

Driver Error List Yaskawa

| Display | Name | Cause | Investigative Actions | Corrective Actions |
|---------|---|--|---|---|
| A.020 | Parameter Checksum Error 1 (The parameter data in the SERVOPACK is incorrect.) | The power supply voltage suddenly dropped. | Measure the power supply voltage. | Set the power supply voltage within the specified range, and set Fn005 to initialize the parameter. |
| | | The power supply went OFF while changing a parameter setting. | Check the circumstances when the power supply went OFF. | Set Fn005 to initialize the parameter and then set the parameter again. |
| | | The number of times that parameters were written exceeded the limit. | Check to see if the parameters were frequently changed through the host controller. | The SERVOPACK may be faulty. Repair or replace the SERVOPACK. Reconsider the method of writing parameters. |
| | | Malfunction caused by noise from the AC power supply or grounding line, static electricity noise, etc. | Turn the power supply ON and OFF several times. If the alarm still occurs, there may be noise interference. | Take countermeasures against noise. |
| | | Gas, water drops, or cutting oil entered the SERVOPACK and caused failure of the internal components. | Check the installation conditions. | The SERVOPACK may be faulty. Replace the SERVOPACK. |
| | | A SERVOPACK fault occurred. | Turn the power supply ON and OFF several times. If the alarm still occurs, the SERVOPACK may be faulty. | The SERVOPACK may be faulty. Replace the SERVOPACK. |
| A.021 | Parameter Format Error 1 (The parameter data in the SERVOPACK is incorrect.) | The software version of SERVOPACK that caused the alarm is older than that of the written parameter. | Check Fn012 to see if the set software version agrees with that of the SERVOPACK. If not, an alarm may occur. | Write the parameter of another SERVOPACK of the same model with the same software version. Then turn the power OFF and then ON again. |
| | | A SERVOPACK fault occurred. | -- | The SERVOPACK may be faulty. Replace the SERVOPACK. |
| A.022 | System Checksum Error 1 (The parameter data in the SERVOPACK is incorrect.) | The power supply voltage suddenly dropped. | Measure the power supply voltage. | The SERVOPACK may be faulty. Replace the SERVOPACK. |
| | | The power supply went OFF while setting an utility function. | Check the circumstances when the power supply went OFF. | The SERVOPACK may be faulty. Replace the SERVOPACK. |
| | | A SERVOPACK fault occurred. | Turn the power supply ON and OFF several times. If the alarm still occurs, the SERVOPACK may be faulty. | The SERVOPACK may be faulty. Replace the SERVOPACK. |

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| A.030 | Main Circuit Detector Error | A SERVOPACK fault occurred. | -- | The SERVOPACK may be faulty. Replace the SERVOPACK. |
| A.040 | Parameter Setting Error 1 (The parameter setting was out of the setting range.) | The SERVOPACK and servomotor capacities do not match each other. | Check the combination of SERVOPACK and servomotor capacities. | Select the proper combination of SERVOPACK and servomotor capacities. |
| | | A SERVOPACK fault occurred. | -- | The SERVOPACK may be faulty. Replace the SERVOPACK. |
| | | The parameter setting is out of the setting range. | Check the setting ranges of the parameters that have been changed. | Set the parameter to a value within the setting range. |
| | | The electronic gear ratio is out of the setting range. | Check the electronic gear ratio. The ratio must satisfy: $0.001 < (Pn20E/Pn210) < 4000$. | Set the electronic gear ratio in the range: $0.001 < (Pn20E/Pn210) < 4000$. |
| A.041 | Encoder Output Pulse Setting Error | The encoder output pulse (Pn212) is out of the setting range and does not satisfy the setting conditions. | Check the parameter Pn212. | Set Pn212 to a correct value. |
| A.042 | Parameter Combination Error | The speed of program JOG operation (Fn004) is lower than the setting range after having changed the electronic gear ratio (Pn20E/Pn210) or the servomotor. | Check that the detection conditions are satisfied. | Decrease the setting of the electronic gear ratio (Pn20E/Pn210). |
| | | The speed of program JOG operation (Fn004) is lower than the setting range after having changed the setting of the program JOG movement speed (Pn533). | Check that the detection conditions are satisfied. | Increase the setting of the program JOG movement speed (Pn533). |
| | | The moving speed of advanced autotuning is lower than the setting range after having changed the electronic gear ratio (Pn20E/Pn210) or the servomotor. | Check that the detection conditions are satisfied. | Decrease the setting of the electronic gear ratio (Pn20E/Pn210). |
| A.044 | Semi-closed/Fullyclosed Loop Control Parameter Setting Error | The setting of the fully-closed module does not match with that of Pn002.3. | Check the settings of Pn002.3. | The setting of fully-closed module must be compatible with the setting of Pn002.3. |

