GE IS420YAICS1B

Functional Safety Analog Input/Output Pack

GE IS420YAICS1B is a Mark VIeS safety analog I/O pack for a terminal-board assembly with ten analog inputs and two current outputs.

Sourcing Support | 12-Month Warranty

Product summary

Manufacturer part number	IS420YAICS1B
Shipping	Swift global dispatch
Condition	New, original product
Shipping size (est.)	5.7cm x 12.2cm x 8.3cm
Country of Origin	USA
Manufacturer	General Electric
Product Category	Gas Turbine Control
Spare Part Number	IS420YAICS1B
Weight	0.34 kg

Buyer information / Overview

YAIC connects process transmitters and actuators to safety logic; selection of the terminal board determines simplex or TMR implementation.

Mixed analog duty
One pack handles process acquisition and current commands through the selected termination assembly.

Redundancy by assembly
The same pack supports different system arrangements through the matching terminal board.

Diagnostic participation
Pack and termination identity, power health and output contribution are evaluated with the control logic.

IS420YAICS1B is the I/O pack, not the complete field termination module. STAIS2A provides the compact simplex termination; TBAIS1C can serve simplex or three-pack TMR arrangements. Keep the pack count, terminal-board order and controller configuration together when selecting a replacement.

Inputs 1–8 support the documented voltage and current selections, while inputs 9–10 have current-specific modes. The transmitter wiring and board jumpers or configuration must agree with that channel duty. Equal channel numbers do not mean every point accepts the same signal.

In TMR use, the controller selects the median returned analog input value and the output circuitry rejects a badly performing pack. Commissioning must therefore check contribution and diagnostic behavior, not merely a plausible process value from one pack. Retain loop-power budgeting and the safety application’s proof-test requirements.

Controller platform reference: Mark VIeS analog I/O. Match the installed configuration.

Technical Specifications

Analog inputs	10
Analog outputs	2
AI 1–8 voltage ranges	1 to 5 V DC; ±5 V DC; ±10 V DC
AI 1–8 current range	0 to 20 mA
AI 9–10 current ranges	0 to 20 mA; ±1 mA
Input conversion	16 bit
Output conversion	14 bit
Output current range	0 to 20 mA
Maximum output load	800 Ω
Pack control power	28 V DC; 8 W
Additional sensor-power allowance	Up to 7 W
Supported controller I/O scan rates	10 / 40 / 80 / 160 ms
Operating ambient temperature	-40 to +70 °C
Storage temperature	-40 to +85 °C

Technical source: GE Power Mark VIeS Functional Safety System Technical Specifications GFT-870. Data apply to the IS420YAICS1B pack with the documented STAIS2A or TBAIS1C terminal-board assembly. Terminal style, field-wire capacity, loop powering and redundancy depend on the selected terminal board. Module certification does not establish the SIL of an unverified installation.
Apter Power product summary. Technical reference and field guide are available in Downloads.

Applications / Compatibility

Use within a configured Mark VIeS analog assembly with the supported STAI or TBAI termination.

A YAIC pack alone does not determine field wiring, redundancy or achieved safety integrity; those are properties of the completed installation.

Simplex transmitter acquisition
Use the documented STAIS2A assembly and retain each transmitter's signal type, loop supply and return allocation.

TMR analog acquisition
With the approved TBAIS1C arrangement, verify all contributing packs and controller-side median selection.

Current-output actuation
Compare the configured current command, receiving load and output contribution before accepting an actuator circuit.

Safety loop maintenance
Retain the safety application, terminal-board identity and proof-test record rather than treating pack health alone as loop acceptance.

Product Precautions

Apply these checks to GE IS420YAICS1B and its documented installation.

Identify the terminal board
Compare its complete order and ID diagnostics before reconnecting field wiring.

Separate the input groups
Check the current-only duty of channels 9–10 before moving a signal.

Budget transmitter power
Include sourced loop power as well as pack control power.

Preserve TMR contribution
Record pack/controller assignments and the accepted degraded-state behavior.

Check the receiving burden
Verify the complete output circuit against its allowed current/load relationship.

Prove the safety function
Use the approved proof-test procedure after hardware and configuration restoration.

Lifecycle Status

The current factory lifecycle phase of IS420YAICS1B is unconfirmed.

Retain the safety pack family, terminal-board compatibility and configured redundancy; a general-purpose analog pack is not assumed equivalent.

One YAIC I/O pack is offered. Terminal board, cover and field wiring are separate unless itemized.

