8-3-5 Troubleshooting

Follow this section to troubleshoot the main alarms that occur during start up or while the machine is operating. Also, refer to the explanations in section "8-3-1 List of alarms".

[Alarm/warning check timing]

- f1: When servo drive unit power is turned ON
- f2: When CNC power supply is turned ON (emergency stop ON)
- f3: During normal operation (servo ON)
- f4: During axis removal (ready ON, servo OFF)

(Note) Note that warning "93" could occur even when the axis is reinstalled after removal.

		-			-			
	Alarm No.	Memory error:			Alar	m che	eck tir	ning
	12	Error in drive unit mem	ory IC (SRAM, FROM)		f1	f2	f3	f4
					0	-	-	-
	Investi	gation details	Investigation results	Rer	medies			
1	Check the repea	tability.	The error is always repeated.	Replace the drive unit.				
			The state returns to normal once, but occurs sometimes thereafter.	Investigate item 2.				
2	Check if there is	any abnormality in the	No abnormality is found in particular.	Replace the drive u	nit.			
	unit's ambient en (Ex. Ambient ten grounding)	ivironment. iperature, noise,	An abnormality was found in the ambient environment.	Take remedies acco the abnormality. Ex. High temperatu Incomplete grou	ording re unding	to the Chi coo I : Ade	e cause eck the bling fa ditiona	es of e an. Illy

	Alarm No.	Software process error	:		Alar	m che	eck tir	ning
	13	The driver's software pr	rocessing time did not end within the specifi	ed time, or an illegal	f1	f2	f3	f4
			out.		-	0	0	0
	Investi	gation details	Investigation results	Rer	emedies			
1	Check whether the version was char	ne servo software nged recently.	The version was changed.	Try replacing with the original software	the drive unit containing re version.			
			The version was not changed.	Investigate item 2.	2.			
2	Check the repea	tability.	The error is always repeated.	Replace the drive u	e unit.			
			The state returns to normal once, but occurs sometimes thereafter.	Investigate item 3.				
3	Check if there is	any abnormality in the	No abnormality is found in particular.	Replace the drive u	nit.			
	unit's ambient en (Ex. Ambient ten grounding)	ivironment. iperature, noise,	An abnormality was found in the ambient environment.	bient Take remedies according to the the abnormality. Ex. High temperature : Che cool Incomplete grounding : Add			e caus eck the oling fa ditiona	es of e an. Illy

	Alarm No.	Software processing er	ror 2:		Alar	m che	eck tir	ning	
	14	The current loop proces	ss, of the driver software processing times,	did not end within	f1	f2	f3	f4	
		the specified time.			_	0	0	0	
	Investi	gation details	Investigation results	Rer	nedie				
1	Check whether the version was char	ne servo software nged recently.	The version was changed.	Try replacing with the original software	ith the drive unit contain ware version.			ining	
			The version was not changed.	Investigate item 2.					
2	Check the repea	tability.	The error is always repeated.	Replace the drive u	lace the drive unit.				
			The state returns to normal once, but occurs sometimes thereafter.	Investigate item 3.					
3	Check if there is	any abnormality in the	No abnormality is found in particular.	Replace the drive u	nit.				
	unit's ambient en (Ex. Ambient ten grounding)	Ambient environment. Ambient temperature, noise, ading)			ording re	to the	eck th	es of	
				Incomplete grou	unding	coc coc coc coc coc coc	ditiona und.	an. ally	

	Alarm No.	A/D converter error:				m che	eck tir	ning
	17	There is an error in the	drive unit's A/D converter.		f1	f2	f3	f4
					-	0	-	-
	Investi	gation details	Investigation results	Rer	nedie	s		
1	Check the repea	tability.	The error is always repeated.	Replace the drive unit.				
			The state returns to normal once, but occurs sometimes thereafter.	Investigate item 2.				
2	Check if there is	any abnormality in the	No abnormality is found in particular.	Replace the drive u	nit.			
	unit's ambient er (Ex. Ambient ten grounding)	nvironment. nperature, noise,	An abnormality was found in the ambient environment.	Replace the drive unit. ient Take remedies according to the the abnormality. Ex. High temperature : Che coording to the coording is Add Incomplete grounding : Add : Add				es of e an. Illy

	Alarm No.	Initial communication en	rror:		Alar	m che	eck tir	ning
	18	Initial communication w	as not possible with the detector in the sys	stem using a high-	f1	f2	f3	f4
		speed serial detector to	r the motor side.		-	0	-	-
	Investi	gation details	Investigation results	Remedies		s		
1	Check the servo	parameter (SV025)	The value is not set correctly.	Correctly set VO20)5.			
	setting value.		The value is set correctly.	Investigate item 2.				
2	Wiggle the conne	ectors by hand to check	The connector is disconnected (or loose).	Correctly install.				
	whether the dete unit side and dete disconnected.	ctor connectors (drive ector side) are	The connector is not disconnected.	Investigate item 3.				
3	Turn the power C	OFF, and check the	There is a connection fault.	Replace the detector	or cabl	e.		
	detector cable co	onnection with a tester.	The connection is normal.	Investigate item 4.				
4	Connect to anoth	ner normal axis driver,	The alarm is on the driver side.	Replace the drive u	nit.			
	and check wheth driver side or det	er the fault is on the tector side.	The alarm is on the detector side.	Investigate item 5.				
5	Check if there is	any abnormality in the	No abnormality is found in particular.	Replace the detector	or.			
	unit's ambient en (Ex. Ambient tem grounding)	ivironment. iperature, noise,	An abnormality was found in the ambient environment.	Take remedies acco the abnormality. Ex. High temperatu Incomplete grou	ording re unding	to the Chi coc J: Add	e caus eck th bling fa ditiona	es of e an. ally

	Alarm No. Serial detector initial communication error (SUB): Initial communication was not possible with the detector in the system using a				Alarm check tim				
	1A Initial communication was not possible with the detector in the system using a high-speed serial detector for the machine side.		stem using a	f1	f2	f3	f4		
	high-speed serial detec		tor for the machine side.		-	0	-	-	
	Investi	gation details	Investigation results	Rei	nedie	s			
1	Check the alarm	No. "18" items.							

_									
Ī		Alarm No.	CPU error (SUB):			Alar	m che	eck tir	ning
		1B	An error was detected i	n the data stored in the EEPROM of an abs	solute position linear	f1	f2	f3	f4
			scale connected to the	machine side.		-	0	0	0
ſ		Investi	gation details	Investigation results	Rer	medies			
ľ	1	Check whether the	he connector on the	The connector is disconnected (or loose).	Correctly install.				
		drive unit side or disconnected.	scale side is	The connector is not disconnected.	Investigate item 2.				
ſ	2	Turn the power (OFF, and check the	There is a connection fault.	Replace the detector	or cab	e.		
l		detector cable co	tector cable connection with a tester.	The connection is normal.	Investigate item 3.				
ľ	3	Connect to anoth	ner normal axis driver,	The alarm is on the driver side.	Replace the drive unit.				
		and check wheth drive unit side or	her the fault is on the scale side.	The alarm is on the absolute position linear scale side.	Investigate item 4.				
ſ	4	Check if there is	any abnormality in the	No abnormality is found in particular.	Replace the absolu	te pos	ition li	inear s	scale.
		unit's ambient er (Ex. Ambient ten	nvironment. nperature, noise,	An abnormality was found in the ambient environment.	Take remedies account the abnormality.	ording	to the	e caus	es of
		grounaing)			Ex. High temperatu	re unding	Chi coc Ade	eck the oling fa ditiona	e an. ally
Т									

	Alarm No. EEPROM/LED error (SUB): An error was detected in the EEPROM of an absolute position linear position linear				Alar	m che	eck tir	ning
	1C An error was detected in the EEPROM of an absolute position linear position linear scale connected to the machine side.		f1	f2	f3	f4		
	scale connected to the machine side.		-	0	0	0		
	Investigation details		Investigation results	Rer	nedie	s		
1	Check the alarm	No "1B" items						

	Alarm No.	Data error (SUB):			Alar	m che	eck tir	ning
	1D An error was detected within one rotation position of an absolute position linear position linear scale connected to the machine side.			position linear	f1	f2	f3	f4
		position inear scale cor	inected to the machine side.		-	0	0	0
	Investigation details		Investigation results	Re	medie	s		
1	Check the alarm	No. "1B" items.						

