configuration	
• Via CM6; A maximum of 6 CMs (PROFINET + PROFIBUS) can be inserted in totalNumber of IO Controllers• Integrated1• Via CM6; A maximum of 6 CMs (PROFINET + PROFIBUS) can be inserted in totalRack32, CPU + 31 modules• Modules per rack, max.32, CPU + 31 modules• Number of Ines, max.1PIP CM1• Number of PIP CMsthe number of connectable PIP CMs is only limited by the number of available sids• Number of PIP CMs4• Number of eday5• Number of eday0 skr; At 40 °C ambient temperature, typically o beviation per day, max.• Operating Hours counter18• Number16• SupportedYes• Number16• ClockYes• Number of PROFINET interfacesYes• In AS, masterYes• In AS, masterYes• In AS, masterYes• In AS, device2• In AS, device1• Interface types1• Interface types1• Interface typesYes; X1• Interface types2• Interface typesYes; X1• Number of prots2• RotocolYes; IPV4• PROFINET IO DeviceYes; IPV4• PROFINET IO ControllerYes• PROFINET IO DeviceYes• PROFINET IO DeviceYes• SIMATIC communicationYes	Number of distributed IO systems	distributed I/O via PROFINET or PROFIBUS communication modules, but also
Number of IO Controllers         1           Integrated         1           Via GM         6; A maximum of 6 CMs (PROFINET + PROFIBUS) can be inserted in total           Rack         32; CPU + 31 modules           Number of times, max.         32; CPU + 31 modules           Number of PtP CMs         32; CPU + 31 modules           Number of PtP CMs         1           Number of PtP CMs         the number of connectable PtP CMs is only limited by the number of available solts           Time of day         1           Clock         1           • Type         Hardware clock           • Stackup time         6 w; At 40 °C ambient temperature, typically           • Devisition per day, max.         10 s; Typ: 2 s           Operating hours counter         16           • Number of PROFINET interfaces         Yes           • in AS, master         Yes           • on Ethernet via NTP         Yes           • on Ethernet via NTP         Yes           • Interfaces         1           Number of PROFINET interfaces         1           • Interface teges         1           • Interface teges         1           • RAJ 45 (Ethernet)         Yes; YI           • Number of ports         2	Number of DP masters	
• integrated1• Via CM6; A maximum of 6 CMs (PROFINET + PROFIBUS) can be inserted in totalRack32; CPU + 31 modules• Number of lines, max.32; CPU + 31 modules• Number of lines, max.1PIP CMInsume of connectable PIP CMs is only limited by the number of available slots <b>Trope</b> Handware clock• Number of PIP CMs6 wk: At 40 °C ambient temperature, typically o bysiton per day, max.• Deviation per day, max.10 s; Typ: 2 sOperating hours counter10 s; Typ: 2 s• Number16Clock synchronizationYes• supportedYes• in AS, forviceYes• norter of PROFINET interfacesYes• In AS, forviceYes• In AS, forvice2• Interface types1• Interface typesYes; N1• Rumber of ports2• Rumber of ports2• Rumber of portsYes; N1• Interface typesYes; N1• ProtocolYes; N1• ProtocolYes; N1• ProtocolYes; N1• ProtocolYes; N2• ProtocolYes• ProtocolYes• ProtocolYes• ProtocolYes• ProtocolYes• Pro	• Via CM	6; A maximum of 6 CMs (PROFINET + PROFIBUS) can be inserted in total
• Via CM6; A maximum of 6 CMs (PROFINET + PROFIBUS) can be inserted in totalRackRack• Modules per rack, max.32; CPU + 31 modules• Number of lines, max.32; CPU + 31 modules• Number of lines, max.10• PP CM•• Number of PP CMsthe number of connectable PIP CMs is only limited by the number of available slots• Inter of day•Clock•• TypeHardware clock• Backup time6 wk; At 40 °C ambient temperature, typically• Deviation per day, max.10 s; Typ: 2 sOperating hours counter•• Number16• SupportedYes• Number of PR CNIST interfacesYes• In AS, device9• on Ethernet via NTPYes• Number of PROFINET interfaces1• Interface types•• Runds of PROFINET interfaces2• Runds of PROFINET interfaces2• Runds of protis2• Runds of protis2• Runds of PROFINET interfaces1• Runds of protis2• Runds of protis2• In FAS, Berlenett)Yes; X1• Runds of protis2• Runds of protis2• ProtocolYes; N1• Runds of protis2• ProtocolYes; S1• ProtocolYes; S1• ProtocolYes; S1• ProtocolYes• ProtocolYes• ProtocolYes• ProtocolYes<	Number of IO Controllers	
Rack         Second	<ul> <li>integrated</li> </ul>	1
• Modules per rack, max.32; CPU + 31 modules• Number of lines, max.1PIP CMthe number of connectable PIP CMs is only limited by the number of available slots• Number of PIP CMsthe number of connectable PIP CMs is only limited by the number of available slots• Time of day• Clock•• TypeHardware clock 6 wk; At 40 °C ambient temperature, typically • Deviation per day, max.• Deviation per day, max.0 s; Typ: 2 sOperating hours counter16• Number16Clock synchronizationYes• In AS, device • on Ethernet via NTPYes• Number of PROFINET Interfaces1• Number of PROFINET interfaces1• Interface types1• Ruft S (Ethernet) • Number of portsYes; X1• Number of ports • Number of portsYes; X1• PROFINET InterfacesYes• Protocol • PROFINET ID Controller • PROFINET ID ControllerYes; IPV4• PROFINET ID Controller • PROFINET ID Device • PROFINET ID DeviceYes• SIMATIC communicationYes	• Via CM	6; A maximum of 6 CMs (PROFINET + PROFIBUS) can be inserted in total
• Number of lines, max.1PIP CMPIP CMs• Number of PIP CMsthe number of connectable PIP CMs is only limited by the number of available isols <b>ine of dayClock</b> • TypeHardware clock• Backup time6 wk; At 40 °C ambient temperature, typically• Deviation per day, max.10 s; Typ.: 2 sOperating hours counter6• Number16Clock synchronization16• supportedYes• in AS, masterYes• in AS, deviceYes• on Ethernet via NTPYes <b>Number of PROFINET</b> interfaces1 <b>Interface</b> Yes• RUAF de Clehrmet)Yes• RUAF de StateYes• Interface types1• Interface types2• Interface typesYes• PROFINET interfaces2• Interface typesYes• PROFINET IO ControllerYes• PROFINET IO ControllerYes• PROFINET IO ControllerYes• PROFINET IO DeviceYes• PROFINET IO DeviceYes• SIMATIC communicationYes	Rack	
PtP CM           • Number of PtP CMs         the number of connectable PtP CMs is only limited by the number of available slots <b>Time of day</b> Clock            • Type         Hardware clock           • Backup time         6 wk; At 40 °C ambient temperature, typically           • Deviation per day, max.         0 s; Typ: 2 s           Operating hours counter            • Number         16           Clock synchronization            • supported         Yes           • in AS, master         Yes           • in AS, device         Yes           • on Ethernet via NTP         Yes <b>Interfaces</b> PMote of ports         2           • Number of ports         2           • Number of ports         2           • integrated switch         Yes           • Protocol         Yes           • IP protocol         Yes           • PROFINET ID Controller         Yes           • PROFINET ID Device         Yes	<ul> <li>Modules per rack, max.</li> </ul>	32; CPU + 31 modules
Number of PtP CMs         the number of connectable PtP CMs is only limited by the number of available slots           Imme of day         Immediate         Immediat         Immediate         Immed	<ul> <li>Number of lines, max.</li> </ul>	1
slots           rine of day           Clock           Clock           Type         Hardware clock           Backup time         6 wk; At 40 °C ambient temperature, typically           obeviation per day, max.         10 s; Typ.: 2 s           Operating hours counter         16           Number         16           Clock synchronization         Yes           supported         Yes           on Ethernet via NTP         Yes           Number of PROFINET interfaces         1           Interface types         Interface types           erRJ 45 (Ethernet)         Yes; X11           Number of ports         2           eintegrated switch         Yes; Number of ports           Protocols         Yes; Number of ports           eintegrated switch         Yes; X11           Protocols         Yes; X11           eintegrated switch         Yes; X11           Protocols         Yes           Protocols         Yes           Protocols         Yes           PROFINET ID Controller         Yes           PROFINET ID Controller         Yes           PROFINET ID Controller         Yes           PROFINET ID Device	PtP CM	
Clock• TypeHardware clock• Backup time6 wk; At 40 °C ambient temperature, typically• Deviation per day, max.0 is, Typ.: 2 sOperating hours counter16• Number16Clock synchronizationYes• supportedYes• in AS, masterYes• in AS, deviceYes• on Ethernet via NTPYesNumber of PROFINET interfaces1• InterfaceYes• Interface types1• Interface types1• Interface types2• Interface types2• Interface switch2• Interface switch2• Interface types1• Interface types2• Interface types2• Interface types2• Interface types1• ProtocolYes; IPv4• ProtocolYes; IPv4• IP protocolYes; IPv4• PROFINET IO ControllerYes• PROFINET IO DeviceYes• SIMATIC communicationYes		
• TypeHardware clock• Backup time6 wk; At 40 °C ambient temperature, typically• Deviation per day, max.10 s; Typ.: 2 sOperating hours counter10 s; Typ.: 2 s• Number16Clock synchronizationYes• supportedYes• in AS, masterYes• on Ethernet via NTPYesNumber of PROFINET interfaces1InterfaceYes; X1• RJ 45 (Ethernet)Yes; X1• Number of ports2• integrated switchYes; Y1• ProtocolYes; IPV4• PROFINET IO ControllerYes; IPV4• PROFINET IO DeviceYes; SIMATIC communication	Time of day	
Backup time6 wk; At 40 °C ambient temperature, typically• Deviation per day, max.10 s; Typ.: 2 sOperating hours counter16• Number16Clock synchronizationYes• supportedYes• in AS, masterYes• in AS, deviceYes• on Ethernet via NTPYesNumber of PROFINET interfaces1InterfaceInterfaceInterface types2• RJ 45 (Ethernet)Yes; X1• Number of ports2• integrated switchYesProtocolYes; IPV4• PROFINET IO ControllerYes; IPV4• PROFINET IO DeviceYes• SIMATIC communicationYes	Clock	
• Deviation per day, max.10 s; Typ.: 2 sOperating hours counter16• Number16Clock synchronizationYes• supportedYes• in AS, masterYes• in AS, deviceYes• on Ethernet via NTPYesNumber of PROFINET interfaces1InterfaceInterface typesYes; X1• RJ 45 (Ethernet)Yes; X1• nitegrated switchYesProtocolYes; IPv4• PROFINET IO ControllerYes; IPv4• PROFINET IO DeviceYes; SiMATIC communication• SIMATIC communicationYes	• Туре	Hardware clock
Operating hours counter       16         Clock synchronization       Yes         • supported       Yes         • in AS, master       Yes         • in AS, device       Yes         • on Ethernet via NTP       Yes         Number of PROFINET interfaces       1         Interface       1         Interface types       Yes, X1         • RJ 45 (Ethernet)       Yes, X1         • Integrated switch       Yes         Protocol       Yes         PROFINET IO Controller       Yes         • IP PROFINET IO Controller       Yes         • SIMATIC communication       Yes	Backup time	6 wk; At 40 °C ambient temperature, typically
• Number16Clock synchronization• supportedYes• in AS, masterYes• in AS, deviceYes• on Ethernet via NTPYes• on Ethernet via NTPYesNumber of PROFINET interfaces1• InterfaceInterface• Interface typesYes• RJ 45 (Ethernet)Yes X1• Number of ports2• Integrated switchYes• ProtocolsYes• IP protocolYes (Pv4• PROFINET IO ControllerYes• PROFINET IO ControllerYes• SIMATIC communicationYes	<ul> <li>Deviation per day, max.</li> </ul>	10 s; Typ.: 2 s
Clock synchronization         • supported       Yes         • in AS, master       Yes         • in AS, device       Yes         • on Ethernet via NTP       Yes         • on Ethernet via NTP       Yes         • on Ethernet via NTP       Yes         • number of PROFINET interfaces       1         • Interface       1         • Interface types       Yes; X1         • RJ 45 (Ethernet)       Yes; X1         • Number of ports       2         • integrated switch       Yes         Protocols       Yes; IPv4         • IP protocol       Yes; IPv4         • PROFINET IO Controller       Yes         • PROFINET IO Controller       Yes         • SIMATIC communication       Yes	Operating hours counter	
• supportedYes• in AS, masterYes• in AS, deviceYes• on Ethernet via NTPYes• netfacesYes• netfaces1• Interface1• Interface typesYes X1• RJ 45 (Ethernet)Yes X1• Number of ports2• integrated switchYes• ProtocolsYes Y1• ProtocolYes Y1• PROFINET IO ControllerYes Y1• PROFINET IO ControllerYes Y1• PROFINET IO DeviceYes• SIMATIC communicationYes	Number	16
in AS, masterYesin AS, deviceYeson Ethernet via NTPYesNumber of PROFINET interfaces1InterfaceInterface typese RJ 45 (Ethernet)Yes; X1e RJ 45 (Ethernet)2e integrated switchYesProtocolse IP protocolYes; IPv4e PROFINET IO ControllerYese PROFINET IO DeviceYese SIMATIC communicationYes	Clock synchronization	
• in AS, deviceYes• on Ethernet via NTPYes• nterfaces1Number of PROFINET interfaces1• InterfaceInterface• RJ 45 (Ethernet)Yes; X1• RJ 45 (Ethernet)2• integrated switchYes• ProtocolsYes; IPv4• IP protocolYes; IPv4• PROFINET IO ControllerYes• PROFINET IO DeviceYes• SIMATIC communicationYes	• supported	Yes
