

Data sheet CPU 315SN/EC (315-4EC12)

## Technical data

Type         CPU 315SN/EC           General Information         -           Note         -           Features         SPEED7 technology 1 MB work memory Memory extension (max. 2 MB) PROFIBUS-DP master / Ptr (switchable) Ether CAT controller integrated           SPEED-Bus         -           Technical data power supply         DC 24 V           Power supply (refed value)         DC 24 V           Power supply (permitted range)         DC 20.428.8 V           Reverse polarity protection	Order no.	315-4EC12
Note   SPEED7 technology   Mall work memory   Memory extension (max. 2 MB)   Memory extens	Туре	CPU 315SN/EC
Features SPEEDT technology I MB work memory man 2 MB) Memory extension (mer / PP (ewitchable) EtherCAT controller integrated SPEED-Bus	General information	
I MB work memory Memory extension (max. 2 MB) PROFIBUS-DP master / PIP (switchable) EtherCAT controller integrated  Fechnical data power supply  Power supply (rated value)  DC 24 V  Power supply (rated value)  DC 20.428.8 V  Reverse polarity protection  © Current consumption (no-load operation)  Current consumption (rated value)  1.1 A  Innush current  6 A  Pt  0.28 A²s  Max. current drain at backplane bus  2.5 A  Power loss  8.5 W  Load and working memory  Load memory, integrated  2 MB  Work memory, maximum  2 MB  Work memory, maximal  2 MB  Memory divided in 50% program / 50% data  Memory card slot  MMC-Card with max. 1 GB  Hardware configuration  Racks, max.  4  Modules per rack, max.  Number of Integrated DP master  1 Number of DP master val CP  Operable communication modules PIP  8  Operable communication modules PIP  8  Operable communication modules PIP  8  Command processing times  Bit instructions, min.  0.01 μs  Use Value  Out of the special conduction in the special conduction, min.  0.01 μs  Use Value  Out of the special conduction in the special conduction, min.  0.01 μs  Double integer arithmetic, min.  0.01 μs	Note	-
Power supply (rated value)  Power supply (permitted range)  Power supply (permitted range)  Current consumption (no-load operation)  Current consumption (rated value)  1.1 A  Inrush current  6 A  Pt  0.28 A²s  Max. current drain at backplane bus  2.5 A  Power loss  8.5 W   Load and working memory  Load memory, integrated  2 MB  Work memory, integrated  1 MB  Work memory, integrated  1 MB  Work memory, integrated  2 MB  Memory divided in 50% program / 50% data   ✓  Memory card slot  MmC-Card with max. 1 GB  Hardware configuration  Racks, max.  4  Modules per rack, max.  Number of 1DP master via CP  Operable function modules  8  Operable communication modules LAN  8  Command processing times  Bit instructions, min.  0.01 μs  Contractions  Double integer arithmetic, min.  0.01 μs  Contractions  Double integer arithmetic, min.  0.01 μs	Features	1 MB work memory  Memory extension (max. 2 MB)  PROFIBUS-DP master / PtP (switchable)
Power supply (rated value)  Power supply (permitted range)  Reverse polarity protection  ✓  Current consumption (no-load operation)  Current consumption (rated value)  Inrush current  6 A  Pt  0.28 A <sup>28</sup> Max. current drain at backplane bus  2.5 A  Power loss  8.5 W   Load and working memory  Load memory, integrated  2 MB  Work memory, integrated  1 MB  Work memory, integrated  2 MB  Memory divided in 50% program / 50% data  Memory card slot  Hardware configuration  Racks, max.  4  Modules per rack, max.  Number of DP master via CP  Operable function modules  Operable communication modules PtP  Operable communication modules PtP  Operable communication modules LAN  Bit instructions, min.  O.01 μs  Vor lacks in the first instructions, min.  O.01 μs  Vor lacks in the first instructions, min.  O.01 μs  Vor lacks in the first instruction, min.  O.01 μs  Vor lacks in the first instruction, min.  O.01 μs  Vor lacks in the first instruction, min.  O.01 μs  Vor lacks in the first instruction, min.  O.01 μs  Vor lacks in the first instruction, min.  O.01 μs  Vor lacks in the first instruction, min.  O.01 μs	SPEED-Bus	-
Power supply (permitted range)  Reverse polarity protection  Current consumption (no-load operation)  Current consumption (rated value)  1.1 A  Inrush current  6 A  Pt  0.28 A²s  Max. current drain at backplane bus  2.5 A  Power loss  8.5 W   Load and working memory  Load memory, integrated  2 MB  Load memory, integrated  1 MB  Work memory, integrated  1 MB  Work memory, integrated  1 MB  Work memory, maximum  2 MB  Memory divided in 50% program / 50% data  Memory card slot  Hardware configuration  Racks, max.  4  Modules per rack, max.  8 in multiple-, 32 in a single-rack configuration  Number of Integrated DP master  1 Number of DP master via CP  4 Operable function modules  0 perable communication modules LAN  8  Command processing times  Bit instructions, min.  0.01 μs  Vord instruction, min.  0.01 μs  Vord instruction, min.  0.01 μs	Technical data power supply	
