

Issued by: Mitsubishi Electric Europe B.V. - UK Branch
 Document issue: V1.00 March 2010
 Produced by : - CTC
 Travellers Lane, Hatfield, Herts, AL10 8XB, UK
 Author: Matt Wills

Databank - Technical Bulletin

This document details the most common errors / problems found when configuring the FX3U-20SSCH-H for the first time.

1. Amplifier Forced Stop Error

Error code E6

Found on the front of the amplifier

Warning code 4006

Found in FX3U-20SSCH-H, BFM #29, #129.

Warning name: Servo forced stop warning

Servo forced stop warning EM1 is off.

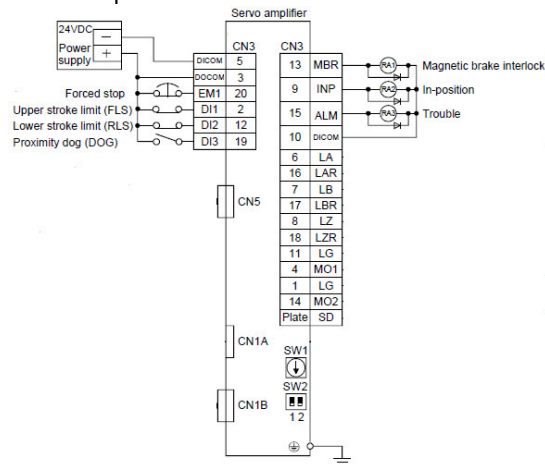
External forced stop was made valid. (EM1 was turned off.)

Ensure safety and deactivate forced stop.

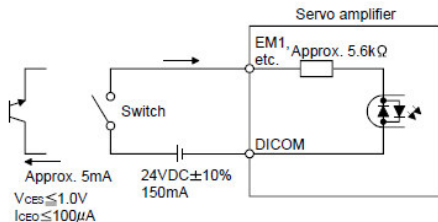
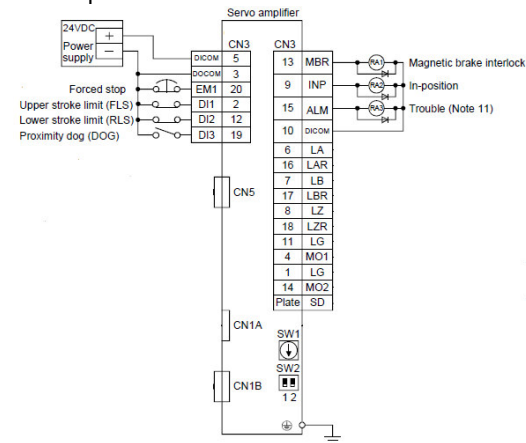
Remedy

Connect the EM1 input on the servo amplifier Pin 20 connector CN3.

Source input



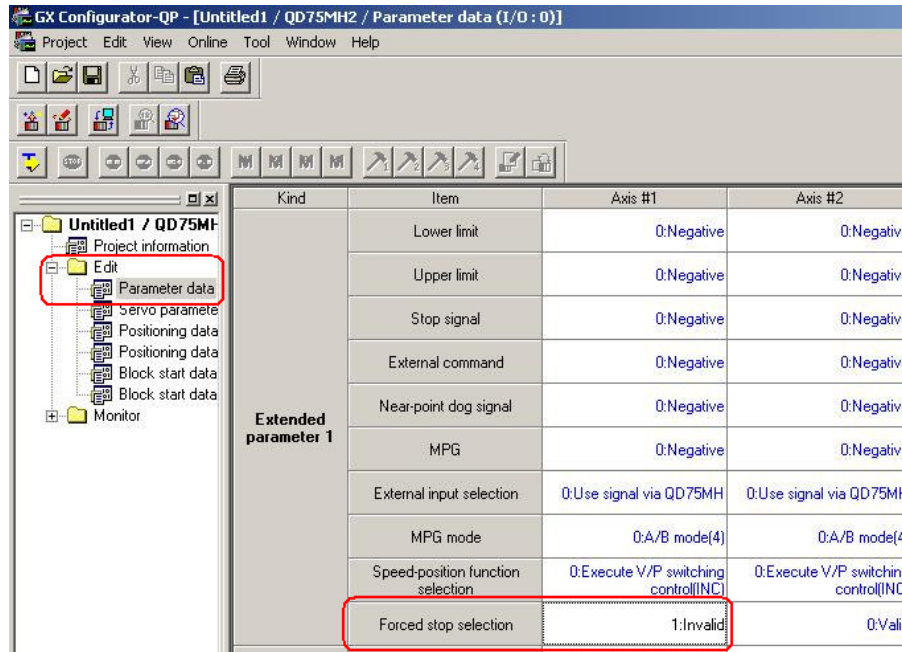
Sink input



Issued by: Mitsubishi Electric Europe B.V. - UK Branch
 Document issue: V1.00 March 2010
 Produced by : - CTC
 Travellers Lane, Hatfield, Herts, AL10 8XB, UK
 Author: Matt Wills

Databank - Technical Bulletin

To make this alarm invalid from GX Configurator FP select.