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| A.050 | Combination Error (The SERVOPACK and servomotor capacities do not correspond.) | The SERVOPACK and servomotor capacities do not match each other. | Check the capacities to see if they satisfy the following condition: $1/4 \leq (\text{Servomotor capacity}) / (\text{SERVOPACK capacity}) \leq 4$. | Select the proper combination of SERVOPACK and servomotor capacities. |
| | | An encoder fault occurred. | Replace the servomotor and see if the alarm occurs again. | Replace the servomotor (encoder). |
| | | A SERVOPACK fault occurred. | -- | The SERVOPACK may be faulty. Replace the SERVOPACK. |
| A.051 | Unsupported Device Alarm | An unsupported serial converter unit, encoder, or external encoder is connected to the SERVOPACK. | Check the product specifications, and select the correct model. | Select the correct combination of units. |
| A.0b0 | Cancelled Servo ON Command Alarm | After executing the utility function to turn ON the power to the motor, the servo ON signal (/SON) was sent from an external device. | -- | Turn the SERVOPACK power supply OFF and then ON again or execute a software reset. |
| A.100 | Overcurrent or Heat Sink Overheated (An overcurrent flowed through the IGBT or heat sink of SERVOPACK overheated.) | Incorrect wiring or contact fault of main circuit cable or servomotor main circuit cable. | Check the wiring. | Correct the wiring. |
| | | Short-circuit or ground fault of main circuit cable or servomotor main circuit cable. | Check for short-circuits across the servomotor terminal phases U, V, and W, or between the grounding and servomotor terminal phases U, V, or W. | The cable may be short-circuited. Replace the cable. |
| | | Short-circuit or ground fault inside the servomotor. | Check for short-circuits across the servomotor terminal phases U, V, and W, or between the grounding and servomotor terminal phases U, V, or W. | The servomotor may be faulty. Replace the servomotor. |

| Display | Name | Cause | Investigative Actions | Corrective Actions |
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| A.100 (cont.) | Overcurrent or Heat Sink Overheated (An overcurrent flowed through the IGBT or heat sink of SERVOPACK overheated.) | Short-circuit or ground fault inside the SERVOPACK. | Check for short-circuits across the servomotor connection terminals U, V, and W on the SERVOPACK, or between the grounding and terminal U, V, or W. | The SERVOPACK may be faulty. Replace the SERVOPACK. |
| | | Incorrect wiring or contact fault of the regenerative resistor. | Check the wiring. | Correct the wiring. |
| | | The dynamic brake (DB: Emergency stop executed from the SERVOPACK) was frequently activated, or the DB overload alarm occurred. | Check the power consumed by DB resistance (Un00B) to see how many times the DB has been used. Or, check the alarm history display Fn000 to see if the DB overload alarm A.730 or A.731 was reported. | Change the SERVOPACK model, operating conditions, or the mechanism so that the DB does not need to be used so frequently. |
| | | The generated regenerative resistor value exceeded the SERVOPACK regenerative energy processing capacity. | Check the regenerative load ratio (Un00A) to see how many times the regenerative resistor has been used. | Check the operating condition including overload, and reconsider the regenerative resistor value. |
| | | The SERVOPACK regenerative resistance is too small. | Check the regenerative load ratio (Un00A) to see how many times the regenerative resistor has been used. | Change the regenerative resistance value to a value larger than the SERVOPACK minimum allowable resistance value. |
| | | A heavy load was applied while the servomotor was stopped or running at a low speed. | Check to see if the operating conditions are outside servo drive specifications. | Reduce the load applied to the servomotor or increase the operating speed. |
| | | Malfunction caused by noise interference. | Improve the wiring or installation environment, such as by reducing noise, and check to see if the alarm recurs. | Take countermeasures for noise, such as correct wiring of the FG. Use an FG wire size equivalent to the SERVOPACK main circuit wire size. |
| | | A SERVOPACK fault occurred. | -- | Turn the power supply OFF and then ON again. If the alarm still occurs, the SERVOPACK may be faulty. Replace the SERVOPACK. |

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|---------|-----------------------|---|---|---|
| A.300 | Regeneration Error | - Regenerative resistor capacity (Pn600) is set to a value other than 0 for a SGDVR70, -R90, -1R6, -2R1, or -2R8 SERVOPACK, and an external regenerative resistor is not connected. - An external regenerative resistor is not connected to the SGDVR470, SGDVR550, SGDVR590, SGDVR780, SGDVR210, SGDVR260, SGDVR280, or SGDVR370 SERVOPACK. | Check the external regenerative resistor connection and the value of the Pn600. | Connect the external regenerative resistor, or set Pn600 to 0 if no regenerative resistor is required. |
| | | The jumper between the power supply terminals B2 and B3 is removed. | Confirm that a jumper is mounted between the power supply terminals B2 and B3. | Correctly mount a jumper. |
| | | The external regenerative resistor is incorrectly wired, or is removed or disconnected. | Check the external regenerative resistor connection. | Correctly connect the external regenerative resistor. |
| | | A SERVOPACK fault occurred. | -- | While the main circuit power supply is OFF, turn the control power supply OFF and then ON again. If the alarm still occurs, the SERVOPACK may be faulty. Replace the SERVOPACK. |
| A.320 | Regenerative Overload | The power supply voltage exceeds the specified limit. | Measure the power supply voltage. | Set the power supply voltage within the specified range. |
| | | Insufficient external regenerative resistance, regenerative resistor capacity, or SERVOPACK capacity. Or, regenerative power has been continuously flowing back. | Check the operating condition or the capacity using the capacity selection Software SigmaJunmaSize+, etc. | Change the regenerative resistance, regenerative resistor capacity, or SERVOPACK capacity. Reconsider the operating conditions using the capacity selection software Sigma-JunmaSize+, etc. |
| | | Regenerative power continuously flowed back because negative load was continuously applied. | Check the load applied to the servomotor during operation. | Reconsider the system including servo, machine, and operating conditions. |
| | | The setting of parameter Pn600 is smaller than the external regenerative resistor's capacity. | Check the external regenerative resistor connection and the value of the Pn600. | Set the Pn600 to a correct value. |
| | | The external regenerative resistance is too high. | Check the regenerative resistance. | Change the regenerative resistance to a correct value or use an external regenerative resistor of appropriate capacity. |
| | | A SERVOPACK fault occurred. | -- | The SERVOPACK may be faulty. Replace the SERVOPACK. |