Reverse polarity protection  Current consumption (no-load operation)  Current consumption (rated value)  Inrush current  6 A  Pt  0.28 A*s  Max. current drain at backplane bus  2.5 A  Power loss  8.5 W   Load and working memory  Load memory, integrated  2 MB  Load memory, integrated  2 MB  Work memory, integrated  1 MB  Work memory, integrated  1 MB  Work memory divided in 50% program / 50% data  Memory card slot  MMC-Card with max. 1 GB  Hardware configuration  Racks, max.  4  Modules per rack, max.  8 in multiple-, 32 in a single-rack configuration  Number of integrated DP master  1  Number of DP master via CP  4  Operable function modules  Operable communication modules PtP  8  Command processing times  Bit instructions, min.  0.01 \( \mu \text{s} \)  Word instruction, min.  0.01 \( \mu \text{s} \)  Use A*s  1.1 A  1.1 A	Power supply (rated value)	DC 24 V
Current consumption (no-load operation)         270 mA           Current consumption (rated value)         1.1 A           Inrush current         6 A           Ft         0.28 A*s           Max. current drain at backplane bus         2.5 A           Power loss         8.5 W           Load and working memory           Load memory, integrated         2 MB           Load memory, maximum         2 MB           Work memory, maximal         2 MB           Work memory, maximal         2 MB           Memory divided in 50% program / 50% data         ✓           Memory card slot         MMC-Card with max. 1 GB           Hardware configuration           Racks, max.         4           Modules per rack, max.         8 in multiple-, 32 in a single-rack configuration           Number of Integrated DP master         1           Number of DP master via CP         4           Operable function modules         8           Operable communication modules PtP         8           Operable communication modules LAN         8           Command processing times           Bit instructions, min.         0.01 μs           Word instruction, min.         0.01 μs	Power supply (permitted range)	DC 20.428.8 V
Current consumption (rated value)  Inrush current 6 A  Pt 0.28 A*s  Max. current drain at backplane bus 2.5 A  Power loss 8.5 W  Load and working memory  Load memory, integrated 2 MB  Uoad memory, maximum 2 MB  Work memory, integrated 1 MB  Work memory, maximal 2 MB  Memory divided in 50% program / 50% data  Memory card slot  MMC-Card with max. 1 GB  Hardware configuration  Racks, max. 4  Modules per rack, max. 8 in multiple-, 32 in a single-rack configuration  Number of Integrated DP master 1  Number of DP master via CP 4  Operable function modules 0perable communication modules PtP 8  Command processing times  Bit instructions, min. 0.01 μs  Voral instruction, min. 0.01 μs  Voral instruction, min. 0.01 μs  Voral instruction, min. 0.01 μs	Reverse polarity protection	✓
Inrush current  6 A  PR  0.28 A°s  Max. current drain at backplane bus  2.5 A  Power loss  8.5 W  Load and working memory  Load memory, integrated  2 MB  Load memory, maximum  2 MB  Work memory, integrated  1 MB  Work memory, maximal  2 MB  Memory divided in 50% program / 50% data  Memory card slot  MMC-Card with max. 1 GB  Hardware configuration  Racks, max.  4  Modules per rack, max.  Modules per rack, max.  Number of integrated DP master  Number of DP master via CP  Operable function modules  Operable communication modules LAN  8  Command processing times  Bit instructions, min.  0.01 μs  Vol μs	Current consumption (no-load operation)	270 mA
Pt 0.28 A%   Max. current drain at backplane bus 2.5 A   Power loss 8.5 W   Load and working memory 2 MB   Load memory, integrated 2 MB   Work memory, integrated 1 MB   Work memory, maximun 2 MB   Work memory, maximal 2 MB   Memory divided in 50% program / 50% data ✓   Memory card slot MMC-Card with max. 1 GB   Hardware configuration 8   Racks, max. 4   Modules per rack, max. 8 in multiple-, 32 in a single-rack configuration   Number of Integrated DP master 1   Number of DP master via CP 4   Operable function modules 8   Operable communication modules PtP 8   Operable communication modules LAN 8   Command processing times   Bit instructions, min. 0.01 μs   Word instruction, min. 0.01 μs   Double integer arithmetic, min. 0.01 μs	Current consumption (rated value)	1.1 A
