Fanuc Beta Servo A06B-6093-H151, A06B-6093-H152 Alarm List

QUESTIONS?

Program or Setting Alarms (PS alarms)

No	LED Display	Description	Countermeasure
000		A parameter that requires power-down has been specified	Turn the power off, then back on.
011		The specified feedrate is zero	Check the feedrate parameter specified with a function code
013		The specified feedrate (maximum feedrate) is zero	Check the value of parameter No. 043, which indicates the maximum feedrate that can be specified.
070		More than 32 blocks have been registered for a buffering operation.	Reduce the number of registered blocks to 32.
085		Input from the reader/puncher interface or the like caused an overrun, parity, or framing error)	Correct the baud of the input/output unit (always 4800) or other settings.
086		Input from the reader/puncher interface or the like includes an input/output unit operation ready signal (DR) that is set to off.	Turn the reader/puncher on. Check the cable connection.
087		After input from reader/puncher interface or the like stops, character input does not stop even though ten characters have been input.	Check the cable connection.
090		Reference position setting cannot be executed normally.	Move the tool in the direction of reference position return in jog mode at a speed that causes the servo position error to exceed 128. Then, specify another reference position
093		A first to third reference position return cannot be executed because the reference position has not yet been established.	Set the reference position.
224		The reference position has not yet been established. This occurs only when the ZRTN bit of parameter No.001 is set to 0.	Set the reference position.
250		Input data 1 is invalid.	Check input data 1, specified with a function code.
251		Input data 2 is invalid.	Check input data 2, specified with a function code.
255		Operation can not be activated because an invalid mode is specified or because block execution is in progress.	Check the mode. Check whether a block is being executed.
290		The interface switch signal (DRC) was switched during block execution.	Switch the signal after block execution stops.
291		The speed of an axial movement specified by an external pulse has exceeded the upper limit. This occurs only when the EPEXA bit of parameter No.001 is set to 1.	Check the speed specified by the external pulse. Check the magnification of the external pulse (parameters No.062 and 063).
292		A checksum error for the battery-powered memory was detected	Parameters are cleared. Set the parameters again. If this alarm subsequently recurs, replace the unit.

Pulse coder alarms

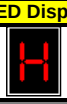
No.	LED display	Description	Countermeasure
300		A communication error (DTER) for the serial pulse coder was detected.	Check the continuity of the signal cable. If the cable is normal, the pulse coder may be defective. Turn the power off. If the alarm recurs, replace the serial pulse coder and motor.
301		A communication error(CRCER) for serial pulse coder was detected.	Check the continuity of the signal cable. If the pulse coder is normal, the pulse coder or servo unit may be defective. This error can also be caused by external noise.
302		A communication error (STBER) for serial pulse coder was detected.	Check the continuity of the signal cable. If the cable is normal, the pulse coder or servo unit may be defective. This error can also be caused by external noise.
303		An LED disconnection (LDAL) was detected in the serial pulse coder.	Turn the power off. If this alarm recurs when the power is reapplied, replace the motor.
304		A mispulse alarm (PMAL) for the serial pulse coder was detected.	Turn the power off. If this alarm recurs when the power is reapplied, replace the motor.
305		A miscount alarm (CMAL) for the serial pulse coder was detected	Turn the power off. If this alarm recurs when the power is reapplied, replace the motor.
306		The motor was overheated (OHAL).	This alarm is issued when the amplifier has overheated, causing the thermostat to trip. Possible causes include an excessively high ambient temperature and strict operating conditions. Turn the power off for about ten minutes. If the alarm recurs, replace the amplifier.
308		A soft phase alarm (SPHAL) was detected.	Turn the power off. This alarm may be caused by noise.
319		When the absolute pulse coder is used, the motor has not yet rotated through more than one turn after the first power up.	Turn the motor through more than one turn in jog feed mode, then turn the power off then back on.
350		The battery voltage of the absolute pulse coder is low.	Replace the battery. Restart the operation from reference position return.
351		The battery voltage of the absolute pulse coder is low. (Warning)	Replace the battery.

Servo alarms

No.	LED Display	Description	Countermeasure
400		The servo motor has overheated (estimated value)	Turn the power off. After a while, turn the power back on. Possible causes include an excessively high acceleration/deceleration frequency.
401		Servo amplifier ready signal (DRDY) went off.	
403		The cooling fins have overheated (hardware detection)	The load on the motor may be too high. Re-examine the load conditions.
404		The regenerative discharge unit has overheated.	This alarm is issued when the average regenerative discharge energy is too high (when the acceleration/deceleration frequency is too high, for example). When the regenerative discharge resistor is not being used, check whether a dummy connector is fitted to the CX11-6 connector. When the regenerative discharge resistor is being used, (1) The average regenerative discharge energy may be too high. Decrease the acceleration/deceleration frequency. (2) The thermostat line of the separate regenerative discharge unit may not be connected properly. Check the connection. (3) The thermostat of the separate regenerative discharge unit may be defective. Disconnect the separate regenerative discharge unit, then check the thermostat. If the thermostat is open even though the separate regenerative discharge unit is cool, replace the separate regenerative discharge unit. If (1) to (3) are not the cause of alarm, replace the servo amplifier.
405		Reference position return could not be executed correctly.	Re-execute reference position return.
410		The servo position error in the stop state is larger than the value specified in parameter No.110.	Determine the mechanical cause of the large position error. If no mechanical cause is found, specify a larger value for the parameter.
411		The servo position error during the movement is larger than the value specified in parameter No.182.	Determine the mechanical cause of the large position error. If no mechanical cause is found, apply any of the following countermeasures. (1) Specify a larger value for