• on Ethernet via NTPYesNumber of PROFINET interfaces1Interface1Interface typesYes; X1• RJ 45 (Ethernet)Yes; X1• Number of ports2• integrated switchYesProtocolsYes; IPv4• IP protocolYes; IPv4• PROFINET IO ControllerYes• PROFINET IO DeviceYes• SIMATIC communicationYes	• in AS, master	Yes
• on Ethernet via NTPYesNumber of PROFINET interfaces1Interface1Interface typesYes; X1• RJ 45 (Ethernet)Yes; X1• Number of ports2• integrated switchYesProtocolsYes; IPv4• IP protocolYes; IPv4• PROFINET IO ControllerYes• PROFINET IO DeviceYes• SIMATIC communicationYes		
Interfaces         Number of PROFINET interfaces       1         Interface         Interface types <ul> <li>RJ 45 (Ethernet)</li> <li>Yes; X1</li> <li>Number of ports</li> <li>integrated switch</li> </ul> Yes         Protocols       Yes; IPv4 <ul> <li>PROFINET IO Controller</li> <li>Yes</li> <li>SIMATIC communication</li> <li>Yes</li> </ul>		
Number of PROFINET interfaces       1         Interface       Interface types         Interface types       Ves; X1         Integrated switch       Yes; X1         Number of ports       2         Integrated switch       Yes         Protocols       Yes; IPv4         IP protocol       Yes; IPv4         IP PROFINET IO Controller       Yes         IP ROFINET IO Device       Yes         IMATIC communication       Yes	Interfaces	
Interface         Interface types         • RJ 45 (Ethernet)       Yes; X1         • Number of ports       2         • integrated switch       Yes         Protocols       Yes; IPv4         • PROFINET IO Controller       Yes         • PROFINET IO Device       Yes         • SIMATIC communication       Yes		1
Interface types         • RJ 45 (Ethernet)       Yes; X1         • Number of ports       2         • integrated switch       Yes         Protocols         • IP protocol       Yes; IPv4         • PROFINET IO Controller       Yes         • PROFINET IO Device       Yes         • SIMATIC communication       Yes		
• RJ 45 (Ethernet)Yes; X1• Number of ports2• integrated switchYesProtocols• IP protocolYes; IPv4• PROFINET IO ControllerYes• PROFINET IO DeviceYes• SIMATIC communicationYes		
• Number of ports2• integrated switchYesProtocols• IP protocolYes; IPv4• PROFINET IO ControllerYes• PROFINET IO DeviceYes• SIMATIC communicationYes		Vec. X1
• integrated switch     Yes       Protocols     Yes; IPv4       • PROFINET IO Controller     Yes       • PROFINET IO Device     Yes       • SIMATIC communication     Yes		
Protocols         • IP protocol       Yes; IPv4         • PROFINET IO Controller       Yes         • PROFINET IO Device       Yes         • SIMATIC communication       Yes	-	
IP protocolYes; IPv4PROFINET IO ControllerYesPROFINET IO DeviceYesSIMATIC communicationYes		
• PROFINET IO Controller     Yes       • PROFINET IO Device     Yes       • SIMATIC communication     Yes		VersiDud
PROFINET IO Device Yes     SIMATIC communication Yes		
SIMATIC communication Yes		
Open IE communication     Yes; Optionally also encrypted		
	Open IE communication	Yes; Optionally also encrypted

Update time for RT     250 µs to 128 ms       - for send cycle of 250 µs     250 µs to 256 ms       - for send cycle of 1 ms     1 ms to 512 ms       - for send cycle of 4 ms     2 ms to 512 ms       - for send cycle of 4 ms     4 ms to 512 ms       - for send cycle of 4 ms     4 ms to 512 ms       - for send cycle of 4 ms     4 ms to 512 ms       - for send cycle of 4 ms     4 ms to 512 ms       - for send cycle of 4 ms     4 ms to 512 ms       - FO/OP communication     Yes       - IRT     Yes       - PROFINETIO Device     Yes       - PROFINETION mode     No       - IRT     Yes       - 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       - Asset management record     Yes; per user program       100 Mbps     Yes       Autonegotiation     Yes       - Autonegotiation     Yes       - Autonegotiation     Yes       - Autocrossing     Yes	Web server	Yes
Services	Media redundancy	Yes
PGOP commutation     PGOP	PROFINET IO Controller	
- Isochronaus mode     Yes       - Isochronaus mode     Yes       - PROFINET     Yes       - PROFINET     Yes       - PROFINET     Yes       - PROFINET     Yes       - Number of connectable ID Devices, max.     128. In total, up to 512 distributed ID devices can be connected via AS-I, PROFINET       - Of which ID devices win IFT, max.     84       - Number of connectable ID Devices for RT, max.     128.       - Worder of ID Devices for RT, max.     128.       - Worder of ID Devices for RT, max.     128.       - Worder of ID Devices for RT, max.     128.       - Worder of ID Devices for RT, max.     128.       - Worder ID Devices for RT, max.     128.       - Worder ID Devices for RT.     28.       - Worder ID Devices for RT.     28.       - Worder ID Devices for RT.     28.       - Worder ID Devices for RT.     128.       - Worder OD Devices for RT.     250 jus to 4 ms; Note: In the case of RTW with incommonus mode, the minimum update for first with incommonus CB is decisive       - Updating times     250 jus to 4 ms; Note: In the case of RTW with incommonus CB is decisive       - For send cycle of 20 ms     250 jus to 28 ms       - For send cycle of 20 ms     250 jus to 28 ms       - For send cycle of 20 ms     250 jus to 28 ms       - For send cycle of 10 ms     10 ms to 512 ms	Services	
- Direct data exchange         Yes; Requirement: IRT and isochronous mode (MRPD optional)           - IRT         Yes           - PROFInergy         Yes; for user program           - Protricted startup         Yes; Max: 32 PROFINET devices           - Or which IO devices with IRT, max.         64           - Or which ID devices with IRT, max.         128           - Or which IID Devices that can be simultaneously         8; in total across all interfaces           - Or which IID Devices that can be simultaneously         8; in total across all interfaces           - Number of IO Devices per tool, max.         6           - Number of IO Devices per tool, max.         6           - Or send cycle of 250 µs         200 µs to the incertose of IRT with incommous OB is decisive           - for send cycle of 250 µs         200 µs to the sochronous OB is decisive           - for send cycle of 20 µs         200 µs to the sochronous OB is decisive           - for send cycle of 20 µs         200 µs to the sochronous OB is decisive           - for send cycle of 20 µs         200 µs to the sochronous OB is decisive           - for send cycle of 20 µs         200 µs to the sochronous OB is decisive           - for send cycle of 20 µs         200 µs to the sochronous OB is decisive           - for send cycle of 20 µs         200 µs to the sochronous OB is decisive           - for send c	— PG/OP communication	Yes
- IRT         Yes           - IRC/Fenergy         Yes, per user program           - Number of connectable IO Devices, max.         128, in total, user program           - Of which IO devices with IRT, max.         64           - Number of connectable IO Devices for IRT, max.         128           - Of which ID devices with IRT, max.         64           - Number of Dowies that can be simulaneously         is in total across all interfaces           - Number of ID Devices per tool, max.         128           - Number of ID Devices per tool, max.         8           - Updating times         250 us to 4 ms; Nate: In the calso depends on communication there set for PROFINET IC. on the number of IO devices, and on the quantity of the configured user data           - Or send cycle of 250 us         250 us to 4 ms; Nate: In the calse of IRT with isochronous mode, the minimum update time of S00 us to 150 ms           - Or send cycle of 1 ms         1 ms to 16 ms           - For send cycle of 250 us         250 us to 8 ms           - Or send cycle of 1 ms         1 ms to 64 ms           - For send cycle of 1 ms         250 us to 128 ms           - Or send cycle of 1 ms         250 us to 128 ms           - Or send cycle of 1 ms         1 ms to 512 ms           - Or send cycle of 1 ms         2 ms to 32 ms           - Or send cycle of 1 ms         2 ms to 512 ms     <	— Isochronous mode	Yes
- PROFilementry     Yes, Jean 23 PROFINET devices       - Number of connectable IO Devices, max.     128       - Of which IO devices with IRT, max.     64       - Mumber of connectable IO Devices for RT, max.     128       - Mumber of Dovices that can be simultaneously activated Sector Additional activational activativational activativational	— Direct data exchange	Yes; Requirement: IRT and isochronous mode (MRPD optional)
- Pionteed strutup     Yes, Max. 32 PPOCINET revices       - Number of connectable IO Devices, max.     PROFIBUS or PROFINET       - Of which ID devices with IRT, max.     64       - Number of connectable IO Devices for TT, max.     128       - Number of IO Devices for tool, max.     8       - Number of IO Devices for tool, max.     8       - Number of IO Devices per tool, max.     8       - Updating times     8       - Updating times     250 us to arms information to the number of IO devices, and on the quantity of the interfaces       - Or send cycle of 250 us     250 us to arms information to the number of IO devices, and on the quantity of the interfaces       - For send cycle of 250 us     250 us to arms information to the interfaces       - For send cycle of 250 us     250 us to arms information to the interfaces       - For send cycle of 250 us     250 us to arms information to the interfaces       - For send cycle of 250 us     250 us to arms information of to drift send cycle of arms       - For send cycle of 250 us     250 us to arms       - For send cycle of 250 us     250 us to 128 ms       - For send cycle of 250 us     250 us to 128 ms       - For send cycle of 250 us     250 us to 128 ms       - For send cycle of 270 ms     250 us to 128 ms       - For send cycle of 270 us     250 us to 128 ms       - For send cycle of 270 us     250 us to 128 ms    <	— IRT	Yes
- Number of connectable IO Devices, max.     128.1 in total, up to 512 distinuted I/O devices can be connected via AS-i, PROFINET       - Of which IO devices with IRT, max.     64       - of which in line, max.     128       - of which in line, max.     8.       - Number of IO Devices that can be simultaneously activited diverted activited frame.     8.       - Updating times     8.       - Update time for IRT     8.       - for send cycle of 250 ps     250 pis to 4 ms; Note: In the case of IRT with isochronous mode, 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 consend cycle of 1 ms       - for send cycle of 250 ps     250 pis to 4 ms; Note: In the case of IRT with isochronous mode, the minimum value for BOU set of the isochronous DB is decisive       - for send cycle of 1 ms     1 ms to 16 ms       - for send cycle of 250 ps     250 pis to 4 ms; Note: In the case of IRT with isochronous mode, the minimum value to the update time also depends on communication share set to 7 PROFINET IO.       - for send cycle of 1 ms     1 ms to 16 ms       - for send cycle of 250 ps     250 pis to 4 ms; Note: In the case of IRT with isochronous mode, the minimum value of the update time also depends on communication set of the resonance	— PROFlenergy	Yes; per user program
PROFIDUS or PROFINET Of which 10 devices with IRT, max. A Number of connectable 10 Devices for RT, max. A Number of connectable 10 Devices for RT, max. A Number of D Devices that can be simultaneously activated/deactivated, max. A Number of D Devices per tool, max of the ma	- Prioritized startup	Yes; Max. 32 PROFINET devices
- Number of connectable IO Devices for RT, max.     128       - of which in ine, max.     128       - Number of IO Devices that can be simultaneously activated/deactivated/deactivated.     8       - Number of IO Devices per tool, max.     8       - Updating times     8       - Updating times     250 µs to 4m value of the update time also depends on communication shares on onfigured user data       - for send cycle of 250 µs     500 µs to 8 ms       - for send cycle of 1 ms     1 ms to 15 ms       - for send cycle of 2 ms     250 µs to 4 ms       - for send cycle of 2 ms     250 µs to 128 ms       - for send cycle of 2 ms     367 µs       - for send cycle of 2 ms     250 µs to 128 ms       - for send cycle of 250 µs     500 µs to 28 ms       - for send cycle of 250 µs     500 µs to 28 ms       - for send cycle of 250 µs     500 µs to 128 ms       - for send cycle of 4 ms     4 ms to 542 ms       - for send cycle of 2 ms     2 ms to 512 ms       - for send cycle of 4 ms     Ves       - for send cycle of 4 ms     Yes       - for send cycle of 4 ms     Yes       - for send cycle of 2 ms     2 ms to 512 ms       - for send cycle of 4 ms     Yes       - for send cycle of 4 ms     Yes       - Norber of 10 Controlers with ahard device, max.     4       - Subchonous mode <td>- Number of connectable IO Devices, max.</td> <td></td>	- Number of connectable IO Devices, max.	