Max. current drain at backplane bus 2.5 A   Power loss 8.5 W   Load and working memory 2 MB   Load memory, integrated 2 MB   Load memory, maximum 2 MB   Work memory, integrated 1 MB   Work memory, maximal 2 MB   Memory divided in 50% program / 50% data ✓   Memory card slot MMC-Card with max. 1 GB   Hardware configuration 8   Racks, max. 4   Modules per rack, max. 8 in multiple-, 32 in a single-rack configuration   Number of integrated DP master 1   Number of DP master via CP 4   Operable function modules 8   Operable communication modules PtP 8   Operable communication modules LAN 8   Command processing times 8   Bit instructions, min. 0.01 μs   Word instruction, min. 0.01 μs   Double integer arithmetic, min. 0.01 μs	Inrush current	6 A
Power loss  Load and working memory  Load memory, integrated 2 MB  Load memory, maximum 2 MB  Work memory, integrated 1 MB  Work memory, maximal 2 MB  Memory divided in 50% program / 50% data ✓ MMC-Card with max. 1 GB  Hardware configuration  Racks, max. 4  Modules per rack, max. 4  Modules per rack, max. 8 in multiple-, 32 in a single-rack configuration  Number of integrated DP master 1  Number of DP master via CP 4  Operable function modules 8  Operable communication modules PtP 8  Operable communication modules LAN 8  Et instructions, min. 0.01 μs  Word instruction, min. 0.01 μs  Double integer arithmetic, min. 0.01 μs	l²t	0.28 A²s
Load and working memory         Load memory, integrated       2 MB         Load memory, maximum       2 MB         Work memory, integrated       1 MB         Work memory, maximal       2 MB         Memory divided in 50% program / 50% data       ✓         Memory card slot       MMC-Card with max. 1 GB         Hardware configuration         Racks, max.       4         Modules per rack, max.       8 in multiple-, 32 in a single-rack configuration         Number of integrated DP master       1         Number of DP master via CP       4         Operable function modules       8         Operable communication modules PtP       8         Operable communication modules LAN       8         Command processing times         Bit instructions, min.       0.01 μs         Word instruction, min.       0.01 μs         Double integer arithmetic, min.       0.01 μs	Max. current drain at backplane bus	2.5 A
Load memory, integrated       2 MB         Load memory, maximum       2 MB         Work memory, integrated       1 MB         Work memory, maximal       2 MB         Memory divided in 50% program / 50% data       ✓         Memory card slot       MMC-Card with max. 1 GB         Hardware configuration         Racks, max.       4         Modules per rack, max.       8 in multiple-, 32 in a single-rack configuration         Number of integrated DP master       1         Number of DP master via CP       4         Operable function modules       8         Operable communication modules PtP       8         Operable communication modules LAN       8         Command processing times       Command processing times         Bit instructions, min.       0.01 μs         Word instruction, min.       0.01 μs         Double integer arithmetic, min.       0.01 μs	Power loss	8.5 W
Load memory, maximum 2 MB   Work memory, integrated 1 MB   Work memory, maximal 2 MB   Memory divided in 50% program / 50% data ✓   Memory card slot MMC-Card with max. 1 GB   Hardware configuration   Racks, max. 4   Modules per rack, max. 8 in multiple-, 32 in a single-rack configuration   Number of integrated DP master 1   Number of DP master via CP 4   Operable function modules 8   Operable communication modules PtP 8   Operable communication modules LAN 8   Command processing times   Bit instructions, min. 0.01 μs   Word instruction, min. 0.01 μs   Double integer arithmetic, min. 0.01 μs	Load and working memory	
Work memory, integrated 1 MB   Work memory, maximal 2 MB   Memory divided in 50% program / 50% data ✓   Memory card slot MMC-Card with max. 1 GB   Hardware configuration   Racks, max. 4   Modules per rack, max. 8 in multiple-, 32 in a single-rack configuration   Number of integrated DP master 1   Number of DP master via CP 4   Operable function modules 8   Operable communication modules PtP 8   Operable communication modules LAN 8   Command processing times   Bit instructions, min. 0.01 μs   Word instruction, min. 0.01 μs   Double integer arithmetic, min. 0.01 μs	Load memory, integrated	2 MB
