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GE Fanuc Series 90-30 Troubleshooting

Troubleshooting Guide for the GE Series 90-30 PLC System.



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Introduction - 90-30 Troubleshooting

The GE Fanuc Series 90-30 PLC System has the largest installed base of all GE PLC's, therefore we felt it was important to assist users with some troubleshooting procedures.

Our 33 years of expertise allows us to provide a concise process for identifying problems, as well as procedures which will help you recover from a factory-down situation.

There's an old saying – "If you don't know where you're going, then any road will take you there."

This guide will help you identify the PLC problems, and then systematically provide you with practical solutions.



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STEP 1 - Inspect Power Supply Status

The very first step to understanding the GE Series 90-30 PLC status is to inspect the four LED's on the front of the power supply. When the green LED power LED is on, it indicates that all power in and out of the power supply appears to be functional.

If this LED is off, install a battery on the front of your CPU to maintain the program, and then simply replace the power supply.

Note: The Series 90-30 has 8 different power supply modules. See all the [modules here](#)

Image: Inspect Green 'PWR' LED.



Power Supply Pictured IC693PWR321

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STEP 2 - Inspect CPU Power-Up Status

The green 'OK' LED indicates that the CPU appears to pass its power-up test. If this LED is off, then replace your CPU. There is most likely a hardware fault in the CPU module.

Note: The Series 90-30 has 17 CPU modules. See all the [modules here](#)

Image: Inspect Green 'OK' LED.



Power Supply Pictured IC693PWR321

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STEP 3 - Inspect CPU Run Status

The green 'RUN' LED indicates that the CPU is in run mode and is solving program logic properly. If this LED is green, your problem most likely lies with the failed devices such as I/O modules, and not the PLC system.

If this LED is off, we will walk you through troubleshooting later in this guide.

Image: Inspect Green 'RUN' LED.



Power Supply Pictured **IC693PWR321**

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STEP 4 - Inspect Battery Status

Finally, the red 'BATT' LED should be off, which indicates that your battery is good. If the red LED is on:

- Remove the bottom door labeled 'battery' on the power supply. Carefully replace the battery while the PLC is powered up. In many cases, there are two connectors; one connector for the new battery, and one for the current installed battery.
- Install the new battery before removing the old battery.
- DO NOT power down your PLC System or you will most likely lose your program during the [battery](#) change-out process.

Image: Inspect 'BATT' LED.



Power Supply Pictured IC693PWR321

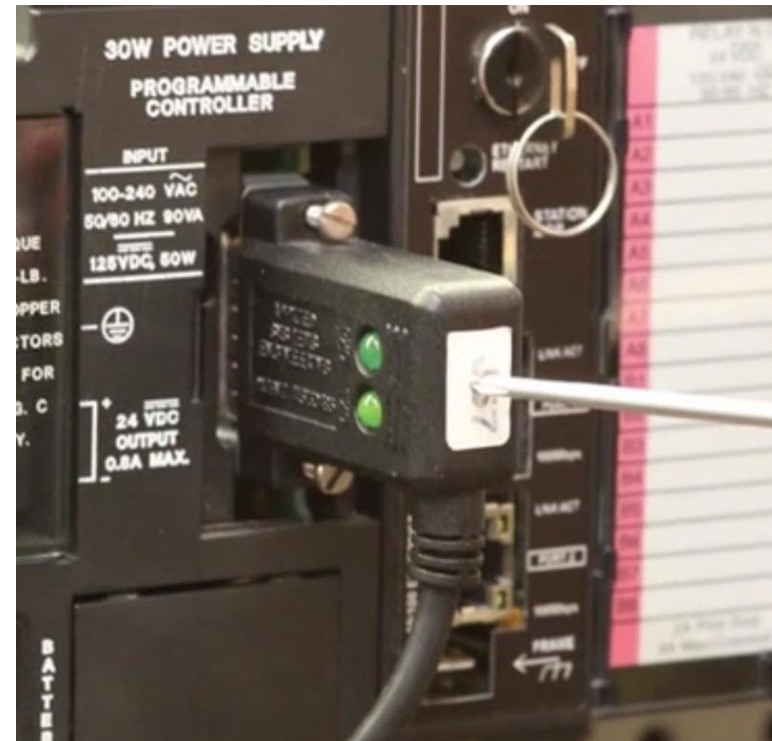
8

STEP 5 - CPU Out Of 'RUN' Mode

The most common failure of the GE Series 90-30 is the 'RUN' LED is off, which generally indicates that an incident has forced the CPU out of 'RUN' mode.

Connect your programming unit to the RS-485 Serial Port on the power supply, and then navigate to the fault tables in your programming software.

Image: Connect RS-485 Programming Cable.