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|---------|--|---|---|---|
| A.330 | Main Circuit Power Supply Wiring Error (Detected when the power to the main circuit is turned ON.) | The regenerative resistor disconnected when the SERVOPACK power supply voltage was high. | Measure the resistance of the regenerative resistor using a measuring instrument. | When using a regenerative resistor built in the SERVOPACK: Replace the SERVOPACK. When using an external regenerative resistor: Replace the external regenerative resistor. |
| | | In the AC power input mode, DC power was supplied. | Check the power supply to see if it is a DC power supply. | Correct the settings to match the actual power supply specifications. |
| | | In the DC power input mode, AC power was supplied. | Check the power supply to see if it is an AC power supply. | Correct the settings to match the actual power supply specifications. |
| | | Regenerative resistor capacity (Pn600) is not set to 0 even though the regenerative resistor is disconnected. | Check if regenerative resistor is connected and check the regenerative resistor capacity. | Set Pn600 to 0. |
| | | A SERVOPACK fault occurred. | -- | The SERVOPACK may be faulty. Replace the SERVOPACK. |
| A.400 | Overvoltage (Detected in the SERVOPACK main circuit power supply section.) | . For 100-VAC SERVOPACKs: The AC power supply voltage exceeded 145 V. . For 200-VAC SERVOPACKs: The AC power supply voltage exceeded 290 V. . For 400-VAC SERVOPACKs: The AC power supply voltage exceeded 580 V. . For 200-VAC SERVOPACKs: with DC power supply input: The DC power supply voltage exceeded 410 V. . For 400-VAC SERVOPACKs: The DC power supply voltage exceeded 820 V. | Measure the power supply voltage. | Set AC/DC power supply voltage within the specified range. |
| | | The power supply is unstable, or was influenced by a lightning surge. | Measure the power supply voltage. | Improve the power supply conditions by installing a surge absorber, etc. Then, turn the power supply OFF and ON again. If the alarm still occurs, the SERVOPACK may be faulty. Replace the SERVOPACK. |

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| A.400 (cont.) | Overvoltage (Detected in the SERVOPACK main circuit power supply section.) | Acceleration/deceleration was executed under the following conditions. . The AC power supply voltage of 100-VAC SERVOPACK was in the range between 115 V and 135 V. . The AC power supply voltage of 200-VAC SERVOPACK was in the range between 230 V and 270 V. . The AC power supply voltage of 400-VAC SERVOPACK was in the range between 480 V and 560 V. | Check the power supply voltage and the speed and torque during operation. | Set AC power supply voltage within the specified range. |
| | | The external regenerative resistance is too high for the actual operating conditions. | Check the operating conditions and the regenerative resistance. | Select a regenerative resistance value appropriate for the operating conditions and load. |
| | | The moment of inertia ratio exceeded the allowable value. | Confirm that the moment of inertia ratio is within the allowable range. | Increase the deceleration time, or reduce the load. |
| | | A SERVOPACK fault occurred. | -- | Turn the control power OFF and then ON again while the main circuit power supply is OFF. If the alarm still occurs, the SERVOPACK may be faulty. Replace the SERVOPACK. |
| A.410 | Undervoltage (Detected in the SERVOPACK main circuit power supply section.) | . For 100-VAC SERVOPACKs: The AC power supply voltage is 49 V or less. . For 200-VAC SERVOPACKs: The AC power supply voltage is 120 V or less. . For 400-VAC SERVOPACKs: The AC power supply voltage is 240 V or less. | Measure the power supply voltage. | Set the power supply voltage within the specified range. |
| | | The power supply voltage dropped during operation. | Measure the power supply voltage. | Increase the power supply capacity. |
| | | Occurrence of instantaneous power interruption. | Measure the power supply voltage. | When the instantaneous power cut hold time (Pn509) is set, decrease the setting. |
| | | The SERVOPACK fuse is blown out. | -- | Replace the SERVOPACK, connect a reactor, and run the SERVOPACK. |
| | | A SERVOPACK fault occurred. | -- | The SERVOPACK may be faulty. Replace the SERVOPACK. |