	Alarm No.	ROM, RAM/thermal erro	or (SUB):		Alar	m che	eck tir	ning
	1E A ROM/RAM error was detected in the absolute position linear scale connected to the machine side.			f1	f2	f3	f4	
		machine side.			-	0	0	0
	Investigation details		Investigation results	Rer	nedie	s		
1	1 Check the alarm No. "1B" items.							

	Alarm No.	Serial detector commun	ication error (SUB)		Alarm check timir				
	1F Communication was cut to the machine side.		t off with the detector in the absolute position scale connected		f1	f2	f3	f4	
	to the machine s				_	0	0	0	
	Investigation details		Investigation results	Rer	nedie	s			
1	Check items 2 ar	nd following for alarm							
	No "18"								

	Alarm No.	Scale CPU error (SUB):	:		Alar	m che	eck tir	ning
	27	The CPU of the absolut	e position linear scale connected to the ma	achine side is not	f1	f2	f3	f4
		operating correctly.			-	0	0	0
	Investi	gation details	Investigation results	Rer	nedie	S		
1	Wiggle the conne	ectors by hand to check	The connector is disconnected (or loose).	Correctly install.				
	whether the abso scale connectors side) are disconr	blute position linear (unit side and scale nected.	The connector is not disconnected.	Investigate item 2.				
2	Turn the power C	OFF, and check the	There is a connection fault.	Replace the detector cable.				
	detector cable co	onnection with a tester.	The connection is normal.	Investigate item 3.				
3	Connect to anoth	ner normal axis unit, and	The alarm is on the unit side.	Replace the drive unit.				
	check whether th or scale side.	e fault is on the unit side	The alarm is on the absolute position linear scale side.	Investigate item 4.				
4	Check if there is	any abnormality in the	No abnormality is found in particular.	Replace the absolu	te pos	ition li	near s	scale.
	unit's ambient en (Ex. Ambient ten grounding)	ivironment. iperature, noise,	An abnormality was found in the ambient environment.	nt Take remedies according to the causes the abnormality. Ex. High temperature : Check the cooling fan Incomplete grounding : Additionally				

I		Alarm No.	Scale overspeed (SUB)):		Alar	m che	eck tir	ning	
		28	The absolute position li	ner scale connected to the machine side d	etected a speed of	f1	f2	f3	f4	
			45m/sec or more when	the CNC power was turned ON.		_	0	-	-	
ľ		Investi	gation details	Investigation results	Rer	nedie	s			
	1	Check that the sposition linear sc	ystem is an absolute cale specification	The system is not the absolute position linear scale specifications.	Correctly set the SV	SV025: MTYP pa			neter.	
		system.		The system is the absolute position linear scale specifications.	Investigate item 2.					
	2	Check whether the operating when the terms of the second s	he machine was he alarm occurred.	The machine was operating.	Check the motor's r machine system.	nechanical brakes			s and	
				The machine was not operating.	Investigate item 3.					
ſ	3	Wiggle the conne	ectors by hand to check	The connector is disconnected (or loose).	Correctly install.	all.				
		whether the abso scale connectors side) are disconr	olute position linear (unit side and scale nected.	The connector is not disconnected.	Investigate item 4.					
ľ	4	Turn the power (OFF, and check the	There is a connection fault.	Replace the detector	or cabl	e.			
		detector cable co	onnection with a tester.	The connection is normal.	Investigate item 5.					
ľ	5	Connect to anoth	ner normal axis unit, and	The alarm is on the unit side.	Replace the drive u	nit.				
		check whether th or detector side.	e fault is on the unit side	The alarm is on the absolute position linear scale side.	Investigate item 6.					
	6	Check if there is	any abnormality in the	No abnormality is found in particular.	Replace the absolu	te pos	ition li	near s	scale.	
		unit's ambient er (Ex. Ambient ten grounding)	ivironment. nperature, noise,	An abnormality was found in the ambient environment.	Take remedies acco the abnormality. Ex. High temperatu Incomplete grou	ording re unding	to the Chi coc J: Add	e caus eck th bling fa ditiona	es of e an. ally	

	Alarm No.	Absolute position detect	tion circuit error (SUB):	ircuit error (SUB):			Alarm check timing				
	29	An error was detected in	n the scale or scale side circuit of the abso	olute position linear	f1	f2	f3	f4			
					-	0	0	0			
	Investigation details		Investigation results	Rer	nedie	s					
1	Check the alarm No. "28" items.										

	Alarm No.	Incremental position de	tection circuit error (SUB):		Alar	m che	eck tir	ning
	2A	A speed exceeding the	max. movement speed of the absolute pos	sition linear scale	f1	f2	f3	f4
					-	0	0	0
	Investi	gation details	Investigation results	Rer	nedie	s		
1	Check whether the	he machine was	The machine was operating.	Investigate item 3.				
	operating when t	he alarm occurred.	The machine was not operating.	Investigate item 2.				
2	Check whether th	ne operation is normal at	The machine was operating.	Investigate item 3.				
	low-speeds.		The machine was not operating.	Check the precaution power ON. • Wiring check • Parameter check	ons for	turnir	ng the	
3	Wiggle the conne	ectors by hand to check	The connector is disconnected (or loose).	Correctly install.				
	whether the abso scale connectors side) are disconr	blute position linear (unit side and scale nected.	The connector is not disconnected.	Investigate item 4.				
4	Turn the power C	DFF, and check the	There is a connection fault.	Replace the detector	or cabl	e.		
	detector cable co	onnection with a tester.	The connection is normal.	Investigate item 5.				
5	Connect to anoth	ner normal axis unit, and	The alarm is on the unit side.	Replace the drive u	nit.			
	check whether th or detector side.	e fault is on the unit side	The alarm is on the absolute position linear scale side.	Investigate item 6.				
6	Check if there is unit's ambient en	any abnormality in the nvironment.	No abnormality is found in particular.	Replace the motor (the absolute position linear scale).				tion
	(Ex. Ambient ten grounding)	nperature, noise,	An abnormality was found in the ambient environment.	Take remedies acco the abnormality. Ex. High temperatu Incomplete grou	ording re unding	to the Cho coc I : Ado gro	e caus eck the oling fa ditiona und.	es of e an. ally

	Alarm No. CPU error: An error was detected in the data stored in the EEPROM of an absolute position linear					m che	eck tir	ning
	2B An error was detected in the data stored in the EEPROM of an absolute position linear scale connected to the motor side.			f1	f2	f3	f4	
					-	0	0	0
	Investigation details		Investigation results	Ren	nedie	s		
1	Check items 3 and following for alarm No. "2A".							

	Alarm No.	EEPROM/LED error:	/LED error:				Alarm check timing				
2C An error was detected in the EEPROM of an absolute position lir scale connected to the motor side.				ear position linear	f1	f2	f3	f4			
					-	0	0	0			
	Investigation details		Investigation results	Rer	nedie	s					
1	Check items 3 and following for alarm No. "2A".										

	Alarm No.	Date error:		one rotation position of an absolute position linear				ning
	2D	An error was detected w	vithin one rotation position of an absolute p	position linear	f1	f2	f3	f4
					-	0	0	0
	Investigation details		Investigation results	Rer	nedie	s		
1	Check items 3 and following for alarm No. "2A".							

	Alarm No. ROM/RAM error: A ROM/RAM error was detected in the absolute position linear scale connected to the				Alarm check timing				
	2E	A ROM/RAM error was	detected in the absolute position linear sca	ale connected to the	f1	f2	f3	f4	
		motor side.			-	0	0	0	
	Investigation details		Investigation results	Ren	nedie	s			
1	Check items 3 and following for alarm No. "2A".								

