

# 4DX ERROR CODE : Convex & Panasonic

Description	LED Sign of Servo Driver		Description	LED Sign of Servo Driver		Description	LED Sign of Servo Driver	
	Convex	Panasonic		Convex	Panasonic		Convex	Panasonic
Servo Off (Stand By)			Servo On (Run)			Communication Error		

## Compatibility (Firmware 1.51 or Later)

Error Part	Error Code	Description	Probable Cause	First Action	Trouble Shooting
Motion Board	0x00				
	0x01	Run Auto Recovery	Run Auto Recovery		Check the Alarm
	0x02	Failed Auto Recovery (More then 5 time)	Failed Auto Recovery (More then 5 time)		Check the Alarm
	0x04	Mismatch between Unit Version and Firmware	Mismatch between Unit Version and Firmware		Check ICS Model and Firmware version.
	0x10 : All Axis 0x11 : 1Axis 0x12 : 2Axis 0x13 : 3Axis	Each Axis failed to detect Home Sensor	During init Moving... Failed to detect Home Sensor more than 60 Seconds	SW Auto Recovery	1. Check Home Sensor 2. Check cable at the JC Board
	0x20 : All Axis 0x21 : 1Axis 0x22 : 2Axis 0x23 : 3Axis	Each Axis failed to communicate with Servo Driver	Downed Communication with Servo Driver	SW Auto Recovery	1. Check Servo Driver 2. Check Communication Cable at Servo Driver.
	0x30 : All Axis 0x31 : 1Axis 0x32 : 2Axis 0x33 : 3Axis	Each Axis failed to Servo On	Unsuccessful Servo on execution.	SW Auto Recovery	1. Check Servo Driver or Motor Cable
	0x40 : All Axis 0x41 : 1Axis 0x42 : 2Axis 0x43 : 3Axis	Each Axis has Over Torque	Detect Servo Driver Over Torque		1. Check noise sound from the Spine & Actuator. 2. Check the overload conditions
	0x50 : All Axis 0x51 : 1Axis 0x52 : 2Axis 0x53 : 3Axis	Each Servo Driver has OverLoad	Detect Servo Driver Overload		1. Check noise sound from the Spine & Actuator. 2. Check the overload conditions 3. Check the Motion Strength
0x60 : All Axis 0x61 : 1Axis 0x62 : 2Axis 0x63 : 3Axis	During Running... Detect Home Sensor	During Play... Detect Home Sensor		1. Check Home Sensor 2. Check Init Position 3. Check Reducer/Motor Connecting	

## Convex Alarm Code

Error Part	Error Code	Description	Probable Cause	First Action	Trouble Shooting
Convex	11	Power Module Error	1. Alarm to protect IPM from the over-current, over-voltage, or over-heating 2. Damaged IPM	Power Reset	1. Turn off power and restart 2. Replace servo driver
	12	Input current error at Servo Motor	1. Over-current in motor 2. Servo driver error	Power Reset	1. Turn off power and restart 2. Check the motor's input current 3. Replace servo driver
	13	Over-Current	1. More than 25% of peak current in motor 2. Over-Current in Motor 3. Circuit Error	SW Auto Recovery	1. Check Motor Cable Connecting 2. Check Motor Cable U,V,W with FG Insulation Resistance 3. Check Servo Driver Capacity
	32	Over-Load	1. Over-Run with exceeded motor capacity 2. Issue on moving parts 3. Rapid acceleration and deceleration	SW Auto Recovery	1. Check Moving part. 2. Check rapid acceleration and deceleration of large load 3. Check Motor Capacity
	33	Overload - Regenerative Resistance	1. Rapid acceleration and deceleration of large load	Power Reset	1. Check over-weight on Unit 2. Change Servo Driver Capacity
	38	Disconnected Regenerative Resistance	1. Disconnected regenerative resistance 2. Damaged regenerative resistance 3. Servo driver error	Power Reset	1. Connect regenerative resistance 2. Replace regenerative resistance 3. Replace servo driver
	51	Over-voltage of main power	1. Regenerative circuit error 2. Damaged regenerative resistance 3. Rapid acceleration and deceleration	SW Auto Recovery	1. Re-selection regenerative resistance 2. Check over-weight on motion chairs 3. Check for rapid acceleration or deceleration in 4DX code
	52	Under-voltage of main power	1. Power supply error 2. Power condensor error 3. Rapid acceleration and deceleration	SW Auto Recovery	1. Check input power 2. Replace condensor in Servo drive 3. Improve operating condition
	71	Encoder disconnected	1. Encoder error 2. Disconnected Encoder cable 3. Faulty connection of connectors	Power Reset	1. Replace encoder 2. Replace cable 3. Check connection status of connectors
	72	Encoder initialization error	1. Encoder error 2. Disconnected Encoder cable 3. Faulty connection of connectors	Power Reset	1. Replace encoder 2. Replace cable 3. Check connection status of connectors
	74	Encoder error	1. Encoder error 2. Disconnected Encoder cable 3. Faulty connection of connectors	Power Reset	1. Replace encoder 2. Replace cable 3. Check connection status of connectors
	94	Command Error	1. Position Data or Command Error	SW Auto Recovery	1. Check Mechatrolink-2 Cable
	A1	Over speed error	1. Operating over than Maximum speed	SW Auto Recovery	1. Check for rapid acceleration or deceleration in 4DX Code 2. Replace servo driver
	C1	EEPROM decoding error	1. Damaged internal EEPROM 2. Circuit error	Power Reset	1. Turn off power and restart 2. Replace servo drive
	C2	Parameter error	1. Location deviation value has been exceeded	Power Reset	1. Reset Parameter
E3	Over-Maximum deviation	1. Location deviation value has been exceeded	SW Auto Recovery	1. Turn off power and restart 2. Check for problems with moving parts	