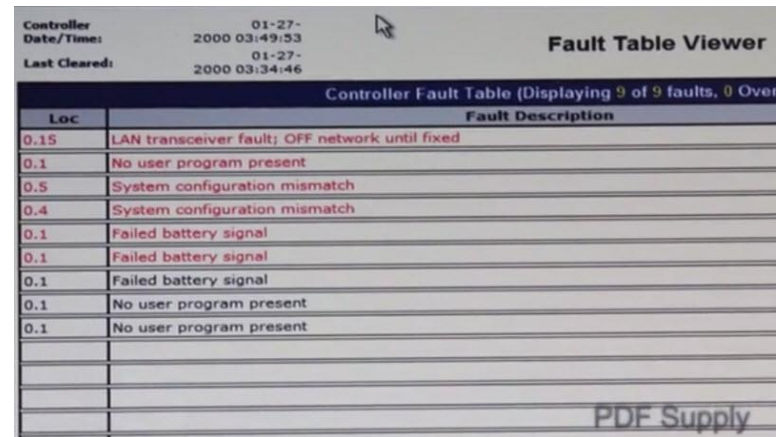
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STEP 6 - View Fault Tables

There are two basic fault tables; I/O and CPU. There, you will find time and date stamp faults that have caused your system to exit 'RUN' mode.

In many cases, it will identify rack and slot positions of a failed module. Once you have fixed the issue creating the fault, clear the fault tables so that any additional faults will be logged at next power up. Continue this process until your Series 90-30 PLC System is back up and running.

Image: Controller Fault Table Viewer



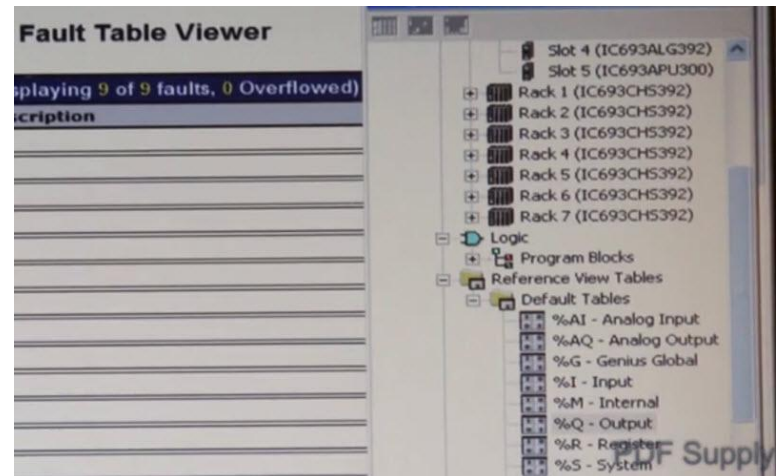
Controller: 01-27-
Date/Time: 2000 03:49:53
Last Cleared: 01-27-
2000 03:34:46

Fault Table Viewer

Controller Fault Table (Displaying 9 of 9 faults, 0 Overflowed)

Loc	Fault Description
0.15	LAN transceiver fault; OFF network until fixed
0.1	No user program present
0.5	System configuration mismatch
0.4	System configuration mismatch
0.1	Failed battery signal
0.1	Failed battery signal
0.1	Failed battery signal
0.1	No user program present
0.1	No user program present

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Fault Table Viewer

Displaying 9 of 9 faults, 0 Overflowed

Location

- Slot 4 (IC693ALG392)
- Slot 5 (IC693APU300)
- Rack 1 (IC693CHS392)
- Rack 2 (IC693CHS392)
- Rack 3 (IC693CHS392)
- Rack 4 (IC693CHS392)
- Rack 5 (IC693CHS392)
- Rack 6 (IC693CHS392)
- Rack 7 (IC693CHS392)
- Logic
 - Program Blocks
- Reference View Tables
 - Default Tables
 - %AI - Analog Input
 - %AQ - Analog Output
 - %G - Genius Global
 - %I - Input
 - %M - Internal
 - %Q - Output
 - %R - Register
 - %S - System

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STEP 7 - Additional Support Options

We hope our troubleshooting guide has helped you track down the problem in your PLC system.

Should you need to repair or replace any parts for your GE Fanuc 90-30 PLC, please contact us at **1-800-360-6802** or visit our website at www.pdfsupply.com

We offer:

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GE Fanuc Series 90-30 PLC
The GE Fanuc Series 90-30 PLC system includes racks, power supplies and CPUs. The most common CPU used in the Series 90-30 is IC693CPU364 which includes an Ethernet connection and 240K memory.