- of which in line, max.     128       - Number of IC Devices that can be simultaneously activated devices.     8: In total across all interfaces       - Updating times     8       - Updating times     8       - Update time for IRT     50 us to 4 ms; Note: In the case of IRT with isochronous mode, the minimum value of the update time also depends on communication share set to FROFINET I/O, on the number of IO devices, and on the quantity of come device of 250 us       - for send cycle of 250 us     250 us to 4 ms; Note: In the case of IRT with isochronous mode, the minimum value of the update time of 500 us of the isochronous CB is decisive       - for send cycle of 2 ms     250 us to 4 ms; Note: In the case of IRT with isochronous mode, the minimum value of the update time of 500 us of the isochronous CB is decisive       - for send cycle of 2 ms     2 ms to 4 ms       - for send cycle of 2 ms     2 ms to 64 ms       - for send cycle of 500 µs     250 µs to 128 ms       - for send cycle of 1 ms     1 ms to 512 ms       - for send cycle of 300 µs     250 µs to 128 ms       - for send cycle of 4 ms     1 ms to 512 ms       - for send cycle of 4 ms     1 ms to 512 ms       - for send cycle of 4 ms     4 ms to 512 ms       - FOROP communication     Yes, per user program       - No hord of the old elevice     Yes       - No hord old elevice     Yes       - No hord old elevice     Yes       - Nothord old elevice	— Of which IO devices with IRT, max.	64
Number of IO Devices that can be simultaneously activated/deactivated, max.     8       Number of IO Devices per tool, max.     8       Updating times     8       Updating times     8       Updating times     250 µs to 4 ms; Note: in the case of IRT with isochronous mode, the minimum update time of S00 µs of the isochronous OB is decisive       for send cycle of 500 µs     500 µs to 4 ms; Note: in the case of IRT with isochronous mode, the minimum update time of S00 µs of the isochronous OB is decisive       for send cycle of 20 ns     250 µs to 4 ms; Note: in the case of IRT with isochronous mode, the minimum update time of S00 µs of the isochronous OB is decisive       for send cycle of 2 ms     250 µs to 128 ms       for send cycle of 2 ms     250 µs to 128 ms       for send cycle of 250 µs     250 µs to 128 ms       for send cycle of 250 µs     250 µs to 128 ms       for send cycle of 270 ms     250 µs to 128 ms       for send cycle of 2 ms     250 µs to 128 ms       for send cycle of 2 ms     250 µs to 128 ms       for send cycle of 1 ms     1 ms to 512 ms       for send cycle of 4 ms     4 ms to 512 ms       for send cycle of 4 ms     2 ms to 512 ms       for send cycle of 4 ms     4	<ul> <li>— Number of connectable IO Devices for RT, max.</li> </ul>	128
activated/deactivated, max.  Number of IO Devices per tool, max.  Number of IO Devices per tool, max.  Number of IO Devices per tool, max.  Number of IO Cevices, and on the quantity of configured user data configured user	— of which in line, max.	128
		8; in total across all interfaces
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 - for send cycle of 250 µs - for send cycle of 1ms - for send cycle of 1ms - for send cycle of 2 ms - for send cycle of 2 ms - for send cycle of 2 ms - for send cycle of 4 ms - for send cycle of 4 ms - for send cycle of 4 ms - for send cycle of 250 µs - for send cycle of 1ms - for send cycle of 1 ms - for send cycle of 1 ms - for send cycle of 1 ms - for send cycle of 4 ms - for send cycle of	<ul> <li>— Number of IO Devices per tool, max.</li> </ul>	8
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 500 μs to 8 ms           for send cycle of 1 ms         1 ms to 16 ms           for send cycle of 4 ms         4 ms to 32 ms           for send cycle of 4 ms         4 ms to 32 ms           for send cycle of 4 ms         4 ms to 64 ms           for send cycle of 250 μs         250 μs to 128 ms           for send cycle of 250 μs         250 μs to 128 ms           for send cycle of 278         250 μs to 128 ms           for send cycle of 278         250 μs to 128 ms           for send cycle of 278         250 μs to 128 ms           for send cycle of 278         250 μs to 128 ms           for send cycle of 278         2 ms to 512 ms           for send cycle of 1 ms         1 ms to 512 ms           for send cycle of 4 ms         4 ms to 512 ms           for send cycle of 4 ms         4 ms to 512 ms           for send cycle of 4 ms         Yes           Broteromunication         Yes           IRT		set for PROFINET IO, on the number of IO devices, and on the quantity of
update time of 500 µsupdate time of 500 µs to 8 ms- for send cycle of 1 ms1 ms to 16 ms- for send cycle of 2 ms2 ms to 32 ms- for send cycle of 4 ms4 ms to 64 ms- With IRT and parameterization of "odd" send cycleUpdate time = set "odd" send clock (any multiple of 125 µs: 375 µs, 625 µsUpdate time for RT500 µs to 256 ms- for send cycle of 200 µs500 µs to 256 ms- for send cycle of 20 ms2 ms to 512 ms- for send cycle of 20 ms2 ms to 512 ms- for send cycle of 4 ms4 ms to 512 ms- for send cycle of 4 ms2 ms to 512 ms- for send cycle of 4 ms2 ms to 512 ms- for send cycle of 4 ms4 ms to 512 ms- for send cycle of 4 ms4 ms to 512 ms- for send cycle of 4 ms4 ms to 512 msPROFINET IO DeviceYes- efor Send cycle of 4 msYes- schornous modeYes- IRTYes- Shared deviceYes- Number of IO Controllers with shared device, max.4- activation(deactivation of 1-devicesYes; per user program- Asset management recordYes* AdornegotiationYes• AutorcosingYes• AutorcosingYes• AutorcosingYes• Mumber of connections max.128, via integrated interfaces of the CPU and connected CPs / CMs• Mumber of connections max.128, via integrated interfaces of the CPU and connected CPs / CMs• Mumber of connections max.128, via integrated interfaces of the CPU and connected	Update time for IRT	
for send cycle of 1 ms1 ms to 16 ms for send cycle of 2 ms2ms to 32 ms for send cycle of 4 ms4 ms to 64 ms With IRT and parameterization of "odd" send cyclesUpdate time = set "odd" send clock (any multiple of 125 µs: 375 µs, 625 µs 3 for send cycle of 250 µs250 µs to 128 ms for send cycle of 250 µs250 µs to 128 ms for send cycle of 1 ms1 ms to 512 ms for send cycle of 2 ms2 ms to 512 ms for send cycle of 4 ms4 ms to 512 ms for send cycle of 4 ms4 ms to 512 ms for send cycle of 4 ms4 ms to 512 ms for send cycle of 4 ms4 ms to 512 ms for send cycle of 4 ms4 ms to 512 ms for send cycle of 4 ms4 ms to 512 ms for send cycle of 4 ms4 ms to 512 ms for send cycle of 4 ms4 ms to 512 ms for send cycle of 4 ms4 ms to 512 ms for send cycle of 4 ms4 ms to 512 ms for send cycle of 4 ms4 ms to 512 ms for Send cycle of 4 msYes FO/OP communicationYes FO/OP communicationYes Number of IO Controllers with shared device, max.4 Asset management recordYes yer user program Asset management recordYes for Send cycle of Controllers with shared device, max.Yes AutomorgotationYes Automorg	— for send cycle of 250 $\mu$ s	
- for send cycle of 2 ms2 ms to 32 ms- for send cycle of 4 ms4 ms to 64 ms- With IRT and parameterization of 'odd' send cycleUpdate time = set "odd" send clock (any multiple of 125 µs: 375 µs, 625 µs 3Vightet time for RT500 µs to 128 ms- for send cycle of 250 µs500 µs to 256 ms- for send cycle of 1 ms1 ms to 512 ms- for send cycle of 4 ma4 ms to 512 ms- for send cycle of 4 ma4 ms to 512 ms- for send cycle of 4 ma4 ms to 512 ms- for send cycle of 4 ma4 ms to 512 ms- for send cycle of 4 ma4 ms to 512 ms- for Send cycle of 4 ma4 ms to 512 ms- for Send cycle of 1 ms4 ms to 512 ms- for Send cycle of 1 ms4 ms to 512 ms- for Send cycle of 1 ms4 ms to 512 ms- for Send cycle of 1 ms4 ms to 512 ms- for Send cycle of 1 ms4 ms to 512 ms- for Send cycle of 1 ms4 ms to 512 ms- for Send cycle of 1 ms4 ms to 512 ms- for Send cycle of 1 msYes- for Send cycle of 1 ms1 ms to 512 ms- for Send cycle of 1 msYes- for Send cycle of 1 msYes per user program- for Send cycle of 1 for Send cycleYes- for Send cycle of to Send	— for send cycle of 500 µs	500 µs to 8 ms
- for send cycle of 4 ms4 ms to 64 ms- Wth IRT and parameterization of "odd" send cycleVodate time = set "odd" send clock (any multiple of 125 µs: 375 µs, 625 µs. 3 875 µs)Update time for RT- for send cycle of 250 µs500 µs to 256 ms- for send cycle of 250 µs500 µs to 256 ms500 µs to 256 ms- for send cycle of 1 ms1 ms to 512 ms- for send cycle of 4 ms- for send cycle of 4 ms4 ms to 512 ms- for send cycle of 4 ms4 ms to 512 ms- for send cycle of 4 ms4 ms to 512 ms- for send cycle of 4 ms4 ms to 512 ms- for send cycle of 4 ms4 ms to 512 ms- for send cycle of 4 ms4 ms to 512 ms- for send cycle of 4 ms4 ms to 512 ms- for send cycle of 4 ms4 ms to 512 ms- for send cycle of 4 ms4 ms to 512 ms- for send cycle of 4 ms4 ms to 512 ms- for send cycle of 4 msYes- for send cycle of 4 msYes- for send cycle of 4 ms4 ms to 512 ms- for send cycle of 4 msYes- for dycle of 5 msYes Yez 4 / Y	— for send cycle of 1 ms	1 ms to 16 ms
With IRT and parameterization of 'odd' send cyclesUpdate time = set 'odd'' send cycle' (any multiple of 125 µs: 375 µs, 625 µs 3 875 µs)Update time for RT for send cycle of 250 µs250 µs to 128 ms for send cycle of 100 µs500 µs to 256 ms for send cycle of 1 ms1 ms to 512 ms for send cycle of 4 ms2 ms to 512 ms for send cycle of 4 ms4 ms to 512 msPROFINET IO DevicServices PROF communicationYes IRTYes Shared deviceYes Shared deviceYes; per user program Asset management recordYes; per user program Asset management recordYes100 MpsYes AutonegotiationYes Number of 10 Controllers with shared device, max.4 Asset management recordYes; per user program Asset management recordYes Mutber of 10 Controllers with shared device, max.4 Asset management recordYes Mutber of DometorisYes Mutber of DometorisYes Mutber of DometorisYes Mutber of connections max.128 via integrated interfaces of the CPU and connected CPs / CMs Number of connections reserved for ES/HMI/web10 Number of connections via integrated interfaces88 Number of S7 routing paths128 via integrated interfaces of the CPU and connected CPs / CMs Number of S7 routing paths10 Number of Connections r	— for send cycle of 2 ms	2 ms to 32 ms
With the second seco	— for send cycle of 4 ms	4 ms to 64 ms
- 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           - for send cycle of 4 ms         4 ms to 512 ms           PROFINET 10 Device         -           Services         -           - loc Arconous mode         No           - IRT         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           - Asset management record         Yes; per user program           - Autonegotiation         Yes           - 100 Mbps         Yes           - 100 Mbps         Yes           - 101 Mitops         Yes           - 102 Mitoprotion         Yes           - 103 Mitops         Yes           - 104 Mitops         Yes           - 104 Mitops         Yes           - 100 Mitops         Yes           - 100 Mitops         Yes           - 100 Mitops         Yes	- With IRT and parameterization of "odd" send cycles	Update time = set "odd" send clock (any multiple of 125 $\mu s$ : 375 $\mu s$ , 625 $\mu s$ 3 875 $\mu s$ )
- for send cycle of 500 µs500 µs to 256 ms- for send cycle of 1 ms1 ms to 512 ms- for send cycle of 4 ms2 ms to 512 ms- for send cycle of 4 ms4 ms to 512 ms- for send cycle of 4 ms4 ms to 512 msPROFINET IO DeviceServices- PCJ/OP communicationYes- Isochronous modeNo- Isochronous modeYes- PROFINET OF DeviceYes- Shared deviceYes; per user program- Shared deviceYes; per user program- Asster management recordYes; per user program- Asster management recordYes; per user program- Asster management recordYes- AutoregoliationYes- AutoregoliationYes- Number of connections, max.Yes; V2.4 / V2.6Number of connections reserved for ES/HMI/web10- Number of connections reserved for ES/HMI/web10- Number of sort on sin integrated interfaces88- Number of sort on sin aitegrated interfaces88 <td>Update time for RT</td> <td></td>	Update time for RT	
for send cycle of 1 ms1 ms to 512 ms for send cycle of 2 ms2 ms to 512 ms for send cycle of 4 ms4 ms to 512 ms for send cycle of 4 ms4 ms to 512 msPROFINET IO DeviceServices FoldOP communicationYes Iscochronous modeNo Iscochronous modeYes PROFINERTYYes PROFINERTYYes Shared deviceYes Number of IO Controllers with shared device, max.4 activation/deactivation of I-devicesYes; per user program Asset management recordYes; per user program Asset management recordYes; per user program AutoregotitationYes AutoregotitationYes AutoregotitationYes AutoregotitationYes Mumber of connections, max.128; via integrated interfaces of the CPU and connected CPs / CMs Number of connections, reserved for ES/HMI/web10 Number of connections via integrated interfaces88 Number of soriections via integrated interfaces88 Numb	— 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
PROFINET IO Device         Services	— for send cycle of 2 ms	2 ms to 512 ms
Services         PG/OP communication       Yes         Isochronous mode       No         IRT       Yes         PROFlenergy       Yes, per user program         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         Asset management record       Yes; per user program         totation/deactivation of I-devices       Yes; per user program         Asset management record       Yes; per user program         totation of Log       Yes         RJ 45 (Ethernet)       Yes         •- Autoreopsing       Yes         • Autoreopsing       Yes         • Industrial Ethernet status LED       Yes         PROFlsafe       Yes; V2.4 / V2.6         Number of connections, max.       128; via integrated interfaces of the CPU and connected CPs / CMs         • Number of connections, max.       128; via integrated interfaces of the CPU and connected CPs / CMs         • Number of connections, max.       128; via integrated interfaces of the CPU and connected CPs / CMs         • Number of connections via integrated interfaces       88         • Number of S7 routi	— for send cycle of 4 ms	4 ms to 512 ms
PG/OP communicationYes Isochronous modeNo IRTYes PROFlenergyYes; per user program Shared deviceYes Shared deviceYes; per user program Shared deviceYes; per user program activation/deactivation of I-devicesYes; per user program Asset management recordYes; per user program Number of consigYes Number of connections, max.Yes; V2.4 / V2.6Number of connections via integrated interfacesYes; via integrated interfaces of the CPU and connected CPs / CMs Number of connections, max.128; via integrated interfaces of the CPU and connected CPs / CMs Number of S7 routing paths16 Number of S7 routing pa	PROFINET IO Device	
	Services	
- IRTYes- PROFlenergyYes; per user program- Shared deviceYes- Number of IO Controllers with shared device, max.4- activation/deactivation of I-devicesYes; per user program- Asset management recordYes; per user program- Asset management recordYes; per user programtherface typesTesRJ 45 (Ethernet)Yes• 100 MbpsYes• AutonegotiationYes• AutorossingYes• Industrial Ethernet status LEDYesPROFlsafeYes; V2.4 / V2.6Number of connections, max.128; via integrated interfaces of the CPU and connected CPs / CMs• Number of connections reserved for ES/HMI/web10• Number of S7 routing paths16Redundancy modeHes• H-Sync forwardingYes	— PG/OP communication	Yes
- PROF lenergyYes; per user program- Shared deviceYes;- Number of IO Controllers with shared device, max.4- activation/deactivation of I-devicesYes; per user program- Asset management recordYes; per user programtheface typesRJ 45 (Ethernet)RJ 45 (Ethernet)* 100 MbpsYes• AutonegotiationYes• AutonegotiationYes• AutorossingYes• Industrial Ethernet status LEDYesPROFIsafeYes; V2.4 / V2.6Number of connections, max.128; via integrated interfaces of the CPU and connected CPs / CMs• Number of connections reserved for ES/HMI/web10• Number of S7 routing paths16Redundancy modeHes; Name Set Set Set Set Set Set Set Set Set Se	<ul> <li>— Isochronous mode</li> </ul>	No