Available Unit Details

Offered reference	GE IS420YAICS1B.
Identity check	Request the complete IS420YAICS1B label and photographs of the pack mating face and power/network interfaces.
Physical review	Inspect connector seating, enclosure condition and evidence of contaminated or damaged contacts.
Included items	one YAIC pack; supported terminal board and cover separately identified.

Request available-unit photos and details: sales13@apterpower.com

Technical notes

Supply scope	Pack and field terminal board are separately orderable parts.
Diagnostic interpretation	A healthy indication on one pack does not prove all TMR contributions are valid.
Safety boundary	Component certification remains conditional on the approved system design and proof testing.

Alternative Names

GE IS420YAICS1B; IS420YAICS1B

Frequently Asked Questions (FAQ)

1. Can IS420YAICS1B be ordered as a complete field-wiring module without specifying a terminal board?

The pack and terminal board are separate orderable parts. Identify the STAI or TBAI assembly, pack count and wiring style before selecting the offered scope.

2. Why should channels 9 and 10 on IS420YAICS1B be reviewed before moving a voltage transmitter?

Those inputs have documented current modes rather than the voltage selections of channels 1–8. Reconcile the channel duty before changing wiring.

3. How is a single faulty analog input contribution handled in a TMR installation using IS420YAICS1B?

The controller uses the median of returned analog values. Verify all contributions and diagnostics under the approved test rather than relying on one displayed process value.

4. What must be checked before IS420YAICS1B supplies a current-output actuator loop?

Confirm the receiving burden, wiring resistance, configured command and current contribution. Test the loop at approved points without exceeding the published load condition.

5. Can an IS420YAICS1B power budget include only the pack's control consumption?

Include the additional power sourced to field sensors by the termination assembly. Separate pack demand from actual loop-power demand in the system budget.

6. Does a good IS420YAICS1B status LED prove the terminal-board selection is correct?

Inspect terminal-board identity diagnostics and the installed part number as well. A visible health indicator is not a complete configuration check.

7. What distinguishes a TMR output check from a simplex output check on IS420YAICS1B?

TMR acceptance must account for each pack's contribution and rejection of a failed output, in addition to the final field current. Follow the approved safety test sequence.

8. Does replacing IS420YAICS1B preserve a loop's SIL automatically?

No. Retain the approved architecture, configuration, terminal assembly and proof-test results; the achieved safety function belongs to the complete loop.

Downloads

For IS420YAICS1B, the Apter Power technical reference summarizes verified manufacturer data. The field guide develops terminal-board selection and tmr analog proof.

IS420YAICS1B Technical Reference	Apter Power technical reference with manufacturer-based values and exact application boundaries. PDF · 1 pages · 92.2 KB.
IS420YAICS1B Installation & Commissioning Guide	Terminal-Board Selection and TMR Analog Proof. Keep signal selection, loop power and redundant contribution as separate acceptance decisions. PDF · 2 pages · 94.2 KB.

The manufacturer-based technical reference and installation decisions are provided as separate documents.

What happens after you enquire

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

Ordering checks

Include IS420YAICS1B and every revision or approval marking visible on the item. Keep the exact reference on your enquiry and quotation.

Request available label and interface photos. Have your maintenance team compare the offered IS420YAICS1B reference with the installed equipment and applicable GE documentation.

Service and support

Dispatch Planning	Confirm stock and lead time with our team.
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	Check the return process and obtain approval before sending an item back.
Shipping Method	Review shipping arrangements, transit estimates and delivery responsibilities.
Parts Availability	Browse stock listings and confirm current availability with our team.
How to order	See how to submit an enquiry, review a quotation and confirm an order.

Discuss your requirement

Send the full marking, label photos, quantity and required date. Our team will review the available sourcing options with you.

WhatsApp / Phone: +86 18030235313 | sales13@apterpower.com

Related GE product references

Separate supply references; these links do not establish interchangeability.

GE SF412024 517-0224-16A-504376 820-0297
Circuit Board Assembly

GE 46-288512G1-F
Gantry I/O Board

GE IS200EPSMG1ADC
Exciter Control Power Supply Module

GE IS200EPSMG1AEC
Exciter Auxiliary and Control Power Supply Module

GE IS200TRLYH1BHH
Relay Output Terminal Board

GE IS200TSVCH2AJE
Servo Control Terminal Board

GE IS200ECTBG2ADE
Exciter Contact Terminal Board

GE IS200EDCFG1AED
Exciter DC Feedback Board

GE IS200EISBH1AAB
Exciter ISBus Communication Board

GE IS200EPSMG1AED
Exciter Power Supply Module

Discuss IS420YAICS1B and its installed application with Apter Power.
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