Work memory, maximal  Memory divided in 50% program / 50% data  Memory card slot  MMC-Card with max. 1 GB  Hardware configuration  Racks, max.  4  Modules per rack, max.  Modules per rack, max.  Number of integrated DP master  1  Number of DP master via CP  4  Operable function modules  8  Operable communication modules PtP  8  Operable communication modules LAN  8  Command processing times  Bit instructions, min.  0.01 μs  Word instruction, min.  0.01 μs  Double integer arithmetic, min.	Load memory, maximum	2 MB
Memory divided in 50% program / 50% data ✓   Memory card slot MMC-Card with max. 1 GB   Hardware configuration 4   Racks, max. 4   Modules per rack, max. 8 in multiple-, 32 in a single-rack configuration   Number of integrated DP master 1   Number of DP master via CP 4   Operable function modules 8   Operable communication modules PtP 8   Operable communication modules LAN 8   Command processing times   Bit instructions, min. 0.01 μs   Word instruction, min. 0.01 μs   Double integer arithmetic, min. 0.01 μs	Work memory, integrated	1 MB
Memory card slot  Hardware configuration  Racks, max.  4  Modules per rack, max.  Modules per rack, max.  8 in multiple-, 32 in a single-rack configuration  Number of integrated DP master  1  Number of DP master via CP  4  Operable function modules  8  Operable communication modules PtP  8  Operable communication modules LAN  8  Command processing times  Bit instructions, min.  0.01 \( \mu \)s  Out   \( \mu \)s  Double integer arithmetic, min.  0.01 \( \mu \)s	Work memory, maximal	2 MB
Hardware configuration  Racks, max.  Modules per rack, max.  8 in multiple-, 32 in a single-rack configuration  Number of integrated DP master  1  Number of DP master via CP  4  Operable function modules  8  Operable communication modules PtP  8  Operable communication modules LAN  8  Command processing times  Bit instructions, min.  0.01 \( \mu \)s  Word instruction, min.  0.01 \( \mu \)s  Double integer arithmetic, min.	Memory divided in 50% program / 50% data	✓
Racks, max.4Modules per rack, max.8 in multiple-, 32 in a single-rack configurationNumber of integrated DP master1Number of DP master via CP4Operable function modules8Operable communication modules PtP8Operable communication modules LAN8Command processing timesBit instructions, min. $0.01 \mu s$ Word instruction, min. $0.01 \mu s$ Double integer arithmetic, min. $0.01 \mu s$	Memory card slot	MMC-Card with max. 1 GB
Modules per rack, max.8 in multiple-, 32 in a single-rack configurationNumber of integrated DP master1Number of DP master via CP4Operable function modules8Operable communication modules PtP8Operable communication modules LAN8Command processing timesBit instructions, min. $0.01 \mu s$ Word instruction, min. $0.01 \mu s$ Double integer arithmetic, min. $0.01 \mu s$	Hardware configuration	
Number of integrated DP master       1         Number of DP master via CP       4         Operable function modules       8         Operable communication modules PtP       8         Operable communication modules LAN       8         Command processing times         Bit instructions, min. $0.01  \mu s$ Word instruction, min. $0.01  \mu s$ Double integer arithmetic, min. $0.01  \mu s$	Racks, max.	4
Number of DP master via CP 4  Operable function modules 8  Operable communication modules PtP 8  Operable communication modules LAN 8  Command processing times  Bit instructions, min. 0.01 $\mu$ s  Word instruction, min. 0.01 $\mu$ s  Double integer arithmetic, min. 0.01 $\mu$ s	Modules per rack, max.	8 in multiple-, 32 in a single-rack configuration
Operable function modules PtP 8 Operable communication modules PtP 8 Operable communication modules LAN 8  Command processing times  Bit instructions, min. 0.01 $\mu$ s  Word instruction, min. 0.01 $\mu$ s  Double integer arithmetic, min. 0.01 $\mu$ s	Number of integrated DP master	1
Operable communication modules PtP 8 Operable communication modules LAN 8  Command processing times  Bit instructions, min. 0.01 $\mu$ s  Word instruction, min. 0.01 $\mu$ s  Double integer arithmetic, min. 0.01 $\mu$ s	Number of DP master via CP	4
Operable communication modules LAN 8    Command processing times    Bit instructions, min. 0.01 $\mu$ s    Word instruction, min. 0.01 $\mu$ s    Double integer arithmetic, min. 0.01 $\mu$ s	Operable function modules	8
Command processing times  Bit instructions, min. $0.01  \mu s$ Word instruction, min. $0.01  \mu s$ Double integer arithmetic, min. $0.01  \mu s$	Operable communication modules PtP	8
Bit instructions, min. $0.01  \mu s$ Word instruction, min. $0.01  \mu s$ Double integer arithmetic, min. $0.01  \mu s$	Operable communication modules LAN	8
Word instruction, min. $0.01  \mu s$ Double integer arithmetic, min. $0.01  \mu s$	Command processing times	