2. Power Circuit supply for the Servo Amplifier is OFF

Error code E9 or 10

Found on the front of the amplifier

Warning code 2010

Found in FX3U-20SSC-H, BFM #29, #129.

Warning name: Main circuit off warning

1. Servo-on command was issued with main circuit power off.

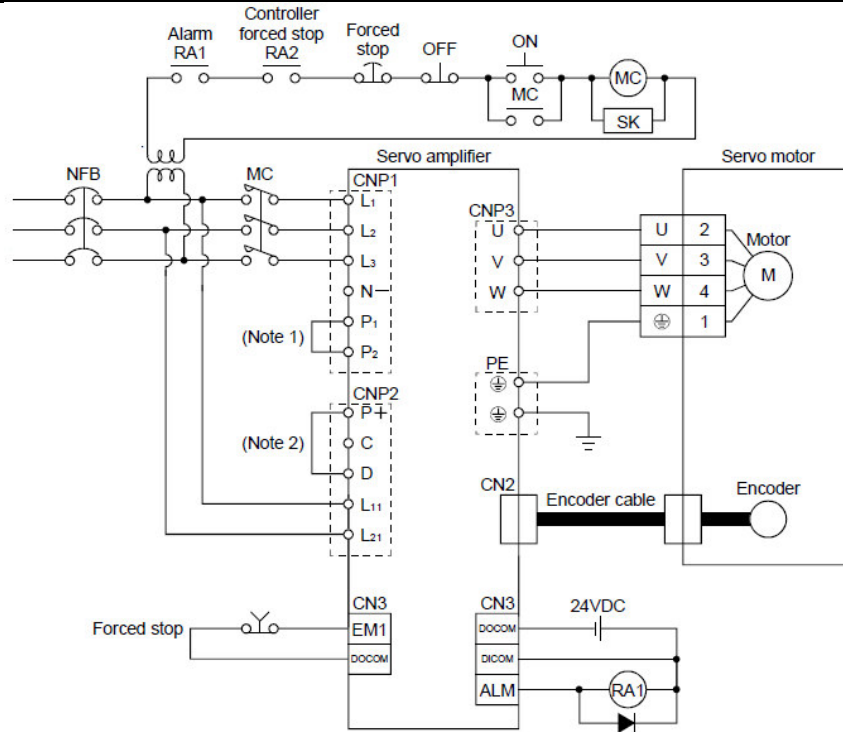
Remedy

Switch on main circuit power.

Make sure the proper supply voltage is across terminals L1,L2 and L3

Issued by: Mitsubishi Electric Europe B.V. - UK Branch
 Document issue: V1.00 March 2010
 Produced by : - CTC
 Travellers Lane, Hatfield, Herts, AL10 8XB, UK
 Author: Matt Wills

Databank - Technical Bulletin



3. Hardware Limit

Error code 4004

Found in FX3U-20SSC-H, BFM #29, #129.

Error name: Hardware stroke limit (+) or (-)

The hardware stroke limit upper or lower signal is input.

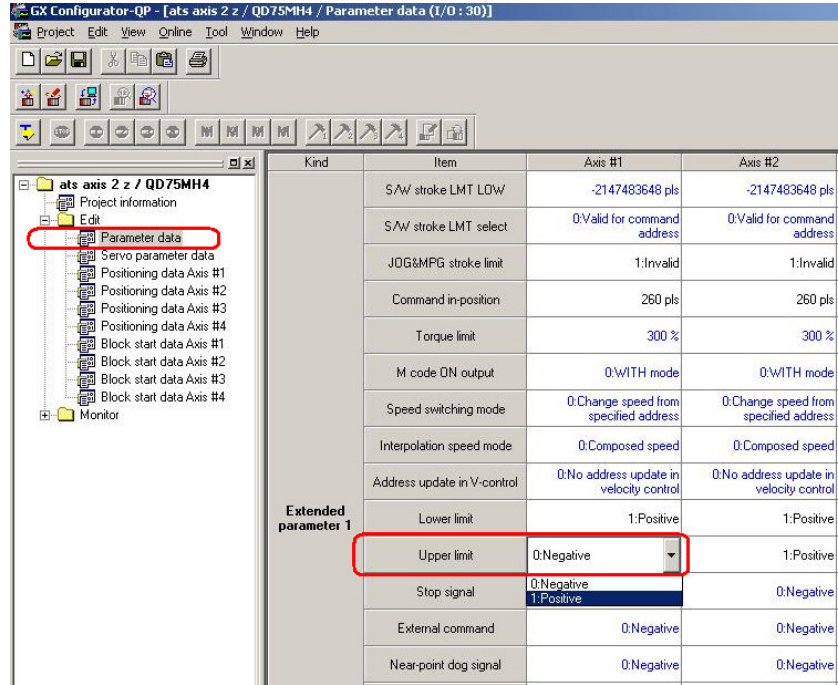
Remedy

Cancel the error with an axis error reset after moving the system to a position where an upper limit signal is not input using the JOG operation or manual pulse generator operation.

