

INDUSTRIAL AUTOMATION PRODUCT

8237-1246

ProTech-GII triple-modular-redundant overspeed protection device

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

IDENTITY	VERIFIED VALUE
Manufacturer	Woodward
System family	Woodward ProTech-GII overspeed protection
Part number	8237-1246
Country	USA
HS code	8537101190

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Technical Specifications

Technical values below are limited to the named Woodward product record.

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

ENGINEERING DATA SUMMARY

DATA GROUP	VERIFIED ASSIGNMENT
Installed host / carrier	three MPU or proximity speed sensors
Companion hardware	independent trip relay circuits
Field connection	machine shutdown system
Primary system function	Uses three independent speed-sensing modules
Controlled acceptance duty	Steam-turbine overspeed protection

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System Role and Architecture

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

FUNCTION 1

Uses three independent speed-sensing modules

FUNCTION 2

Applies two-out-of-three trip voting

FUNCTION 3

Provides twelve-millisecond trip response

FUNCTION 4

Supports IEC 61508 SIL 3 protection

Matched system components

- three MPU or proximity speed sensors
- independent trip relay circuits
- machine shutdown system
- ProTech-GII configuration and test interface

SYSTEM INTEGRATION RECORD

INTEGRATION ITEM	DOCUMENTED ROLE
Installed host / carrier	three MPU or proximity speed sensors
Companion hardware	independent trip relay circuits
Field connection	machine shutdown system
Primary system function	Uses three independent speed-sensing modules
Controlled acceptance duty	Steam-turbine overspeed protection

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Applications and Engineering Context

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

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.

MODEL-SPECIFIC ACCEPTANCE EVIDENCE

CHECK	ACCEPTANCE CONDITION
Identity	8237-1246 / 8237-1246 recorded
Physical interface	three MPU or proximity speed sensors
Companion check	independent trip relay circuits
Functional proof	Uses three independent speed-sensing modules
Application test	Steam-turbine overspeed protection

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Engineering 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.

RELATED PRODUCTS ON APTER POWER

MODEL	SYSTEM ROLE	APTER POWER PAGE
Bently Nevada 330103-00-16-05-11-05	Related industrial automation product	View Bently Nevada 330103-00-16-05-11-05 page
Bently Nevada 330103-00-16-05-02-05	Related industrial automation product	View Bently Nevada 330103-00-16-05-02-05 page
Bently Nevada 330101-02-60-05-01-05	Related industrial automation product	View Bently Nevada 330101-02-60-05-01-05 page
Bently Nevada 21000-28-05-00-030-04-02	Related industrial automation product	View Bently Nevada 21000-28-05-00-030-04-02 page
Bently Nevada 330101-00-18-10-02-05	Related industrial automation product	View Bently Nevada 330101-00-18-10-02-05 page
Phoenix Contact QUINT-PS-3AC-24DC-40-286 6802	Related industrial automation product	View Phoenix Contact QUINT-PS-3AC-24DC-40-2866802 page
Bently Nevada 146054-34-20-02-05	Related industrial automation product	View Bently Nevada 146054-34-20-02-05 page
Allen-Bradley 700-HC14Z24	Related industrial automation product	View Allen-Bradley 700-HC14Z24 page

MANUFACTURER SOURCE RECORD

Woodward ProTech-GII Overspeed Protection Device Manual

Manual 26545, revision G

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