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|---------|---|---|--|--|
| A.450 | Main-Circuit Capacitor Overvoltage | A SERVOPACK fault occurred. | -- | Replace the SERVOPACK. |
| A.510 | Overspeed (The servomotor rotational speed exceeds the maximum.) | The order of phases U, V, and W in the servomotor wiring is incorrect. | Check the servomotor wiring. | Confirm that the servomotor is correctly wired. |
| | | A reference value exceeding the overspeed detection level was input. | Check the input value. | Reduce the reference value or adjust the gain. |
| | | The motor speed exceeded the maximum. | Check the servomotor speed waveform. | Reduce the speed reference input gain, adjust the servo gain, or reconsider the operating conditions. |
| | | A SERVOPACK fault occurred. | -- | The SERVOPACK may be faulty. Replace the SERVOPACK. |
| A.511 | Overspeed of Encoder Output Pulse Rate | The encoder output pulse frequency exceeded the limit. | Check the encoder output pulse setting. | Decrease the setting of the encoder output pulse (Pn212). |
| | | The encoder output pulse output frequency exceeded the limit because the servomotor speed was too high. | Check the encoder output pulse output setting and servomotor speed. | Decrease the servomotor speed. |
| A.520 | Vibration Alarm | Abnormal vibration was detected at the servomotor speed. | Check for abnormal noise from the servomotor, and check the speed and torque waveforms during operation. | Reduce the servomotor speed or reduce the speed loop gain (Pn100). |
| | | The moment of inertia ratio (Pn103) value is greater than the actual value or is greatly changed. | Check the moment of inertia ratio. | Set the moment of inertia ratio (Pn103) to an appropriate value. |
| A.521 | Autotuning Alarm (Vibration was detected while executing the advanced autotuning, one-parameter tuning, EasyFFT, or tuning-less function.) | The servomotor vibrated considerably while performing tuningless function (factory setting). | Check the servomotor speed waveform. | Reduce the load so that the moment of inertia ratio falls within the allowable value, or raise the tuning level using the tuning-less levels setting (Fn200) or reduce the load level. |
| | | The servomotor vibrated considerably during advanced autotuning, one-parameter tuning, or EasyFFT. | Check the servomotor speed waveform. | Check the operation procedure of corresponding function and take a corrective action. |

| Display | Name | Cause | Investigative Actions | Corrective Actions |
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| A.710 A.720 - Overload A.710 - High Load A.720 - Low Load | | Incorrect wiring or contact fault of servomotor and encoder. | Check the wiring. | Confirm that the servomotor and encoder are correctly wired. |
| | | Operation beyond the overload protection characteristics. | Check the servomotor overload characteristics and executed run command. | Reconsider the load conditions and operating conditions. Or, increase the servomotor capacity. |
| | | Excessive load was applied during operation because the servomotor was not driven due to mechanical problems. | Check the executed operation reference and servomotor speed. | Remove the mechanical problems. |
| | | A SERVOPACK fault occurred. | -- | The SERVOPACK may be faulty. Replace the SERVOPACK. |
| A.730 A.731 | Dynamic Brake Overload (An excessive power consumption of dynamic brake was detected.) | The servomotor rotates because of external force. | Check the operation status. | Take measures to ensure the servomotor will not rotate because of external force. |
| | | The rotating energy at a DB stop exceeds the DB resistance capacity. | Check the power consumed by DB resistance (Un00B) to see how many times the DB has been used. | Reconsider the following: . Reduce the servomotor reference speed. . Reduce the moment of inertia ratio. . Reduce the number of times of the DB stop operation. |
| | | A SERVOPACK fault occurred. | -- | The SERVOPACK may be faulty. Replace the SERVOPACK. |
| A.740 | Overload of Surge Current Limit Resistor (The main circuit power is turned ON/OFF too frequently.) | The inrush current limit resistor operation frequency at the main circuit power supply ON/OFF operation exceeds the allowable range. | -- | Reduce the frequency of turning the main circuit power supply ON/OFF. |
| | | A SERVOPACK fault occurred. | -- | The SERVOPACK may be faulty. Replace the SERVOPACK. |
| A.7A0 | Heat Sink Overheated (Detected when the heat sink temperature exceeds 100°C.) | The surrounding air temperature is too high. | Check the surrounding air temperature using a thermostat. | Decrease the surrounding air temperature by improving the SERVOPACK installation conditions. |
| | | The overload alarm has been reset by turning OFF the power too many times. | Check the alarm history display (Fn000) to see if the overload alarm was reported. | Change the method for resetting the alarm. |