## Panasonic Alarm Code

Error Part	Error Code	Description	Probable Cause	First Action	Trouble Shooting
Panasonic	11	Protection Under-voltage of Control Power Supply	Voltage between P and N in the converter of the Control Power Supply has fallen below the specified value.	SW Auto Recovery	Measure the voltage between lines of connector and terminal block(L1C-L2C)
	12	Over-voltage Protection	Voltage between P and N in the converter of the Control Power Supply has exceeded the specified value.	SW Auto Recovery	Measure the voltage between lines of connector (L1,L2 and L3)
	13	Low Voltage of Main power Protection	Power supply voltage is low Or Instantaneous Blackout		
	14	Over-Current Protection	Current through the converter has exceeded the specified value.	Power Reset	1. Replace Servo Driver 2. Check Servo Motor Power Cable and connecting
	15	Over-Heat Protection	Detect overheating from the heat sink or Power part	Power Reset	Making a cooling condition. Lower the load.
	16	Over-Load Protection	Heavy load and actual torque value have been overed on the running for a long time.	Power Reset	Check load weight Lower the load. Extend time for acceleration/deceleration
	18	Over-regeneration load protection	Regenerative energy has exceeded the capacity of regenerative resistor	Power Reset	Check the running patten. Extend time for acceleration/deceleration
	21	Encoder disconnected communication error	Communication between the encoder and the Servo driver has been interrupted or disconnected in certain times.	Power Reset	Make a wiring connection of the encoder. Correct the miswiring of the connector pins.
	23	Encoder Communication data error	Data communication between the encoder is normal, but contents of data are not correct.	Power Reset	Cable Noise Check.
	24	Over-Position deviation error	The Motor has not followed the command.	SW Auto Recovery	Extend time for acceleration/deceleration . Lower the load and speed.
	25	Over-Hybrid deviation error	Position of load by the external scale and position of the motor by the encoder slips larger than the setup pulses with Pr3.28 at full closed control	Power Reset	Check the connection between the motor and the load
	26	Over Speed protection	the motor rotational speed has exceeded the setup value	SW Auto Recovery	Do not give an excessive speed command.
	27	Command pulse input frequency error	the frequency of input command pulse is more than 1.2 times of setting	SW Auto Recovery	Check the input command pulse for frequency
	28	Pulse regeneration limit error	The output frequency of pulse regeneration has exceeded the limit	SW Auto Recovery	Parameter Check
	29	Deviation counter overflow	Positional deviation of encoder pulse regerence has exceeded	SW Auto Recovery	Check that the motor runs as per the position command pulses.
36	EEPROM parameter error	Data in parameter storage area has been damaged when reading the data from EEPROM at power-on	Power Reset	Set up all parameter again. Replace the Servo driver.	

Error Part	Error Code	Description	Probable Cause	First Action	Trouble Shooting
Panasonic	37	EEPROM check code error	Data for writing confirmation to EEPROM has been damage when reding the data from EEPROMat power	Power Reset	Replace the Servo driver.
	43	Encoder Initialization error	Encoder initialization error was detected	Power Reset	Replace the motor
	44	Absolute single turn counter error	Single turn counter error	Power Reset	Replace the motor
	45	Absolute multi turn counter error	Multi-turn counter error	Power Reset	Replace the motor
	47	Absolute status error	Encoder has been running faster than the specified value when power on	Power Reset	Arrange so as the motor does not run when power on
	48	Encoder Z-phase error	Missing pulse of Z-phase of serial incremental encoder has been detected. The encoder might be a failure.	Power Reset	Replace the motor
	49	Encoder CS signal error protection	CS signal logic error of serial incremental encoder has been detected.	Power Reset	Replace the motor
	50	Feedback scale wiring error	Communication between the external scale and the Servo driver has been interrupted in certain times, and disconnection detection has been triggered.	Power Reset	Make a re-wiring connection of the external scale
	51	Feedback scale statues error	Check the specifications of the external scale	Power Reset	Shut off the power to reset
	55	A,B,Z-phase wiring error	A,B,C-phase wiring in the external scale has been defective	Power Reset	Check the A,B,C-phase wiring connection.
	84	RTEX Time out error	RTEX Communication Fail	SW Auto Recovery	Check the RTEX LAN Cable Check each Servo Driver power on status, if 1 axis Servo Driver lost power, 2,3 axis will alarm 84. if 2 axis lost power, 1,3 axis will alarm 84.
	95	Motor automatic detect error	The motor and the Servo driver has not been matched.	Power Reset	Replace the motor which matches to the Servo driver.