Westinghouse 1C31189G01

Installation & Commissioning Guide

Westinghouse 1C31189G01 serves as a speed detector electronics module in the Ovation I/O subsystem. It interfaces tachometer frequency input with 1C31192G01 speed-detector personality module.

PRODUCT ROLE AND VERIFIED FEATURES

Feature 1

Provides one speed sensor with Ovation point outputs for the documented speed detector electronics module function.

Feature 2

Handles tachometer frequency input through the specified Ovation I/O subsystem.

Feature 3

Works with 1C31192G01 speed-detector personality module.

Feature 4

The module provides separate fast overspeed and high-resolution regulation values from the same sensor signal.

VERIFIED DATA SNAPSHOT

Sensor input	One sinusoidal or pulse-train tachometer
Low-resolution output	16-bit; 200 Hz to 51,200 Hz
Low-resolution update	5 ms
High-resolution output	32-bit; 0.72 Hz to 65,535 Hz

SYSTEM RELATIONSHIP

Tachometer → **Personality module** → **Speed electronics** → **Ovation controller**

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Pre-installation readiness

READINESS GATE

Identity

Compare the complete marking with the approved work order and installed record.

System match

Confirm the receiving channel, mating components and controlled configuration.

Physical condition

Inspect mounting surfaces, connectors, terminals, cable and support hardware.

Work controls

Apply authorized isolation, bypass, access and restoration procedures.

TECHNICAL PROFILE FOR THE WORK

Sensor input

One sinusoidal or pulse-train tachometer

Low-resolution output

16-bit; 200 Hz to 51,200 Hz

Low-resolution update

5 ms

High-resolution output

32-bit; 0.72 Hz to 65,535 Hz

Personality module

1C31192G01

IMPORTANT NOTICE

Resolve every unmatched interface, configuration or receiving-system condition before removal or installation.

SOURCE AND WORK CONTROLS

Manufacturer source	Emerson Process Management, Ovation I/O Reference Manual R3-1150 Rev 3, Section 24, February 2003.
Evidence boundary	Technical statements are limited to the identified product or applicable manufacturer family.
Selection control	Use the complete ordering string and verify the installed system before purchase or installation.

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Installation sequence

CONTROLLED WORK STEPS

01	Match the complete 1C31189G01 marking to the work order and installed position before removal.
02	Confirm 1C31192G01 speed-detector personality module before making or breaking any field connection.
03	Keep the assigned tachometer frequency input within the documented subsystem and range.
04	Record terminal designations, polarity, common and shield treatment before disconnecting conductors.
05	Inspect module seating, connector keying, terminal condition and strain relief before power is restored.
06	Restore the controlled channel configuration, range selection and alarm or timeout behavior after installation.
07	Check local indicators and controller diagnostics for internal, communication or channel faults during commissioning.
08	Prove the intended response across one speed sensor with Ovation point outputs and record the acceptance result before release.

CONNECTION RECORD

As found	Photograph and label every connection and installed orientation before removal.
Mechanical	Record mounting position, support, clearance and connector engagement.
Electrical	Record polarity, common, shield, channel assignment and cable route.
Configuration	Preserve approved settings, scaling, alarm logic and acceptance limits.
As left	Record the final physical condition and any controlled deviation.

Tachometer → **Personality module** → **Speed electronics** → **Ovation controller**

WORK HOLD POINTS

Before removal	Identity, position, wiring, orientation and controlled settings recorded.
Before connection	Mating interfaces, condition and routing reviewed.
Before power-up	Mechanical work, wiring, shielding and configuration independently checked.
Before release	Static value, dynamic response and protection behavior accepted.

Commissioning and functional proof

COMMISSIONING SEQUENCE

Initial state

Observe status at power-up and check for unexpected fault or alarm indication.

Static value

Verify the expected bias, gap, loop, contact or channel value for the application.

Dynamic response

Apply the approved machine or test stimulus and confirm response and scaling.

Protection path

Verify the configured alarm, relay, data or receiving-system behavior.

APPLICATION-SPECIFIC EVIDENCE

Installed-base maintenance

Restores the documented speed detector electronics module position without changing the approved system architecture.

Loop or channel service

Supports verification of tachometer frequency input at the assigned control-system channel.

Planned replacement

Provides an exact-identity replacement path when 1C31192G01 speed-detector personality module and the field interface have been confirmed.

Commissioning support

Allows the responsible engineer to prove wiring, configuration, status and response for one speed sensor with Ovation point outputs.

ACCEPTANCE RECORD

Identity	Complete marking and final installed position recorded.
Physical inspection	Mounting, connectors, terminals and routing checked.
Channel status	Expected status and configured measurement confirmed.
Functional test	Required output or protection response demonstrated.
Restoration	Bypasses removed and operating state approved.

COMMISSIONING QUESTIONS

What function does Westinghouse 1C31189G01 perform?	It measures tachometer frequency for Ovation overspeed detection and speed-regulation calculations.
How many channels are associated with Westinghouse 1C31189G01?	The documented configuration provides one speed sensor with Ovation point outputs.

Release record and technical references

CLOSEOUT QUESTIONS

Which signal path is used by Westinghouse 1C31189G01?	It is used for tachometer frequency input within the specified subsystem.
Which companion hardware must be checked for Westinghouse 1C31189G01?	Confirm 1C31192G01 speed-detector personality module and the project-specific base or terminal arrangement.
What technical values should be verified before installing Westinghouse 1C31189G01?	Verify One sinusoidal or pulse-train tachometer; also confirm 16-bit; 200 hz to 51,200 hz and every applicable range or wiring selection.
What connection details should be recorded for Westinghouse 1C31189G01?	Record terminal identifiers, polarity, common, shield termination, connector keying and the assigned channel before disconnection.
Which diagnostics should be reviewed when commissioning Westinghouse 1C31189G01?	Review the applicable power, communication, internal-fault and channel-status indications, then compare the controller status with the expected field condition.
Can a nearby ordering code replace Westinghouse 1C31189G01 without an engineering check?	No. Match the complete identifier, companion hardware, signal range, wiring and controlled project configuration before substitution.

RELATED MODELS FOR INSTALLATION PLANNING

Westinghouse 5X00419G01	Installation-planning reference. Review the complete ordering string before selection.
Foxboro AD916AE FBM203	Installation-planning reference. Compare the required interface and system position.
Westinghouse 1C31116G01	Installation-planning reference. Confirm the execution independently for the intended task.

MANUFACTURER SOURCE AND FINAL CONTROL

Manufacturer source	Emerson Process Management, Ovation I/O Reference Manual R3-1150 Rev 3, Section 24, February 2003.
Evidence boundary	Technical statements are limited to the identified product or applicable manufacturer family.
Selection control	Use the complete ordering string and verify the installed system before purchase or installation.

IMPORTANT NOTICE Release the equipment only after the responsible site authority accepts the recorded result.

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