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|------------------|--|--|--|--|
| A.7A0 (cont.) | Heat Sink Overheated (Detected when the heat sink temperature exceeds 100°C.) | Excessive load or operation beyond the regenerative energy processing capacity. | Check the accumulated load ratio (Un009) to see the load during operation, and the regenerative load ratio (Un00A) to see the regenerative energy processing capacity. | Reconsider the load and operating conditions. |
| | | Incorrect SERVOPACK installation orientation or/and insufficient space around the SERVOPACK. | Check the SERVOPACK installation conditions. | Install the SERVOPACK correctly as specified. |
| | | A SERVOPACK fault occurred. | -- | The SERVOPACK may be faulty. Replace the SERVOPACK. |
| A.7AB | Built-in Fan in SERVOPACK Stopped | The fan inside the SERVOPACK stopped. | Check for foreign matter or debris inside the SERVOPACK. | Remove foreign matter or debris from the SERVOPACK. If the alarm still occurs, the SERVOPACK may be faulty. Replace the SERVOPACK. |
| A.810 | Encoder Backup Error (Only when an absolute encoder is connected.) (Detected on the encoder side.) | Alarm occurred when the power to the absolute encoder was initially turned ON. | Check to see if the power was turned ON initially. | Set up the encoder (Fn008). |
| | | The encoder cable disconnected, and connected again. | Check to see if the power was turned ON initially. | Confirm the connection and set up the encoder (Fn008). |
| | | The power from both the control power supply (+5 V) from the SERVOPACK and the battery power supply is not being supplied. | Check the encoder connector battery or the connector contact status. | Replace the battery or take similar measures to supply power to the encoder, and set up the encoder (Fn008). |
| | | An absolute encoder fault occurred. | -- | If the alarm cannot be reset by setting up the encoder again, replace the servomotor. |
| | | A SERVOPACK fault occurred. | -- | The SERVOPACK may be faulty. Replace the SERVOPACK. |
| A.820 | Encoder Checksum Error (Detected on the encoder side.) | An encoder fault occurred. | -- | Set up the encoder again using Fn008. If the alarm still occurs, the servomotor may be faulty. Replace the servomotor. |
| | | A SERVOPACK fault occurred. | -- | The SERVOPACK may be faulty. Replace the SERVOPACK. |

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| A.830 | Absolute Encoder Battery Error (The absolute encoder battery voltage is lower than the specified value.) | The battery connection is incorrect. | Check the battery connection. | Reconnect the battery. |
| | | The battery voltage is lower than the specified value 2.7V. | Measure the battery voltage. | Replace the battery. |
| | | A SERVOPACK fault occurred. | -- | The SERVOPACK may be faulty. Replace the SERVOPACK. |
| A.840 | Encoder Data Error (Detected on the encoder side.) | The encoder malfunctioned. | -- | Turn the power supply OFF and then ON again. If the alarm still occurs, the servomotor may be faulty. Replace the servomotor. |
| | | Malfunction of encoder because of noise interference, etc. | -- | Correct the wiring around the encoder by separating the encoder cable from the servomotor main circuit cable or by checking the grounding and other wiring. |
| A.850 | Encoder Overspeed (Detected when the control power supply was turned ON.) (Detected on the encoderside.) | The servomotor was running at 200 min ⁻¹ or higher when the control power supply was turned ON. | Check the motor rotating speed (Un000) to confirm the servomotor speed when the power is turned ON. | Reduce the servomotor speed to a value less than 200 min ⁻¹ , and turn ON the control power supply. |
| | | An encoder fault occurred. | -- | Turn the power supply OFF and then ON again. If the alarm still occurs, the servomotor may be faulty. Replace the servomotor. |
| | | A SERVOPACK fault occurred. | -- | Turn the power supply OFF and then ON again. If the alarm still occurs, the SERVOPACK may be faulty. Replace the SERVOPACK. |
| A.860 | Encoder Overheated (Only when an absolute encoder is connected.) (Detected on the encoder side.) | The ambient operating temperature around the servomotor is too high. | Measure the ambient operating temperature around the servomotor. | The ambient operating temperature must be 40°C or less. |
| | | The servomotor load is greater than the rated load. | Check the accumulated load ratio (Un009) to see the load. | The servomotor load must be within the specified range. |
| | | An encoder fault occurred. | -- | Turn the power supply OFF and then ON again. If the alarm still occurs, the servomotor may be faulty. Replace the servomotor. |
| | | A SERVOPACK fault occurred. | -- | Turn the power supply OFF and then ON again. If the alarm still occurs, the SERVOPACK may be faulty. Replace the SERVOPACK. |