Usually also found in a system where limit switches are not required and therefore haven't been connected. Since the system expects to see a Normally Closed limit switch when they are not connected the system thinks that a limit has occurred. To correct this change the polarity of the limit switches in FX Configurator FP:

Issued by: Mitsubishi Electric Europe B.V. - UK Branch
 Document issue: V1.00 March 2010
 Produced by : - CTC
 Travellers Lane, Hatfield, Herts, AL10 8XB, UK
 Author: Matt Wills

Databank - Technical Bulletin



If no switch is connected to the stop input select 'Positive' logic

4. Absolute Position Erase

Error code 25

Found on the front of the amplifier

Warning code 2025

Found in FX3U-20SSC-H, BFM #29, #129.

Warning name: Absolute Position Erase

There are 2 causes for this error, but it is usually seen when configuring the system for the first time when Absolute mode is first switched on as the user has asked the system to work in Absolute mode, but has not yet specified a home position for the Servo Motor.

Cause 1: Power was switched on for the first time in the Absolute Position detection mode.

Remedy

After leaving the alarm occurring for a few minutes switch power off, then on again and then execute a home position return.

Cause 2: Absolute Position data in error, Voltage drop in encoder due to either a flat battery, or battery connection fault

Remedy

Check the connection of the battery, replace if the battery is depleted. Execute a home position return to re-establish the Absolute position data.

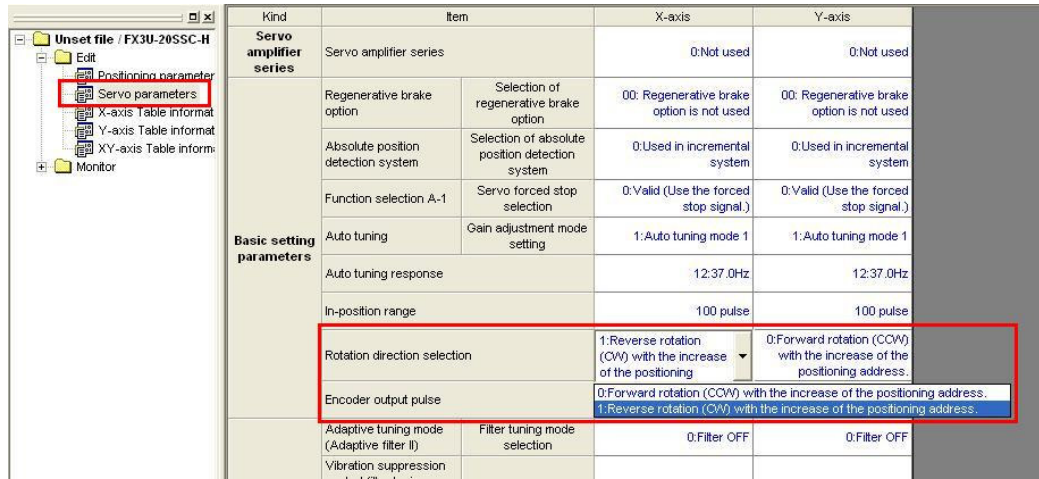
Issued by: Mitsubishi Electric Europe B.V. - UK Branch
 Document issue: V1.00 March 2010
 Produced by : - CTC
 Travellers Lane, Hatfield, Herts, AL10 8XB, UK
 Author: Matt Wills

Databank - Technical Bulletin

5. Servo motor turns the wrong way for the mechanics and desired direction of travel

Remedy

Change the motor's direction of rotation using the parameter in FX Configurator FP:



Kind	Item	X-axis	Y-axis
Servo amplifier series	Servo amplifier series	0: Not used	0: Not used
	Regenerative brake option	00: Regenerative brake option is not used	00: Regenerative brake option is not used
Basic setting parameters	Absolute position detection system	0: Used in incremental system	0: Used in incremental system
	Function selection A-1	0: Valid (Use the forced stop signal.)	0: Valid (Use the forced stop signal.)
	Auto tuning	1: Auto tuning mode 1	1: Auto tuning mode 1
	Auto tuning response	12: 37.0Hz	12: 37.0Hz
	In-position range	100 pulse	100 pulse
	Rotation direction selection	1: Reverse rotation (CW) with the increase of the positioning	0: Forward rotation (CCW) with the increase of the positioning address.
	Encoder output pulse	0: Forward rotation (CCW) with the increase of the positioning address. 1: Reverse rotation (CW) with the increase of the positioning address.	
	Adaptive tuning mode (Adaptive filter II)	Filter tuning mode selection	0: Filter OFF

Servo Parameters → Basic Setting Parameters: Rotation Direction Selection.