Woodward 8237-1246

01 Function and selected configuration

Product function

Woodward 8237-1246 separates speed protection into three independent modules and combines their trip decisions through voted outputs. The HV/LV power arrangement provides two supply inputs per module without internal load sharing.

Selected configuration

The 8237-1246 configuration uses bulkhead mounting, one high-voltage and one low-voltage supply input per module, and voted relay outputs. Each of the three independent modules evaluates its speed input. The two output channels act simultaneously through the voted relay arrangement rather than behaving as three separately assigned process-control outputs.

Functional path

Independent speed probes

Three protection modules

2-out-of-3 voting

Dual trip channels

Protection architecture	Three modules with two-out-of-three voting
Power configuration	One HV and one LV input per module
Trip outputs	Two simultaneous Form C, dual-SPDT channels

Each module accepts 90-264 Vac at 47-63 Hz or 100-150 Vdc at the HV input, and 18-32 Vdc at the LV input. The module rating is 30 W. Either input can sustain operation, but the supplies do not share the load internally. Separate supply protection and the correct protective-earth connections form part of the installation.

8237-1246 / Technical operating envelope

02 Technical operating envelope

Voting configuration	2-out-of-3; three independent modules
HV input per module	90-264 Vac, 47-63 Hz; or 100-150 Vdc
LV input per module	18-32 Vdc; nominal 24 Vdc
Module power rating	30 W per module
Passive speed input	100 Hz-32 kHz; 1-35 Vrms
Active speed input	0.5 Hz-25 kHz; 24 V probe

Speed accuracy	±0.04% of current speed at -20 to +60 °C
Voted trip outputs	2 simultaneous channels; Form C, dual SPDT
Trip contact rating	8 A at 220 Vac or 8 A at 24 Vdc
Maximum switching power	2000 VA / 192 W
Analog output per module	Isolated 4-20 mA; 12-bit; maximum load 500 ohms at 25 mA
Operating ambient	-20 to +60 °C

The table uses the HV/LV and voted-relay configuration. Passive and active input limits are different; power ratings are per module, and contact current does not override switching-voltage or power limits.

Input independence

Each speed input is intended for its own probe. The active and passive modes have different frequency and amplitude requirements, so the selected sensor and configured mode must be reviewed together.

Output limits

Current rating, maximum switching voltage and switching power apply together. Do not multiply the maximum current by the maximum voltage and assume that the resulting load is permitted.

8237-1246 / System integration and applications

03 System integration and applications

Turbine overspeed trip

Use three independent sensing and decision paths with the approved shutdown circuit.

Compressor protection

Monitor the shaft speed with probe type and tooth-count scaling configured for the machine.

Protection-system renewal

Retain voted-relay behavior and HV/LV power architecture when evaluating replacement hardware.

Scheduled proof testing

Verify each module and the final voted trip path under the site-approved protection test procedure.

System and supply context

8237-1246 provides overspeed protection in the bulkhead-mount HV/LV voted-relay configuration. Speed probes, field wiring and shutdown elements are separate components unless itemized.

Application boundary

Suitable integration depends on the machine protection design, independent speed inputs and validated trip path. A protection device must not be substituted for an ordinary speed controller.

Can Woodward 8237-1246 operate from its LV input alone?

Each module can operate from either supply input, but both sources are recommended for availability. The LV range is 18-32 Vdc and missing one source can cause a supply-fault alarm.

8237-1246 / Engineering selection decisions

04 Engineering selection decisions

Which trip architecture is built into Woodward 8237-1246?

It is the voted-relay model, using three independent modules and two-out-of-three voting with two output channels actuated simultaneously.

Do the HV and LV supplies in Woodward 8237-1246 share their load?

No. Both may be connected, but the internal supplies do not load-share. Size and protect each source for its applicable requirements.

May one probe feed all three Woodward 8237-1246 modules?

No. Each speed input should use its own probe. Sharing compromises open-wire detection in passive mode and can affect sensitivity and accuracy.

What load limits apply to Woodward 8237-1246 voted contacts?

The contact rating is 8 A at 220 Vac or 24 Vdc, with maximum switching voltage 220 Vac or 150 Vdc and maximum switching power 2000 VA or 192 W. All applicable limits must be satisfied.

Match sensing mode	Select active or passive probe mode and verify amplitude, frequency and scaling.
Check contact load	Meet contact current, switching voltage and switching power limits together.

8237-1246 / Configuration boundary and references

05 Configuration boundary and references

Lifecycle and support

Legacy non-preferred model. The current manufacturing and repair phase for the individual hardware revision requires confirmation; do not treat historical support terms as a new-unit availability guarantee.

Replacement assessment

Assess the applicable ProTech-GII replacement or upgrade against the complete hardware revision, HV/LV supplies and voted trip circuit. A different relay configuration is not a like-for-like replacement.

Document roles

Use the original manufacturer excerpt for its preserved technical tables and drawings. This product brief explains configuration and selection boundaries. The independent installation guide organizes preparation, connection, testing and handover. It does not replace the applicable manufacturer installation instructions.

Technical basis

Woodward ProTech-GII Overspeed Protection Device Manual 26545, Revision G.

Related product navigation

- Woodward 9907-018
- Woodward 9907-031
- Woodward 9907-252

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

Product enquiries