Double integer arithmetic, min. $0.01  \mu \mathrm{s}$	Bit instructions, min.	0.01 μs
	Word instruction, min.	0.01 μs
Floating-point arithmetic, min. $0.06  \mu \text{s}$	Double integer arithmetic, min.	0.01 μs
	Floating-point arithmetic, min.	0.06 μs



## Timers/Counters and their retentive characteristics

Number of S7 counters	512	
S7 counter remanence	adjustable 0 up to 512	
S7 counter remanence adjustable	C0 C7	
Number of S7 times	512	
S7 times remanence	adjustable 0 up to 512	
S7 times remanence adjustable	not retentive	
Data range and retentive characteristic		
Number of flags	8192 Byte	
Bit memories retentive characteristic adjustable	adjustable 0 up to 8192	
Bit memories retentive characteristic preset	MB0 MB15	
Number of data blocks	4095	
Max. data blocks size	64 KB	
Number range DBs	1 4095	
Max. local data size per execution level	3072 Byte	
Max. local data size per block	3072 Byte	
Blocks		
Number of OBs	24	
Maximum OB size	64 KB	
Total number DBs, FBs, FCs		
Number of FBs	2048	
Maximum FB size	64 KB	
Number range FBs	0 2047	
Number of FCs	2048	
Maximum FC size	64 KB	
Number range FCs	0 2047	
Maximum nesting depth per priority class	8	
Maximum nesting depth additional within an error OB	4	
Time	90 M	
Real-time clock buffered	✓	
Clock buffered period (min.)	6 w	
Type of buffering	Vanadium Rechargeable Lithium Battery	
Load time for 50% buffering period	20 h	
Load time for 100% buffering period	48 h	
Accuracy (max. deviation per day)	10 s	
Number of operating hours counter	8	
Clock synchronization	✓	
Synchronization via MPI	Master/Slave	
Synchronization via Ethernet (NTP)	Slave	
Address areas (I/O)		
Input I/O address area	2048 Byte	
Output I/O address area	2048 Byte	
Process image adjustable	✓	
Input process image preset	128 Byte	



Output process image preset	128 Byte	A YASKAWA COMPANY
Input process image maximal	2048 Byte	
Output process image maximal	2048 Byte	
Digital inputs	16384	
Digital outputs	16384	
Digital inputs central	1024	
Digital outputs central	1024	
Integrated digital inputs	-	
Integrated digital outputs	-	
Analog inputs	1024	
Analog outputs	1024	
Analog inputs, central	256	
Analog outputs, central	256	
Integrated analog inputs	-	
Integrated analog outputs	-	
Communication functions		
PG/OP channel	✓	
Global data communication	✓	
Number of GD circuits, max.	8	
Size of GD packets, max.	22 Byte	
S7 basic communication		
S7 basic communication, user data per job	76 Byte	
S7 communication		
S7 communication as server	✓	
S7 communication as client	-	
S7 communication, user data per job	160 Byte	
Number of connections, max.	32	
Functionality Sub-D interfaces		
Туре	X2	
Type of interface	RS485	
Connector	Sub-D, 9-pin, female	
Electrically isolated	✓	
MPI	✓	
MP²I (MPI/RS232)	-	
DP master	-	
DP slave	-	
Point-to-point interface	-	
Туре	Х3	
Type of interface	RS485	
Connector	Sub-D, 9-pin, female	
Electrically isolated	✓	
MPI	-	
MP²I (MPI/RS232)	-	



DP master	yes A YASKAWA COMPANY
DP slave	yes
Point-to-point interface	✓
Functionality MPI	
Number of connections, max.	32
PG/OP channel	✓
Routing	✓
Global data communication	✓
S7 basic communication	✓
S7 communication	✓
S7 communication as server	✓
S7 communication as client	-
Transmission speed, min.	19.2 kbit/s
Transmission speed, max.	12 Mbit/s
Functionality PROFIBUS master	
PG/OP channel	✓
Routing	<b>√</b>
S7 basic communication	<b>√</b>
S7 communication	<b>√</b>
S7 communication as server	<b>√</b>
S7 communication as client	
Activation/deactivation of DP slaves	<b>√</b>
Direct data exchange (slave-to-slave communication)	-
DPV1	<b>√</b>
Transmission speed, min.	9.6 kbit/s
Transmission speed, max.	12 Mbit/s
Number of DP slaves, max.	124
Address range inputs, max.	8 KB
Address range outputs, max.	8 KB
User data inputs per slave, max.	244 Byte
User data outputs per slave, max.	244 Byte
Functionality PROFIBUS slave	
PG/OP channel	✓
Routing	<u> </u>
S7 communication	<del>-</del>
S7 communication as server	-/
S7 communication as client	
Direct data exchange (slave-to-slave communication)	
DPV1	✓
Transmission speed, min.	9.6 kbit/s
Transmission speed, max.	12 Mbit/s
Automatic detection of transmission speed	•



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0/100 MBit
N TOO MER
0/100 MBit



User data per ISC connection, max.   32 KB	S7 connections	BSEND, BRCV, GET, PUT, Connection of active and passive NY data handling	
handling	User data per S7 connection, max.	32 KB	
ISO-connections	TCP-connections		
