GE IC697ALG440

Installation & Commissioning Guide

GE IC697ALG440 is the current-input expander used with an IC697ALG230 base converter in a Series 90-70 high-level analog input subsystem.

PRODUCT ROLE AND TECHNICAL FEATURES

Feature 1

Adds sixteen current-input points to the high-level analog subsystem.

Feature 2

Shares conversion and data handling with the IC697ALG230 base module.

Feature 3

Supports three current ranges selected through software configuration.

Feature 4

Provides open-wire fault behavior for 4 to 20 mA operation.

TECHNICAL DATA SNAPSHOT

System family	Series 90-70
Module role	Current expander
Input channels	16
Supported input ranges	4 to 20 mA; 0 to 20 mA; -4 to +20 mA

SYSTEM RELATIONSHIP

Current loops → **IC697ALG440** → **IC697ALG230** → **Series 90-70 CPU**

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Pre-installation readiness

READINESS GATE

Identity

Compare the complete marking with the approved work order and installed record.

System match

Confirm the receiving channel, mating components and controlled configuration.

Physical condition

Inspect mounting surfaces, connectors, terminals, cable and support hardware.

Work controls

Apply authorized isolation, bypass, access and restoration procedures.

TECHNICAL PROFILE FOR THE WORK

System family Series 90-70	**Module role** Current expander
Input channels 16	**Supported input ranges** 4 to 20 mA; 0 to 20 mA; -4 to +20 mA
Companion base converter IC697ALG230	**Isolation** 1500 V between field and logic
Common-mode voltage 200 V between any two inputs	**Configuration** Windows programming software or handheld programmer

IMPORTANT NOTICE Resolve every unmatched interface, configuration or receiving-system condition before removal or installation.

DOCUMENT AND WORK CONTROLS

Manufacturer document	GE Fanuc Series 90-70 Data Sheet Manual GFK-0600F
Application scope	The values below apply to the identified product and its documented system relationship.
Selection rule	Use the complete ordering string and confirm the installed interfaces before selection.

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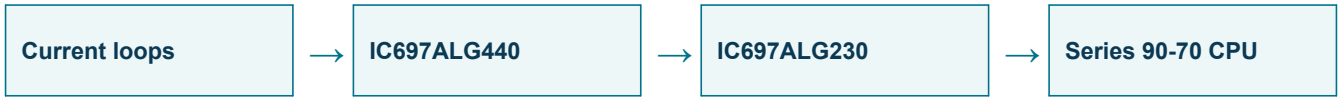
Installation sequence

CONTROLLED WORK STEPS

01	Confirm IC697ALG440 and its assigned IC697ALG230 base module.
02	Place every affected current loop in the approved maintenance state.
03	Record range selection and scaling for all used channels.
04	Isolate field sources before removing terminal wiring.
05	Preserve shield, common and channel assignments exactly.
06	Check the expander cable and base-module connection for damage.
07	Inject controlled current points across each configured range.
08	Review PLC values and open-wire diagnostics before release.

CONNECTION RECORD

As found	Photograph and label every connection and installed orientation before removal.
Mechanical	Record mounting position, support, clearance and connector engagement.
Electrical	Record polarity, common, shield, channel assignment and cable route.
Configuration	Preserve approved settings, scaling, alarm logic and acceptance limits.
As left	Record the final physical condition and any controlled deviation.



WORK HOLD POINTS

Before removal	Identity, position, wiring, orientation and controlled settings recorded.
Before connection	Mating interfaces, condition and routing reviewed.
Before power-up	Mechanical work, wiring, shielding and configuration independently checked.
Before release	Static value, dynamic response and protection behavior accepted.

Commissioning and functional proof

COMMISSIONING SEQUENCE

Initial state

Observe status at power-up and check for unexpected fault or alarm indication.

Static value

Verify the expected bias, gap, loop, contact or channel value for the application.

Dynamic response

Apply the approved machine or test stimulus and confirm response and scaling.

Protection path

Verify the configured alarm, relay, data or receiving-system behavior.

APPLICATION-SPECIFIC CHECKS

Process current acquisition

Brings transmitter loops into a Series 90-70 rack.

Multi-channel monitoring

Expands a base converter for dense analog measurement.

Loop maintenance

Supports channel-level diagnosis and controlled calibration checks.

Legacy PLC renewal

Restores the documented current-input expansion position.

ACCEPTANCE RECORD

Identity	Complete marking and final installed position recorded.
Physical inspection	Mounting, connectors, terminals and routing checked.
Channel status	Expected status and configured measurement confirmed.
Functional test	Required output or protection response demonstrated.
Restoration	Bypasses removed and operating state approved.

COMMISSIONING QUESTIONS

Which base converter must be paired with GE IC697ALG440?	IC697ALG440 operates with the IC697ALG230 high-level analog input base converter.
How many current inputs does GE IC697ALG440 add?	It adds sixteen current-input channels to the matched analog subsystem.

Release record and technical references

CLOSEOUT QUESTIONS

Which current ranges can GE IC697ALG440 accept?	The documented ranges are 4 to 20 mA, 0 to 20 mA and -4 to +20 mA.
Where is A/D conversion performed for GE IC697ALG440?	Conversion and PLC data transfer are handled by the companion IC697ALG230 base module.
What isolation boundary applies to GE IC697ALG440?	The subsystem provides 1500 V isolation between field inputs and logic.
How is GE IC697ALG440 configured?	Channel range and operation are set through the Series 90-70 programming software or handheld programmer.
What indicates an open loop on GE IC697ALG440 in 4 to 20 mA mode?	The subsystem reports an underrange condition for a current below the documented open-wire threshold.
Which commissioning test is appropriate for GE IC697ALG440?	Inject traceable current values at representative points and compare all configured PLC readings and diagnostics.

RELATED MODELS FOR INSTALLATION PLANNING

GE IC697MDL740	Installation-planning reference. Review the complete ordering string before selection.
GE IC697CPU772	Installation-planning reference. Compare the required interface and system position.
GE IC697CPM915	Installation-planning reference. Confirm the execution independently for the intended task.

MANUFACTURER DOCUMENT AND FINAL CONTROL

Manufacturer document	GE Fanuc Series 90-70 Data Sheet Manual GFK-0600F
Application scope	The values below apply to the identified product and its documented system relationship.
Selection rule	Use the complete ordering string and confirm the installed interfaces before selection.

IMPORTANT NOTICE Release the equipment only after the responsible site authority accepts the recorded result.

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