

FSSB Fiber Optic Communication



Overview

FANUC PW0012 PW0013 SV1067 SV1068 SV0Alarm Code “U” 1. Content: FSSB communication abnormality in the inverter (COP10B) 2. Cause and Troubleshooting: • (a).

Key Takeaways

FSSB (Fanuc Serial Servo Bus) is a high-speed fiber optic communication network connecting the CNC controller to servo amplifiers, enabling real-time synchronization of motion commands and feedback. Overview of FSSB

FSSB is a fiber optic communication bus used in FANUC CNC and robotic systems to link the controller (master) with multiple servo amplifiers (slaves) . It operates as a closed-loop, high-speed network, transmitting position, speed, enable signals, and status information in real time. The fiber optic design ensures low latency and high signal integrity, which is critical for precise motion control in multi-axis machines .

Common FSSB Alarms and Causes

FSSB alarms indicate a communication failure between the controller and servo amplifiers, which can halt all motion. Typical alarms include SRVO-057, SV1067, and 926 FSSB alarms . Common causes are:

- Damaged or bent fiber optic cables: Physical stress can degrade signal quality or break the fiber .
- Loose or improperly seated connectors at the amplifier or controller .

- Dirty or scratched fiber ends, which reduce light transmission .
- Faulty servo amplifiers or FSSB interface boards, which can block communication downstream .
- Power supply instability, affecting signal integrity .

Troubleshooting FSSB Issues

To resolve FSSB communication problems, a systematic approach is recommended:

- Inspect Fiber Optic Cables: Check for bends, pinches, or damage. Swap cables between amplifiers to see if the alarm follows the cable, indicating a cable issue .
- Check Connectors and Fiber Ends: Clean and reseal connectors; ensure fiber tips are free of scratches or dirt .
- Verify Servo Amplifiers: If the alarm persists on the same axis, the amplifier or FSSB interface board may be faulty .
- Power Cycling: Sometimes cycling the power can temporarily clear alarms, but persistent issues indicate hardware or fiber problems .
- Check System Power: Ensure stable voltage to all components, as FSSB communication is sensitive to power fluctuations .

Key Considerations

- FSSB uses a ring topology, so a single faulty node can block communication to downstream axes .
- FANUC systems are designed to stop motion immediately if FSSB communication is unstable, preventing unsafe operation .
- Proper installation, careful handling of fiber cables, and regular inspection are essential to maintain reliable FSSB communication . FSSB is critical for synchronized, high-precision motion control in FANUC systems, and understanding its fiber optic network and common failure modes is essential for minimizing downtime and ensuring safe operation.

Article Content

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Key Checkpoints: • FSSB fiber optic communication • Servo amplifier side panels — try re-seating the connectors, as poor contact

FSSB Configuration and Troubleshooting Guide

The document provides instructions for setting up FSSB parameters for a CNC control system with 16i, 18i, or 21i controls. There are

FSSB fiber protocol : r/Fanuc

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Fanuc FSSB protocol

Does anyone know what protocol the FSSB optical connection between a rj3ib computer and amplifier uses. So far

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FANUC Communication Boards: FSSB, Ethernet, DeviceNet

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FSSB SYSTEM ALARM 926 BY DEFLECTED OPTICAL FIBER

CNC MACHINE How to connected FSSB OPTICALS CABLE WHAT IS FANUC

FANUC Alarm 926: Fanuc Alarm 926

Fanuc 926 FSSB ALARM indicates a communication failure on the Fiber-optic Serial Servo Bus between the CNC control unit and

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Perimeter Fiberoptic Cable, 30 Strand, 125" (FSSB-125)

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FSSB Alarm 926 Troubleshooting Guide | PDF | Numerical Control

This document provides troubleshooting information for Alarm 926 (FSSB ALARM) which occurs when there is a fault on the FSSB

Initialize setting of FSSB on Fanuc 0

The CNC controller and multiple servo amplifiers or spindle amplifiers are connected through a high-speed serial servo bus (FSSB:

A66L-6001-0023#L250R0 Fanuc 25cm Fibre Optical Cable

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FSSB fiber optic cable for Fanuc COP10A COP10B, 0.3m-10m lengths, CE certified, 1 piece per pack, 100000015 measurement unit,

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Fanuc FSSB parameter setting

Fanuc FSSB parameter setting,Tech Support 1. FSSB definition FSSB is the abbreviation of FANUC Serial Servo Bus. The FANUC

Fanucalpha FSSB Setup | PDF | Numerical Control | Amplifier

GE Fanuc Automation Computer Numerical Control Products a a Series Servo Amplifier Module (SVM) With FSSB Servo Setup

SV1067 FSSB: Configuration Error fault in Fanuc drive

SV1067 is a communication configuration alarm related to the Fanuc Serial Servo Bus (FSSB). FSSB is the optical fiber network that

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FSSB Faults

To test the FSSB, with the controller on, unplug the fiber cable at the Servo amp and look at the connector end. There

FANUC SV5134 Alarm: FSSB Startup Timeout Troubleshooting

If the FSSB cable itself is normal, check the fiber optic interfaces on the servo amplifier side and CNC side. A

Fanuc OPEN FSSB Communication Error: Service Information

The OPEN (Green) LED indicates normal communication between the servo amplifier and the main board via FSSB. This fault

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