	Alarm No. Serial detector communication error: Communication was cut off with detector of the absolute position linear scale connected				Alarm check timin				
	2F Communication was cut off with detector of the absolute position linear scale connected to the motor side.			f1	f2	f3	f4		
		to the motor side.			-	0	0	0	
	Investigation details		Investigation results	Rer	nedie	s			
1	Check items 2 an No. "18".	nd following for alarm							

	Alarm No.	Overspeed:			Alar	m che	eck tir	ning
	31	Movement was carried	out at a speed exceeding the linear motor	s tolerable speed.	f1	f2	f3	f4
					-	0	0	0
	Investi	gation details	Investigation results	Rer	nedie	S		
1	Check whether the	he machine was	The machine was operating.	Investigate item 4.				
	operating when t	he alarm occurred.	The machine was not operating.	Investigate item 2.				
2	Check whether th	ne operation is normal at	The machine was operating.	Investigate item 3.				
	low-speeds.		The machine was not operating.	Check the wiring an power ON.	g and the parameters at			
3	Check whether the rapid traverse speed		The speed is too high.	Lower the speed to	below	the ra	ated sp	beed.
	is too high.		The speed is set below the rated speed.	Investigate item 4.				
4	 Check whether the acceleration/ deceleration constant is too small. Check the current value display on the Servo Monitor screen. 		A value that is 80% or more of the max. value is displayed.	 Reduce the rapid traverse time constant that the current value on the Servo Moni screen is 80% or less of the max. value during rapid traverse acceleration/deceleration. 			ant so onitor ue	
			The value is 80% or less of the max. value.	Investigate item 5.				
5	Check items 2 ar No. "18".	nd following for alarm						

	Alarm No.	Power module error (Ov	vercurrent):		Alar	m c	heck	timi	ing
	32	The IPM used for the in	verter detected an overcurrent.		f1	f2	f	3	f4
					-	С		C	0
	Investi	gation details	Investigation results	Rer	nedies	S			
1	Check for a shor phases of the un	t-circuit in the UWV iit output.	The phases are short circuited or there is no continuity.	Replace the UVW v	vires.				
	 Disconnect the from the termin motor's canno tester. 	e U V W connection nal block and the n plug, and check with a	The phases are normal.	Investigate item 2.					
2	Check whether the UVW wires.	here is a ground fault in	The phases are short circuited or there is no continuity.	Replace the UVW wires.					
	 Check betwee ground with a in item 1. 	n the UVW wires and tester in the state given	The phases are normal.	Investigate item 3.					
3	Check whether the motor.	here is a ground fault in	The phases are short circuited or there is no continuity.	Replace the motor.					
	 Check betwee ground with a state given in it 	en the motor's wires and tester (megger) in the item 1.	The phases are normal. (same level as other axes)	Investigate item 4.					
4	Check the param	neter setting values.	The settings are incorrect.	Correctly set.					
	Refer to the act	djustment procedures.	The settings are correct.	Investigate item 5.					
5	Wiggle the conne whether the dete	ectors by hand to check ector connectors (unit	The connector is disconnected (or loose).	Correctly install.					
	side and detecto disconnected.	r side) are	The connector is not disconnected.	Investigate item 6.					
6	Turn the power (OFF, and check the	There is a connection fault.	Replace the detector	or cabl	e.			
	detector cable co	onnection with a tester.	The connection is normal.	Investigate item 7.					
7	Check the repea	tability.	The alarm is not repeated. The alarm is repeated sometimes.	Investigate item 9.					
			The alarm is always repeated.	Investigate item 8.					
8	Connect to anoth	ner normal axis driver,	The alarm is on the unit side.	Replace the drive u	nit.				
	and check wheth side or scale side	her the fault is on the unit e.	The alarm is on the detector.	Replace the motor	e motor (the detector).				
9	Check if there is	any abnormality in the	No abnormality is found in particular.	Monitor the state fo	onitor the state for a while.				
	unit's ambient er (Ex. Ambient ten grounding)	nvironment. nperature, noise,	An abnormality was found in the ambient environment.	Take remedies acco the abnormality. Ex. High temperatu Incomplete grou	ording re unding	to t : C c y : A	he ca heck oolin dditi	the g fan onally	s of 1. y

	Alarm No.	CNC communication C	RC error:		Alar	m che	eck tir	ning
	34	An error was detected i	n the data sent from the CNC to the driver		f1	F2	f3	f4
					_	0	0	0
	Investi	gation details	Investigation results	Rer	nedie	s		
1	Wiggle the conne between the CN	ection cables by hand C and drive unit,	The connector is disconnected (or loose).	Correctly install.				
	between the batt and between the of the connectors Check whether a applied on the co	The connector is not disconnected. Investigate iter for the connectors are loose. Check whether any force is being applied on the connectors.						
2	Turn the power (OFF, and check the	There is a connection fault.	Replace the communication cable.				
	connection of the listed in item 1. Try replacing the ones.	e communication cables	The connection is normal.	Investigate item 3.				
3	Check whether the	he CNC and drive unit	The version was changed.	Replace with the or	ginal	softwa	are ve	rsion.
	software version recently.	s have been changed	The version was not changed.	Investigate item 4.				
4	Try replacing wit	h another unit to	The alarm is on the unit side.	Replace the drive u	nit.			
	determine wheth CNC side or unit	er the fault is on the s side.	The driver is not the cause.	Investigate item 5.				
5	Check if there is	any abnormality in the	No abnormality is found in particular.	Replace the MCP card on the CNC side				ide.
	unit's ambient er (Ex. Ambient ten grounding)	nvironment. nperature, noise,	An abnormality was found in the ambient environment.	Take remedies acco the abnormality. Ex. High temperatu Incomplete grou	ording re unding	to the Chi coc I : Add	eck th bling fa ditiona	es of e an. ally

	Alarm No.	CNC communication da	CNC communication data error: An error was detected in the meyoment command data from the CNC					
35 An error was detected in the movement command data			n the movement command data from the C	CNC.	f1	f2	f3	f4
					-	0	0	-
	Investigation details		Investigation results	Rer	nedie	s		
1	1 Check the alarm No. "34" items.							

	Alarm No.	CNC communication, co	ommunication error:		Alar	m che	ck tir	ning
	36	The communication from	m the CNC was cut off.		f1	f2	f3	f4
					-	0	0	-
	Investi	gation details	Investigation results	Rer	nedie	S		
1	Check the alarm	No. "34" items.						
		1						
	Alarm No.	Initial parameter error:		0110	Alar	m che	eck tir	ning
	37	An illegal parameter wa	is detected in the parameters sent when the	e CNC power was	f1	f2	f3	f4
	turned ON.				-	0	_	0
	Investi	Investigation details Investigatio		Rer	nedie	5		
	The illegal parameter No. will appear on				parameter.			
1	The illegal param	neter No. will appear on	The parameter is incorrect.	Set to the correct pa	arame	ter.		
1	The illegal param the CNC Diagnos	neter No. will appear on sis screen, so check that	The parameter is incorrect. The parameter is correct.	Set to the correct pa Investigate item 3.	arame	ter.		
1	The illegal param the CNC Diagnos servo parameter adjustment proce	eter No. will appear on sis screen, so check that with the parameter edures.	The parameter is incorrect. The parameter is correct. The parameter No. is not 1 to 64.	Set to the correct pa Investigate item 3. If the No. is 101, ch 2.	eck in	ter. vestig	ation i	item
1	The illegal param the CNC Diagnos servo parameter adjustment proce Check whether tl (PIT) (RNG1) (RI combination is ill	heter No. will appear on sis screen, so check that with the parameter edures. The servo parameter NG2) (PC1) and (PC2) egal, or whether the	The parameter is incorrect. The parameter is correct. The parameter No. is not 1 to 64. The combination is illegal, or the setting range is exceeded.	Set to the correct pa Investigate item 3. If the No. is 101, ch 2. Refer to the parame specifications and to set to the correct va	eck in eck in eter se o the s ilues.	ter. vestig ttings upple	ation i in the ments	tem
1	The illegal param the CNC Diagnos servo parameter adjustment proce Check whether tl (PIT) (RNG1) (RI combination is ill setting range is e	heter No. will appear on sis screen, so check that with the parameter edures. The servo parameter NG2) (PC1) and (PC2) egal, or whether the exceeded.	The parameter is incorrect. The parameter is correct. The parameter No. is not 1 to 64. The combination is illegal, or the setting range is exceeded. The parameter is correct.	Set to the correct pa Investigate item 3. If the No. is 101, ch 2. Refer to the parame specifications and to set to the correct va Investigate item 3.	eck in eck in eter se o the s llues.	ter. vestig ttings upple	ation i in the ments	tem

Alarm No. CNC communication protocol error 1:			otocol error 1:		Alar	m che	eck tir	ning
	38 An error was detected		n the communication frame sent from the	CNC.	f1	f2	f3	f4
					-	0	0	0
	Investigation details		Investigation results	Rer	nedie	s		
1	Check the alarm	No. "34" items.						