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| A.8A0 | External Encoder Error | Setting the zero point position of external absolute encoder failed because the servomotor rotated. | Before setting the zero point position, use the fully-closed feedback pulse counter (Un00E) to confirm that the servomotor is not rotating. | The servomotor must be stopped while setting the zero point position. |
| | | An external encoder fault occurred. | -- | Replace the external encoder. |
| A.8A1 | External Encoder Error of Module | An external encoder fault occurred. | -- | Replace the external encoder. |
| | | A serial converter unit fault occurred. | -- | Replace the serial converter unit. |
| A.8A | External Encoder Error of Sensor (Incremental) | An external encoder fault occurred. | -- | Replace the external encoder. |
| A.8A3 | External Encoder Error of Position (Absolute) | An external absolute encoder fault occurred. | -- | The external absolute encoder may be faulty. Refer to the encoder manufacturer's instruction manual for corrective actions. |
| A.8A5 | External Encoder Overspeed | The overspeed from the external encoder occurred. | Check the maximum speed of the external encoder. | Keep the external encoder below its maximum speed. |
| A.8A6 | External Encoder Overheated | The overheat from the external encoder occurred. | -- | Repair or replace the external encoder. |
| A.b10 | Speed Reference A/D Error (Detected when the servo is ON.) | A malfunction occurred in the speed reference input section. | -- | Clear and reset the alarm and restart the operation. |
| | | A SERVOPACK fault occurred. | -- | Turn the power supply OFF and then ON again. If the alarm still occurs, the SERVOPACK may be faulty. Replace the SERVOPACK. |
| A.b11 | Speed Reference A/D Data Error | A malfunction occurred in the speed reference input section. | -- | Clear and reset the alarm and restart the operation. |
| | | A SERVOPACK fault occurred. | -- | Turn the power supply OFF and then ON again. If the alarm still occurs, the SERVOPACK may be faulty. Replace the SERVOPACK. |
| A.b20 | Reference Torque Input Read Error (Detected when the servo is ON.) | A malfunction occurred in the reading section of the torque reference input. | -- | Clear and reset the alarm and restart the operation. |
| | | A SERVOPACK fault occurred. | -- | Turn the power supply OFF and then ON again. If the alarm still occurs, the SERVOPACK may be faulty. Replace the SERVOPACK. |

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| A.b31 | Current Detection Error 1 | The current detection circuit for phase U is faulty. | -- | Turn the power supply OFF and then ON again. If the alarm still occurs, the SERVOPACK may be faulty. Replace the SERVOPACK. |
| A.b32 | Current Detection Error 2 | The current detection circuit for phase V is faulty. | -- | Turn the power supply OFF and then ON again. If the alarm still occurs, the SERVOPACK may be faulty. Replace the SERVOPACK. |
| A.b33 | Current Detection Error 3 | The detection circuit for the current is faulty. | -- | Turn the power supply OFF and then ON again. If the alarm still occurs, the SERVOPACK may be faulty. Replace the SERVOPACK. |
| | | The servomotor main circuit cable is disconnected. | Check for disconnection of the servomotor main circuit cable. | Correct the servomotor wiring. |
| A.bF0 | System Alarm 0 | A SERVOPACK fault occurred. | -- | Turn the power supply OFF and then ON again. If the alarm still occurs, the SERVOPACK may be faulty. Replace the SERVOPACK. |
| A.bF1 | System Alarm 1 | A SERVOPACK fault occurred. | -- | Turn the power supply OFF and then ON again. If the alarm still occurs, the SERVOPACK may be faulty. Replace the SERVOPACK. |
| A.bF2 | System Alarm 2 | A SERVOPACK fault occurred. | -- | Turn the power supply OFF and then ON again. If the alarm still occurs, the SERVOPACK may be faulty. Replace the SERVOPACK. |
| A.bF3 | System Alarm 3 | A SERVOPACK fault occurred. | -- | Turn the power supply OFF and then ON again. If the alarm still occurs, the SERVOPACK may be faulty. Replace the SERVOPACK. |
| A.bF4 | System Alarm 4 | A SERVOPACK fault occurred. | -- | Turn the power supply OFF and then ON again. If the alarm still occurs, the SERVOPACK may be faulty. Replace the SERVOPACK. |
| A.C10 | Servo Overrun Detected (Detected when the servomotor power is ON.) | The order of phases U, V, and W in the servomotor wiring is incorrect. | Check the servomotor wiring. | Confirm that the servomotor is correctly wired. |
| | | An encoder fault occurred. | -- | If the alarm still occurs after turning the power OFF and then ON again, even though the servomotor is correctly wired, the servomotor may be faulty. Replace the servomotor. |
| | | A SERVOPACK fault occurred. | -- | Turn the power supply OFF and then ON again. If the alarm still occurs, the SERVOPACK may be faulty. Replace the SERVOPACK. |

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| A.C80 | Absolute Encoder Clear Error and Multiturn Limit Setting Error | An encoder fault occurred. | -- | Turn the power supply OFF and then ON again. If the alarm still occurs, the servomotor may be faulty. Replace the servomotor. |
| | | A SERVOPACK fault occurred. | -- | Turn the power supply OFF and then ON again. If the alarm still occurs, the SERVOPACK may be faulty. Replace the SERVOPACK. |
| A.C90 | Encoder Communications Error | Contact fault of encoder connector or incorrect encoder wiring. | Check the encoder connector contact status. | Re-insert the encoder connector and confirm that the encoder is correctly wired. |
| | | Encoder cable disconnection or short-circuit. Or, incorrect cable impedance. | Check the encoder cable. | Use the encoder cable with the specified rating. |
| | | Corrosion caused by improper temperature, humidity, or gas, short-circuit caused by intrusion of water drops or cutting oil, or connector contact fault caused by vibration. | Check the operating environment. | Improve the operating environmental conditions, and replace the cable. If the alarm still occurs, replace the SERVOPACK. |
| | | Malfunction caused by noise interference. | -- | Correct the wiring around the encoder to avoid noise interference (Separate the encoder cable from the servomotor main circuit cable, improve grounding, etc.) |
| | | A SERVOPACK fault occurred. | -- | Connect the servomotor to another SERVOPACK, and turn ON the control power. If no alarm occurs, the SERVOPACK may be faulty. Replace the SERVOPACK. |
| A.C91 | Encoder Communications Position Data Error | The noise interference occurred on the I/O signal line because the encoder cable is bent and the sheath is damaged. | Check the encoder cable and connector. | Confirm that there is no problem with the encoder cable layout. |
| | | The encoder cable is bundled with a high-current line or near a high-current line. | Check the encoder cable layout. | Confirm that there is no surge voltage on the encoder cable. |
| | | The FG potential varies because of influence from machines on the servomotor side, such as the welder. | Check the encoder cable layout. | Properly ground the machines to separate from the encoder FG. |

