

Data sheet

CPU 214SER RS485 (214-2BS33)

Technical data

Order no.	214-2BS33
Type	CPU 214SER RS485
General information	
Note	-
Features	Work memory [KB]: 96 Interface [RS485]: MPI Interface [RS485]: PtP: ASCII, STX/ETX, 3964(R), USS master, Modbus master/slave MMC card slot, up to 32 expansion modules Programmable with WinPLC7 and SIMATIC Manager
Technical data power supply	
Power supply (rated value)	DC 24 V
Power supply (permitted range)	DC 20.4...28.8 V
Reverse polarity protection	yes
Current consumption (no-load operation)	80 mA
Current consumption (rated value)	1.5 A
Inrush current	65 A
I^2t	0.75 A ² s
Max. current drain at backplane bus	3 A
Max. current drain load supply	-
Power loss	5 W
Load and working memory	
Load memory, integrated	144 KB
Load memory, maximum	144 KB
Work memory, integrated	96 KB
Work memory, maximal	96 KB
Memory divided in 50% program / 50% data	-
Memory card slot	MMC-Card with max. 512 MB
Hardware configuration	
Racks, max.	4
Modules per rack, max.	total max. 32
Number of integrated DP master	-
Number of DP master via CP	8
Operable function modules	32
Operable communication modules PtP	32
Operable communication modules LAN	-
Status information, alarms, diagnostics	
Status display	yes
Interrupts	no
Process alarm	no
Diagnostic interrupt	no
Diagnostic functions	no
Diagnostics information read-out	possible
Supply voltage display	green LED

Group error display	red SF LED
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Channel error display	none
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Command processing times

Bit instructions, min.	0.18 µs
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Word instruction, min.	0.78 µs
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Double integer arithmetic, min.	1.8 µs
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Floating-point arithmetic, min.	40 µs
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Timers/Counters and their retentive characteristics

Number of S7 counters	256
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S7 counter remanence	adjustable 0 up to 64
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S7 counter remanence adjustable	C0 .. C7
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Number of S7 times	256
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S7 times remanence	adjustable 0 up to 128
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S7 times remanence adjustable	not retentive
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Data range and retentive characteristic

Number of flags	8192 Bit
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Bit memories retentive characteristic adjustable	adjustable 0 up to 256
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Bit memories retentive characteristic preset	MB0 .. MB15
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Number of data blocks	2047
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Max. data blocks size	16 KB
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Number range DBs	1 ... 2047
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Max. local data size per execution level	1024 Byte
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Max. local data size per block	1024 Byte
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Blocks

Number of OBs	14
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Maximum OB size	16 KB
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Total number DBs, FBs, FCs	-
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Number of FBs	1024
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Maximum FB size	16 KB
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Number range FBs	0 ... 1023
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Number of FCs	1024
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Maximum FC size	16 KB
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Number range FCs	0 ... 1023
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Maximum nesting depth per priority class	8
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Maximum nesting depth additional within an error OB	1
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Time

Real-time clock buffered	yes
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Clock buffered period (min.)	30 d
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Type of buffering	Vanadium Rechargeable Lithium Battery
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Load time for 50% buffering period	20 h
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Load time for 100% buffering period	48 h
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Accuracy (max. deviation per day)	10 s
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Number of operating hours counter	8
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Clock synchronization	-
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Synchronization via MPI	-
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Synchronization via Ethernet (NTP)	-
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Address areas (I/O)

Input I/O address area	1024 Byte
Output I/O address area	1024 Byte
Process image adjustable	-
Input process image preset	128 Byte
Output process image preset	128 Byte
Input process image maximal	128 Byte
Output process image maximal	128 Byte
Digital inputs	8192
Digital outputs	8192
Digital inputs central	512
Digital outputs central	512
Integrated digital inputs	-
Integrated digital outputs	-
Analog inputs	512
Analog outputs	512
Analog inputs, central	128
Analog outputs, central	128
Integrated analog inputs	-
Integrated analog outputs	-

Communication functions

PG/OP channel	yes
Global data communication	yes
Number of GD circuits, max.	4
Size of GD packets, max.	22 Byte
S7 basic communication	yes
S7 basic communication, user data per job	76 Byte
S7 communication	yes
S7 communication as server	yes
S7 communication as client	-
S7 communication, user data per job	160 Byte
Number of connections, max.	16

Functionality Sub-D interfaces

Type	MP2I
Type of interface	RS485
Connector	Sub-D, 9-pin, female
Electrically isolated	-
MPI	yes
MP2I (MPI/RS232)	yes
Point-to-point interface	-

Type	COM
Type of interface	RS485
Connector	Sub-D, 9-pin, female
Electrically isolated	yes
MPI	-
MP2I (MPI/RS232)	-
Point-to-point interface	yes

Type	-
Type of interface	-
Connector	-
Electrically isolated	-
MPI	-
MP ² I (MPI/RS232)	-
Point-to-point interface	-

Functionality MPI

Number of connections, max.	16
PG/OP channel	yes
Routing	-
Global data communication	yes
S7 basic communication	yes
S7 communication	yes
S7 communication as server	yes
S7 communication as client	-
Transmission speed, min.	19.2 kbit/s
Transmission speed, max.	187.5 kbit/s

Point-to-point communication

PtP communication	yes
Interface isolated	yes
RS232 interface	-
RS422 interface	-
RS485 interface	yes
Connector	Sub-D, 9-pin, female
Transmission speed, min.	150 bit/s
Transmission speed, max.	115.2 kbit/s
Cable length, max.	500 m

Point-to-point protocol

ASCII protocol	yes
STX/ETX protocol	yes
3964(R) protocol	yes
RK512 protocol	-
USS master protocol	yes
Modbus master protocol	yes
Modbus slave protocol	yes
Special protocols	-

Datasizes

Input bytes	0
Output bytes	0
Parameter bytes	3
Diagnostic bytes	0

Housing

Material	PPE / PA 6.6
Mounting	Profile rail 35 mm

Mechanical data

Dimensions (WxHxD)	50.8 mm x 76 mm x 80 mm
Net weight	150 g

Weight including accessories	-
Gross weight	-
Environmental conditions	
Operating temperature	0 °C to 60 °C
Storage temperature	-25 °C to 70 °C
Certifications	
UL certification	yes
KC certification	-