Alarm No. CNC communica			otocol error 2		Alar	m che	eck tir	ning
	39 An error was detected		n the axis information data sent from the C	NC.	f1	f2	f3	f4
					-	0	0	0
	Investi	gation details	Investigation results	Rer	nedie	s		
1	Check the alarm	No "34" items						

	Alarm No.	Overcurrent:			Alar	Alarm check timing			
	3A An excessive current wa		as detected in the motor drive current.		f1	f2	f3	f4	
					-	0	0	0	
	Investigation details		Investigation results	Rer	nedie	s			
1	Check the alarm No. "32" items.								

	Alarm No.	Power module overheat	t:	Alarm check t				ming
	3B	The power module's ter	mperature protection function activated.		f1	f2	f3	f4
					-	0	0	0
	Investi	gation details	Investigation results	Rer	nedie	s		
1	Turn the unit power ON again, and confirm the rotation of the fan. Note) Assure more than 10 seconds for the time from when the power is turned OFF till when it is turned ON. For the fan used for the drive unit, assuring more than 10 seconds for the time from when		The fan is rotating, and an alarm did not occur again.	Continue to use. The power may be assuring more than time from when the when it is turned Of Leave for more than and turn the power	turnec 10 se power N. n 10 se ON aç	I ON v conds is tur econd gain.	vithou 3 for th ned C Is or n	it ne DFF till nore,
	than 10 seconds the power is tur turned ON is req	for the time from when ned OFF till when it is uired.	The fan did not rotate. Or, an alarm occurred again.	Investigate item 2.				
2	Confirm adhesio chips, etc. at the any abnormality	n of cutting oil or cutting fan. Or check if there is such as low rotation	Large amounts of cutting oil or cutting chips, etc., are adhered, or the rotation is slow.	Clean or replace the	e fan.			
	Speed.	h - h t - l' t' t' t'	The fan is rotating properly.	Investigate item 3.				
3	are dirty.	he heat dissipating fins	adhered, and the fins are clogged.	Clean the fins.				
			The fins are normal.	Investigate item 4.				
4	Measure the driv temperature.	e unit's ambient	55°C or more	Improve the ventilat power distribution p	tion ar anel.	nd coo	ling fo	or the
			Less than 55°C.	Investigate item 5.				
5	Check if there is unit's ambient er	any abnormality in the nvironment.	No abnormality is found in particular.	If the alarm occurs even after the unit temperature has dropped, replace the				t e unit.
	(Ex. Ambient ten grounding)	nperature, noise,	An abnormality was found in the ambient environment.	Take remedies according the abnormality. Ex. High temperatu Check for the complete group Addition Addition according to the complete group and the complete group according to the complete gr	ording re: the co unding nally g	to the oling f g: round) caus fan. I.	ses of

	Alarm No.	Feedback error 2:			Alarm check tim			ning
	43 An excessive deviation machine side detector v		of the feedback amount for the motor side detector and		f1	f2	f3	f4
	machine side detec			piller) control.	—	0	0	-
	Investi	gation details	Investigation results	Rer	nedie	s		
1	Check items 3 and following for alarm No. "2A".							

	Alarm No.	Motor overheat:			Alar	m ch	eck ti	ming
	46	A temperature error wa (Temperature exceeded	s detected in the motor being driven. (°C)		f1	f2	f3	f4
					-	0	0	-
	Investi	gation details	Investigation results	Rer	nedie	s		
1	Check whether the motor therma	ne specifications provide I.	The specifications do not provide the motor thermal.	Investigate item 2.				
			The specifications provide the motor thermal.	Investigate item 3.				
2	Check the servo	parameter (SV034)	The parameter is not set correctly.	Correctly set SV034	1/mohm			
	setting value.		The parameter is set correctly.	Investigate item 3.				
3	Check the repea	tability.	The alarm is repeated within one minute after startup.	Investigate item 5.				
			The alarm is repeated sometimes after operating for a while.	Investigate item 4.				
4	Check the motor temperature when the alarm occurs.		The motor is hot.	Ease the operation ↓ If the problem is no investigation item 5	patter t solve	n. ed, che	eck	
			The motor is not high.	Investigate item 5.				
5	Wiggle the conne	ectors by hand to check	The connector is disconnected (or loose).	Correctly install.				
	whether the dete side and motor s disconnected.	ector connectors (unit ide cannon) are	The connector is not disconnected.	Investigate item 6.				
6	Turn the power 0	OFF, and check the	There is a connection fault.	Replace the detector	or cabl	e.		
	detector cable co	onnection with a tester.	The connection is normal.	Investigate item 7.				
7	Connect to anoth	ner normal axis unit, and	The alarm is on the unit side.	Replace the drive u	nit.			
	check whether th side.	ne fault is on the unit	The alarm occurs even when the unit is replaced.	Investigate item 8.				
8	Check if there is	any abnormality in the	No abnormality is found in particular.	Replace the motor.				
	unit's ambient er (Ex. Ambient ten grounding)	nvironment. nperature, noise,	An abnormality was found in the ambient environment.	Take remedies acco the abnormality. Ex. High temperatu Incomplete grou	ording re unding	to the Ch cod I : Ad	e caus eck th pling fa ditiona	es of e an. ally

	Alarm No.	Scale CPU error:			Alar	m che	eck tir	ning
	48	The CPU of the absolut	e position linear scale connected to the mo	otor side is not	f1	f2	f3	f4
		operating correctly.			-	0	0	0
	Investi	gation details	Investigation results	Rer	nedie	5		
1	Wiggle the conne	ectors by hand to check	The connector is disconnected (or loose).	Correctly install.				
	whether the abso scale connectors side) are disconr	blute position linear (unit side and scale nected.	The connector is not disconnected.	Investigate item 2.				
2	Turn the power C	OFF, and check the	There is a connection fault.	Replace the detector cable.				
	detector cable connection with a tester.		The connection is normal.	Investigate item 3.	8.			
3	Connect to anoth	ner normal axis unit, and	The alarm is on the unit side.	Replace the drive u	unit.			
	check whether th or scale side.	e fault is on the unit side	The alarm is on the absolute position linear scale side.	Investigate item 4.				
4	Check if there is	any abnormality in the	No abnormality is found in particular.	Replace the absolut	te pos	ition li	near s	scale.
	unit's ambient en (Ex. Ambient ten grounding)	ivironment. iperature, noise,	An abnormality was found in the ambient environment.	Take remedies acco the abnormality. Ex. High temperatu Incomplete grou	ording re unding	to the Che coc : Add	eck the ling fa ditiona	es of e an. Illy