Shared deviceYes Number of IO Controllers with shared device, max.4 activation/deactivation of I-devicesYes; per user program Asset management recordYes; per user program Asset management recordYes; per user programnterface typesTesRJ 45 (Ethernet)Yes• 100 MbpsYes• AutonegotiationYes• AutorossingYes• Industrial Ethernet status LEDYesPROFIsafeYes; V2.4 / V2.6Number of connections, max.128; via integrated interfaces of the CPU and connected CPs / CMs• Number of connections reserved for ES/HMI/web10• Number of S7 routing paths16Redundancy modeH-Sync forwarding• H-Sync forwardingYes	— IRT	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         therace types       Tes         RJ 45 (Ethernet)       Yes         • 100 Mbps       Yes         • Autonegotiation       Yes         • Autorossing       Yes         • Industrial Ethernet status LED       Yes         PROFIsafe       Yes; V2.4 / V2.6         Number of connections, max.       128; via integrated interfaces of the CPU and connected CPs / CMs         • Number of connections reserved for ES/HMI/web       10         • Number of S7 routing paths       16         Redundancy mode       Yes	— PROFlenergy	Yes; per user program
activation/deactivation of I-devicesYes; per user program Asset management recordYes; per user programterface typesRJ 45 (Ethernet)*100 MbpsYes• 100 MbpsYes• AutonegotiationYes• AutorossingYes• Industrial Ethernet status LEDYesPROFIsafeYes; V2.4 / V2.6Number of connections, max.128; via integrated interfaces of the CPU and connected CPs / CMs• Number of connections reserved for ES/HMI/web10• Number of connections via integrated interfaces88• Number of S7 routing paths16Redundancy modeH-Sync forwarding• H-Sync forwardingYes	— Shared device	Yes
Asset management record     Yes; per user program       nterface types     RJ 45 (Ethernet)       RJ 45 (Ethernet)     Yes       • 100 Mbps     Yes       • Autonegotiation     Yes       • Autocrossing     Yes       • Industrial Ethernet status LED     Yes       PROFIsafe     Yes; V2.4 / V2.6       Number of connections, max.     128; 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     88       • Number of S7 routing paths     16       Redundancy mode     Yes       • H-Sync forwarding     Yes	- Number of IO Controllers with shared device, max.	4
RJ 45 (Ethernet)         • 100 Mbps         • Autonegotiation         • Autonegotiation         • Autocrossing         • Industrial Ethernet status LED         Yes         • Industrial Ethernet status LED         Yes         *rotocols         PROFIsafe         Number of connections, max.         • Number of connections reserved for ES/HMI/web         • Number of connections via integrated interfaces         • Number of S7 routing paths         16         Redundancy mode         • H-Sync forwarding	- activation/deactivation of I-devices	Yes; per user program
RJ 45 (Ethernet)         • 100 Mbps       Yes         • Autonegotiation       Yes         • Autocrossing       Yes         • Industrial Ethernet status LED       Yes         Industrial Ethernet status LED         Yes         Industrial Ethernet status LED         Yes         Industrial Ethernet status LED         Yes         Industrial Ethernet status LED         Yes         Industrial Ethernet status LED         Yes         Industrial Ethernet status LED         Yes         Industrial Ethernet status LED         Yes         Industrial Ethernet status LED         Yes         Industrial Ethernet status LED         Yes Y2.4 / V2.6         Number of connections, max.       128; via integrated interfaces of the CPU and connected CPs / CMs         Number of connections via integrated interfaces       88         Number of S7 routing paths       16         Redundancy mode         H-Sync forwarding       Yes	- Asset management record	Yes; per user program
RJ 45 (Ethernet)         • 100 Mbps       Yes         • Autonegotiation       Yes         • Autocrossing       Yes         • Industrial Ethernet status LED       Yes         Industrial Ethernet status LED         Yes         Industrial Ethernet status LED         Yes         Industrial Ethernet status LED         Yes         Industrial Ethernet status LED         Yes         Industrial Ethernet status LED         Yes         Industrial Ethernet status LED         Yes         Industrial Ethernet status LED         Yes         Industrial Ethernet status LED         Yes         Industrial Ethernet status LED         Yes Y2.4 / V2.6         Number of connections, max.       128; via integrated interfaces of the CPU and connected CPs / CMs         Number of connections via integrated interfaces       88         Number of S7 routing paths       16         Redundancy mode         H-Sync forwarding       Yes	nterface types	
Autorossing • Autocrossing • Industrial Ethernet status LEDYesProtocolsPROFIsafeYes; V2.4 / V2.6Number of connections, max.128; via integrated interfaces of the CPU and connected CPs / CMs• Number of connections reserved for ES/HMI/web10• Number of connections via integrated interfaces88• Number of S7 routing paths16Redundancy modeYes• H-Sync forwardingYes	RJ 45 (Ethernet)	
Autorossing • Autocrossing • Industrial Ethernet status LEDYesProtocolsPROFIsafeYes; V2.4 / V2.6Number of connections, max.128; via integrated interfaces of the CPU and connected CPs / CMs• Number of connections reserved for ES/HMI/web10• Number of connections via integrated interfaces88• Number of S7 routing paths16Redundancy modeYes• H-Sync forwardingYes		Yes
• Autorossing • Industrial Ethernet status LEDYesProtocolsProtocolsPROFIsafeYes; V2.4 / V2.6Number of connections, max.128; via integrated interfaces of the CPU and connected CPs / CMs• Number of connections reserved for ES/HMI/web10• Number of connections via integrated interfaces88• Number of S7 routing paths16Redundancy modeYes• H-Sync forwardingYes		Yes
• Industrial Ethernet status LED       Yes         Protocols       Yes; V2.4 / V2.6         Number of connections       Yes; V2.4 / V2.6         • Number of connections, max.       128; 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       88         • Number of S7 routing paths       16         Redundancy mode       Yes	-	
Protocols         PROFIsafe       Yes; V2.4 / V2.6         Number of connections       128; 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       88         • Number of S7 routing paths       16         Redundancy mode       Yes	-	
PROFIsafe       Yes; V2.4 / V2.6         Number of connections       128; 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       88         • Number of S7 routing paths       16         Redundancy mode       Yes	Protocols	
Number of connections       128; 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       88         • Number of S7 routing paths       16         Redundancy mode       Yes		Yes: V2.4 / V2.6
• Number of connections, max.       128; 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       88         • Number of S7 routing paths       16         Redundancy mode       Yes		
Number of connections reserved for ES/HMI/web 10     Number of connections via integrated interfaces 88     Number of S7 routing paths 16 Redundancy mode     H-Sync forwarding Yes		128: via integrated interfaces of the CPLL and connected CPs / CMs
Number of connections via integrated interfaces     Number of S7 routing paths     16 Redundancy mode     H-Sync forwarding     Yes		-
Number of S7 routing paths     16 Redundancy mode     H-Sync forwarding     Yes		
Redundancy mode       • H-Sync forwarding       Yes	-	
H-Sync forwarding Yes		
· ·	-	Vac

— 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
<ul> <li>Switchover time on line break, typ.</li> </ul>	200 ms; For MRP, bumpless for MRPD
<ul> <li>Number of stations in the ring, max.</li> </ul>	50
SIMATIC communication	
<ul> <li>PG/OP communication</li> </ul>	Yes; encryption with TLS V1.3 pre-selected
S7 routing	Yes
<ul> <li>Data record routing</li> </ul>	Yes
<ul> <li>S7 communication, as server</li> </ul>	Yes
<ul> <li>S7 communication, as client</li> </ul>	Yes
<ul> <li>User data per job, max.</li> </ul>	See online help (S7 communication, user data size)
Open IE communication	
• TCP/IP	Yes
— Data length, max.	64 kbyte
- several passive connections per port, supported	Yes
• ISO-on-TCP (RFC1006)	Yes
— Data length, max.	64 kbyte
• UDP	Yes
— Data length, max.	2 kbyte; 1 472 bytes for UDP broadcast
— UDP multicast	Yes; max. 78 multicast circuits
• DHCP	Yes
• DNS	Yes
SNMP	Yes
• DCP	Yes
• LLDP	Yes
Encryption Web server	Yes; Optional
• HTTP	Vee: Standard and user pages
• HTTPS	Yes; Standard and user pages Yes; Standard and user pages
OPC UA	
OPC UA <ul> <li>Runtime license required</li> </ul>	Yes; "Small" license required
OPC UA <ul> <li>Runtime license required</li> <li>OPC UA Client</li> </ul>	Yes; "Small" license required Yes; Data Access (registered Read/Write), Method Call
OPC UA <ul> <li>Runtime license required</li> <li>OPC UA Client <ul> <li>Application authentication</li> </ul> </li> </ul>	Yes; "Small" license required Yes; Data Access (registered Read/Write), Method Call Yes
OPC UA <ul> <li>Runtime license required</li> <li>OPC UA Client</li> </ul>	Yes; "Small" license required Yes; Data Access (registered Read/Write), Method Call
OPC UA <ul> <li>Runtime license required</li> <li>OPC UA Client <ul> <li>Application authentication</li> </ul> </li> </ul>	Yes; "Small" license required Yes; Data Access (registered Read/Write), Method Call Yes Available security policies: None, Basic128Rsa15, Basic256Rsa15, Basic256Sha256
OPC UA  • Runtime license required  • OPC UA Client  — Application authentication  — Security policies  — User authentication	Yes; "Small" license required Yes; Data Access (registered Read/Write), Method Call Yes Available security policies: None, Basic128Rsa15, Basic256Rsa15, Basic256Sha256 "anonymous" or by user name & password
OPC UA   • Runtime license required  • OPC UA Client  — Application authentication  — Security policies  — User authentication  — Number of connections, max.	Yes; "Small" license required Yes; Data Access (registered Read/Write), Method Call Yes Available security policies: None, Basic128Rsa15, Basic256Rsa15, Basic256Sha256 "anonymous" or by user name & password 4
OPC UA  • Runtime license required  • OPC UA Client  — Application authentication  — Security policies  — User authentication	Yes; "Small" license required Yes; Data Access (registered Read/Write), Method Call Yes Available security policies: None, Basic128Rsa15, Basic256Rsa15, Basic256Sha256 "anonymous" or by user name & password
OPC UA	Yes; "Small" license required Yes; Data Access (registered Read/Write), Method Call Yes Available security policies: None, Basic128Rsa15, Basic256Rsa15, Basic256Sha256 "anonymous" or by user name & password 4 1 000 300
OPC UA	Yes; "Small" license required Yes; Data Access (registered Read/Write), Method Call Yes Available security policies: None, Basic128Rsa15, Basic256Rsa15, Basic256Sha256 "anonymous" or by user name & password 4 1 000 300
OPC UA	Yes; "Small" license required Yes; Data Access (registered Read/Write), Method Call Yes Available security policies: None, Basic128Rsa15, Basic256Rsa15, Basic256Sha256 "anonymous" or by user name & password 4 1 000 300
OPC UA	Yes; "Small" license required Yes; Data Access (registered Read/Write), Method Call Yes Available security policies: None, Basic128Rsa15, Basic256Rsa15, Basic256Sha256 "anonymous" or by user name & password 4 1 000 300
OPC UA	Yes; "Small" license required Yes; Data Access (registered Read/Write), Method Call Yes Available security policies: None, Basic128Rsa15, Basic256Rsa15, Basic256Sha256 "anonymous" or by user name & password 4 1 000 300
OPC UA	Yes; "Small" license required Yes; Data Access (registered Read/Write), Method Call Yes Available security policies: None, Basic128Rsa15, Basic256Rsa15, Basic256Sha256 "anonymous" or by user name & password 4 1 000 300
<ul> <li>OPC UA</li> <li>Runtime license required</li> <li>OPC UA Client <ul> <li>Application authentication</li> <li>Security policies</li> <li>User authentication</li> <li>Number of connections, max.</li> <li>Number of nodes of the client interfaces, recommended max.</li> <li>Number of elements for one call of OPC_UA_NodeGetHandleList/OPC_UA_ReadList/OPC_U max.</li> <li>Number of elements for one call of OPC_UA_NameSpaceGetIndexList, max.</li> <li>Number of elements for one call of</li> </ul> </li> </ul>	Yes; "Small" license required Yes; Data Access (registered Read/Write), Method Call Yes Available security policies: None, Basic128Rsa15, Basic256Rsa15, Basic256Sha256 "anonymous" or by user name & password 4 1 000 300
<ul> <li>OPC UA</li> <li>Runtime license required</li> <li>OPC UA Client <ul> <li>Application authentication</li> <li>Security policies</li> </ul> </li> <li>User authentication <ul> <li>Number of connections, max.</li> <li>Number of nodes of the client interfaces, recommended max.</li> <li>Number of elements for one call of OPC_UA_NodeGetHandleList/OPC_UA_ReadList/OPC_U max.</li> <li>Number of elements for one call of OPC_UA_NameSpaceGetIndexList, max.</li> <li>Number of elements for one call of OPC_UA_MethodGetHandleList, max.</li> </ul> </li> </ul>	Yes; "Small" license required Yes; Data Access (registered Read/Write), Method Call Yes Available security policies: None, Basic128Rsa15, Basic256Rsa15, Basic256Sha256 "anonymous" or by user name & password 4 1 000 300 20
<ul> <li>OPC UA</li> <li>Runtime license required</li> <li>OPC UA Client <ul> <li>Application authentication</li> <li>Security policies</li> </ul> </li> <li>User authentication <ul> <li>Number of connections, max.</li> <li>Number of nodes of the client interfaces, recommended max.</li> <li>Number of elements for one call of OPC_UA_NodeGetHandleList/OPC_UA_ReadList/OPC_U max.</li> <li>Number of elements for one call of OPC_UA_NameSpaceGetIndexList, max.</li> <li>Number of elements for one call of OPC_UA_MethodGetHandleList, max.</li> </ul> </li> <li>Number of simultaneous calls of the client instructions for session management, per connection, max.</li> </ul>	Yes; "Small" license required Yes; Data Access (registered Read/Write), Method Call Yes Available security policies: None, Basic128Rsa15, Basic256Rsa15, Basic256Sha256 "anonymous" or by user name & password 4 1 000 300 20 100
<ul> <li>OPC UA</li> <li>Runtime license required</li> <li>OPC UA Client <ul> <li>Application authentication</li> <li>Security policies</li> <li>User authentication</li> <li>Number of connections, max.</li> <li>Number of nodes of the client interfaces, recommended max.</li> <li>Number of elements for one call of OPC_UA_NodeGetHandleList/OPC_UA_ReadList/OPC_U max.</li> <li>Number of elements for one call of OPC_UA_NameSpaceGetIndexList, max.</li> <li>Number of elements for one call of OPC_UA_MethodGetHandleList, max.</li> <li>Number of simultaneous calls of the client instructions for session management, per connection, max.</li> <li>Number of simultaneous calls of the client</li> </ul> </li> </ul>	Yes; "Small" license required Yes; Data Access (registered Read/Write), Method Call Yes Available security policies: None, Basic128Rsa15, Basic256Rsa15, Basic256Sha256 "anonymous" or by user name & password 4 1 000 300 20
<ul> <li>OPC UA</li> <li>Runtime license required</li> <li>OPC UA Client <ul> <li>Application authentication</li> <li>Security policies</li> <li>User authentication</li> <li>Number of connections, max.</li> <li>Number of nodes of the client interfaces, recommended max.</li> <li>Number of elements for one call of OPC_UA_NodeGetHandleList/OPC_UA_ReadList/OPC_U max.</li> <li>Number of elements for one call of OPC_UA_NameSpaceGetIndexList, max.</li> <li>Number of elements for one call of OPC_UA_MethodGetHandleList, max.</li> <li>Number of simultaneous calls of the client instructions for session management, per connection, max.</li> </ul> </li> </ul>	Yes; "Small" license required Yes; Data Access (registered Read/Write), Method Call Yes Available security policies: None, Basic128Rsa15, Basic256Rsa15, Basic256Sha256 "anonymous" or by user name & password 4 1 000 300 20 100
<ul> <li>OPC UA</li> <li>Runtime license required</li> <li>OPC UA Client <ul> <li>Application authentication</li> <li>Security policies</li> <li>User authentication</li> <li>Number of connections, max.</li> <li>Number of nodes of the client interfaces, recommended max.</li> <li>Number of elements for one call of OPC_UA_NodeGetHandleList/OPC_UA_ReadList/OPC_U max.</li> <li>Number of elements for one call of OPC_UA_NameSpaceGetIndexList, max.</li> <li>Number of elements for one call of OPC_UA_MethodGetHandleList, max.</li> <li>Number of simultaneous calls of the client instructions for session management, per connection, max.</li> <li>Number of simultaneous calls of the client</li> </ul> </li> </ul>	Yes; "Small" license required Yes; Data Access (registered Read/Write), Method Call Yes Available security policies: None, Basic128Rsa15, Basic256Rsa15, Basic256Sha256 "anonymous" or by user name & password 4 1 000 300 20 100 1