Series 90-30	Description	Stock Level
IC693ACC300	SERIES 90-30 16 point Input Simulator uses on slot in the base rack requires minimal power	In Stock
IC693ACC301	PLC Replacement Battery (qty 2) for all CPUs and PCM modules 2 per package IC693ACC 90-30	In Stock
IC693ACC302	GE 90-30 High capacity battery pack IC693A mounted external IC693ACC IC693ACC 90-30	In Stock
IC693ACC303	Series 90-30 ACC303 Memory Card 32K for Hand Held Programmer IC693PRG300 IC693A IC693ACC	In Stock
IC693ACC310	9030 Blank Filler Module for empty slots keeps dust out of all connectors in the chs racks	In Stock
IC693ALG220	Voltage Analog Input 4 Ch IC693A 0-10V IC693AL IC693ALG provides four channels of input	In Stock
IC693ALG221	Current Analog Input 4PT IC693A 4-20 ma IC693AL IC693ALG provides four channels input	In Stock
IC693ALG222	High Density GE Analog Input 16# IC693A Voltage sixteen channels single ended IC693ALG	In Stock
IC693ALG223	High Density GE Analog Input 16 IC693A Current 4-20 ma allows 16 channels IC693ALG	In Stock
IC693ALG390	Low Density GE Analog Voltage Output 2PT IC693A Module two output channels IC693ALG	In Stock
IC693ALG391	Low Density GE Analog Current Output module 2 channels 12 bit resolution IC693ALG	In Stock
IC693ALG392	High Density GE Analog Output SPT IC693A Current / Voltage allowing eight single IC693ALG	In Stock
IC693ALG442	Mixed Analog 4IN/2OUT IC693A Voltage or Current makes for versatile module IC693ALG	In Stock
IC693APU300	Series 90-30 High Speed Counter provides direct processing of rapid pulse IC693 IC693APU	In Stock
IC693APU301	AXIS POSITIONING Drive Enable Relay and Velocity Command outputs IC693AP IC693APU	In Stock
IC693APU302	APM MODULE Compatible with GE Fanuc Series 90-30 IC693 IC693AP IC693APU	In Stock
IC693APU305	I/O Link Module APU305 Modules are compatible with GE Fanuc Series IC693AP IC693APU	In Stock
IC693BEM320	I/O Link BEM320 Compatible with GE Fanuc Series 9030 PLCs IC693B IC693BEM IC693BEM	In Stock
IC693BEM321	I/O Link master A module in the host provides the interface between the FIP bus IC693BEM	In Stock
IC693BEM330	90-30 BEM330 Bus Controller Module provide interface to a broad range of discrete analog	In Stock
IC693BEM331	31 devices Genius Bus Controller I/O Link master I/O control enhanced by communications	In Stock
IC693BEM332	Series 90-30 FIP Remote I/O 2.5mhz Module is Compatible with 90-30 Series IC693BEM332	In Stock
IC693BEM333	GE Fanuc Series 90-30 Remote FIP Interface Module is Compatible with 90-30 IC693BEM333	In Stock
IC693BEM334	Series 90-30 Genius Bus Controller Module is Compatible with 90-30 Series GE Fanuc PLC	Call
IC693BEM335	GE Fanuc Series 90-30 FIP Remote I/O 2.5mhz Module is Compatible with 90-30 IC693BEM	In Stock
IC693BEM340	FIP Bus Controller Management of slave devices Monitoring of slave devices IC693BEM	In Stock
IC693BEM341	2.5 MHZ FIP Controller The 2.5MHZ version of requires a Release 8.10 version IC693BEM	Call
IC693BEM350	GE Fanuc Series 90-30 Ethernet Network Interface Unit Module is Compatible with 90-30	Call
IC693CDD200	GE Fanuc Csan Interface Module Module is Compatible with 90-30 Series IC693CD IC693CDD	Call
IC693CHS381	I/O Rack, 10 Slots Power Supply module plugged into left slot Expansion remote Baseplate	In Stock
IC693CHS392	I/O Rack, Expansion 10 Slots Remote baseplate has Rack Number Selection DIP IC693CHS	In Stock
IC693CHS393	I/O Rack, Remote Expansion CPU must be installed in slot 1 Expansion & Remote Baseplate	In Stock
IC693CHS397	I/O Rack, CPU, 5 Slots Left slot supports Power Supply, Slot 1 supports CPU IC693CHS 9030	In Stock
IC693CHS398	I/O Rack, Expansion, 5 Slots cable interconnection Expansion & CPU baseplates IC693CHS	In Stock
IC693CHS399	I/O Rack, Remote Expansion Baseplates 25-pin female D-type I/O Bus Expansion IC693CHS	In Stock
IC693CMM301	Genius Communications configuration completed using Hand-held Programme software IC69	In Stock
IC693CMM302	Communication card, Genius Series 90-30 PLC module, providing Global Data IC693CMM	In Stock
IC693CMM304	GE 90-30 Alstom N80 CMM304 high-performance microcomputer IC693CMM3 GE Fanuc	In Stock
IC693CMM305	Alstom CMM305 ALSPA N80 Enhanced Comm Module Series Six PLC GE Fanuc Series IC693C	In Stock
IC693CMM311	IC693CMM Communications Card user interfaces for the CMM311 and CMM711 9030	In Stock

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