

9.2.3 Alarm Display Table

A summary of alarm displays and alarm code outputs is given in the following table.

Alarm Display Table

Alarm Display	Alarm Code Output			ALM Output	Alarm Name	Description
	ALO1	ALO2	ALO3			
A.02	OFF	OFF	OFF	OFF	Parameter Breakdown*	EEPROM data of servo amplifier is abnormal.
A.03					Main Circuit Encoder Error	Detection data for power circuit is abnormal.
A.04					Parameter Setting Error*	The parameter setting is outside the allowable setting range.
A.05					Servomotor and Amplifier Combination Error	Servo amplifier and servomotor capacities do not match each other.
A.10	ON	OFF	OFF	OFF	Overcurrent or Heat Sink Overheated**	An overcurrent flowed through the IGBT. Heat sink of servo amplifier was overheated.
A.30	ON	ON	OFF	OFF	Regeneration Error Detected	<ul style="list-style-type: none"> Regenerative circuit is faulty Regenerative resistor is faulty.
A.32					Regenerative Overload	Regenerative energy exceeds regenerative resistor capacity.
A.40	OFF	OFF	ON	OFF	Overvoltage	Main circuit DC voltage is excessively high.
A.41					Undervoltage	Main circuit DC voltage is excessively low.
A.51	ON	OFF	ON	OFF	Overspeed	Rotational speed of the motor is excessively high.
A.71	ON	ON	ON	OFF	Overload: High Load	The motor was operating for several seconds to several tens of seconds under a torque largely exceeding ratings.
A.72					Overload: Low Load	The motor was operating continuously under a torque largely exceeding ratings
A.73					Dynamic Brake Overload	When the dynamic brake was applied, rotational energy exceeded the capacity of dynamic brake resistor.
A.74					Overload of Surge Current Limit Resistor	The main circuit power was frequently turned ON and OFF.
A.7A					Heat Sink Overheated **	The heat sink of servo amplifier overheated.

* These alarms are not reset by the alarm reset signal (/ALM-RST). Eliminate the cause of the alarm and then turn OFF the power supply to reset the alarms.

** This alarm display appears only within the range of 30W to 1kW.

Notes: OFF: Output transistor is OFF.
ON: Output transistor is ON.

Alarm Display	Alarm Code Output			ALM Output	Alarm Name	Description
	ALO1	ALO2	ALO3			
A.81	OFF	OFF	OFF	OFF	Absolute Encoder Backup Error*	All the power supplies for the absolute encoder have failed and position data was cleared.
A.82					Encoder Checksum Error*	The checksum results of encoder memory is abnormal.
A.83					Absolute Encoder Battery Error	Battery voltage for the absolute encoder has dropped.
A.84					Absolute Encoder Data Error*	Received absolute data is abnormal.
A.85					Absolute Encoder Overspeed	The encoder was rotating at high speed when the power was turned ON.
A.86					Encoder Overheated	The internal temperature of encoder is too high.
A.b1					Reference Speed Input Read Error	The A/D converter for reference speed input is faulty.
A.b2					Reference Torque Input Read Error	The A/D converter for reference torque input is faulty.
A.bF					System Alarm*	A system error occurred in the servo amplifier.
A.C1					ON	OFF
A.C8	Absolute Encoder Clear Error and Multi-Turn Limit Setting Error*	The multi-turn for the absolute encoder was not properly cleared or set.				
A.C9	Encoder Communications Error*	Communications between servo amplifier and encoder is not possible.				
A.CA	Encoder Parameter Error*	Encoder parameters are faulty.				
A.Cb	Encoder Echoback Error*	Contents of communications with encoder is incorrect.				
A.CC	ON	OFF	ON	OFF	Multi-Turn Limit Disagreement	Different multi-turn limits have been set in the encoder and servo amplifier.
A.d0	ON	ON	OFF	OFF	Position Error Pulse Overflow	Position error pulse exceeded parameter (Pn505).
A.E7	OFF	ON	ON	OFF	Option Unit Detection Error	Option unit detection fails.
A.F1	OFF	ON	OFF	OFF	Power Line Open Phase	One phase is not connected in the main power supply
CPF00	Not Specified				Digital Operator Transmission Error	Digital operator (JUSP-OP02A-2) fails to communicate with servo amplifier (e.g., CPU error).
CPF01						
A.--	OFF	OFF	OFF	ON	Not an error	Normal operation status

* These alarms are not reset by the alarm reset signal (/ALM-RST). Eliminate the cause of the alarm and then turn OFF the power supply to reset the alarms.

** This alarm display appears only within the range of 30 to 1000W.

Notes: OFF: Output transistor is OFF.
ON: Output transistor is ON.

9.2.4 Warning Displays

The correlation between warning displays and warning code outputs is shown in the following table.

Warning Displays and Outputs

Warning Display	Warning Code Outputs			Warning Name	Meaning of Warning
	ALO1	ALO2	ALO3		
A.91	ON	OFF	OFF	Overload	This warning occurs before either of the overload alarms (A.71 or A.72) occurs. If the warning is ignored and operation continues, an overload alarm may result.
A.92	OFF	ON	OFF	Regenerative Overload	This warning occurs before the regenerative overload alarm (A.32) occurs. If the warning is ignored and operation continues, a regenerative overload alarm may result.

Sigma II Alarms

<u>Alarm Code</u>	<u>Descriptions</u>
A.08	Linear scale pitch setting error. Implemented in firmware Ver. 12 and higher.
A.33	Wrong input power. Amplifier is in AC input mode (Pn001.2=0), but has DC input; or vice versa. Implemented in firmware Ver. F and higher.
A.76	Pre-charge contactor failure. Pre-charge contactor failed to close when SVON signal is applied. Applicable to large capacity (22-55kW) amplifiers only.
A.C2	Encoder output phase error. Applicable to linear scale only. Firmware Ver. 12 and higher.
A.C5	Linear motor pole sensor position detection error. Firmware Ver. 12 and higher.

Alarm with Intelligent Option Boards (MP940, etc.):

A.E0	Option board not connected/no response. At power on, the SGDHD will check for 10 seconds if the option board is connected. Check Pn004, it should be set to 0000.
A.E1	Option board timed out. Timer in SGDHD starts timing when control board function starts. Timer currently is set for 10 sec.
A.E2	Watch Dog Timer alarm. Option board and SGDHD are out of synchronism.
A.E5	MECHATROLINK synchronization error.
A.E6	MECHATROLINK communication error (failed twice consecutively).
A.E7	Option board not connected. After power on with option board connected, the option board is removed while power is still on. Reset alarm with Fn014.

The following Alarms are generated by Option Boards:

A.94	Data set up warning. Invalid or out of range data.
A.95	Invalid command warning. Inappropriate command was issued for the current control state.
A.9F	I/O cable not connected (MP940 or MECHATROLINK cable disconnected).
A.B6	Option board (JL-040) abnormal.
A.E9	MP940 alarm. This alarm is generated by the MP940 when there is problem in the MP940. Check MP940 for more information.
A.EA	SGDHD does not respond at power on or after reset.
A.EB	SGDHD initial access error. SGDHD Power on start up confirmed, but response is absent or faulty.
A.EC	Watch Dog Timer error. SGDHD ran away or WDT abnormal.
A.ED	Command execution incomplete.