| Display | Name | Cause | Investigative Actions | Corrective Actions |
|---------|------------------------------------|--|----------------------------------|---|
| A.C92 | Encoder Communications Timer Error | Noise interference occurred on the I/O signal line from the encoder. | -- | Take countermeasures against noise for the encoder wiring. |
| | | Excessive vibration and shocks were applied to the encoder. | Check the operating environment. | Reduce the machine vibration or correctly install the servomotor. |
| | | An encoder fault occurred. | -- | Turn the power supply OFF and then ON again. If the alarm still occurs, the servomotor may be faulty. Replace the servomotor. |
| | | A SERVOPACK fault occurred. | -- | Turn the power supply OFF and then ON again. If the alarm still occurs, the SERVOPACK may be faulty. Replace the SERVOPACK. |
| A.CA0 | Encoder Parameter Error | An encoder fault occurred. | -- | Turn the power supply OFF and then ON again. If the alarm still occurs, the servomotor may be faulty. Replace the servomotor. |
| | | A SERVOPACK fault occurred. | -- | Turn the power supply OFF and then ON again. If the alarm still occurs, the SERVOPACK may be faulty. Replace the SERVOPACK. |
| A.Cb0 | Encoder Echoback Error | The encoder wiring and contact are incorrect. | Check the encoder wiring. | Correct the encoder wiring. |
| | | Noise interference occurred due to incorrect encoder cable specifications. | -- | Use tinned annealed copper shielded twisted-pair or screened unshielded twisted-pair cable with a core of at least 0.12 mm ² . |
| | | Noise interference occurred because the wiring distance for the encoder cable is too long. | -- | The wiring distance must be 50 m max. |
| | | The FG potential varies because of influence from machines on the servomotor side, such as the welder. | Check the encoder cable layout. | Properly ground the machines to separate from encoder FG. |
| | | Excessive vibration and shocks were applied to the encoder. | Check the operating environment. | Reduce the machine vibration or correctly install the servomotor. |
| | | An encoder fault occurred. | -- | Turn the power supply OFF and then ON again. If the alarm still occurs, the servomotor may be faulty. Replace the servomotor. |
| | | A SERVOPACK fault occurred. | -- | Turn the power supply OFF and then ON again. If the alarm still occurs, the SERVOPACK may be faulty. Replace the SERVOPACK. |

| Display | Name | Cause | Investigative Actions | Corrective Actions |
|---------|--|--|--|--|
| A.CC0 | Multiturn Limit Disagreement | When using a direct drive (DD) servo motor, the multiturn limit value (Pn205) is different from that of the encoder. | Check the value of the Pn205. | Correct the setting of Pn205 (0 to 65535). |
| | | The multiturn limit value of the encoder is different from that of the SERVOPACK. Or, the multiturn limit value of the SERVOPACK has been changed. | Check the value of the Pn205 of the SERVOPACK. | Execute Fn013 at the occurrence of alarm. |
| | | A SERVOPACK fault occurred. | -- | Turn the power supply OFF and then ON again. If the alarm still occurs, the SERVOPACK may be faulty. Replace the SERVOPACK. |
| A.CF1 | Feedback Option Module Communications Error (Reception error) | Wiring of cable between serial converter unit and SERVOPACK is incorrect or contact is faulty. | Check the external encoder wiring. | Correct the cable wiring. |
| | | The specified cable is not used between serial converter unit and SERVOPACK. | Confirm the external encoder wiring specifications. | Use the specified cable. |
| | | Cable between serial converter unit and SERVOPACK is too long. | Measure the length of this cable. | Use 20-m cable max. |
| | | Sheath of cable between serial converter unit and SERVOPACK is broken. | Check the cable for damage. | Replace the cable. |
| A.CF2 | Feedback Option Module Communications Error (Timer stop) | Noise interferes with the cable between serial converter unit and SERVOPACK. | -- | Correct the wiring around serial converter unit, e.g., separating I/O signal line from main circuit cable or grounding. |
| | | A serial converter unit fault occurred. | -- | Replace the serial converter unit. |
| | | A SERVOPACK fault occurred. | -- | Replace the SERVOPACK. |
| A.d00 | Position Error Overflow (Position error exceeded the value set in the excessive position error alarm level (Pn520).) | The servomotor U, V, and W wirings is faulty. | Check the servomotor main circuit cable connection. | Confirm that there is no contact fault in the motor wiring or encoder wiring. |
| | | The frequency of the position reference pulse is too high. | Reduce the reference pulse frequency, and operate the SERVOPACK. | Reduce the position reference pulse frequency or acceleration of position reference. Or, reconsider the electronic gear ratio. |
| | | The position reference acceleration is too fast. | Reduce the reference acceleration, and operate the SERVOPACK. | Apply the smoothing function, such as using position reference acceleration/deceleration time constant (Pn216). |
| | | Setting of the excessive position error alarm level (Pn520) is low against the operating condition. | Check the alarm level (Pn520) to see if it is set to an appropriate value. | Set the Pn520 to proper value. |
| | | A SERVOPACK fault occurred. | -- | Turn the power supply OFF and then ON again. If the alarm still occurs, the SERVOPACK may be faulty. Replace the SERVOPACK. |

