General Electric IS215VPROH1BE

Complete Product Information

Product role

This Mark VI emergency protection execution belongs to the independent VPRO turbine-protection path. H1B supports a second TREG connection at J4, a significant selection difference from the lower-power H2B arrangement that omits that second trip-board path.

Published product summary

Summary field	Published information
Product type	Emergency Turbine Protection Assembly
Manufacturer part number	IS215VPROH1BE
Shipping	Swift global dispatch
Condition	New, original product
Shipping size (est.)	10cm x 18.6cm x 26.1cm
Country of Origin	USA

Native product information

Product field	Published information
Manufacturer	General Electric
Product Category	Gas Turbine Control
Spare Part Number	IS215VPROH1BE
Weight	2.12 kg
Tariff Code	8537101190

Overview

General Electric IS215VPROH1BE belongs to the independent emergency-protection path, where speed voting, trip-board feedback and separately supplied solenoids must be tested as a complete protection function.

H1B selection	J4 supports the second TREG path omitted from H2B.
Protection separation	VPRO processing and power remain independent of normal VME communication.
Trip proof	Command, relay feedback and solenoid voltage are distinct observations.

Selection and adjacent choices

IS215VPROH1BE belongs to the Mark VI emergency turbine-protection arrangement. The protection module uses independent VPRO channels with their own processor, power and IONet connection. Its operational protection path is not dependent on ordinary VME backplane communication, which separates it from a general rack I/O board.

Operating relationship

The H1B generation supports a second TREG trip board through J4. H2B is a lower-power execution without that second trip-board connection. Before selecting a replacement, reconcile the installed number of TREG boards and trip-solenoid wiring with the exact H1B reference; a reduced connection arrangement is not automatically equivalent.

Integration implications

Each VPRO channel accepts its own speed inputs and participates in the emergency protection logic. Potential-transformer, thermocouple and analog functions have separate interface requirements. Protection acceptance must retain the actual channel voting, trip outputs and approved machine setpoints; a healthy communication link does not prove the emergency trip path.

Technical parameters

Parameter	Value / condition
Nominal DC supply	125 V DC
DC input range	70-145 V DC
Speed inputs per VPRO	3
Speed input frequency span	2 Hz-20 kHz

Technical parameters - continued

Parameter	Value / condition
Speed accuracy	0.05% of reading
Speed resolution at 100 Hz frame rate	15 bit
Maximum frame rate	100 Hz
PT inputs per VPRO	2
Nominal PT input	115 V rms
Synchronizing frequency span	45-66 Hz
Thermocouple inputs per VPRO	3
Parallel-fed analog input channels	3
Supported TREG connections, H1B	2
PT circuit burden	Less than 3 VA
PT isolation barrier	1,500 V RMS
PT cable allowance	100 m, 18 AWG twisted shielded wire

Parameter applicability

The H1B independent-protection architecture and second-TREG interface apply to this complete IS215 reference. Per-VPRO inputs and whole-module capacities remain distinct; application voting and trip setpoints are installation-specific.

System and supply context

The H1B protection design can serve two TREG boards in the Mark VI emergency trip architecture; the exact installed trip arrangement determines the acceptance scope.

Integration boundary

Do not confuse the IS215 assembly reference with a claim that a complete three-channel protection module or all terminal boards are included.

Applications / Compatibility

Independent overspeed protection

Retain emergency speed sensing and its configured trip confirmation independently of ordinary speed control.

Two-trip-board systems

Preserve the J4 second-TREG connection when the installed design uses the H1B capability.

Backup synchronizing permissive

Use the two PT paths and voted K25A feedback with the installed breaker-closing interlocks.

Backup temperature protection

Keep each VPRO thermocouple allocation separate from analog inputs fanned out by TPRO.

Precautions scope

Use the approved protection outage and trip-test plan; software command alone does not prove relay or solenoid action.

Installation precautions

Engineering field	Interpretation / condition
Identify dedicated DC feeds	Trace VPRO power and each separately fused trip-solenoid feed before isolating the protection hardware.
Preserve trip-board count	Match J3/J4 cabling and configured solenoid groups to the actual TREG population.
Retain speed scaling	Record tooth count, pickup identity and application/I/O emergency settings before injecting a speed signal.
Keep primary and backup evidence	Test the emergency path without treating the normal controller speed indication as proof of backup protection.
Check PT burden and phase	Use the intended isolated PT interface and its allowed burden; preserve generator/bus assignment for the synchronizing test.
Observe final trip hardware	Record relay contact feedback and solenoid voltage as well as the software trip command under the authorized machine procedure.

Lifecycle and replacement

Engineering field	Interpretation / condition
H1B revision position	The manufacturing phase of IS215VPROH1BE is unconfirmed; the H1B trip architecture is retained as the offered function.
Non-equivalent alternative	The lower-power H2B execution omits the second TREG connection and cannot replace an installed H1B second-board function on name similarity alone.
Protection maintenance	Replacement acceptance covers the independent emergency-protection path and configured trip outputs, not merely rack communications.