User data per ISO connections (RFC 1008)         FETCH PASSIV, WRITE PASSIV, Connection of passive data handling           User data per ISO on TCP connection, max.         32 KB           UDP-connections         -           User data per UDP connection, max.         -           UDP-broadcast-connections         -           UDP-broadcast-connections         -           UDP-broadcast-connections         -           User data per ISO on TCP connection, max.         8           User data per ISO on TCP connection, max.         8 KB           User data per ISO on TCP connection, max.         8 KB           User data per albor TCP connection, max.         1460 Byte           User data per uDP connection, max.         1472 Byte           EtherCAT Master           Number of EtherCAT-slaves         128           Update time         500 μs . 512 ms           Address range inputs, max.         2 KB           Eof support         №           FoE support         №           FoE support         №           Hotconnect Slaves         №           Management & diagnosis         -           Protocols         ICMP LLC           Web based diagnosis         -           NCM diagnosis         №	User data per TCP connection, max.	64 KB	
ISO on TCP connections (RFC 1006)  User data per ISO on TCP connection, max.  User data per UDP connection, max.  USER  UDP-connections  - USER  UDP-multicast-connections  - UDP-broadcast-connections  - UDP-broadcast-connections  - UDP-broadcast-connections  - UDP-broadcast-connection, max.  User data per UDP connection, max.  User data per ISO on TCP connection, max.  User data per ISO on TCP connection, max.  User data per alto on TCP connection, max.  1480 Byle  User data per uDP connection, max.  1480 Byle  Update time  500 µs . 512 ms  Address range inputs, max.  2 KB  Address range outputs, max.  2 KB  Address range outputs, max.  2 KB  Eoc support  Foc support  Foc support  Foc support  We based diagnosis  Protocols  ICMP  LLC  Web based diagnosis  NCM diagnosis  PPE  Mounting  Material  PPE  Mounting  Rail System 300  Mechanical data  Dimensions (WxHxD)  80 mm x 125 mm x 120 mm  Weight  Environmental conditions  Operating temperature  0 °C to 60 °C	ISO-connections		
handling  User data per ISO on TCP connection, max.  UDP-connections  User data per UDP connections  UDP-multicast-connections  UDP-multicast-connections  -  UDP-multicast-connections  -  Ethernet open communication  Number of connection, max.  8  User data per ISO on TCP connection, max.  8 KB  User data per lad per ISO on TCP connection, max.  8 KB  User data per native TCP connection, max.  1460 Byte  User data per alto CTCP connection, max.  1472 Byte  EtherCAT Master  Number of EtherCAT-slaves  128  Update time  500 µs . 512 ms  Address range inputs, max.  2 KB  Address range outputs, max.  2 KB  EoE support  FoE support  PoE support  Whotonnect Slaves  Management & diagnosis  Protocols  ICMP  LLC  Web based diagnosis  NCM diagnosis  NCM diagnosis  NCM diagnosis  NCM diagnosis  PPE  Mounting  Rail System 300  Mechanical data  Dimensions (WxHxD)  80 mm x 125 mm x 120 mm  Weight  430 g  Environmental conditions  Operating temperature  0 °C to 60 °C	User data per ISO connection, max.	-	
UDP-connections	ISO on TCP connections (RFC 1006)		
User data per UDP connection, max.	User data per ISO on TCP connection, max.	32 KB	
UDP-multicast-connections         -           UDP-broadcast-connections         -           Ethernet open communication         Number of connections, max.         8           User data per lSO on TCP connection, max.         8 KB           User data per antive TCP connection, max.         1460 Byte           User data per uDP connection, max.         1472 Byte           EtherCAT Master         128           Number of EtherCAT-slaves         128           Update time         500 μs . 512 ms           Address range inputs, max.         2 KB           Address range outputs, max.         2 KB           E6E support         ✓           FoE support         ✓           Hotconnect Slaves         ✓           Management & diagnosis         -           Protocols         ICMP LLC           Web based diagnosis         -           Housing         Mali System 300           Mechanical data         Dimensions (WxHxD)         80 mm x 125 mm x 120 mm           Weight         430 g           Environmental conditions         O °C to 60 °C	UDP-connections	-	
UDP-broadcast-connections	User data per UDP connection, max.	-	
