

INDUSTRIAL AUTOMATION PRODUCT

IC693ALG391

Two-channel Analog Current Output Module

IC693ALG391 is a Series 90-30 PLC I/O module documented for two-channel analog current output module. This Apter Power reference organizes identity, technical values, integration context and field verification in a model-specific format.

PRODUCT SNAPSHOT

MANUFACTURER

General Electric / Emerson

FAMILY

Series 90-30 PLC I/O

MODEL

IC693ALG391

DOCUMENT

Product technical reference

REFERENCE PURPOSE

Use this document to prepare product identity checks, configuration review, field wiring verification and controlled commissioning. Follow the applicable manufacturer manual and the approved site procedure for actual work.

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2 Technical Specifications

Technical values below are limited to the named product record and its documented platform.

PARAMETER	TECHNICAL VALUE
Module role	Analog current output generation
Output channels	2 analog output channels
Output ranges	0-20 mA and 4-20 mA
Digital resolution	12 bits, typical
Channel update	Approximately 5 ms for all channels
External supply	20 to 30 Vdc
Compliance voltage	25 V maximum
Isolation	1500 Vac isolation rating
Backplane load	+5 Vdc: 30 mA; isolated +24 Vdc: 215 mA
Host platform	Series 90-30 PLC baseplate
Configuration focus	Range selection, output scaling and commanded safe state
Field focus	Loop polarity, load, return and shield termination

3 System Role and Architecture

IC693ALG391 performs its documented two-channel analog current output module role inside the Series 90-30 PLC I/O platform. The following blocks separate product function, matched hardware and the controlled signal path.

PLC-TO-LOOP CONVERSION

Converts Series 90-30 output data into two controlled analog current-loop commands.

DUAL-CHANNEL SERVICE

Controls two independent field loops from one baseplate module position.

RANGE SELECTION

Supports the documented 0-20 mA and 4-20 mA current-output ranges.

FIELD ISOLATION

Separates the field-side output circuitry from the controller backplane as documented.

MATCHED SYSTEM COMPONENTS

- Series 90-30 PLC CPU and compatible baseplate
- 20 to 30 Vdc external field supply
- Two correctly polarized analog current loops
- Compatible positioners, drives or receiving instruments

CONTROLLED SIGNAL PATH



INTEGRATION RECORD

Before enabling either loop, confirm the external 20 to 30 Vdc supply, polarity, selected range, receiving load and 25 V compliance limit. Restore the documented default or safe-state behavior before production release.

4 Applications and Engineering Context

PROCESS SETPOINT OUTPUT

Supplies controlled current-loop commands from a Series 90-30 control application.

VALVE AND ACTUATOR COMMAND

Provides an analog reference to compatible positioners or actuators within the loop limit.

DRIVE-REFERENCE SIGNALING

Delivers a scaled current command to equipment with an analog current input.

LIKE-FOR-LIKE MAINTENANCE

Supports replacement where slot, supply, range, wiring and safe-state behavior are preserved.

ENGINEERING NOTE

Before enabling either loop, confirm the external 20 to 30 Vdc supply, polarity, selected range, receiving load and 25 V compliance limit. Restore the documented default or safe-state behavior before production release.

MODEL-SPECIFIC ACCEPTANCE EVIDENCE

CHECK	ACCEPTANCE CONDITION
Identity	Complete IC693ALG391 marking and revision recorded
Rack assignment	Series 90-30 slot and output addresses match the project
Loop supply	20 to 30 Vdc source, common and polarity verified
Range and load	Selected range and connected load are within documented limits
Functional proof	Each loop verified at low, midpoint and high commands

5 Engineering Precautions

- 1 Confirm the complete model marking and installed revision before replacement.
- 2 Isolate rack power and the external 20 to 30 Vdc loop supply before disconnecting wiring.
- 3 Record slot assignment, output addresses, scaling and commanded safe-state values.
- 4 Label both channel conductors and preserve polarity, common and shield terminations.
- 5 Confirm the connected load remains within the documented compliance limit.
- 6 Protect backplane and terminal hardware from ESD and mechanical damage.
- 7 Restore the approved range selection and hardware configuration before enabling commands.
- 8 Verify each loop at controlled low, midpoint and high values before production release.

RELATED SERIES PRODUCTS ON APTER POWER

MODEL	SERIES ROLE	APTER POWER PAGE
IC693ALG392	Series 90-30 eight-channel analog output	Open product page
IC693ALG223	Series 90-30 analog current input	Open product page
IC693ALG442	Series 90-30 analog combination module	Open product page

MANUFACTURER SOURCE RECORD

Series 90-30 PLC I/O Module Specifications - GFK-0898F, July 2000

Series 90-30 PLC Installation and Hardware Manual - GFK-0356

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