APTER POWER

PRODUCT TECHNICAL REFERENCE

CNT204

Four-Channel Counter Module

Bachmann CNT204 is a four-channel counter module for the M1 automation system. It accepts four single-line pulse-generator inputs, while two channels can be configured for incremental encoders with synchronized measurement functions.

IDENTITY	VERIFIED VALUE
Manufacturer	Bachmann
Complete model	CNT204
Product role	Four-Channel Counter Module
System family	M1 Automation System
Country of origin	Austria

DOCUMENT SCOPE

Exact identity, verified technical data, installation checks, applications, precautions and controlled acceptance records for this model.

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WHATSAPP / PHONE +86 180 3023 5313

EMAIL sales13@apterpower.com

WEBSITE www.apterpower.com

Technical Specifications

PARAMETER	VERIFIED VALUE
Model family	CNT204
Counter inputs	Four single-line pulse-generator inputs
Encoder capability	Two channels configurable as incremental encoder inputs
Channel indication	Green LED per counter/initiator input
Encoder power	Available at the module terminal block
Synchronization	Inputs can be synchronized
Period measurement resolution	42 ns
Differential phase measurement	C1/C3 or C2/C4 at 42 ns
Supply monitoring	All supply voltages monitored
Country of origin	Austria

System Role and Core Functions

Bachmann CNT204 is a four-channel counter module for the M1 automation system. It accepts four single-line pulse-generator inputs, while two channels can be configured for incremental encoders with synchronized measurement functions.

FUNCTION 1

Four independent counter inputs

FUNCTION 2

Two incremental-encoder channels

FUNCTION 3

42 ns period-measurement resolution

FUNCTION 4

Input synchronization and supply monitoring

Common Applications

APPLICATION	ENGINEERING CONTEXT
Pulse counting	Counts four documented single-line pulse-generator inputs in an M1 station.
Incremental encoders	Uses two channels as an approved incremental-encoder interface.
Period and speed measurement	Applies the documented 42 ns measurement resolution to timing applications.
Phase comparison	Measures differential phase on the documented C1/C3 or C2/C4 channel pairs.

Engineering Precautions

- Verify CNT204 and the complete hardware variant before work.
- Record every channel's counter, initiator or encoder assignment.
- Confirm sensor supply and terminal-block wiring.
- Remove module and field power before insertion or wiring changes.
- Maintain shield termination and separation from noisy conductors.
- Do not exceed the documented input and encoder limits.
- Check supply-monitoring and channel LEDs after startup.
- Prove count, direction, period and synchronization functions before release.

MODEL-SPECIFIC BOUNDARY

Confirm the exact CNT204 variant, terminal assignment, sensor supply and counter or encoder mode for every channel. Remove module and field power, preserve shielding and run controlled count, period and direction tests before release.

Model-Specific FAQ

QUESTION	ANSWER
What is Bachmann CNT204?	It is a four-channel counter module for the Bachmann M1 automation system.
How many single-line counter inputs are provided?	The official data sheet specifies four inputs for single-line pulse generators.
Can CNT204 read incremental encoders?	Yes. Two input channels can be configured for incremental encoders.
Is encoder power available from the module?	The official data sheet states that encoder power is available directly from the module terminal block.
Can the inputs be synchronized?	Yes. The CNT204 family supports synchronized inputs.
What period-measurement resolution is documented?	The data sheet specifies 42 ns resolution.
Which channel pairs support differential phase measurement?	The documented pairs are C1/C3 or C2/C4.
What confirms successful commissioning?	Supply monitoring is normal and controlled counter, direction, period and synchronization tests pass for the configured channels.

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