Ethernet open communication  Number of connections, max.  User data per ISO on TCP connection, max.  User data per ad hoc TCP connection, max.  User data per ad hoc TCP connection, max.  1460 Byte  User data per UDP connection, max.  1472 Byte  EtherCAT Master  Number of EtherCAT-slaves  128  Update time  500 µs 512 ms  Address range inputs, max.  2 KB  Address range outputs, max.  2 KB  EoE support  FoE support  Volument Slaves  Management & diagnosis  Protocols  LCMP  LLC  Web based diagnosis  NCM diagnosis  NCM diagnosis  NCM diagnosis  Machanical data  Dimensions (WxHxD)  Weight  430 g  Environmental conditions  Operating temperature  0 °C to 60 °C  Experiments  8 KB	UDP-multicast-connections	-	
Number of connections, max.         8           User data per ISO on TCP connection, max.         8 KB           User data per native TCP connection, max.         8 KB           User data per ad hoc TCP connection, max.         1460 Byte           User data per UDP connection, max.         1472 Byte           EtherCAT Master         128           Number of EtherCAT-slaves         128           Update time         500 µs 512 ms           Address range inputs, max.         2 KB           Address range outputs, max.         2 KB           Ecc support	UDP-broadcast-connections	-	
User data per ISO on TCP connection, max.  User data per native TCP connection, max.  User data per ad hoc TCP connection, max.  1460 Byte  User data per UDP connection, max.  1472 Byte  EtherCAT Master  Number of EtherCAT-slaves  Update time  500 μs512 ms  Address range inputs, max.  2 KB  Address range outputs, max.  2 KB  EoE support  FoE support  W  Distributed Clock support  Hotonnect Slaves  Management & diagnosis  Protocols  ICMP  LLC  Web based diagnosis  NCM diagnosis  Housing  Material  PPE  Mounting  Rail System 300  Mechanical data  Dimensions (WxHxD)  Weight  430 g  Environmental conditions  Operating temperature  0 °C to 60 °C	Ethernet open communication		
User data per native TCP connection, max.  User data per ad hoc TCP connection, max.  1460 Byte  User data per UDP connection, max.  1472 Byte  EtherCAT Master  Number of EtherCAT-slaves  Update time  500 μs 512 ms  Address range inputs, max.  2 KB  Address range outputs, max.  2 KB  EoE support  FoE support  Hotconnect Slaves  Management & diagnosis  Protocols  ICMP LLC  Web based diagnosis  Housing  Material  PPE  Mounting  Rail System 300  Mechanical data  Dimensions (WxHxD)  Weight  430 g  Environmental conditions  Operating temperature  0 °C to 60 °C	Number of connections, max.	8	
User data per ad hoc TCP connection, max.  User data per UDP connection, max.  1472 Byte  EtherCAT Master  Number of EtherCAT-slaves  128  Update time  500 µs 512 ms  Address range inputs, max.  2 KB  Address range outputs, max.  2 KB  EoE support  FoE support  Web based diagnosis  NCM diagnosis  Housing  Material  PPE  Mounting  Mechanical data  Dimensions (WxHxD)  Weight  Address range xield and side	User data per ISO on TCP connection, max.	8 KB	
User data per UDP connection, max.  EtherCAT Master  Number of EtherCAT-slaves  Update time  500 μs 512 ms  Address range inputs, max.  2 KB  Address range outputs, max.  2 KB  EoE support  FoE support  W  Distributed Clock support  Hotconnect Slaves  Management & diagnosis  Protocols  ICMP LLC  Web based diagnosis  -  NCM diagnosis  ACM diagnosis  PPE  Mounting  Material  PPE  Mounting  Rail System 300  Mechanical data  Dimensions (WxHxD)  B0 mm x 125 mm x 120 mm  Weight  A30 g  Environmental conditions  Operating temperature  0 °C to 60 °C	User data per native TCP connection, max.	8 KB	
EtherCAT Master  Number of EtherCAT-slaves  Update time  500 \( \mu \)s 512 ms  Address range inputs, max.  2 KB  Address range outputs, max.  2 KB  EoE support  FoE support  W  Hotconnect Slaves  Management & diagnosis  Protocols  ICMP LLC  Web based diagnosis  NCM diagnosis  -  NCM diagnosis  PPE  Mounting  Material  PPE  Mounting  Rail System 300  Mechanical data  Dimensions (WxHxD)  80 mm x 125 mm x 120 mm  Weight  A30 g  Environmental conditions  Operating temperature  0 °C to 60 °C	User data per ad hoc TCP connection, max.	1460 Byte	
Number of EtherCAT-slaves  Update time  500 \( \mu \) s 512 ms  Address range inputs, max.  2 KB  Address range outputs, max.  2 KB  EoE support  FoE support  Distributed Clock support  Hotconnect Slaves  Management & diagnosis  Protocols  ICMP LLC  Web based diagnosis  NCM diagnosis  Housing  Material  PPE  Mounting  Rail System 300  Mechanical data  Dimensions (WxHxD)  Bo mm x 125 mm x 120 mm  Weight  A30 g  Environmental conditions  Operating temperature  0 °C to 60 °C	User data per UDP connection, max.	1472 Byte	
Update time 500 \( \mu \)s 512 ms  Address range inputs, max. 2 KB  Address range outputs, max. 2 KB  EoE support 2 KB  FoE support 3 FoE support 4 FoE support 5 FoE support 5 FoE support 7 FoE support 8 FoE	EtherCAT Master		
