

8237-1246

ProTech-GII triple-modular-redundant overspeed protection device

Three independent speed inputs, voted trip relays and analog speed outputs

PRODUCT SNAPSHOT

BRAND

Woodward

FAMILY

Woodward ProTech-GII overspeed protection

PART

8237-1246

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PRODUCT OVERVIEW

Three independent speed inputs, voted trip relays and analog speed outputs

1

Uses three independent speed-sensing modules

2

Applies two-out-of-three trip voting

3

Provides twelve-millisecond trip response

4

Supports IEC 61508 SIL 3 protection

SYSTEM COMPONENTS

three MPU or proximity speed sensors

independent trip relay circuits

machine shutdown system

ProTech-GII configuration and test interface

TECHNICAL NOTE

Verify the exact 8237-1246 execution, supply rating, sensor type, trip setpoints, relay wiring and voted-test procedure; test each module and the final shutdown path before returning the machine to service.

TECHNICAL DATA

PARAMETER	VALUE
Architecture	Triple modular redundant
Voting logic	2-out-of-3
Response time	12 ms
Speed range	0.5 to 32,000 rpm
Speed inputs	3 MPU/PROX inputs; one per module

PARAMETER	VALUE
Alarm relays	3
Analog speed outputs	3
Functional safety	IEC 61508 SIL 3
Mounting	Bulkhead

ENGINEERING NOTE

Verify the exact 8237-1246 execution, supply rating, sensor type, trip setpoints, relay wiring and voted-test procedure; test each module and the final shutdown path before returning the machine to service.

RELATED PRODUCTS ON APTER POWER

MODEL	SYSTEM ROLE	APTER POWER PAGE
Honeywell 51304511-200	Related industrial automation product	View Honeywell 51304511-200 page
Honeywell 51196653-100	Related industrial automation product	View Honeywell 51196653-100 page
Honeywell 51305072-100	Related industrial automation product	View Honeywell 51305072-100 page
Honeywell TC-OAV081	Related industrial automation product	View Honeywell TC-OAV081 page
GE 151X1202YE03SA04-IS200STAIH2AD	Related industrial automation product	View GE 151X1202YE03SA04-IS200STAIH2AD page
Honeywell T921D-1008	Related industrial automation product	View Honeywell T921D-1008 page
Honeywell TK-PRS021	Related industrial automation product	View Honeywell TK-PRS021 page
Honeywell TC-IXR061	Related industrial automation product	View Honeywell TC-IXR061 page

APPLICATIONS & PRECAUTIONS

COMMON APPLICATIONS

Steam-turbine overspeed protection

Uses three independent speed-sensing modules

Gas-turbine trip voting

Applies two-out-of-three trip voting

Hydro-turbine speed protection

Provides twelve-millisecond trip response

Critical engine overspeed shutdown

Supports IEC 61508 SIL 3 protection

PRODUCT PRECAUTIONS

- 1 Verify the complete 8237-1246 marking and its assigned Woodward ProTech-GII overspeed protection position before work.
- 2 Place the connected steam-turbine overspeed protection process in the approved maintenance state.
- 3 Isolate applicable power and three independent speed inputs, voted trip relays and analog speed outputs field energy before disconnecting conductors.
- 4 Record connector, conductor, address, firmware and software identities before removal.
- 5 Use ESD controls and protect keyed interfaces, exposed contacts and electronic assemblies.
- 6 Confirm the installed three MPU or proximity speed sensors and independent trip relay circuits against the approved project.
- 7 Restore power in a controlled sequence and review device, network and host diagnostics.
- 8 Prove the intended gas-turbine trip voting function and retain the final test result.

ENGINEER FAQ

Q1 Does 8237-1246 match three MPU or proximity speed sensors in a Steam-turbine overspeed protection installation?

Verify the complete 8237-1246 marking, the documented Woodward ProTech-GII overspeed protection position and the installed three MPU or proximity speed sensors before fitting the assembly.

Q3 Which Woodward ProTech-GII overspeed protection records should be captured before removing 8237-1246?

Record the as-found wiring, installed position, active configuration and diagnostic state associated with 8237-1246 before disconnection.

Q5 Which independent trip relay circuits condition should be checked when 8237-1246 reports an abnormal state?

Check the independent trip relay circuits supply, seating and connection first, then compare channel diagnostics with the recorded 8237-1246 baseline.

Q7 What maintenance evidence is required after 8237-1246 is used for Hydro-turbine speed protection?

Retain the nameplate record, corrective action, final diagnostics and a controlled hydro-turbine speed protection functional-test result for 8237-1246.

Q2 How should 8237-1246 be wired when it must uses three independent speed-sensing modules?

Isolate the circuit, identify every terminal and reproduce the approved polarity, shield and channel assignment for 8237-1246; then continuity-test the affected path.

Q4 What controlled test confirms that 8237-1246 can applies two-out-of-three trip voting?

Apply the approved field or simulated stimulus, observe the Woodward ProTech-GII overspeed protection indication and confirm the intended response without bypassing the normal interlocks.

Q6 Can 8237-1246 be moved directly into Gas-turbine trip voting without validating ProTech-GII configuration and test interface?

No. Confirm the ProTech-GII configuration and test interface, revision, connection scheme and Woodward ProTech-GII overspeed protection configuration before transferring 8237-1246 to that duty.

Q8 How should 8237-1246 be returned to service in Critical engine overspeed shutdown?

Restore power under control, verify provides twelve-millisecond trip response, exercise the intended signal path and release 8237-1246 only after the Woodward ProTech-GII overspeed protection remains in its approved operating state.

SOURCE Woodward ProTech-GII Overspeed Protection Device Manual | Manual 26545, revision G

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