<ul> <li>OPC UA</li> <li>Runtime license required</li> <li>OPC UA Client <ul> <li>Application authentication</li> <li>Security policies</li> <li>User authentication</li> <li>Number of connections, max.</li> <li>Number of nodes of the client interfaces, recommended max.</li> <li>Number of elements for one call of</li> <li>OPC_UA_NodeGetHandleList/OPC_UA_ReadList/OPC_U max.</li> <li>Number of elements for one call of</li> <li>OPC_UA_NameSpaceGetIndexList, max.</li> <li>Number of elements for one call of</li> <li>OPC_UA_MethodGetHandleList, max.</li> <li>Number of simultaneous calls of the client instructions for session management, per connection, max.</li> <li>Number of simultaneous calls of the client instructions for data access, per connection, max.</li> <li>Number of registerable nodes, max.</li> </ul> </li> </ul>	Yes; "Small" license required Yes; Data Access (registered Read/Write), Method Call Yes Available security policies: None, Basic128Rsa15, Basic256Rsa15, Basic256Sha256 "anonymous" or by user name & password 4 1 000 300 20 100 1 5 5 000
<ul> <li>OPC UA</li> <li>Runtime license required</li> <li>OPC UA Client <ul> <li>Application authentication</li> <li>Security policies</li> <li>User authentication</li> <li>Number of connections, max.</li> <li>Number of nodes of the client interfaces, recommended max.</li> <li>Number of elements for one call of OPC_UA_NodeGetHandleList/OPC_UA_ReadList/OPC_U max.</li> <li>Number of elements for one call of OPC_UA_NameSpaceGetIndexList, max.</li> <li>Number of elements for one call of OPC_UA_MethodGetHandleList, max.</li> <li>Number of simultaneous calls of the client instructions for session management, per connection, max.</li> <li>Number of simultaneous calls of the client instructions for data access, per connection, max.</li> <li>Number of registerable method calls of OPC_UA_MethodCall, max.</li> <li>Number of inputs/outputs when calling</li> </ul> </li> </ul>	Yes; "Small" license required Yes; Data Access (registered Read/Write), Method Call Yes Available security policies: None, Basic128Rsa15, Basic256Rsa15, Basic256Sha256 "anonymous" or by user name & password 4 1 000 300 20 100 1 5 5 000
<ul> <li>OPC UA</li> <li>Runtime license required</li> <li>OPC UA Client <ul> <li>Application authentication</li> <li>Security policies</li> <li>User authentication</li> <li>Number of connections, max.</li> <li>Number of nodes of the client interfaces, recommended max.</li> <li>Number of elements for one call of</li> <li>OPC_UA_NodeGetHandleList/OPC_UA_ReadList/OPC_U max.</li> <li>Number of elements for one call of</li> <li>OPC_UA_NameSpaceGetIndexList, max.</li> <li>Number of elements for one call of</li> <li>OPC_UA_MethodGetHandleList, max.</li> <li>Number of simultaneous calls of the client instructions for session management, per connection, max.</li> <li>Number of registerable nodes, max.</li> <li>Number of registerable method calls of</li> <li>OPC_UA_MethodCall, max.</li> <li>Number of inputs/outputs when calling</li> <li>OPC_UA_MethodCall, max.</li> </ul> </li> </ul>	Yes; "Small" license required Yes; Data Access (registered Read/Write), Method Call Yes Available security policies: None, Basic128Rsa15, Basic256Rsa15, Basic256Sha256 "anonymous" or by user name & password 4 1 000 300 20 100 1 5 5 000 100 20
<ul> <li>OPC UA</li> <li>Runtime license required</li> <li>OPC UA Client <ul> <li>Application authentication</li> <li>Security policies</li> <li>User authentication</li> <li>Number of connections, max.</li> <li>Number of nodes of the client interfaces, recommended max.</li> <li>Number of elements for one call of OPC_UA_NodeGetHandleList/OPC_UA_ReadList/OPC_U max.</li> <li>Number of elements for one call of OPC_UA_NameSpaceGetIndexList, max.</li> <li>Number of elements for one call of OPC_UA_MethodGetHandleList, max.</li> <li>Number of simultaneous calls of the client instructions for session management, per connection, max.</li> <li>Number of simultaneous calls of the client instructions for data access, per connection, max.</li> <li>Number of registerable method calls of OPC_UA_MethodCall, max.</li> <li>Number of inputs/outputs when calling</li> </ul> </li> </ul>	Yes; "Small" license required Yes; Data Access (registered Read/Write), Method Call Yes Available security policies: None, Basic128Rsa15, Basic256Rsa15, Basic256Sha256 "anonymous" or by user name & password 4 1 000 300 20 100 1 5 5 000 100
<ul> <li>OPC UA</li> <li>Runtime license required</li> <li>OPC UA Client <ul> <li>Application authentication</li> <li>Security policies</li> <li>User authentication</li> <li>Number of connections, max.</li> <li>Number of nodes of the client interfaces, recommended max.</li> <li>Number of elements for one call of</li> <li>OPC_UA_NodeGetHandleList/OPC_UA_ReadList/OPC_U max.</li> <li>Number of elements for one call of</li> <li>OPC_UA_NameSpaceGetIndexList, max.</li> <li>Number of elements for one call of</li> <li>OPC_UA_MethodGetHandleList, max.</li> <li>Number of simultaneous calls of the client instructions for session management, per connection, max.</li> <li>Number of registerable nodes, max.</li> <li>Number of registerable method calls of</li> <li>OPC_UA_MethodCall, max.</li> <li>Number of inputs/outputs when calling</li> <li>OPC_UA_MethodCall, max.</li> </ul> </li> </ul>	Yes; "Small" license required Yes; Data Access (registered Read/Write), Method Call Yes Available security policies: None, Basic128Rsa15, Basic256Rsa15, Basic256Sha256 "anonymous" or by user name & password 4 1 000 300 20 100 1 5 5 000 100 20 Yes; Data Access (Read, Write, Subscribe), Method Call, Alarms & Condition
<ul> <li>OPC UA</li> <li>Runtime license required</li> <li>OPC UA Client <ul> <li>Application authentication</li> <li>Security policies</li> <li>User authentication</li> <li>Number of connections, max.</li> <li>Number of nodes of the client interfaces, recommended max.</li> <li>Number of elements for one call of</li> <li>OPC_UA_NodeGetHandleList/OPC_UA_ReadList/OPC_U max.</li> <li>Number of elements for one call of</li> <li>OPC_UA_NameSpaceGetIndexList, max.</li> <li>Number of simultaneous calls of the client instructions for session management, per connection, max.</li> <li>Number of simultaneous calls of the client instructions for data access, per connection, max.</li> <li>Number of registerable nodes, max.</li> <li>Number of registerable method calls of OPC_UA_MethodCall, max.</li> <li>Number of inputs/outputs when calling OPC_UA_MethodCall, max.</li> </ul> </li> <li>OPC UA Server <ul> <li>Application authentication</li> </ul> </li> </ul>	Yes; "Small" license required Yes; Data Access (registered Read/Write), Method Call Yes Available security policies: None, Basic128Rsa15, Basic256Rsa15, Basic256Sha256 "anonymous" or by user name & password 4 1 000 300 20 20 100 10 5 5 000 100 20 Yes; Data Access (Read, Write, Subscribe), Method Call, Alarms & Condition (A&C), Custom Address Space Yes
<ul> <li>OPC UA</li> <li>Runtime license required</li> <li>OPC UA Client <ul> <li>Application authentication</li> <li>Security policies</li> <li>User authentication</li> <li>Number of connections, max.</li> <li>Number of nodes of the client interfaces, recommended max.</li> <li>Number of elements for one call of OPC_UA_NodeGetHandleList/OPC_UA_ReadList/OPC_U max.</li> <li>Number of elements for one call of OPC_UA_NameSpaceGetIndexList, max.</li> <li>Number of elements for one call of OPC_UA_MethodGetHandleList, max.</li> <li>Number of simultaneous calls of the client instructions for data access, per connection, max.</li> <li>Number of registerable nodes, max.</li> <li>Number of registerable method calls of OPC_UA_MethodCall, max.</li> <li>Number of inputs/outputs when calling OPC_UA_MethodCall, max.</li> </ul> </li> <li>OPC UA Server</li> </ul>	Yes; "Small" license required Yes; Data Access (registered Read/Write), Method Call Yes Available security policies: None, Basic128Rsa15, Basic256Rsa15, Basic256Sha256 "anonymous" or by user name & password 4 1 000 300 20 100 1 5 5 000 100 20 Yes; Data Access (Read, Write, Subscribe), Method Call, Alarms & Condition (A&C), Custom Address Space
<ul> <li>OPC UA</li> <li>Runtime license required</li> <li>OPC UA Client <ul> <li>Application authentication</li> <li>Security policies</li> <li>User authentication</li> <li>Number of connections, max.</li> <li>Number of nodes of the client interfaces, recommended max.</li> <li>Number of elements for one call of</li> <li>OPC_UA_NodeGetHandleList/OPC_UA_ReadList/OPC_U max.</li> <li>Number of elements for one call of</li> <li>OPC_UA_NameSpaceGetIndexList, max.</li> <li>Number of simultaneous calls of the client instructions for session management, per connection, max.</li> <li>Number of simultaneous calls of the client instructions for data access, per connection, max.</li> <li>Number of registerable nodes, max.</li> <li>Number of registerable method calls of OPC_UA_MethodCall, max.</li> <li>Number of inputs/outputs when calling OPC_UA_MethodCall, max.</li> </ul> </li> <li>OPC UA Server <ul> <li>Application authentication</li> </ul> </li> </ul>	Yes; "Small" license required Yes; Data Access (registered Read/Write), Method Call Yes Available security policies: None, Basic128Rsa15, Basic256Rsa15, Basic256Sha256 "anonymous" or by user name & password 4 1 000 300 20 100 1 5 5 000 100 20 Yes; Data Access (Read, Write, Subscribe), Method Call, Alarms & Condition (A&C), Custom Address Space Yes available security policies: None, Basic128Rsa15, Basic256Rsa15,

- CDS support (entitlade management) Ves     - Number of accessions, max. 30     - Number of sections, max. 30     - Number of proglateable ones, max. 30     - Number of section indust, max. 30     - Number of indust, max. 30	ODC support (sortificate management)	Vee
<ul> <li>Humber of accessible statistics, max.</li> <li>Humber of accessible statistics, max.</li> <li>Sanging interval, min.</li> <li>Solution of accessible statistics, max.</li> <li>Humber of accessible statistics, max.</li> <li>Humber</li></ul>		
<ul> <li>- Mumber of subscriptions per session, max.</li> <li>- Number of subscriptions per session, max.</li> <li>- Sampling interval, min.</li> <li>- Publishing interval, min.</li> <li>- Publishing interval, min.</li> <li>- Number of sever method, max.</li> <li>- Number of neutrosciptions per server method. max.</li> <li>- Number of neutrosciptions, recommended max.</li> <li>- Number of neutrosciptions for user-defined server interfaces, max.</li> <li>- Number of neutrosciptions for user-defined server interfaces.</li> <li>- Number of neutrosciptions.</li> <li>- Number of neutrosciptions.</li></ul>		
<ul> <li>Number of subscriptions per basis, max.</li> <li>Rumber of handscriptions, max.</li> <li>Rumber of nanotheced terms, recommended inax.</li> <li>Number of nanotheced terms for system diagnostics</li> <li>Number of nanotheced terms, recommended inax.</li> <li>Number of nanotheced terms for system diagnostics</li> <li>Number of nanotheced terms, max.</li> <li>Number of nanotheced terms for system diagnostics</li> <li>Numbe</li></ul>		
<ul> <li>Sampling Introduct, min.</li> <li>Off ms</li> <li>Aunther of particitanuptus per server method, max.</li> <li>Number of particitanuptus per server method, max.</li> <li>Subo, Particitanuptus per server method, per server method, server per server server server server server per server server server serve</li></ul>		
<ul> <li>Aubihing interval. min.</li> <li>Worther of server interfacts, max.</li> <li>Number of inputsion/puts per server method, max.</li> <li>Number of inputsion/puts per server method, max.</li> <li>Number of inputsion/puts per server method, max.</li> <li>Number of access interval and 1 is send interval</li> <li>Ordeach "Server interfaces". / Companion spontication" type and 20 of the type Techenche numespace".</li> <li>Number of program atoms</li> <li>Number of constants</li> <li>Yes</li> <li>Number of atoms for notion technology objects</li> <li>Status block</li> <li>Yes: without fail-safe</li> <li>Status block</li> <li>Yes: withou</li></ul>		
<ul> <li>Number of server methods, max.</li> <li>Number of inputsioutputs per server method max.</li> <li>Number of nontroot times, iccommended max.</li> <li>Number of anoties for user-defined server interfaces,</li> <li>Number of anoties for user-defined server interfaces.</li> <li>Number of anoties for message functions.</li> <li>Yes. MODBUS TCP</li> <li>Yres and the server of the server interfaces.</li> <li>Number of loging stations for message functions.</li> <li>Yes.</li> <li>Number of another program messages in RUN, max.</li> <li>Static for gragmal messages in RUN, max.</li> <li>Static for gragmal messages in RUN, max.</li> <li>Yes. Que of another program dames</li> <li>Number of alarms for royot enclohology objects</li> <li>Number of alarms for royot enclohology objects</li> <li>Test commissioning functiona.</li> <li>Number of alarms for royot enclohology objects</li> <li>Statis block.</li> <li>Yes. Yes. Ves. Yes and another of variables, max.</li> <li>Yes. Yes. Yes and another of variables, max.</li> <li>Yes. Yes and another of variables, max.</li> <li>Yes without fail-safe</li> <li>Yout of variables, max.</li> <li>Yes of variables, max.</li> <li>Y</li></ul>		
	-	
<ul> <li>Number of nonlinoral terms, recommended max.</li> <li>Number of admits for user-defined server interfaces, max.</li> <li>Number of program alarms</li> <li>Number of program alarms</li> <li>Number of program alarms</li> <li>Number of terms protein diagnostics</li> <li>Number of terms protein technology objects</li> <li>Number of terms protein technology objects</li> <li>Status block</li> <li>Yes: Vira allel contenes possible for up to 5 engineering system</li> <li>Status block</li> <li>Yes: Vira diale across possible for up to 5 engineering system</li> <li>Status block</li> <li>Yes: Vira diale across possible for up to 5 engineering system</li> <li>Status block</li> <li>Yes: Vira diale across possible for up to 5 engineering system</li> <li>Status block</li> <li>Yes: Vira diale across possible for up to 5 engineering system</li> <li>Status block</li> <li>Yes: Vira diale across possible for up to 5 engineering system</li> <li>Status control virables, max.</li></ul>		
		20
Upp "Reference namespace"     Mathem and Conditions     15 000		
	<ul> <li>Number of server interfaces, max.</li> </ul>	
Number of program alarms     100       Number of alarms for system diagnostics     50       Firther profesors     Yes; MODBUS TCP       ST message functions     32       Program alarms     Yes       Number of folgin stations for message functions, max.     32       Program alarms     Yes       Number of fordigatele program messages in RUN, max.     2500       Number of fordigatele program messages in RUN, max.     2500       Number of facatable program messages in RUN, max.     2500       Number of facatable program messages in RUN, max.     2500       Number of alarms for system diagnostics     100       Number of alarms for system diagnostics     100       Number of alarms for motion technology objects     100       Status block     Yes; Up to 8 simultaneously (to ttal across al ES clients)       Single step     No       Number of transpoints     8       Statuscontrol variable     Yes; Without fail-safe       • Variables     inpulsioutputs, bit memories, DBs, peripheral I/Os (without fail-safe), times, counters       • Of which status variables, max.     200       Or which status variables, max.     200       • Forcing     Yes       • Forcing     Yes       • Number of antises, max.     200       • Number of wariables, max.     200	,	