Address range inputs, max.  Address range outputs, max.  2 KB  EoE support  FoE support  Distributed Clock support  Hotconnect Slaves  Management & diagnosis  Protocols  ICMP LLC  Web based diagnosis  -  NCM diagnosis  Housing  Material  PPE  Mounting  Rail System 300  Mechanical data  Dimensions (WxHxD)  Bo mm x 125 mm x 120 mm  Weight  Environmental conditions  Operating temperature  O °C to 60 °C	Number of EtherCAT-slaves	128	
Address range outputs, max.  EoE support  FoE support  Distributed Clock support  Hotconnect Slaves  Management & diagnosis  Protocols  ICMP LLC  Web based diagnosis  NCM diagnosis  Housing  Material  PPE  Mounting  Rail System 300  Mechanical data  Dimensions (WxHxD)  Weight  Bo mm x 125 mm x 120 mm  Weight  Environmental conditions  Operating temperature  O °C to 60 °C	Update time	500 μs 512 ms	
EoE support  FoE support  Distributed Clock support  Hotconnect Slaves  Management & diagnosis  Protocols  ICMP LLC  Web based diagnosis  NCM diagnosis  Housing  Material  PPE  Mounting  Rail System 300  Mechanical data  Dimensions (WxHxD)  Weight  Bo mm x 125 mm x 120 mm  Weight  A30 g  Environmental conditions  Operating temperature  O °C to 60 °C	Address range inputs, max.	2 KB	
FoE support  Distributed Clock support  Hotconnect Slaves  Management & diagnosis  Protocols  ICMP LLC  Web based diagnosis  NCM diagnosis  Housing  Material  PPE  Mounting  Rail System 300  Mechanical data  Dimensions (WxHxD)  80 mm x 125 mm x 120 mm  Weight  430 g  Environmental conditions  Operating temperature  0 °C to 60 °C	Address range outputs, max.	2 KB	
Distributed Clock support  Hotconnect Slaves  Management & diagnosis  Protocols  ICMP LLC  Web based diagnosis  NCM diagnosis  Housing  Material  PPE  Mounting  Material  PPE  Mounting  Rail System 300  Mechanical data  Dimensions (WxHxD)  80 mm x 125 mm x 120 mm  Weight  430 g  Environmental conditions  Operating temperature  0 °C to 60 °C	EoE support	✓	
Hotconnect Slaves  Management & diagnosis  Protocols  ICMP LLC  Web based diagnosis  NCM diagnosis  Housing  Material  PPE  Mounting  Rail System 300  Mechanical data  Dimensions (WxHxD)  80 mm x 125 mm x 120 mm  Weight  430 g  Environmental conditions  Operating temperature  0 °C to 60 °C	FoE support	✓	
Management & diagnosis   Protocols ICMP LLC   Web based diagnosis -   NCM diagnosis ✓   Housing PPE   Mounting Rail System 300   Mechanical data Dimensions (WxHxD) 80 mm x 125 mm x 120 mm   Weight 430 g   Environmental conditions   Operating temperature 0 °C to 60 °C	Distributed Clock support	✓	
Protocols  ICMP LLC  Web based diagnosis  - NCM diagnosis  Housing  Material  PPE  Mounting  Rail System 300  Mechanical data  Dimensions (WxHxD)  80 mm x 125 mm x 120 mm  Weight  430 g  Environmental conditions  Operating temperature  0 °C to 60 °C	Hotconnect Slaves	✓	
Web based diagnosis -   NCM diagnosis ✓   Housing PPE   Mounting Rail System 300   Mechanical data Dimensions (WxHxD) 80 mm x 125 mm x 120 mm   Weight 430 g   Environmental conditions   Operating temperature 0 °C to 60 °C	Management & diagnosis		
Housing  Material PPE  Mounting Rail System 300  Mechanical data  Dimensions (WxHxD) 80 mm x 125 mm x 120 mm  Weight 430 g  Environmental conditions  Operating temperature 0 °C to 60 °C	Protocols		
Housing  Material PPE  Mounting Rail System 300  Mechanical data  Dimensions (WxHxD) 80 mm x 125 mm x 120 mm  Weight 430 g  Environmental conditions  Operating temperature 0 °C to 60 °C	Web based diagnosis		
Material PPE  Mounting Rail System 300  Mechanical data  Dimensions (WxHxD) 80 mm x 125 mm x 120 mm  Weight 430 g  Environmental conditions  Operating temperature 0 °C to 60 °C	NCM diagnosis	✓	
Mounting Rail System 300  Mechanical data  Dimensions (WxHxD) 80 mm x 125 mm x 120 mm  Weight 430 g  Environmental conditions  Operating temperature 0 °C to 60 °C	Housing		
Mechanical data  Dimensions (WxHxD) 80 mm x 125 mm x 120 mm  Weight 430 g  Environmental conditions  Operating temperature 0 °C to 60 °C	Material	PPE	
Dimensions (WxHxD)  80 mm x 125 mm x 120 mm  Weight  430 g  Environmental conditions  Operating temperature  0 °C to 60 °C	Mounting	Rail System 300	
Weight 430 g  Environmental conditions  Operating temperature 0 °C to 60 °C	Mechanical data		
Environmental conditions  Operating temperature 0 °C to 60 °C	Dimensions (WxHxD)	80 mm x 125 mm x 120 mm	
Operating temperature 0 °C to 60 °C	Weight	430 g	
	Environmental conditions		
Storage temperature -25 °C to 70 °C	Operating temperature	0 °C to 60 °C	
	Storage temperature	-25 °C to 70 °C	



## Certifications

UL508 certification in preparation