VIPA 214-2BM02

01 PROFIBUS CPU / system role

Product function

VIPA 214-2BM02 controls a local System 200V application while exchanging process data with distributed PROFIBUS stations through its dedicated master interface.

Selected configuration

The CPU 214DPM configuration provides 48 KB work memory and 80 KB load memory. It is a distinct variant from the neighboring 215DPM and 216DPM processors, whose larger memory capacities must not be applied to this order number.

Functional path

System 200V application	CPU 214DPM	PROFIBUS master	Mapped slave I/O

CPU memory	48 KB work and 80 KB load
DP capacity	1,024 input and output bytes
Network	Linear PROFIBUS with active end termination

The PROFIBUS interface uses a 9-pin D-sub connection and a linear bus with active termination at both ends. Rates extend from 9.6 kbit/s to 12 Mbit/s; at 12 Mbit/s a segment without a repeater is limited to 100 m.

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02 Technical operating envelope

Work memory	48 KB
Load memory	80 KB
Supply voltage	24 V DC; 20.4–28.8 V permitted
Maximum current	1.5 A
Maximum power dissipation	5 W
PROFIBUS connector	9-pin D-sub

PROFIBUS rate	9.6 kbit/s to 12 Mbit/s
Segment length at 12 Mbit/s	100 m without repeater
Stations per segment	32 maximum without repeater
DP slaves	125 maximum
DP input/output capacity	1,024 bytes each direction
Fieldbus potential separation	≥500 V AC

CPU 214DPM order 214-2BM02 uses 48 KB work and 80 KB load memory. Shared CPU 21xDPM bus ratings apply only to the stated topology and transfer rate.

Operating interpretation

The 100 m cable value applies specifically to 12 Mbit/s without a repeater; it is not a universal distance for all PROFIBUS arrangements.

Configuration boundary

Retain CPU 214DPM memory limits, segment topology, slave data allocation and the approved project during replacement.

What termination does the bus connected to 214-2BM02 require?

The linear PROFIBUS bus requires active termination at both ends. Intermediate nodes should follow the installed termination plan.

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03 System integration and applications

System 200V control

Execute the CPU 214 application with its local modular I/O arrangement.

Distributed DP master

Exchange mapped data with the configured PROFIBUS slave network.

Segmented installations

Use repeaters and termination where required by station count and cable length.

Legacy I/O restoration

Restore an existing DP map while preserving its rate and directional data limits.

System and supply context

VIPA 214-2BM02 operates within the following defined system context. Check 214-2BM02 and the CPU 214DPM memory configuration.

Application boundary

The applications below describe its technical role. Select associated hardware and configuration for the actual installation.

Does the 125-slave limit of 214-2BM02 permit 125 stations on one unrepeated segment?

No. A segment without a repeater supports at most 32 stations. The total master capacity and segment limit must both be respected.

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04 Engineering selection decisions

How does 214-2BM02 differ from the larger CPU 215DPM and 216DPM variants?

This CPU 214DPM has 48 KB work memory and 80 KB load memory. The larger variants' memory capacities do not apply.

How far can the PROFIBUS segment of 214-2BM02 extend at 12 Mbit/s without a repeater?

The specified maximum is 100 m. A different rate or repeater arrangement requires its own supported distance assessment.

Is the DP connector of 214-2BM02 an Ethernet connection?

No. It is a 9-pin D-sub PROFIBUS interface and must use the correct bus wiring and configuration.

What supply range is permitted for 214-2BM02?

The nominal 24 V DC input permits 20.4–28.8 V. Check voltage at the CPU while accounting for the installed system load.

Check master and slave states	Observe PROFIBUS diagnostics and confirm data exchange with every expected slave. Investigate a missing station before enabling its dependent process outputs.
Save the segment baseline	Retain rate, cable length, repeater layout, termination, station count and I/O allocation. These values define the working DP installation for future service.

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05 Configuration boundary and references

Lifecycle and support

The current manufacturing and factory-support phase of 214-2BM02 is unconfirmed. Apter Power availability is assessed separately from manufacturer lifecycle status.

Replacement assessment

Retain CPU 214DPM memory limits, segment topology, slave data allocation and the approved project during replacement.

Document roles

Use the original manufacturer excerpt for its preserved technical tables and drawings. This product brief explains selection and system context. The separate installation guide covers preparation, connection, tests and handover; use it together with the applicable manufacturer instructions.

Technical basis

VIPA System 200V CPU Manual HB97E, revision 12/02.

Related product navigation

- Siemens 6ES7214-1BG40-0XB0
- Siemens 6ES7212-1AE40-0XB0

These are related references, not confirmed substitutes or an automatically approved assembly.

Product enquiries