GE IS200VTURH1BAC

Turbine I/O Board

GE IS200VTURH1BAC is a Mark VI turbine I/O processor for pulse-rate speed inputs, generator and bus potential-transformer signals, automatic synchronizing and fast overspeed trip logic.

01	02	03	04
Four pulse-rate magnetic-pickup input channels	Generator and bus PT inputs for synchronization	Automatic breaker-close timing with adaptive compensation	Fast overspeed trip path with 30 ms-or-less relay dropout

System position

Speed pickups and generator/bus PT circuits	TTUR terminal board	IS200VTURH1BAC turbine algorithms	K25 synchronizing and trip-relay outputs

Evidence boundary

Only verified exact-model facts and explicitly identified family context are included. Similar codes are not treated as substitutes.

Model-specific release focus

- Four pulse-rate magnetic-pickup input channels
- Generator and bus PT inputs for synchronization
- Automatic breaker-close timing with adaptive compensation
- Fast overspeed trip path with 30 ms-or-less relay dropout

02 / CAPABILITY MAP

Engineering domains and architecture

Control platform	GE Mark VI
Board family	IS200VTURH1B
Complete revision	IS200VTURH1BAC
Pulse-rate inputs	4 magnetic-pickup channels

Synchronization PT inputs	Generator and bus
Auto-synchronizing breakers	2 configurable breaker timing sets
Fast-trip modes	PR_Single and PR_Max
Fast overspeed response	30 ms or less from input to completed relay dropout

Interface architecture

TTUR

Terminates pulse-rate, generator PT, bus PT and breaker-control circuits

K25 path

Automatic synchronizing relay command with breaker close-time compensation

Signal space

Exchanges permissives, breaker status, voltage status and diagnostic variables

Trip relays

Links local fast-overspeed logic to the configured protective relay outputs

Interface evidence for acceptance

- TTUR: Terminates pulse-rate, generator PT, bus PT and breaker-control circuits
- K25 path: Automatic synchronizing relay command with breaker close-time compensation
- Signal space: Exchanges permissives, breaker status, voltage status and diagnostic variables
- Trip relays: Links local fast-overspeed logic to the configured protective relay outputs

Use cases with controlled scope

Generator auto-synchronizing	Synchronization supervision	Fast overspeed protection	Turbine speed monitoring
Calculates phase and slip and commands breaker closure at the projected in-phase point.	Monitors PT validity, breaker-coil voltage and K25 relay feedback.	Executes PR_Single or PR_Max algorithms locally in VTUR firmware.	Processes four magnetic-pickup channels for speed and acceleration data.

INTEGRATION CHECKPOINTS

Identity	Host system	Configuration	Acceptance
GE IS200VTURH1BAC is preserved in full.	Rack, slot and surrounding hardware are verified.	Project, firmware and settings are recorded.	Functional evidence is captured before release.

System relationship

Speed pickups and generator/bus PT circuits	TTUR terminal board	IS200VTURH1BAC turbine algorithms	K25 synchronizing and trip-relay outputs

Configuration-control record

- Synchronization PT inputs: Generator and bus
- Auto-synchronizing breakers: 2 configurable breaker timing sets
- Fast-trip modes: PR_Single and PR_Max
- Fast overspeed response: 30 ms or less from input to completed relay dropout

Decision matrix

Question	Answer
What turbine signals does GE IS200VTURH1BAC process?	It processes four magnetic-pickup channels plus generator and bus PT inputs through the TTUR interface.
How does GE IS200VTURH1BAC calculate breaker closure?	The VTUR algorithm uses phase, slip, acceleration and configured breaker close time to project the in-phase closing point.
How many breaker timing sets can GE IS200VTURH1BAC manage?	The auto-synchronizing configuration provides independent close-time and adaptation settings for two breakers.
Which fast-overspeed modes are available in GE IS200VTURH1BAC?	VTUR provides PR_Single and PR_Max algorithms for different redundant pickup arrangements.

Eight release precautions

1

Match GE IS200VTURH1BAC to the documented TTUR, rack position and complete AC revision record.

2

Disable and positively secure the generator breaker before synchronizing-output simulation.

3

Isolate PT secondary and pulse-pickup circuits using the approved plant procedure.

4

Preserve breaker close-time, adaptation limits, frequency and phase windows before replacement.

5

Verify generator and bus PT polarity, scaling and frequency before arming auto synchronizing.

6

Confirm every speed-pickup channel, tooth-wheel scaling and fast-trip enable before testing.

7

Do not force K25 or trip outputs unless the breaker and turbine protection test boundaries are established.

8

Complete trend-based synchronization and overspeed-trip evidence before returning the unit to service.

Commissioning decision points

- Verify generator and bus PT polarity, scaling and frequency before arming auto synchronizing.
- Confirm every speed-pickup channel, tooth-wheel scaling and fast-trip enable before testing.
- Do not force K25 or trip outputs unless the breaker and turbine protection test boundaries are established.
- Complete trend-based synchronization and overspeed-trip evidence before returning the unit to service.

Product verification and support

Apter Power verification record

Model identity	Keep the complete GE model code and every suffix in purchasing, installation and acceptance records.
Verification boundary	Confirm the physical nameplate, installed position and revision-controlled project documents before field work.
Apter Power support	Use the contact details and Apter Power website links in this document for product and sourcing support.

Related Apter Power references	Scope note
GE IS200TRTDH1CCC	Portfolio reference only; verify compatibility independently.
GE IS200TREAH1A	Portfolio reference only; verify compatibility independently.
GE IS200TDBTH2ACD	Portfolio reference only; verify compatibility independently.

	Apter Power technical and sourcing support sales13@apterpower.com +86 180 3023 5313 www.apterpower.com Scan for the Apter Power contact page.	Model record GE IS200VTURH1BAC Turbine I/O Board Verify the complete nameplate before installation.

Handover evidence to retain

- Exact identity retained: GE IS200VTURH1BAC
- TTUR terminal board
- IS200VTURH1BAC turbine algorithms
- Archive as-left checks and measured results before release.