	Alarm No.	Scale overspeed:			Alar	m che	eck tir	ming
	49	The absolute position li	ner scale connected to the motor side dete	ected a speed of	f1	f2	f3	f4
		45m/sec of more when	the CNC power was turned ON.		-	0	_	-
	Investi	gation details	Investigation results	Rei	nedie	s		
1	Check that the s position linear so	ystem is an absolute cale specification	The system is not the absolute position linear scale specifications.	Correctly set the SV	e SV025: MTYP para			neter.
	system.		The system is the absolute position linear scale specifications.	Investigate item 2.				
2	Check whether t operating when the second se	he machine was the alarm occurred.	The machine was operating.	Check the motor's mechanical br machine system.			orakes	s and
			The machine was not operating.	Investigate item 3.				
3	Wiggle the conn	ectors by hand to check	The connector is disconnected (or loose).	Correctly install.				
	whether the absorbed scale connectors side) are discon	olute position linear s (unit side and scale nected.	The connector is not disconnected.	Investigate item 4.				
4	Turn the power (OFF, and check the	There is a connection fault.	Replace the detected	or cabl	e.		
	detector cable co	onnection with a tester.	The connection is normal.	Investigate item 5.				
5	Connect to anoth	ner normal axis unit, and	The alarm is on the unit side.	Replace the drive u	nit.			
	check whether th or detector side.	ne fault is on the unit side	The alarm is on the absolute position linear scale side.	Investigate item 6.				
6	Check if there is	any abnormality in the	No abnormality is found in particular.	Replace the absolu	te pos	ition li	near s	scale.
	unit's ambient er (Ex. Ambient ten grounding)	nvironment. nperature, noise,	An abnormality was found in the ambient environment.	Take remedies acc the abnormality. Ex. High temperatu Incomplete grou	ording re unding	to the Cho coc J : Ado gro	e caus eck th pling fa ditiona und.	es of e an. ally

	Alarm No.	Absolute position detect	tion circuit error:		Alar	m che	eck tir	ning
	4A An error was detected scale connected to the		n the scale or scale side circuit of the absolute position linear motor side		f1	f2	f3	f4
	scale connected to the				-	0	0	0
	Investigation details		Investigation results	Rer	nedie	s		
1	Check the alarm No. "49" items.							

1	Alarm No.	Incremental position de	tection circuit error:		Alar	m che	eck tir	ning
	4B	A speed exceeding the	max. movement speed of the absolute pos	sition linear scale	f1	f2	f3	f4
			side was delected.		-	0	0	0
	Investi	gation details	Investigation results	Rer	nedie	S		
1	Check whether the	ne machine was	The machine was operating.	Investigate item 3.				
	operating when t	he alarm occurred.	The machine was not operating.	Investigate item 2.				
2	Check whether th	ne operation is normal at	The machine was operating.	Investigate item 3.				
	low-speeds.		The machine was not operating.	Check the wiring an power ON.	viring and the parameter			at
3	Check whether the	ne connector is	The connector is disconnected (or loose).	Correctly install.				
	disconnected from the unit side or scale side.		The connector is not disconnected.	Investigate item 4.				
4	Turn the power C	OFF, and check the	There is a connection fault.	Replace the detector	or cabl	e.		
	detector cable co	onnection with a tester.	The connection is normal.	Investigate item 5.	vestigate item 5.			
5	Connect to anoth	ner normal axis unit, and	The alarm is on the unit side.	Replace the drive u	nit.			
	check whether th or detector side.	e fault is on the unit side	The alarm is on the absolute position linear scale side.	Investigate item 6.				
6	Check if there is	any abnormality in the	No abnormality is found in particular.	Replace the motor	(the lir	iear so	cale).	
	unit's ambient en (Ex. Ambient tem grounding)	ivironment. iperature, noise,	An abnormality was found in the ambient environment.	Take remedies acco the abnormality. Ex. High temperatu Incomplete grou	ording re unding	to the Che coo Ado	e caus eck th lling fa ditiona	es of e an. ally

	Alarm No.	Overload 1:			Aları	n che	eck tir	ning
	50	The servomotor or serv	o drive unit load level obtained from the mo vith the overload detection level (SV022:OI	otor current reached	f1	f2	f3	f4
				- -).	-	0	0	0
	Investi	gation details	Investigation results	Rer	nedies	6		
1	Check the servo value.	parameter (OLL) setting	The value differs from the standard setting value.	When not using spe the value to the star	ecial sp ndard s	pecific settin	ations g valu	s, set e.
	Standard setting	g value OLL: 150.	The value is the standard setting value.	Investigate item 2.				
2	Check the motor alarm occurs.	temperature when the	The motor is hot.	Ease the operation ↓ If the problem is no investigation item 3	patterr t solve	n. d, che	eck	
			The motor is not high.	Investigate item 3.				
3	Check whether the	he motor is hunting.	The motor is hunting.	Refer to the adjus readjust.	tment	proce	dures	and
				Check the cable v connection.	viring a	and co	onnec	tor
				 Check for incorrect 	ct para	mete	r setti	ngs.
				 Adjust the gain. ↓ 				
				If the problem is not investigation item 4	i is not resolved, check item 4.			
			The motor is not hunting.	Investigate item 4.				
4	Connect to anoth	ner normal axis unit, and	The alarm is on the unit side.	Replace the drive u	nit.			
	check whether th side.	ne fault is on the unit	The alarm occurs even when the unit is replaced.	Investigate item 5.				
5	Check whether the	he current value on the	An abnormal value is displayed.	Check the machine	syster	n.		
	CNC Servo Moni abnormally large and operating.	itor screen is an value when stopped	A correct value is displayed.	Investigate item 6.				
6	Check if there is	any abnormality in the	No abnormality is found in particular.	Replace the motor	(the de	tecto	⁻).	
	unit's ambient en (Ex. Ambient tem grounding)	ivironment. iperature, noise,	An abnormality was found in the ambient environment.	Take remedies according the abnormality. Ex. High temperatu	ording re unding	to the Cho coc Ado gro	e caus eck th ling fa ditiona und.	es of e an. ally

	Alarm No.	Overload 2:			Alar	m che	eck tir	ning
	51	A current command exc	ceeding 95% of the drive units max. capac	ity continued for 1	f1	f2	f3	f4
		sec. of more.			-	_	0	-
	Investi	gation details	Investigation results	Rer	nedie	s		
1	Check whether the	ne PN power is supplied	The voltage is being supplied.	Investigate item 3.				
	to the drive unit.		The voltage is not being supplied.	Investigate item 2.				
	 Check the axis for which the alarm is occurring and the axis farthest from the power supply. 							
2	Check whether the CHARGE lamp is	ne power supply unit's s lit, and the PN terminal	There is no voltage at the PN terminal. (The lamp is not lit.)	Check the power su	supply unit.			
	voltage.		There is voltage at the PN terminal.	Check the PN wiring	g betw	veen th	ne uni	ts.
3	Check whether the CNC Servo Monial abnormally large	ne current value on the tor screen is an value during accelera-	The max. value is exceeding the x level given on the previous page.	Increase the accele time constant to low the limit value.	celeration/deceleration b lower to approx. 80% of			
	tion/deceleration		A correct value is displayed.	Investigate item 4.				
4	Check items 3 ar No. "50".	nd following for alarm						

	Alarm No.	Excessive error 1:			Alar	m che	eck tir	ning
	52	The difference of the id	eal position and actual position exceeded	the parameter	f1	f2	f3	f4
		SV023:0D1 (0r SV053:	OD3) at servo ON.		-	-	0	-
	Investi	gation details	Investigation results	Rei	medie	s		
1	Check whether the	he PN power is supplied	The voltage is being supplied.	Investigate item 3.	3.			
	to the drive unit.		The voltage is not being supplied.	Investigate item 2.	e item 2.			
	• Check the axis for which the alarm is occurring and the axis farthest from the power supply.							
2	Check whether t CHARGE lamp is	he power supply unit's s lit, and the PN terminal	There is no voltage at the PN terminal. (The lamp is not lit.)	Check the power su	upply ı	unit.		
	voltage.		There is voltage at the PN terminal.	Check the PN wirin	g betv	veen t	ne uni	ts.
3	Check the servo setting value.	parameter (OD1)	The value differs from the standard setting value.	When not using spe the value to the sta	ng special specification ne standard setting valu			
			The value is the standard setting value.	Je. Investigate item 4.				
4	Check items 3 an No. "50".	nd following for alarm						

Supplement

Depending on the ideal machine position in respect to the command position, the actual machine position could enter the actual shaded section shown below, which is separated more than the distance set in OD1.



