GE IS420YAICS1B

Installation & Commissioning Guide

Terminal-Board Selection and TMR Analog Proof

Keep signal selection, loop power and redundant contribution as separate acceptance decisions.

Before You Order

Architecture	Identify simplex or TMR, the terminal-board order and number of packs.
Input schedule	Record channel number, signal mode, transmitter wiring and loop supply.
Output schedule	Identify receiving burden, command range and the approved proof test.

Installed interfaces and selection

Input path	Transmitter -> configured STAI/TBAI input -> YAIC -> safety logic.
Output path	Safety command -> contributing YAIC pack(s) -> termination -> actuator loop.
Evidence path	Terminal ID, contribution diagnostics and actual process response -> proof-test record.

Engineering values in use

Signal grouping	Voltage/current selections are not identical across all ten inputs.
Power allocation	28 V DC pack control and sourced transmitter power have separate budget entries.
Load allocation	The 800 Ω maximum applies to the documented 0–20 mA output condition.

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.

Model-specific work decisions

Freeze the channel schedule	Capture the input types and transmitter supplies before disturbing terminals.
Compare the hardware identities	Match pack, terminal board and the application’s redundancy assignment.
Rebuild power and network paths	Restore the documented supplies and controller associations.
Inject distinct input groups	Prove approved points on channels 1–8 separately from current-specific channels 9–10.
Prove output behavior	Measure the final loop and, where applicable, each redundant contribution.

Interpret the observed fault

One returned input differs

Compare individual pack values before interpreting the controller’s median result.

Correct command, wrong field current

Check loop burden, wiring and contribution diagnostics.

Terminal identity fault

Resolve the termination match before treating the pack as failed.

Acceptance evidence

Input proof	Configured transmitter modes and accepted test points agree.
Output proof	Measured actuator current and contribution behavior satisfy the approved test.
Safety proof	The retained proof-test record covers the complete loop.

Technical basis: GE Power Mark VIeS Functional Safety System Technical Specifications GFT-870.

Related GE product references

Separate supply references; these links do not establish interchangeability.

GE DS200TBQBG1ACB
RST Analog Termination Board

GE DS200TBQCG1ABB
Analog Input Milliamp I/O Termination Module

GE DS200TCPSG1AME
Power Supply Board

GE DS3800NGDC1A1A
Ground Detector Module

GE DS3800NGDD1C1B
Field Ground Detector Card

GE IS400AEBMH1AJD
Alternative Energy Bridge Module

GE IS220PPROH1A
Emergency Turbine Protection I/O Pack

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

Discuss IS420YAICS1B and its installed application with Apter Power.
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