Number of alarms for system diagnostics         50           Further protocols         Yes; MODBUS TCP           Stressage functions         32           Program alarms         Yes           Number of configurable program messages (nuclions, max.         5000, Program messages are generated by the "Program_Alarm" block, Program alarms           Number of configurable program messages in RUN, max.         2500           Number of alarms for system diagnostics         600           Number of alarms for system diagnostics         100           Status/control workable         Yes; Vap: Up to 8 simultaneously (in total across all ES clients)           Status/control variables         Yes; Without fail-safe           input/solutputs, bit memories, DBs, peripheral I/Os (without fail-safe), times, counters         100           Status/control variables, max.         200; per job           - of which status variables, max.         200; per job           - of which status variables, max.         200; per job           - Forcing	<ul> <li>Alarms and Conditions</li> </ul>	Yes
Futther protocols       Yes; MODBUS CP         Number of login stations for message functions, max.       32         Program alarms       Yes         Number of configurable program messages, max.       Problag or GRAPH         Number of configurable program messages in RUN, max.       2 500         Number of configurable program messages in RUN, max.       2 500         Number of simultaneously active program alarms       600         • Number of alarms for notion technology objects       100         • Number of alarms for notion technology objects       100         • Number of alarms for notion technology objects       100         Joint commission (Team Engineering)       Yes; Up to 8 simultaneously (in total across all ES clients)         Status block       Yes; without fail-safe         Number of breakpoints       8         Status block       Yes; without fail-safe         • Variables       yes; without fail-safe         • Variables       200; per job         • Or which status variables, max.       200; per job         • Forcing       Yes         • Forcing       Yes         • Number of entries, max.       200         Diagnostic buffer       Yes         • Number of entries, max.       200         Diagnostic buffer	<ul> <li>— Number of program alarms</li> </ul>	100
• MOBBUS     Yes; MODBUS TCP       S7 message functions     32       Program alarms     Yes       Number of configurable program messages max.     500; Program messages are generated by the "Program_Alarm" block, Problag or GRAPH       Number of loadable program messages in RUN, max.     2 500       Number of alarms for system diagnostics     100       • Number of alarms for motion technology objects     180       • Number of alarms for motion technology objects     180       • Status/control     Yes; Winbut fail-safe       Joint commission (Team Engineering)     Yes; Vers; Watus alarms       • Status/control     8       Status/control     8       Status/control variables, max.     200; per job       • of which status variables, max.     200; per job       • of which status variables, max.     200       Dispostic buffer     Yes; wit	— Number of alarms for system diagnostics	50
• MOBBUS     Yes; MODBUS TCP       S7 message functions     32       Program alarms     Yes       Number of configurable program messages max.     500; Program messages are generated by the "Program_Alarm" block, Problag or GRAPH       Number of loadable program messages in RUN, max.     2 500       Number of alarms for system diagnostics     100       • Number of alarms for motion technology objects     180       • Number of alarms for motion technology objects     180       • Status/control     Yes; Winbut fail-safe       Joint commission (Team Engineering)     Yes; Vers; Watus alarms       • Status/control     8       Status/control     8       Status/control variables, max.     200; per job       • of which status variables, max.     200; per job       • of which status variables, max.     200       Dispostic buffer     Yes; wit	Further protocols	
Number of login stations for message functions, max.         32           Program alarms         Yes           Number of configurable program messages, max.         5000; Program messages are generated by the "Program_Alarm" block, ProDag or GRAPH           Number of configurable program messages in RUN, max.         2500           Number of loadable program messages in RUN, max.         2500           Number of alarms for system diagnostics         100           • Number of alarms for system diagnostics         100           Joint commission (Team Engineering)         Yes; Parallel online access possible for up to 5 engineering systems           Status block         Yes; Up to 8 simultaneously (in total across all ES clients)           Single step         No           • Number of breakpoints         8           Status/control         8           Status/control         Yes; without fail-safe           inputs/outputs, bit memories, DBs, peripheral I/Os (without fail-safe), times, counters           • Variables         200; per job           Forcing         Yes           • Forcing         Yes           • Proteing watables, max.         200; per job           • Diagnostic buffer         200           • Interpret/diagnostics/status information         200           Diagnostic indication LED         Yes <td></td> <td>Yes; MODBUS TCP</td>		Yes; MODBUS TCP
Number of login stations for message functions, max.         32           Program alarms         Yes           Number of configurable program messages, max.         5000; Program messages are generated by the "Program_Alarm" block, ProDag or GRAPH           Number of configurable program messages in RUN, max.         2500           Number of loadable program messages in RUN, max.         2500           Number of alarms for system diagnostics         100           • Number of alarms for system diagnostics         100           Joint commission (Team Engineering)         Yes; Parallel online access possible for up to 5 engineering systems           Status block         Yes; Up to 8 simultaneously (in total across all ES clients)           Single step         No           • Number of breakpoints         8           Status/control         8           Status/control         Yes; without fail-safe           inputs/outputs, bit memories, DBs, peripheral I/Os (without fail-safe), times, counters           • Variables         200; per job           Forcing         Yes           • Forcing         Yes           • Proteing watables, max.         200; per job           • Diagnostic buffer         200           • Interpret/diagnostics/status information         200           Diagnostic indication LED         Yes <td>S7 message functions</td> <td></td>	S7 message functions	
Program atarms     Yes       Number of configurable program messages, max.     5 000, Program messages are generated by the "Program_Alarm" block, Problag or GRAPH       Number of loadable program messages in RUN, max.     2 500       Number of simultaneously active program alarms     600       • Number of program insesages in RUN, max.     2 500       • Number of program insesages in RUN, max.     2 500       • Number of program insesages in RUN, max.     2 500       • Number of program inderses     600       • Number of program inderses     600       • Number of program inderses     100       • Number of alarms for motion technology objects     160       Test commission (Team Engineering)     Yes; Yes; Ves; Ves; Ves; Ves; Ves; Ves; Ves; V		32
Number of configurable program messages, max.     5 000; Program messages are generated by the "Program_Alarm" block, Problag or GRAPH       Number of loadable program messages in RUN, max.     2 500       Number of simultaneously active program alarms     600       • Number of alarms for roston technology objects     100       • Number of alarms for roston technology objects     100       • Joint commission (Team Engineering)     Yes; Parallel online access possible for up to 5 engineering systems       Status block     Yes; Up to 8 simultaneously (in total across al ES clients)       Single step     No       Number of variables, max.     200; per job       • Attables     200; per job       • Or which status variables, max.     200; per job       • Or which outrol variables, max.     200; per job       • Forcing     Yes; without fail-safe       • Instructional variables, max.     200; Der job       • Poreing     Yes; without fail-safe       • Croing, variables, max.     200; per job       • Poreing     Yes; Without fail-safe       • Instructional variables, max.     200; Diagnostic buffer       • persent     Yes       • Number of configurable Traces     4; Up to 512 KB of data per trace are possible       Diagnostic buffer     Yes       • Riverpost LED     Yes       • Riverpost LED     Yes <t< td=""><td></td><td></td></t<>		
Number of simultaneously active program alarms       600         • Number of program alarms       600         • Number of alarms for system diagnostics       100         • Number of alarms for motion technology objects       160 <b>Test commissioning functions</b> 160         Joint commission (Team Engineering)       Yes; Parallel online access possible for up to 5 engineering systems         Status block       Yes; Up to 8 simultaneously (in total across all ES clients)         Single step       No         • Number of breakpoints       8         Status/control variable       Yes; without fall-safe         • Variables       'Yes; very objects         • Status/control variables, max.       200; per job         • Of which ostatus variables, max.       200; per job         • Ording       Yes; without fail-safe         • Forcing       Yes         • Number of configurable Traces       4; Up to 512 KB of data per trace are possible         Interrupts/diagnostics/datus information       500		5 000; Program messages are generated by the "Program_Alarm" block,
• Number of program alarms     600       • Number of alarms for system diagnostics     100       • Number of alarms for motion technology objects     160 <b>Test commission (Feam Engineering)</b> Yes; Parallel online access possible for up to 5 engineering systems       Status block     Yes; Up to 8 simultaneously (in total across all ES clients)       Single step     No       Number of breakpoints     8       Status/control     *       • Variables     input/soutputs, bit memories, DBs, peripheral I/Os (without fail-safe), times, counters       • Number of variables, max.     200; per job       • of which satus variables, max.     200; per job       • of which control variables, max.     200; per job       • of which control variables, max.     200; per job       • of which control variables, max.     200; per job       • of which control variables, max.     200; per job       • of which control variables, max.     200; per job       • of which control variables, max.     200       • of which porteries, max.     200; per job       • of which porteries, max.     200       • Orting     Yes; Without fail-safe       • peripheral inputs/outputs (without fail-safe)     0       • Number of configurable, max.     1000       • of which powerfail-proof     500       • reass     4; Up to 512	Number of loadable program messages in RUN, max.	2 500
• Number of alarms for motion technology objects     100       • Number of alarms for motion technology objects     100 <b>Fest commission (Team Engineering)</b> Yes; Parallel online access possible for up to 5 engineering systems       Status block     Yes; Up to 8 simultaneously (in total across all ES clients)       Single step     No       Number of breakpoints     8       Status/control variable     Yes; Wilhout fail-safe       • Status/control variables, max.     200; per job       - of which status variables, max.     200; per job       - of which control variables, max.     200; per job       Forcing     Yes; without fail-safe       • Porcing, variables, max.     200; per job       • Porcing, variables, max.     200       • Porcing, variables, max.     200       • Profing, variables, max.     200       • Prosent     Yes       • Number of entries, max.     1000       • of which powerfail-proof     500       Traces     4; Up to 512 KB of data per trace are possible       Interpts/diagnostics/status information     Yes       Diagnostics indication LED     Yes       • RRN/NSTOP LED     Yes       • S	Number of simultaneously active program alarms	
• Number of alarms for motion technology objects         160           Fest commissioning functions         Joint commission (Team Engineering)         Yes; Parallel online access possible for up to 5 engineering systems           Status block         Yes; Up to 8 simultaneously (in total across all ES clients)           Single step         No           Number of breakpoints         8           Status/control         *           • Variables         regression (Team Engineering)           • Variables, max.         -           • Of which status variables, max.         -           - of which control variables, max.         200; per job           - of which control variables, max.         200; per job           - of which control variables, max.         200; per job           - of which control variables, max.         200; per job           • Forcing         Yes; without fail-safe           • Forcing         Yes; without fail-safe           • Forcing         Yes; without fail-safe           • Number of variables, max.         200           • Number of entries, max.         1000           - of which powerfail-proof         500           Traces         4; Up to 512 KB of data per trace are possible           Interrupts/diagnostics/status information         Yes	<ul> <li>Number of program alarms</li> </ul>	600
Test commission (Team Engineering)         Yes; Parallel online access possible for up to 5 engineering systems           Status block         Yes; Up to 8 simultaneously (in total across all ES clients)           Single step         No           Number of breakpoints         8           Status/control         *Yes; Without fail-safe           • Variables         inputs/outputs, bit memories, DBs, peripheral I/Os (without fail-safe), times, counters           • Variables, max.         200; per job           - of which status variables, max.         200; per job           - of which control variables, max.         200; per job           Forcing         Yes; without fail-safe           • Forcing         Yes; without fail-safe           • Forcing         Yes; without fail-safe           • Forcing, variables, max.         200; per job           • Forcing         Yes; without fail-safe           • present         Yes           • Interrupts/outputs, max.         200           Diagnostic buffer         ************************************	<ul> <li>Number of alarms for system diagnostics</li> </ul>	100
Test commission (Team Engineering)         Yes; Parallel online access possible for up to 5 engineering systems           Status block         Yes; Up to 8 simultaneously (in total across all ES clients)           Single step         No           Number of breakpoints         8           Status/control         *Yes; Without fail-safe           • Variables         inputs/outputs, bit memories, DBs, peripheral I/Os (without fail-safe), times, counters           • Variables, max.         200; per job           - of which status variables, max.         200; per job           - of which control variables, max.         200; per job           Forcing         Yes; without fail-safe           • Forcing         Yes; without fail-safe           • Forcing         Yes; without fail-safe           • Forcing, variables, max.         200; per job           • Forcing         Yes; without fail-safe           • present         Yes           • Interrupts/outputs, max.         200           Diagnostic buffer         ************************************	<ul> <li>Number of alarms for motion technology objects</li> </ul>	160
Joint commission (Team Engineering)       Yes; Parallel online access possible for up to 5 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 variables         • Variables       Yes; without fail-safe         • Variables       inputs/outputs, bit memories, DBs, peripheral I/Os (without fail-safe), times, counters         • Number of variables, max.       200; per job         — of which status variables, max.       200; per job         Forcing       Yes; without fail-safe         • Forcing, variables       peripheral I/Os (without fail-safe)         • Of which status variables, max.       200; per job         Forcing       Yes; without fail-safe         • Forcing, variables       peripheral inputs/outputs (without fail-safe)         • Number of variables, max.       200         Diagnostic buffer       Yes         • present       Yes         • 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         • Storp ACTIVE LED<		