	Alarm No. Excessive error 2: The difference of the i				Alar	m ch	eck ti	ming
	53	SV026:OD2 at servo O	eal position and actual position exceeded FF.	parameter	f1	f2	f3	f4
	i				-	0	-	-
	Investi	gation details	Investigation results	Rei	nedie	s		
1	Check the servo setting value.	parameter (OD2)	The value differs from the standard setting value.	When not using spe the value to the sta	ecial s ndard	pecific settin	cation g valu	s, set ie.
			The value is the standard setting value.	Investigate item 2.				
2	Check whether t during servo OF	he machine is moving F.	The machine was operating.	Check the machine brakes.	and n	necha	nical	
			The machine was not operating.	Investigate item 3.				
3	Wiggle the comm	nunication cable	The connector is disconnected (or loose).	Correctly install.				
	between the CN0 hand to check w connectors (unit disconnected.	C and final connector by hether the detector side and CNC side) are	The connector is not disconnected.	Investigate item 4.				
4	Turn the power OFF, and check the		There is a connection fault.	Replace the communication cable.				
	communication of tester. Try replacing wit	cable connection with a h normal cables.	The connection is normal.	Investigate item 5.				
5	Replace with and	other normal axis unit,	The alarm is on the unit side.	Replace the drive u	nit.			
	and check wheth	her the fault is in the unit.	The alarm occurs even when the unit is replaced.	Replace the MCP c ↓ If the problem is no investigation item 6	ard or t resol	n the (ved, c	CNC s	ide.
6	Wiggle the conne	ectors by hand to check	The connector is disconnected (or loose).	Correctly install.				
	whether the dete side and motor s	ector connectors (unit side) are disconnected.	The connector is not disconnected.	Investigate item 7.				
7	Turn the power (OFF, and check the	There is a connection fault.	Replace the detected	or cab	e.		
	detector cable co	onnection with a tester.	The connection is normal.	Investigate item 8.				
8	Check if there is	any abnormality in the	No abnormality is found in particular.	Replace the motor.				
	unit's ambient er (Ex. Ambient ten grounding)	nvironment. nperature, noise,	An abnormality was found in the ambient environment.	Take remedies acc the abnormality. Ex. High temperatu Incomplete grou	ording Ire unding	to the Ch coo : Ad	e caus eck th oling f ditions	ses of ne an ally

	Alarm No.	Excessive error 3:			Alar	m che	ck tir	ning
	54	The motor current is no	t flowing when the excessive error alarm 1	was detected.	f1	f2	f3	f4
					-	0	0	-
	Investi	gation details	Investigation results	Rer	nedie	S		
1	Check whether the	ne PN power is supplied	The voltage is being supplied.	Investigate item 3.				
	 to the driver. Check the axis for which the alarm is occurring and the axis farthest from the power supply. 		The voltage is not being supplied.	Investigate item 2.				
2	2 Check whether the power supply unit's CHARGE lamp is lit, and the PN termina		There is no voltage at the PN terminal. (The lamp is not lit.)	Check the power su	upply unit.			
	voltage.		There is voltage at the PN terminal.	Check the PN wiring	g betw	een th	ne uni	ts.
3	Check whether the connected to the Disconnect the	ne motor power line is motor. e power line from the	The power line is not connected or is disconnected.	or is Increase the acceleration/deceleration time constant to lower to approx. 80% the limit value.				n o Of
terminal block, and check between UVW with a tester. The power line is correctly connected. Investigate item 4.								
4	Replace with and	other normal unit, and	The alarm is on the unit side.	Replace the drive u	nit.			
	check whether the fault is in the unit.	The alarm is on the motor side.	Replace the motor.	or.				

1		1			1			
	Alarm No.	Collision detection 0:			Alar	m che	eck tir	ning
	58	A collision detection met	thod 1 error was detected during the G0 mo	dal (rapid traverse).	f1	f2	f3	f4
		(A disturbance torque ex	Recearing the tolerable disturbance torque wa	as detected.)	-	-	0	-
	Investi	gation details	Investigation results	Rei	medie	s		
1	Check whether t function is being	he collision detection used.	The collision detection function is not being used.	Investigate item 2.				
	Check whether t	he machine is colliding.	The motor is colliding.	Improve so that the collide.	mach	ine do	oes no	it
			The collision detection is being used, but the machine is not colliding.	ut Investigate item 3.				
2	Check the paran Is SV060 (TLTM	neter.) set to "0"?	The setting is incorrect.	Set SV060 (TLMT) to "0".				
3	Check whether the rapid traverse ac	he current during normal cceleration/ deceleration	The current is 90% or more of the current limit value.	Lengthen the time of investigation item 4	consta	nt, an	d cheo	ck
	has reached the whether it is 90% value.	current limit value, or 6 or more of the limit	The current is less than 90% of the current limit value.	Investigate item 4.				
4	Readjust the col	lision detection function,	The alarm does not occur.					
	and then operate collision detection specifications.)	e. (Refer to the separate on function	The alarm occurs.	Investigate item 5.				
5	Is the machine o	or current vibrating?	They are vibrating.	Eliminate the vibrat gain, and check inv	ion by estiga	adjus tion ite	ting th em 4.	ıe
			They are not vibrating.	Investigate item 6.				
6	Raise the detect	ion level.	The alarm does not occur.	If the problem is no replacing the drive	t resol unit, ra	ved e aise th	ven af ie leve	ter ∍I.
			The alarm occurs.	Replace the drive u	init.			

	Alarm No.	Collision detection 1:			Alarm check timir			ning	
	59	A collision detection me	thod 1 error was detected during the G1 m	nodal (cutting feed).	f1	f2	f3	f4	
		(A disturbance torque e		was delected.)	-	-	0	-	
	Investig	gation details	Investigation results	Rer	nedies	5			
1	Check whether the function is being	ne collision detection used.	The collision detection function is not being used.	Investigate item 2.					
	Check whether the	ne machine is colliding.	The motor is colliding.	Improve so that the collide.	mach	ine do	es no	t	
			The collision detection is being used, but the machine is not colliding.	but Investigate item 2.			igate item 2.		
2	Check the parameter. s SV060 (TLTM) set to "0"?		The setting is incorrect.	Set SV060 (TLMT)) to "0".				
3	Check whether the current during norma rapid traverse acceleration/ deceleratior		The current is 90% or more of the current limit value.	Lengthen the time of investigation item 4	onsta:	nt, and	d cheo	ck	
	has reached the whether it is 90% value.	current limit value, or or more of the limit	The current is less than 90% of the current limit value.	Investigate item 4.					
4	Readjust the coll	ision detection function,	The alarm does not occur.						
	and then operate collision detection specifications.)	. (Refer to the separate n function	The alarm occurs.	Investigate item 5.					
5	Is the machine or	current vibrating?	current vibrating? They are vibrating. Eliminate the vibration by gain, and check investiga			adjus tion ite	ting th em 4.	e	
			They are not vibrating.	Investigate item 6.					
6	Raise the detecti	on level.	The alarm does not occur.	If the problem is not replacing the drive	t resolv unit, ra	ved ev iise th	/en af e leve	ter I.	
			The alarm occurs.	Replace the drive u	nit.				

	Alarm No.	Collision detection 2:			Alar	m che	eck tir	ning
	5A A collision dete		thod 2 error was detected.		f1	f2	f3	f4
					—	-	0	-
	Investigation details		Investigation results	Rer	nedie	s		
1	1 Check the alarm No. "58" items.							

