# WESTINGHOUSE 1C31189G03

## Enhanced Speed Detector Module

WESTINGHOUSE 1C31189G03 is an Ovation enhanced speed-detector electronics module for high-resolution frequency, speed, acceleration and overspeed processing.

| 01 | 02 | 03 | 04 |
|---|---|---|---|
| 32-bit high-resolution speed | 0.089-30000 Hz measurement range | Acceleration and overspeed processing | 1C31192G01 personality pairing |

## System position

| | | | |
|---|---|---|---|
| Speed sensor | 1C31192G01 personality module | 1C31189G03 processing | Ovation speed and trip logic |

## Product and release scope

| Exact identity | Engineering use | Verification boundary | Acceptance |
|---|---|---|---|
| WESTINGHOUSE 1C31189G03 is retained without shortening its suffix. | WESTINGHOUSE 1C31189G03 is used where Ovation must calculate and supervise rotating-equipment speed. Sensor type, pulses per revolution, direction, alarm points and relay logic must be reconciled before the module is returned to service. | Only exact-model or explicitly applicable family facts are populated. | Connections, configuration, function and safe response require recorded proof. |

02 / CAPABILITY AND INTERFACE MAP

# Verified technical matrix

| | |
|---|---|
| Product class | Enhanced speed-detector electronics module |
| Platform | Ovation |
| Resolution | 32-bit high-resolution speed |
| Frequency range | 0.089 Hz to 30000 Hz |

| | |
|---|---|
| Acceleration range | ±32767 RPM/min |
| Companion personality module | 1C31192G01 |
| Subsystem capacity | Six speed channels |
| Software applicability | Ovation 3.3.1 and above |

## Interface architecture

| Sensor boundary | Personality interface | Processing boundary | Controller boundary |
|---|---|---|---|
| Pulse or frequency signal from the installed speed pickup | 1C31192G01 field conditioning and termination | Speed, acceleration, open-wire and overspeed calculations | Point values, status and trip/relay logic in Ovation |

## Control path

| | | | |
|---|---|---|---|
| Speed sensor | 1C31192G01 personality module | 1C31189G03 processing | Ovation speed and trip logic |

## Technical service focus

| H1 | H2 | H3 | H4 |
|---|---|---|---|
| 32-bit high-resolution speed | 0.089-30000 Hz measurement range | Acceleration and overspeed processing | 1C31192G01 personality pairing |

# Use cases with controlled scope

### Turbine speed monitoring

Measures rotating speed and acceleration for Ovation logic.

### Overspeed supervision

Provides configured overspeed and latched-overspeed point types.

### Sensor-circuit diagnostics

Supports open-wire and input-status checks.

### Legacy speed-channel replacement

Restores an installed G03 enhanced speed-detector position.

## INTEGRATION CHECKPOINTS

### Identity

WESTINGHOUSE 1C31189G03 remains complete in purchasing, drawings and labels.

### Host system

Installed position and surrounding hardware are verified before exchange.

### Configuration

Project data, jumpers, wiring and settings are recorded as applicable.

### Acceptance

Functional and safe-state evidence is captured before release.

## Installation decision points

### 1

Place the machine and related trip logic in the approved safe condition before handling WESTINGHOUSE 1C31189G03.

### 2

Confirm the complete G03 identity and 1C31192G01 personality-module pairing.

### 3

Record pulses per revolution, scale, direction, alarm points and relay logic before removal.

### 4

Verify sensor gap, cable shield, polarity and field continuity before installing the replacement.

## System relationship

| | | | |
|---|---|---|---|
| Speed sensor | 1C31192G01 personality module | 1C31189G03 processing | Ovation speed and trip logic |

# FAQ decision matrix

| Engineering decision | Controlled response |
| --- | --- |
| What does WESTINGHOUSE 1C31189G03 measure? | It processes frequency-derived speed and acceleration for enhanced Ovation speed-detector points. |
| Which frequency range is documented for WESTINGHOUSE 1C31189G03? | The high-resolution speed range is 0.089 Hz to 30000 Hz. |
| Which acceleration range applies to WESTINGHOUSE 1C31189G03? | The documented acceleration range is ±32767 RPM per minute. |
| Which personality module pairs with WESTINGHOUSE 1C31189G03? | The documented companion is 1C31192G01. |

## Eight release precautions

| | | | |
| --- | --- | --- | --- |
| **1** Place the machine and related trip logic in the approved safe condition before handling WESTINGHOUSE 1C31189G03. | **2** Confirm the complete G03 identity and 1C31192G01 personality-module pairing. | **3** Record pulses per revolution, scale, direction, alarm points and relay logic before removal. | **4** Verify sensor gap, cable shield, polarity and field continuity before installing the replacement. |
| **5** Do not copy settings from a nearby speed channel without an approved channel record. | **6** Test open-wire behavior separately from normal speed measurement. | **7** Prove speed and acceleration with a traceable frequency source across representative points. | **8** Complete overspeed and latched-relay acceptance only under the plant-approved protection test procedure. |

# Product verification and contact

## Evidence applicability

| Evidence record | Applicable scope |
| --- | --- |
| Ovation Speed Detector Reference Manual OW360_R1152, enhanced module type G03 | Supports only the exact-model or explicitly applicable family facts used in this document. |

## Related Apter Power references

| Related Apter Power references | Scope note |
| --- | --- |
| WESTINGHOUSE 1P00028G01 | Portfolio reference only; verify compatibility independently. |
| WESTINGHOUSE 5X00106G01 | Portfolio reference only; verify compatibility independently. |
| WESTINGHOUSE 5X00119G01 | Portfolio reference only; verify compatibility independently. |

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| | Apter Power technical support sales13@apterpower.com +86 180 3023 5313 www.apterpower.com | Model record WESTINGHOUSE 1C31189G03 Enhanced Speed Detector Module Verify the complete nameplate before installation. |