Available Unit Details

Engineering field	Interpretation / condition
Offered assembly identity	IS215VPROH1BE is the IS215 H1B protection assembly reference, with E retained as part of the complete marking.
Separate module scope	The full protection architecture uses three independent VPRO channels and external TPRO/TREG interfaces; that architecture is not a supplied-quantity statement.
Confirmed shipping estimate	10cm x 18.6cm x 26.1cm and 2.12 kg are the user-supplied transport figures for this offered reference.

Alternative Names

Variant	Complete-model spelling
1	GE IS215VPROH1BE
2	General Electric IS215VPROH1BE

Technical notes

Engineering field	Interpretation / condition
Solenoid-power diagnosis	A missing second-TREG power diagnostic can originate in its 125 V feed/cabling or a configuration requesting a second trip group that is not installed.

Technical notes - continued

Engineering field	Interpretation / condition
Synch-check path	K25A feedback spans the protection and synchronizing interfaces; a command/contact mismatch is not resolved by a speed-input calibration.
Independent sources	Each VPRO has its own onboard supply derived from cabinet DC. A normal VME communication test does not exercise that dedicated supply or the trip-solenoid feed.

Technical questions

Full-model question	Engineering answer
What should be checked when IS215VPROH1BE reports second-TREG solenoid power missing?	Compare the configured second trip group with the actual J4-connected board, then inspect its DC feeder and cable path. The diagnostic may also arise when a second group is configured without a second TREG.
Why can IS215VPROH1BE show a trip relay contact mismatch despite a correct command?	The diagnostic compares requested state with hardware feedback. Trace the named relay, terminal-board feedback and interconnecting cable; a software command alone does not establish that the contact changed state.
How does IS215VPROH1BE distinguish a stale speed signal from a speed-difference condition?	When their respective functions are enabled, stale-speed logic checks lack of change over five frames, while speed-difference logic checks deviation from the configured comparison over more than three consecutive frames. Preserve the enabled function and signal source before diagnosing either.
What does an enabled control-watchdog trip on IS215VPROH1BE require?	Verify that the configured ContWdog signal changes at least once per frame. The diagnostic detects five unchanged frames and requires the documented recovery condition; a stable Ethernet link alone does not prove application updates.
Can the PT burden of IS215VPROH1BE be ignored because it is only a protection input?	The documented PT circuit has a load below 3 VA and an isolated input arrangement. Include its burden and cable arrangement when validating generator/bus secondary circuits rather than treating it as an unconnected voltage probe.
Why must IS215VPROH1BE speed injection retain tooth-count configuration?	The measured pulse frequency is converted into machine speed using the configured relationship. Prove the intended speed and emergency-trip logic with that relationship, not just that a frequency appears on an input.

Technical questions - continued

Full-model question	Engineering answer
How are thermocouple and analog input assignments different on IS215VPROH1BE?	The three thermocouples belong to each VPRO channel, while TPRO feeds the configured analog signals in parallel to the protection channels. Test the intended physical assignment and voting path rather than assuming all inputs are independently wired per board.
Can a healthy normal controller establish protection acceptance for IS215VPROH1BE?	The emergency system has independent processing, supplies and trip interfaces. Retain separate proof of emergency input, voting/logic, relay feedback and final solenoid action under the approved protection test.

Downloads

Document	Content and format
Technical reference	Original GEH-6421H system-architecture pages for the independent protection and trip architecture. PDF, 4 pages.
Engineering guide	Apter Power field guide: independent input proof, second-TREG diagnosis and physical trip evidence. PDF, 2 pages.

What happens after you enquire

Engineering field	Interpretation / condition
1 Review your reference	Send the full marking, quantity and label photos. We review the item and any version details that need clarification.
2 Confirm the offer	Check the quoted reference, condition, included items and expected dispatch date before approving your order.
3 Arrange dispatch	Confirm delivery details and receive the tracking number when it becomes available.

Ordering checks

Engineering field	Interpretation / condition
Match the complete marking	Include IS215VPROH1BE and every hardware or assembly-revision marking visible on the item. Keep the exact reference on your enquiry and quotation.
Check the offered item before ordering	Request available label and interface photos. Have your maintenance team compare the offered IS215VPROH1BE reference with the installed equipment and applicable General Electric documentation.

Sourcing and service information

Engineering field	Interpretation / condition
Title-area support	Sourcing Support; 12-Month Warranty
Dispatch Confirmation	Quantity and dispatch date confirmed in quotation.
Dedicated Manager	Personalized one-to-one VIP service
ISO 9001:2015 Certified	Trusted quality management
Warranty Policy	Review the applicable warranty coverage and claim process.
Return Notice	Obtain return approval before sending an item back.
Shipping Method	Worldwide shipping; freight and timing confirmed in quotation.
Parts Availability	Quantity, dispatch date and lead-time start confirmed in quotation.

Technical basis

GE Mark VI System Guide GEH-6421H, Volume I; GEH-6421M, Volume II

Related platform references - separate selection review

General Electric IS200TBAIH1CDD	Analog Input/Output Terminal Board
General Electric IS200VAICH1DBC	Analog Input/Output Processor Board

Engineering contact

Discuss the complete unit and installed application with Apter Power.
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