Status block       Yes; Up to 8 simultaneously (in total across all ES clients)         Single step       No         Number of breakpoints       8         Status/control       1         • Status/control       1         • Variables       inputs/outputs, bit memories, DBs, peripheral I/Os (without fail-safe), times, conters         • Number of variables, max.       200; per job         - of which control variables, max.       200; per job         Forcing       Yes; without fail-safe         • Forcing, variables, max.       200; per job         • Forcing, variables, max.       200         • of which control variables, max.       200         • Forcing       Yes; without fail-safe         • Forcing       Yes; without fail-safe         • Forcing variables, max.       200         Diagnostic buffer       Yes         • Number of variables, max.       200         Diagnostic buffer       Yes         • Number of oringlurable Traces       4; Up to 512 KB of data per trace are possible         Interrupts/diagnostics/status information       Interrupts/diagnostics/status information         Diagnostics indication LED       Yes         • RUN/STOP LED       Yes         • STOP ACTIVE LED       Yes         • S	Joint commission (Team Engineering)	Yes: Parallel online access possible for up to 5 engineering systems
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.       200; per job         - of which status variables, max.       200; per job         - of which control variables, max.       200; per job         Forcing       Yes; without fail-safe         • Forcing, variables       peripheral inputs/outputs (without fail-safe)         • Forcing, variables, max.       200         Diagnostic buffer       •         • present       Yes         • Number of entries, max.       1000         - of which powerfail-proof       500         Traces       4; Up to 512 KB of data per trace are possible         Interrupts/diagnostics/status information       Image: Status information         Diagnostics indication LED       Yes         • RUN/STOP LED       Yes         • STOP ACTIVE LED       Yes         • STOP ACTIVE LED       Yes         • Stor P ACTIVE LED       Yes; Note: The number of technology objects affects the cycle time of the PLC program; selection guide via the TIA Selection Tool		
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       • Variables, max.     200; per job       — of which status variables, max.     200; per job       — of which control variables, max.     200; per job       Forcing     Yes; without fail-safe       • Number of variables, max.     200       • Paresent     Yes       • Number of entries, max.     1 000       — of which powerfail-proof     500       Traces     4; Up to 512 KB of data per trace are possible       Interrupts/diagnostics/status Information     Interrupts/diagnostics/status Information       Diagnostics indication LED     Yes       • RUN/STOP LED     Yes       • STOP ACTIVE LED     Yes       • STOP ACTIVE LED     Yes       • STOP ACTIVE LED     Yes       • Stor ACTIVE LED     Yes       • Stor ACTIVE LED     Yes       • Connection display LINK TX/RX <t< td=""><td>Single step</td><td></td></t<>	Single step	
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.       200; per job         - of which status variables, max.       200; per job         - of which control variables, max.       200; per job         - of which control variables, max.       200; per job         • Forcing       Yes; without fail-safe         • Forcing, variables       peripheral inputs/outputs (without fail-safe)         • Number of variables, max.       200         Diagnostic buffer       -         • present       Yes         • Number of configurable Traces       4; Up to 512 KB of data per trace are possible         Interrupts/diagnostics/status information       Yes         Diagnostics indication LED       Yes         • RUN/STOP LED       Yes         • MAINT LED       Yes         • STOP ACTIVE LED       Yes         • STOP ACTIVE LED       Yes         • Connection display LINK TX/RX       Yes         • Connection display LINK TX/RX       Yes         Supported technology objects       Yes: Note: The number of technology objects affects the cycle time of the PLC program; selection guide via the TIA Selection Tool	· · · · · · · · · · · · · · · · · · ·	8
• Variablesinputs/outputs, bit memories, DBs, peripheral I/Os (without fail-safe), times, counters• Number of variables, max.200; per job- of which status variables, max.200; per job- of which control variables, max.200; per jobForcingYes; without fail-safe• Forcing, variablesperipheral inputs/outputs (without fail-safe)• Number of variables, max.200Diagnostic buffer200- of which powerfall.200Diagnostic bufferYes• Number of entries, max.1000- of which powerfall.500Traces4; Up to 512 KB of data per trace are possible• Number of configurable Traces4; Up to 512 KB of data per trace are possibleInterrupts/diagnostics/status informationYes• RUN/STOP LEDYes• ERROR LEDYes• MAINT LEDYes• STOP ACTIVE LEDYes• Connection display LINK TX/RXYesSupported technology objectsYes; Note: The number of technology objects affects the cycle time of the PLC program; selection guide via the TIA Selection Tool		
• Variablesinputs/outputs, bit memories, DBs, peripheral I/Os (without fail-safe), times, counters• Number of variables, max.200; per job- of which status variables, max.200; per job- of which control variables, max.200; per jobForcingVes; without fail-safe• Forcing, variablesperipheral inputs/outputs (without fail-safe)• Number of variables, max.200Diagnostic buffer200- of which powerfal.200- of which powerfal.1000- of which powerfal.500- of which powerfal.500- of which powerfal.4; Up to 512 KB of data per trace are possibleInterrupts/diagnostics/status informationYesDiagnostics indication LEDYes• RUN/STOP LEDYes• RROR LEDYes• STOP ACTIVE LEDYes• STOP ACTIVE LEDYes• Connection display LINK TX/RXYesSupported technology objectsYes; Note: The number of technology objects affects the cycle time of the PLC program; selection guide via the TIA Selection Tool	Status/control variable	Yes; without fail-safe
- of which status variables, max.200; per job- of which control variables, max.200; per jobForcingVes; without fail-safe• Forcing, variablesperipheral inputs/outputs (without fail-safe)• Forcing, variables, max.200Diagnostic bufferves• presentYes• Number of entries, max.1 000- of which powerfail-proof500Tracesves• Number of configurable TracesVes• STOP ACTIVE LEDYes• STOP ACTIVE LEDYes• Connection display LINK TX/RXYesSupported technology objectsYes; Note: The number of technology objects affects the cycle time of the PLC program; selection guide via the TIA Selection Tool	Variables	inputs/outputs, bit memories, DBs, peripheral I/Os (without fail-safe), times,
of which control variables, max.200; per jobForcingYes; without fail-safe- Forcing, variablesperipheral inputs/outputs (without fail-safe)- Forcing, variables, max.200Diagnostic buffer200- presentYes- of which powerfail-proof500- of which powerfail-proof500Interrupts/diagnostics/status informationDiagnostic sindication LED- RUN/STOP LEDYes- RUN/STOP LEDYes- ERROR LEDYes- STOP ACTIVE LEDYes- Stop ControlYes: Note: The number of technology objects affects the cycle time of the PLC program; selection guide via the TIA Selection Tool	Number of variables, max.	
Forcing       Yes; without fail-safe         • Forcing, variables       peripheral inputs/outputs (without fail-safe)         • Number of variables, max.       200         Diagnostic buffer       200         • present       Yes         • Number of entries, max.       1000         - of which powerfail-proof       500         Traces       4; Up to 512 KB of data per trace are possible         Interrupts/diagnostics/status information       100         Diagnostic indication LED       Yes         • RUN/STOP LED       Yes         • RUN/STOP LED       Yes         • STOP ACTIVE LED       Yes         • STOP ACTIVE LED       Yes         • Connection display LINK TX/RX       Yes         • Connection display LINK TX/RX       Yes         Supported technology objects       Yes; Note: The number of technology objects affects the cycle time of the PLC program; selection guide via the TIA Selection Tool	— of which status variables, max.	200; per job
ForcingYes; without fail-safe• Forcing, variablesperipheral inputs/outputs (without fail-safe)• Number of variables, max.200Diagnostic buffer• presentYes• Number of entries, max.1 000 of which powerfail-proof500Traces• Number of configurable Traces4; Up to 512 KB of data per trace are possibleInterrupts/diagnostics/status informationDiagnostics indication LEDYes• RUN/STOP LEDYes• RROR LEDYes• STOP ACTIVE LEDYes• STOP ACTIVE LEDYes• Connection display LINK TX/RXYesSupported technology objectsYes; Note: The number of technology objects affects the cycle time of the PLC program; selection guide via the TIA Selection Tool	- of which control variables, max.	200; per job
• Forcing, variablesperipheral inputs/outputs (without fail-safe)• Number of variables, max.200Diagnostic buffer• presentYes• Number of entries, max.1 000- of which powerfail-proof500Traces• Number of configurable Traces4; Up to 512 KB of data per trace are possibleInterrupts/diagnostics/status informationDiagnostics indication LED• RUN/STOP LEDYes• RUN/STOP LEDYes• STOP ACTIVE LEDYes• STOP ACTIVE LEDYes• Connection display LINK TX/RXYesSupported technology objectsMotion ControlYes; Note: The number of technology objects affects the cycle time of the PLC program; selection guide via the TIA Selection Tool	Forcing	
• Number of variables, max.       200         Diagnostic buffer       •         • present       Yes         • Number of entries, max.       1 000         - of which powerfail-proof       500         Traces       4; Up to 512 KB of data per trace are possible         Interrupts/diagnostics/status information       Interrupts/diagnostics/status information         Diagnostics indication LED       Yes         • RUN/STOP LED       Yes         • ERROR LED       Yes         • STOP ACTIVE LED       Yes         • StoP ACTIVE LED       Yes         • StoP ACTIVE LED       Yes         • Connection display LINK TX/RX       Yes         Supported technology objects       Yes; Note: The number of technology objects affects the cycle time of the PLC program; selection guide via the TIA Selection Tool	Forcing	Yes; without fail-safe
Diagnostic buffer       Yes         • present       Yes         • Number of entries, max.       1 000         of which powerfail-proof       500         Traces       4; Up to 512 KB of data per trace are possible         Interrupts/diagnostics/status information       Interrupts/diagnostics/status information         Diagnostic indication LED       Yes         • RUN/STOP LED       Yes         • ERROR LED       Yes         • STOP ACTIVE LED       Yes         • STOP ACTIVE LED       Yes         • Connection display LINK TX/RX       Yes         Supported technology objects       Yes; Note: The number of technology objects affects the cycle time of the PLC program; selection guide via the TIA Selection Tool	<ul> <li>Forcing, variables</li> </ul>	peripheral inputs/outputs (without fail-safe)
• present       Yes         • Number of entries, max.       1 000         of which powerfail-proof       500         Traces       4; Up to 512 KB of data per trace are possible         Interrupts/diagnostics/status information       4; Up to 512 KB of data per trace are possible         Interrupts/diagnostics/status information       4; Up to 512 KB of data per trace are possible         Interrupts/diagnostics/status information       4; Up to 512 KB of data per trace are possible         Interrupts/diagnostics/status information       4; Up to 512 KB of data per trace are possible         Interrupts/diagnostics/status information       4; Up to 512 KB of data per trace are possible         Interrupts/diagnostics/status information       4; Up to 512 KB of data per trace are possible         Interrupts/diagnostics/status information       Yes         • RUN/STOP LED       Yes         • ERROR LED       Yes         • MAINT LED       Yes         • STOP ACTIVE LED       Yes         • Connection display LINK TX/RX       Yes         Supported technology objects       Supported technology objects affects the cycle time of the PLC program; selection guide via the TIA Selection Tool	Number of variables, max.	200
• Number of entries, max.1 000— of which powerfail-proof500Traces• Number of configurable Traces4; Up to 512 KB of data per trace are possibleInterrupts/diagnostics/status informationDiagnostics indication LED• RUN/STOP LEDYes• RUN/STOP LEDYes• STOP ACTIVE LEDYes• Connection display LINK TX/RXYesSupported technology objectsMotion ControlYes; Note: The number of technology objects affects the cycle time of the PLC program; selection guide via the TIA Selection Tool	Diagnostic buffer	
of which powerfail-proof       500         Traces       4; Up to 512 KB of data per trace are possible         Interrupts/diagnostics/status information       4; Up to 512 KB of data per trace are possible         Interrupts/diagnostics/status information       Ves         Interrupts/diagnostics/status information       Yes         Interrupts/diagnostics/status information       Yes; Note: The number of technology objects affects the cycle time of the PLC program; selection guide via the TIA Selection Tool	• present	Yes
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 program; selection guide via the TIA Selection Tool	Number of entries, max.	1 000
• 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         • RUN/STOP LED       Yes         • ERROR LED       Yes         • MAINT LED       Yes         • STOP ACTIVE LED       Yes         • Connection display LINK TX/RX       Yes         Supported technology objects       Yes; Note: The number of technology objects affects the cycle time of the PLC program; selection guide via the TIA Selection Tool	— of which powerfail-proof	500
Interrupts/diagnostics/status information         Diagnostics indication LED       FRUN/STOP LED         • RUN/STOP LED       Yes         • ERROR LED       Yes         • MAINT LED       Yes         • STOP ACTIVE LED       Yes         • Connection display LINK TX/RX       Yes         Supported technology objects       Yes; Note: The number of technology objects affects the cycle time of the PLC program; selection guide via the TIA Selection Tool	Traces	
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       Yes; Note: The number of technology objects affects the cycle time of the PLC program; selection guide via the TIA Selection Tool	Number of configurable Traces	4; Up to 512 KB of data per trace are possible
• RUN/STOP LED       Yes         • ERROR LED       Yes         • MAINT LED       Yes         • STOP ACTIVE LED       Yes         • Connection display LINK TX/RX       Yes         Supported technology objects       Yes; Note: The number of technology objects affects the cycle time of the PLC program; selection guide via the TIA Selection Tool	Interrupts/diagnostics/status information	
• ERROR LEDYes• MAINT LEDYes• STOP ACTIVE LEDYes• Connection display LINK TX/RXYes• Connection display LINK TX/RXYesSupported technology objectsYes; Note: The number of technology objects affects the cycle time of the PLC program; selection guide via the TIA Selection Tool	Diagnostics indication LED	
• MAINT LED     Yes       • STOP ACTIVE LED     Yes       • Connection display LINK TX/RX     Yes <b>Supported technology objects</b> Yes; Note: The number of technology objects affects the cycle time of the PLC program; selection guide via the TIA Selection Tool	RUN/STOP LED	Yes
• STOP ACTIVE LED     Yes       • Connection display LINK TX/RX     Yes       Supported technology objects     Yes; Note: The number of technology objects affects the cycle time of the PLC program; selection guide via the TIA Selection Tool	• ERROR LED	Yes
