

Data sheet
 VIPA CPU 215SER (215-2BS03)

Technical data

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|------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Order no. | 215-2BS03 |
| Type | VIPA CPU 215SER |
| General information | |
| Note | - |
| Features | Work memory [KB]: 128 Interface [RS485]: MPI Interface [2x RS485]: PtP: ASCII, STX/ETX, 3964(R) MMC card slot, up to 32 expansion modules, programmable with SPEED7 Studio 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) | 90 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 | 192 KB |
| Load memory, maximum | 192 KB |
| Work memory, integrated | 128 KB |
| Work memory, maximal | 128 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 |
| Channel error display | none |
| Command processing times | |
| Bit instructions, min. | 0.18 µs |
| Word instruction, min. | 0.78 µs |
| Double integer arithmetic, min. | 1.8 µs |
| Floating-point arithmetic, min. | 40 µs |
| Timers/Counters and their retentive characteristics | |
| Number of S7 counters | 256 |
| S7 counter remanence | adjustable 0 up to 64 |
| S7 counter remanence adjustable | C0 .. C7 |
| Number of S7 times | 256 |
| S7 times remanence | adjustable 0 up to 128 |
| S7 times remanence adjustable | not retentive |
| Data range and retentive characteristic | |
| Number of flags | 8192 Bit |
| Bit memories retentive characteristic adjustable | adjustable 0 up to 256 |
| Bit memories retentive characteristic preset | MB0 .. MB15 |
| Number of data blocks | 2047 |
| Max. data blocks size | 16 KB |
| Number range DBs | 1 ... 2047 |
| Max. local data size per execution level | 1024 Byte |
| Max. local data size per block | 1024 Byte |
| Blocks | |
| Number of OBs | 14 |
| Maximum OB size | 16 KB |
| Total number DBs, FBs, FCs | - |
| Number of FBs | 1024 |
| Maximum FB size | 16 KB |
| Number range FBs | 0 ... 1023 |
| Number of FCs | 1024 |
| Maximum FC size | 16 KB |
| Number range FCs | 0 ... 1023 |
| Maximum nesting depth per priority class | 8 |
| Maximum nesting depth additional within an error OB | 1 |
| Time | |
| Real-time clock buffered | yes |
| Clock buffered period (min.) | 30 d |
| 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 | - |
| Synchronization via Ethernet (NTP) | - |

Address areas (I/O)

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|------------------------------|-----------|
| 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 | COM1 |
| Type of interface | RS232 |
| Connector | Sub-D, 9-pin, male |
| Electrically isolated | - |
| MPI | - |
| MP2I (MPI/RS232) | - |
| Point-to-point interface | yes |

| | |
|-------------------------------------|--------------------|
| Type | COM2 |
| Type of interface | RS232 |
| Connector | Sub-D, 9-pin, male |
| Electrically isolated | - |
| MPI | - |
| MP ² (MPI/RS232) | - |
| Point-to-point interface | yes |
| 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 | - |
| RS232 interface | yes |
| RS422 interface | - |
| RS485 interface | - |
| Connector | Sub-D, 9-pin, male |
| Transmission speed, min. | 150 bit/s |
| Transmission speed, max. | 115.2 kbit/s |
| Cable length, max. | 15 m |
| Point-to-point protocol | |
| ASCII protocol | yes |
| STX/ETX protocol | yes |
| 3964(R) protocol | yes |
| RK512 protocol | yes |
| USS master protocol | - |
| Modbus master protocol | - |
| Modbus slave protocol | - |
| 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

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|------------------------------|-------------------------|
| Dimensions (WxHxD) | 50.8 mm x 76 mm x 80 mm |
| Net weight | 150 g |
| Weight including accessories | - |
| Gross weight | - |

Environmental conditions

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|-----------------------|-----------------|
| Operating temperature | 0 °C to 60 °C |
| Storage temperature | -25 °C to 70 °C |

Certifications

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|------------------|-----|
| UL certification | yes |
| KC certification | - |