	Alarm No.	HR unit connection erro	pr:		Alar	m che	eck tir	ning
	80	An incorrect connection	or cable breakage was detected in the MI	DS-B-HR connected	f1	f2	f3	f4
		to the motor side.			-	0	0	0
	Investi	gation details	Investigation results	Rer	nedie	s		
1	Wiggle the conne	ectors by hand to check	The connector is disconnected (or loose).	Correctly install.				
	whether the MDS side, HR side an disconnected.	S-B-HR connectors (unit d linear scale side) are	The connector is not disconnected.	Investigate item 2.				
2	Turn the power (OFF, and check the	There is a connection fault.	Replace the commu	mmunication cable.			
	connection of the detector cables (between driver I/F units and between I/F unit and scale) with a tester.		The connection is normal.	Investigate item 3.				
3	Connect with and	other normal axis unit (or	The alarm is on the unit side.	Replace the drive u	nit.			
	MDS-B-HR) and is on the unit side scale) side.	check whether the fault e or MDS-B-HR (linear	The alarm is on the MDS-B-HR (linear scale) side.	Investigate item 4.				
4	Check if there is	any abnormality in the	No abnormality is found in particular.	Replace MDS-B-HF	R (linea	ar sca	le).	
	unit's ambient er (Ex. Ambient ten grounding)	nvironment. nperature, noise,	An abnormality was found in the ambient environment.	nt Take remedies according to the car the abnormality. Ex. High temperature : Check cooling Incomplete grounding : Additio			e caus eck th oling fa ditiona	es of e an. Illy

	Alarm No. HR unit HSS communication error:				Alarm check timing			
	81 The MDS-B-HR connected to the motor side detected an error in the communication with the absolute position linear scale.				f1	f2	f3	f4
		with the absolute position	on linear scale.		-	0	0	0
	Investigation details		Investigation results	Rer	nedie	s		
1	Check the alarm No. "80" items.							

	Alarm No.	HR unit scale judgment	error:		Alar	m che	ck tin	ning
	83	The MDS-B-HR connect	ted to the motor side could not judge the a	analog frequency of	f1	f2	f3	f4
			ale.		-	0	0	0
	Investi	gation details	Investigation results	Rer	nedie	6		
1	Wiggle the conne	ectors by hand to check	The connector is disconnected (or loose).	Correctly install.				
	whether the MDS side, HR side, lin side) are disconr	S-B-HR connectors (unit lear scale side and MD nected.	The connector is not disconnected.	Investigate item 2.				
2	Turn the power C	OFF, and check the	There is a connection fault.	Replace the commu	unicati	on cat	ole.	
	connection of the (between driver a I/F unit and scale and pole detecto	e detector cables and I/F units, between and between I/F unit r) with a tester.	The connection is normal.	Investigate item 3.	3.			
3	Connect with and	other normal axis unit (or	The alarm is on the unit side.	Replace the drive u	nit.			
	MDS-B-HR) and is on the unit side scale or MDS-B-	check whether the fault e or MDS-B-HR (linear MD) side.	The alarm is on the MDS-B-HR (linear scale or MDS-B-MD) side.	Investigate item 4.				
4	Check if there is unit's ambient en	any abnormality in the nvironment.	No abnormality is found in particular.	Replace MDS-B-HF MDS-B-MD).	R (linea	ar scal	e or	
	(Ex. Ambient ten grounding)	nperature, noise,	An abnormality was found in the ambient environment.	Take remedies acco the abnormality. Ex. High temperatu Incomplete grou	ording re unding	to the : Che coo : Ado gro	cause eck the ling fa litiona und.	es of e an. Illy

	Alarm No.	HR unit CPU error:			Alar	m che	eck tir	ning
	84	The CPU of the MDS-B	-HR connected to the motor side is not op	erating correctly.	f1	f2	f3	f4
					0	-	-	-
	Investi	gation details	Investigation results	Rei	nedie	s		
1	Wiggle the conne	ectors by hand to check	The connector is disconnected (or loose).	e). Correctly install.				
	whether the MDS side and HR side	S-B-HR connectors (unit e) are disconnected.	The connector is not disconnected.	Investigate item 2.				
2	Turn the power (OFF, and check the	There is a connection fault.	Replace the comm	unicati	on cal	ble.	
	connection of the detector cables (between drive unit and I/F units) with a tester.		The connection is normal.	Investigate item 3.				
3	Connect with and	other normal axis unit	The alarm is on the unit side.	Replace the drive u	nit.			
	and check wheth side or MDS-B-H	er the fault is on the unit IR side.	The alarm is on the MDS-B-HR side.	Investigate item 4.				
4	Check if there is	any abnormality in the	No abnormality is found in particular.	Replace MDS-B-HF	ર .			
	unit's ambient er (Ex. Ambient ten grounding)	nvironment. nperature, noise,	An abnormality was found in the ambient environment.	Take remedies acc the abnormality. Ex. High temperatu Incomplete grou	ording Ire unding	to the Char coc J : Ada gro	e caus eck th bling fa ditiona und.	es of e an. ally

	Alarm No.	HR unit data error:		Alarm No. HR unit data error: An error was detected in the analog interpolation data of the MDS-B-HR connected to			Alarm check timing			
	85 An error was detected in the analog interpolation data of the MDS-B-HR connected to the motor side			f1	f2	f3	f4			
		the motor side.			-	0	0	0		
	Investigation details		Investigation results	Rer	nedie	s				
1	1 Check the alarm No. "80" items.									

	Alarm No.	HR unit pole error:			Alar	m che	eck tir	ning
	86	An error was detected in	n the pole data of the MDS-B-HR connected	ed to the motor side.	f1	f2	f3	f4
					-	0	0	0
	Investi	gation details	Investigation results	Rer	nedie	s		
1	Wiggle the conne	ectors by hand to check	The connector is disconnected (or loose).	Correctly install.				
	whether the MDS side, HR side an disconnected.	S-B-HR connectors (unit d MD side) are	The connector is not disconnected.	Investigate item 2.				
2	Turn the power C	OFF, and check the	There is a connection fault.	Replace the commu	unicati	on cal	ole.	
	connection of the detector cables (between drive unit and I/F units and between I/F unit and pole detector) with a tester.		The connection is normal.	Investigate item 3.				
3	Connect with and	other normal axis unit (or	The alarm is on the unit side.	Replace the drive u	nit.			
	MDS-B-HR) and is on the unit side (MDS-B-MD) side	check whether the fault e or MDS-B-HR e.	The alarm is on the MDS-B-HR (MDS-B-MD) side.	Investigate item 4.				
4	Check if there is	any abnormality in the	No abnormality is found in particular.	Replace MDS-B-HF	R (MD	S-B-M	D).	
	unit's ambient en (Ex. Ambient ten grounding)	nvironment. nperature, noise,	An abnormality was found in the ambient environment.	Take remedies acco the abnormality. Ex. High temperatu Incomplete grou	ording re unding	to the Char coc J : Ada gro	e caus eck the oling fa ditiona und.	es of e an. Illy

	Alarm No.	Watch dog:			Alarm ch			ning
	88	The servo drive softwa	re processing time did not end within the sp	pecified time.	f1	f2	f3	f4
					0	0	0	0
	Investi	gation details	Investigation results	Rer	nedie	s		
1	Check whether th	he servo software	The version was changed.	Replace with the or	iginal	rsion.		
	version has beer	n changed recently.	The version was not changed.	Investigate item 2.				
2	Check if there is	any abnormality in the	No abnormality is found in particular.	Replace the drive u	nit.			
	unit's ambient en (Ex. Ambient ten grounding)	ivironment. iperature, noise,	An abnormality was found in the ambient environment.	Take remedies according the abnormality. Ex. High temperature Incomplete group	ording re unding	to the Cho coc g : Ado gro	e caus eck the bling fa ditiona und.	es of e an. ally

	Alarm No.	HR unit connection error (SUB): An incorrect connection or coble breakage upon detected in the MDS B LIB connected						ning
	89	An incorrect connection	or cable breakage was detected in the MI	DS-B-HR connected	f1	f2	f3	f4
		to the machine side.			-	0	0	0
	Investigation details		Investigation results	Rer	nedie	s		
1	1 Check the alarm No. "80" items.							