| Display | Name | Cause | Investigative Actions | Corrective Actions |
|---------|--|--|--|---|
| A.d01 | Position Error Overflow Alarm at Servo ON | This alarm occurs if the servo ON signal (/S-ON) is turned ON when the position error is greater than the set value of Pn526. | Check the position error amount (Un008) while the /S-ON signal is OFF. | Set position error to be cleared while the /S-ON signal is OFF. Or, correct the excessive position error alarm level at servo ON (Pn526). |
| A.d02 | Position Error Overflow Alarm by Speed Limit at Servo ON | When pulses remain in the error counter, Pn529 limits the speed if the /S-ON signal is turned ON. If Pn529 limits the speed in such a state, this alarm occurs when reference pulses are input and the number of position errors exceeds the value set for the excessive position error alarm level (Pn520). | -- | Set position error to be cleared while the /S-ON signal is OFF. Or, correct the excessive position error alarm level (Pn520). Or, adjust the speed limit level at servo ON (Pn529). |
| A.d10 | Motor-load Position Error Overflow | Motor rotation direction and external encoder installation direction are opposite. | Check the servomotor rotation direction and the external encoder installation direction. | Install the external encoder in the opposite direction, or change the setting of the external encoder usage method (Pn002.3) to reverse the direction. |
| | | Mounting of the load (e.g., stage) and external encoder joint installation are incorrect. | Check the external encoder mechanical connection. | Check the mechanical joints. |
| A.E72 | Feedback Option Module Detection Failure | The connection between the SERVOPACK and the Feedback Option Module is Faulty. | Check the connection between the SERVOPACK and the Feedback Option Module. | Correctly connect the Feedback Option Module. |
| | | The Feedback Option Module was disconnected. | -- | Execute resetting configuration error in option modules (Fn014) and turn the power supply OFF and then ON again. |
| | | A Feedback Option Module fault | -- | Replace the Feedback Option Module. |
| | | A SERVOPACK fault occurred. | -- | Replace the SERVOPACK. |
| A.Eb1 | Safety Function Signal Input Timing Error | The lag between activations of the input signals /HWBB1 and /HWBB2 for the HWBB function is ten second or more. | Measure the time lag between the /HWBB1 and /HWBB2 signals. | The output signal circuits or devices for /HWBB1 and /HWBB2 or the SERVOPACK input signal circuits may be faulty. Alternatively, the input signal cables may be disconnected. Check if any of these items are faulty or have been disconnected. |

| Display | Name | Cause | Investigative Actions | Corrective Actions |
|---------|--|---|--|--|
| A.F10 | Main Circuit Cable Open Phase (With the main power supply ON, voltage was low for more than 1 second in an R, S, or T phase.) (Detected when the main power supply was turned ON.) | The three-phase power supply wiring is incorrect. | Check the power supply wiring. | Confirm that the power supply is correctly wired. |
| | | The three-phase power supply is unbalanced. | Measure the voltage at each phase of the three-phase power supply. | Balance the power supply by changing phases. |
| | | A single-phase power is input without setting Pn00B.2 (power supply method for three-phase SERVOPACK) to 1 (single-phase power supply). | Check the power supply and the parameter setting. | Match the parameter setting to the power supply. |
| | | A SERVOPACK fault occurred. | -- | Turn the power supply OFF and then ON again. If the alarm still occurs, the SERVOPACK may be faulty. Replace the SERVOPACK. |
| CPF00 | Digital Operator Transmission Error 1 | The contact between the digital operator and the SERVOPACK is faulty. | Check the connector contact. | Insert securely the connector or replace the cable. |
| | | Malfunction caused by noise interference. | -- | Keep the digital operator or the cable away from noise sources. |
| CPF01 | Digital Operator Transmission Error 2 | A digital operator fault occurred. | -- | Disconnect the digital operator and then re-connect it. If the alarm still occurs, the digital operator may be faulty. Replace the digital operator. |
| | | A SERVOPACK fault occurred. | -- | Turn the power supply OFF and then ON again. If the alarm still occurs, the SERVOPACK may be faulty. Replace the SERVOPACK. |