No.	LED Display	Description	Countermeasure
412		An overcurrent alarm is issued.	This alarm is issued when an excessively large current flows in the main circuit. (1) Check whether a valid motor number is specified in parameter No.30. (2) Check whether the standard values are specified in the current control parameters for servo control. Correct current control is possible only when the standard values are specified for the following parameters: 70, 71, 72, 78, 79, 84, 85, 86, 87, 88, 89, 90. (3) Disconnect the motor power line from the amplifier connector. Then, release the emergency stop state. -If the overcurrent alarm continues, replace the amplifier. -If no overcurrent alarm is issued, (4) Disconnect the motor power line from the amplifier and check the insulation between the ground and each of U, V, and W. (5) Connect the power line. Observe the waveform of the motor current (IR, IS) while the motor is accelerating or decelerating. (6) If (1) to (4) above are not the cause of the alarm, the pulse coder, command cable, or internal hardware of the CNC may be defective.
413		A DC link over voltage alarm is issued.	This alarm is issued when DC link voltage of the main circuit is too high. (1) The supply voltage for dynamic power may exceed the rated value. Check the voltage. (2) The regenerative discharge unit may not be properly connected. Check the connections. (3) The resistance of the separate regenerative discharge unit may be abnormal. Disconnect the separate regenerative discharge unit, then check the resistance. If (1) to (3) are not the cause of the alarm, replace the servo amplifier.
414		A DC link low voltage alarm is issued.	This alarm is issued when DC link voltage of the main circuit is too low. (1) The external circuit braker may be turned off. Check the circuit braker. (2) The supply voltage for dynamic power is lower than the rated value. Check the voltage. (3) The external magnetic contactor may not be properly connected. Check the connections. If (1) to (3) are not the cause of the alarm, replace the servo amplifier.
417		A parameter has been specified incorrectly.	Check the following parameters: No.30: Is the specified motor type correct? No.31: is the specified direction of rotation of the motor correct? No.106: Is the denominator of the number of pulses per single revolution of the motor 0? No.180: is the specified reference counter capacity 0 or negative value?
418		A DO alarm is issued.	Replace the servo unit.
423		The specified speed exceeds 32767000 detection units per second.	Re-examine the CMR and speed settings.
425		The cooling fan has stopped.	(1) Check that fan is not clogged with foreign matter. (2) Check that the power connector of the fan is connected properly. (3) Replace the fan or servo unit.

Overtravel alarms

No.	LED Display	Description	Countermeasure
500		The positive stroke limit has been exceeded.	Check whether *+OT and *-OT are connected correctly. Check whether a correct move command is specified.
501		The negative stroke limit has been exceeded.	Move the tool in the opposite direction in jog mode, then perform a reset.
No.	**LED Display**	**Description**	**Countermeasure**
510		The positive soft stroke limit has been exceeded.	Check whether appropriate values have been specified for parameters No.142 and 143.Check whether a valid move command
511		The negative soft stroke limit has been exceeded.	is specified. Move the tool in the opposite direction in jog mode, then perform a reset.

System alarms

No.	LED Display	Description	Countermeasure
–		An error was detected in the RAM write/read test at power-up.	Replace the unit.
–		An error was detected in the data collation check for the battery-powered memory.	Turn the power off then back on. Than, re-enter the parameters. If this alarm recurs, replace the unit.
–		A data transfer alarm for the battery-powered memory has been issued.	Replace the unit.
–		A watchdog alarm was issued.	Turn the power off then back on. If this alarm recurs, replace the unit.
–		A checksum alarm for the control software ROM is issued.	Replace the unit.
–		A checksum alarm for the ROM that is built into the CPU is issued.	Replace the unit.
–		An error was detected in the control circuit.	Replace the unit.

I/O link alarm

No.	LED Display	Description	Countermeasure
–		A FANUC I/O link error occurred. A unit connected to the line was turned off.	Turn off the power to all units connected to the line. Then, turn on the slave devices, followed by the master device.

No LED Display

No.	LED Display	Description	Countermeasure
–		The control circuit is not operating normally.	(1) Check the +24VDC control supply voltage. If the voltage is low, increase the voltage to an appropriate level (2) Check whether a fuse in the servo unit has blown. If a blown fuse is found, replace it. If (1) and (2) are not the cause, replace the servo amplifier.