	Alarm No. 8A	HR unit HSS communic The MDS-B-HR connec communication with the	ation error (SUB): ted to the machine side detected an error absolute position linear scale.	in the	Alar f1 -	m che f2 O	f3	f4
	Investigation details		Investigation results	Rer	nedie	s		
1	Check the alarm No. "80" items.							

	Alarm No.	HR unit scale judgment	error (SUB):		Alar	m che	eck tir	ning
	8C The MDS-B-HR connected linear		ted to the machine side could not judge the analog frequency		f1	f2	f3	f4
		of the connected linear	scale.		-	0	0	0
	Investigation details		Investigation results	Rer	nedie	s		
1	Check the alarm No. "83" items.							

	Alarm No.	HR unit CPU error (SUE	3):		Alar	m che	eck tir	ning
	8D	The CPU of the MDS-B	-HR connected to the machine side is not operating correctly.				f3	f4
					0	-	-	-
	Investigation details		Investigation results	Rer	nedie	s		
1	1 Check the alarm No. "84" items.							

	Alarm No.	HR unit data error (SUE	3):		Alar	m che	eck tir	ning
	8E An error was detected i the machine side.		in the analog interpolation data of the MDS-B-HR connected to			f2	f3	f4
	the machine side.				-	0	0	0
	Investigation details		Investigation results	Rer	nedie	s		
1	1 Check the alarm No. "80" items.							

	Alarm No.	HR unit pole error (SUE	e error (SUB):					
	8F	An error was detected in	n the pole data of the MDS-B-HR connecte	ed to the machine	f1	f2	f3	f4
		side.			-	0	0	0
	Investigation details		Investigation results	Rer	nedie	s		
1	1 Check the alarm No. "86" items.							

	Alarm No.	Absolute position fluctu	ation:		Alar	m che	ck tir	ning
	93	A fluctuation exceeding	the tolerable value was detected in the at	solute position	f1	f2	f3	f4
			power is turned ON.		-	0	_	-
	Investi	gation details	Investigation results	Rer	nedie	ies		
1	Check whether t	he connector is	The connector is disconnected (or loose).	Correctly install.				
	disconnected fro detector side.	om the unit side or	The connector is not disconnected.	Investigate item 2.	estigate item 2.			
2	Turn the power (OFF, and check the	There is a connection fault.	Replace the commu	unicati	on cal	ole.	
	connection of the tester.	e detector cables with a	The connection is normal.	Investigate item 3.				
3	Check the repeat Carry out zero p	itability. oint return again.	The alarm is not repeated.	If no abnormality is found with inve item 5, continue use.			vestig	gation
			The alarm is always repeated. Or, the state returns to normal once, but then is repeated sometimes.	Investigate item 4.				
4	Connect with an	other normal axis unit	The alarm is on the unit side.	Replace the drive u	nit.			
	and check wheth side.	her the fault is on the unit	The alarm occurs even when the unit is replaced.	Investigate item 5.				
5	Check if there is	any abnormality in the	No abnormality is found in particular.	Replace the motor	(detec	tor).		
	unit's ambient er (Ex. Ambient ten grounding)	nvironment. nperature, noise,	An abnormality was found in the ambient environment.	Take remedies acc the abnormality. Ex. High temperatu Incomplete grou	ording re unding	to the Che coc : Ado gro	caus eck th ling fa litiona und.	es of e an. ally

		Polo shift warping:	Pole shift warning:							
	Alarm NO.	An error was detected i	n the pole shift amount set in servo param	eter SV028	Alai	40		L f A		
	9B					īΖ	13	14		
<u> </u>	luura a di	nation dataile		Der		_	0	-		
	Investi	gation details	Investigation results	Rer	neales	S				
1	Check whether the	ne MDS-B-MD system is	The system is not MDS-B-MD.	Investigate item 4.						
	being used.		The system is MDS-B-MD.	Investigate item 2.						
2	Check whether the first moveme	he warning occurred at nt after setting the servo	Movement is possible several times without a warning.	Investigate item 4.						
	parameter (SV028).		The warning occurred at the first movement.	Investigate item 3.						
3	Carry out DC exc the servo parame	sitation again, and check eter (SV028) setting	The SV028 setting value is the same with the previous and current DC excitation.	Investigate item 4.						
	value.		The SV028 setting value is different with the previous and current DC excitation.	Set SV028 to the current DC excitation value. ↓ If the problem is not resolved, check			วท			
				investigation item 4.						
4	Wiggle the conne	ectors by hand to check	The connector is disconnected (or loose).	Correctly install.						
	side, HR side an disconnected.	d MD side) are	The connector is not disconnected.	Investigate item 5.						
5	Turn the power C	OFF, and check the	There is a connection fault.	Replace the commu	unicati	on ca	ble.			
	connection of the (between drive u between I/F unit a tester.	e detector cables nit I/F units and and pole detector) with	The connection is normal.	Investigate item 6.						
6	Connect with and	other normal axis unit (or	The alarm is on the unit side.	Replace the drive u	nit.					
	MDS-B-HR) and is on the unit side (MDS-B-MD) sid	check whether the fault e or MDS-B-HR e.	The alarm is on the MDS-B-HR (MDS-B-MD) side.	Investigate item 7.						
7	Check if there is unit's ambient er	any abnormality in the vironment.	No abnormality is found in particular.	Replace MDS-B-HR (linear scale or MDS-B-MD).						
	(Ex. Ambient ten grounding)	nperature, noise,	An abnormality was found in the ambient environment.	Take remedies according the abnormality. Ex. High temperature Incomplete group	ording re unding	to the Ch coo : Ad	eck th oling fa ditiona	es of e an. ally		

	Alarm No.	HR unit pole warning:			Alarm check timir			ning
	9C An error was detected MAIN side after passi		in the pole position data of the MDS-B-HR connected to the		f1	f2	f3	f4
	MAIN side after passi				-	0	0	0
	Investigation details		Investigation results	Rei	nedie	s		
1	Check the alarm	No. "86" items.						

	Alarm No.	HR unit pole warning (S	SUB):): a noise position data of the MDS D LID connected to the				ning
	9D An error was detected in the pole position data of the MDS-B-HR connected to SUB side after passing the Z phase.			connected to the	f1	f2	f3	f4
		SOD Side aller passing	the z phase.		-	0	0	0
	Investigation details		Investigation results	Rer	nedie	s		
1	Check the alarm No. "86" items.							

Alarm No. Overload warning:					Alarm check timing				
	E1 An level 80% of the over		erload alarm 1 was detected.		f1	f2	f3	f4	
					—	0	0	0	
	Investigation details		Investigation results	Remedies					
1	Check whether the motor is hot.		The motor is not hot.	Check the alarm No. "50" items.					
			The motor is hot.	Investigate item 2.					
2	Check whether there is a problem during acceleration/deceleration operation.		Operation is possible without problem.	1. If possible, ease the operation pattern.					
				2. If an alarm does not occur with continued operation, continue in this state.					
			There is a problem in the operation.	Check investigation of alarm No. "50".	vestigation items 3 and following No. "50".				

Alarm No. E4		Parameter error warning:			Alarm check timing				
		A parameter exceeding	parameter exceeding the setting range was set.		f1	f2	f3	f4	
					-	0	0	-	
	Investigation details		Investigation results	Ren	medies				
1	Set the correct values following the parameter adjustment procedures.								

Alarm No. E7 CNC emergency An emergency s		CNC emergency stop:			Alarm check timing				
		An emergency stop sig	gnal is being sent from the CNC, or an alarm is occurring in			f2	f3	f4	
	another axis.				-	0	0	0	
	Investigation details		Investigation results	Remedies					
1	Check whether th	ne CNC side emergency	The emergency stop state is entered.	Investigate item 2.					
	stop switch has been applied.		Emergency stop has been canceled.	Investigate item 3.					
2	2 Cancel the emergency stop.		Operation starts normally.	Normal					
			"E7" remains displayed.	Investigate item 3.					
3	B Check whether the terminator or battery unit is connected, or whether these are loose.		Pinpoint the cause of the fault.	Correct the fault.					
			Normal	Check the alarm No. "34" items.					