• STOP ACTIVE LED     Yes       • Connection display LINK TX/RX     Yes       Supported technology objects     Yes; Note: The number of technology objects affects the cycle time of the PLC program; selection guide via the TIA Selection Tool	MAINT 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	STOP ACTIVE LED	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	<ul> <li>Connection display LINK TX/RX</li> </ul>	Yes
Motion Control         Yes; Note: The number of technology objects affects the cycle time of the PLC program; selection guide via the TIA Selection Tool		
program; selection guide via the TIA Selection Tool		Yes; Note: The number of technology objects affects the cycle time of the PLC
Number of available Motion Control resources for     1 120		
	<ul> <li>Number of available Motion Control resources for</li> </ul>	1 120

technology objects	
<ul> <li>Required Motion Control resources</li> </ul>	
— 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
<ul> <li>Positioning axis</li> </ul>	
<ul> <li>— Number of positioning axes at motion control cycle of 4 ms (typical value)</li> </ul>	11
<ul> <li>— Number of positioning axes at motion control cycle of 8 ms (typical value)</li> </ul>	14
Controller	
<ul> <li>PID_Compact</li> </ul>	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	
Highest safety class achievable in safety mode	
Performance level according to ISO 13849-1	PLe
• SIL acc. to IEC 61508	SIL 3
Probability of failure (for service life of 20 years and repair time	e of 100 hours)
— Low demand mode: PFDavg in accordance with SIL3	< 2.00E-05
<ul> <li>High demand/continuous mode: PFH in accordance with SIL3</li> </ul>	< 1.00E-09
Ambient conditions	
Ambient temperature during operation	
· · · · · · · · · · · · · · · · · · ·	-30 °C; No condensation
<ul> <li>norizontal installation, min.</li> </ul>	
<ul> <li>horizontal installation, min.</li> <li>horizontal installation, max.</li> </ul>	60 °C; Display: 50 °C, at an operating temperature of typically 50 °C, the display is switched off
	60 °C; Display: 50 °C, at an operating temperature of typically 50 °C, the
<ul> <li>horizontal installation, max.</li> </ul>	60 °C; Display: 50 °C, at an operating temperature of typically 50 °C, the display is switched off
<ul><li>horizontal installation, max.</li><li>vertical installation, min.</li></ul>	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
<ul> <li>horizontal installation, max.</li> <li>vertical installation, min.</li> <li>vertical installation, max.</li> </ul>	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
<ul> <li>horizontal installation, max.</li> <li>vertical installation, min.</li> <li>vertical installation, max.</li> </ul> Ambient temperature during storage/transportation	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
<ul> <li>horizontal installation, max.</li> <li>vertical installation, min.</li> <li>vertical installation, max.</li> </ul> Ambient temperature during storage/transportation <ul> <li>min.</li> </ul>	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
<ul> <li>horizontal installation, max.</li> <li>vertical installation, min.</li> <li>vertical installation, max.</li> </ul> Ambient temperature during storage/transportation <ul> <li>min.</li> <li>max.</li> </ul>	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
<ul> <li>horizontal installation, max.</li> <li>vertical installation, min.</li> <li>vertical installation, max.</li> </ul> Ambient temperature during storage/transportation <ul> <li>min.</li> <li>max.</li> </ul> Altitude during operation relating to sea level	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
<ul> <li>horizontal installation, max.</li> <li>vertical installation, min.</li> <li>vertical installation, max.</li> </ul> Ambient temperature during storage/transportation <ul> <li>min.</li> <li>max.</li> </ul> Altitude during operation relating to sea level <ul> <li>Installation altitude above sea level, max.</li> </ul>	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
<ul> <li>horizontal installation, max.</li> <li>vertical installation, min.</li> <li>vertical installation, max.</li> </ul> Ambient temperature during storage/transportation <ul> <li>min.</li> <li>max.</li> </ul> Altitude during operation relating to sea level <ul> <li>Installation altitude above sea level, max.</li> </ul> configuration / header <ul> <li>configuration / programming / header</li> </ul>	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
<ul> <li>horizontal installation, max.</li> <li>vertical installation, min.</li> <li>vertical installation, max.</li> </ul> Ambient temperature during storage/transportation <ul> <li>min.</li> <li>max.</li> </ul> Altitude during operation relating to sea level <ul> <li>Installation altitude above sea level, max.</li> </ul> configuration / header <ul> <li>configuration / programming / header</li> <li>Programming language</li> </ul>	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
<ul> <li>horizontal installation, max.</li> <li>vertical installation, min.</li> <li>vertical installation, max.</li> </ul> Ambient temperature during storage/transportation <ul> <li>min.</li> <li>max.</li> </ul> Altitude during operation relating to sea level <ul> <li>Installation altitude above sea level, max.</li> </ul> configuration / header <ul> <li>configuration / programming / header</li> </ul>	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; incl. failsafe
<ul> <li>horizontal installation, max.</li> <li>vertical installation, min.</li> <li>vertical installation, max.</li> </ul> Ambient temperature during storage/transportation <ul> <li>min.</li> <li>max.</li> </ul> Altitude during operation relating to sea level <ul> <li>Installation altitude above sea level</li> <li>Installation altitude above sea level, max.</li> </ul> configuration / header <ul> <li>configuration / programming / header</li> </ul> Programming language <ul> <li>LAD</li> <li>FBD</li> </ul>	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 
<ul> <li>horizontal installation, max.</li> <li>vertical installation, min.</li> <li>vertical installation, max.</li> </ul> Ambient temperature during storage/transportation <ul> <li>min.</li> <li>max.</li> </ul> Altitude during operation relating to sea level <ul> <li>Installation altitude above sea level, max.</li> </ul> configuration / header <ul> <li>configuration / programming / header</li> </ul> Programming language <ul> <li>LAD</li> <li>FBD</li> <li>STL</li> </ul>	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 
<ul> <li>horizontal installation, max.</li> <li>vertical installation, min.</li> <li>vertical installation, max.</li> </ul> Ambient temperature during storage/transportation <ul> <li>min.</li> <li>max.</li> </ul> Altitude during operation relating to sea level <ul> <li>Installation altitude above sea level, max.</li> </ul> configuration / header <ul> <li>configuration / programming / header</li> </ul> Programming language <ul> <li>LAD</li> <li>FBD</li> <li>STL</li> <li>SCL</li> </ul>	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; incl. failsafe Yes; incl. failsafe Yes Yes
<ul> <li>horizontal installation, max.</li> <li>vertical installation, min.</li> <li>vertical installation, max.</li> </ul> Ambient temperature during storage/transportation <ul> <li>min.</li> <li>max.</li> </ul> Altitude during operation relating to sea level <ul> <li>Installation altitude above sea level, max.</li> </ul> configuration / header <ul> <li>configuration / programming / header</li> </ul> Programming language <ul> <li>LAD</li> <li>FBD</li> <li>STL</li> <li>SCL</li> <li>GRAPH</li> </ul>	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 
<ul> <li>horizontal installation, max.</li> <li>vertical installation, min.</li> <li>vertical installation, max.</li> </ul> Ambient temperature during storage/transportation <ul> <li>min.</li> <li>max.</li> </ul> Altitude during operation relating to sea level <ul> <li>Installation altitude above sea level, max.</li> </ul> configuration / header <ul> <li>configuration / programming / header</li> </ul> Programming language <ul> <li>LAD</li> <li>FBD</li> <li>STL</li> <li>SCL</li> <li>GRAPH</li> </ul> Know-how protection	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; incl. failsafe Yes; incl. failsafe Yes Yes Yes
<ul> <li>horizontal installation, max.</li> <li>vertical installation, min.</li> <li>vertical installation, max.</li> </ul> Ambient temperature during storage/transportation <ul> <li>min.</li> <li>max.</li> </ul> Altitude during operation relating to sea level <ul> <li>Installation altitude above sea level, max.</li> </ul> configuration / header <ul> <li>configuration / programming / header</li> </ul> Programming language <ul> <li>LAD</li> <li>FBD</li> <li>STL</li> <li>SCL</li> <li>GRAPH</li> </ul> Know-how protection <ul> <li>User program protection/password protection</li> </ul>	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 
<ul> <li>horizontal installation, max.</li> <li>vertical installation, min.</li> <li>vertical installation, max.</li> </ul> Ambient temperature during storage/transportation <ul> <li>min.</li> <li>max.</li> </ul> Attitude during operation relating to sea level <ul> <li>Installation altitude above sea level, max.</li> </ul> configuration / header <ul> <li>configuration / programming / header</li> </ul> Programming language <ul> <li>LAD</li> <li>FBD</li> <li>STL</li> <li>SCL</li> <li>GRAPH</li> </ul> Know-how protection <ul> <li>User program protection/password protection</li> <li>Copy protection</li> </ul>	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 
<ul> <li>horizontal installation, max.</li> <li>vertical installation, min.</li> <li>vertical installation, max.</li> </ul> Ambient temperature during storage/transportation <ul> <li>min.</li> <li>max.</li> </ul> Attitude during operation relating to sea level <ul> <li>Installation altitude above sea level, max.</li> </ul> configuration / header <ul> <li>configuration / programming / header</li> </ul> Programming language <ul> <li>LAD</li> <li>FBD</li> <li>STL</li> <li>SCL</li> <li>GRAPH</li> </ul> Know-how protection <ul> <li>User program protection/password protection</li> <li>Copy protection</li> <li>Block protection</li> </ul>	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 
<ul> <li>horizontal installation, max.</li> <li>vertical installation, min.</li> <li>vertical installation, max.</li> </ul> Ambient temperature during storage/transportation <ul> <li>min.</li> <li>max.</li> </ul> Attitude during operation relating to sea level <ul> <li>Installation altitude above sea level, max.</li> </ul> configuration / header <ul> <li>configuration / programming / header</li> </ul> Programming language <ul> <li>LAD</li> <li>FBD</li> <li>STL</li> <li>SCL</li> <li>GRAPH</li> </ul> Know-how protection <ul> <li>User program protection/password protection</li> <li>Copy protection</li> <li>Block protection</li> </ul> Access protection	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; incl. failsafe Yes Yes Yes Yes Yes Yes
<ul> <li>horizontal installation, max.</li> <li>vertical installation, min.</li> <li>vertical installation, max.</li> </ul> Ambient temperature during storage/transportation <ul> <li>min.</li> <li>max.</li> </ul> Altitude during operation relating to sea level <ul> <li>Installation altitude above sea level, max.</li> </ul> configuration / header <ul> <li>configuration / programming / header</li> </ul> Programming language <ul> <li>LAD</li> <li>FBD</li> <li>STL</li> <li>SCL</li> <li>GRAPH</li> </ul> Know-how protection <ul> <li>User program protection/password protection</li> <li>Copy protection</li> <li>Block protection</li> <li>protection of confidential configuration data</li> </ul>	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; incl. failsafe Yes; incl. failsafe Yes Yes Yes Yes Yes Yes Yes
<ul> <li>horizontal installation, max.</li> <li>vertical installation, min.</li> <li>vertical installation, max.</li> </ul> Ambient temperature during storage/transportation <ul> <li>min.</li> <li>max.</li> </ul> Altitude during operation relating to sea level <ul> <li>Installation altitude above sea level, max.</li> </ul> configuration / header <ul> <li>configuration / programming / header</li> </ul> Programming language <ul> <li>LAD</li> <li>FBD</li> <li>STL</li> <li>SCL</li> <li>GRAPH</li> </ul> Know-how protection <ul> <li>User program protection/password protection</li> <li>Copy protection</li> <li>Block protection</li> <li>Protection of confidential configuration data</li> <li>Password for display</li> </ul>	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; incl. failsafe Yes; incl. failsafe Yes Yes Yes Yes Yes Yes Yes
<ul> <li>horizontal installation, max.</li> <li>vertical installation, min.</li> <li>vertical installation, max.</li> </ul> Ambient temperature during storage/transportation <ul> <li>min.</li> <li>max.</li> </ul> Altitude during operation relating to sea level <ul> <li>Installation altitude above sea level, max.</li> </ul> configuration / header <ul> <li>configuration / programming / header</li> </ul> Programming language <ul> <li>LAD</li> <li>FBD</li> <li>STL</li> <li>SCL</li> <li>GRAPH</li> </ul> Know-how protection <ul> <li>User program protection/password protection</li> <li>Copy protection</li> <li>Block protection</li> <li>Access protection</li> <li>protection of confidential configuration data</li> <li>Password for display</li> <li>Protection level: Write protection</li> </ul>	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; incl. failsafe Yes; incl. failsafe Yes Yes Yes Yes Yes Yes Yes
<ul> <li>horizontal installation, max.</li> <li>vertical installation, min.</li> <li>vertical installation, max.</li> </ul> Ambient temperature during storage/transportation <ul> <li>min.</li> <li>max.</li> </ul> Attitude during operation relating to sea level <ul> <li>Installation altitude above sea level, max.</li> </ul> configuration / header <ul> <li>configuration / programming / header</li> </ul> Programming language <ul> <li>LAD</li> <li>FBD</li> <li>STL</li> <li>SCL</li> <li>GRAPH</li> </ul> Know-how protection <ul> <li>User program protection/password protection</li> <li>Copy protection</li> <li>Block protection</li> <li>Protection of confidential configuration data</li> <li>Password for display</li> <li>Protection level: Write protection</li> <li>Protection level: Read/write protection</li> </ul>	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; incl. failsafe Yes; incl. failsafe Yes Yes Yes Yes Yes Yes Yes Yes
<ul> <li>horizontal installation, max.</li> <li>vertical installation, min.</li> <li>vertical installation, max.</li> </ul> Ambient temperature during storage/transportation <ul> <li>min.</li> <li>max.</li> </ul> Altitude during operation relating to sea level <ul> <li>Installation altitude above sea level, max.</li> </ul> configuration / header <ul> <li>configuration / programming / header</li> </ul> Programming language <ul> <li>LAD</li> <li>FBD</li> <li>STL</li> <li>SCL</li> <li>GRAPH</li> </ul> Know-how protection <ul> <li>User program protection/password protection</li> <li>Copy protection</li> <li>Block protection</li> </ul> Access protection <ul> <li>Protection level: Write protection</li> </ul>	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; incl. failsafe Yes; incl. failsafe Yes Yes Yes Yes Yes Yes Yes Yes Yes
<ul> <li>horizontal installation, max.</li> <li>vertical installation, min.</li> <li>vertical installation, max.</li> </ul> Ambient temperature during storage/transportation <ul> <li>min.</li> <li>max.</li> </ul> Attitude during operation relating to sea level <ul> <li>Installation altitude above sea level, max.</li> </ul> configuration / header <ul> <li>configuration / programming / header</li> </ul> Programming language <ul> <li>LAD</li> <li>FBD</li> <li>STL</li> <li>SCL</li> <li>GRAPH</li> </ul> Know-how protection <ul> <li>Loser program protection/password protection</li> <li>Copy protection</li> <li>Block protection</li> <li>Prostection of confidential configuration data</li> <li>Password for display</li> <li>Protection level: Write protection</li> <li>Protection level: Read/write protection</li> </ul>	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; incl. failsafe Yes; incl. failsafe Yes Yes Yes Yes Yes Yes Yes Yes

lower limit	adjustable minimum cycle time
• upper limit	adjustable maximum cycle time
Dimensions	
Width	35 mm
Height	147 mm
Depth	129 mm
Weights	
Weight, approx.	336 g

last modified:

7/13/2024 🖸