Honeywell

Safety Precautions

DATASHEET

MasterLogic-200 **CPU Module**

2MLI-CPUU

- ► Safety Precautions are for using the product safe and correct in order to prevent the accidents and danger, so please go by them.
- ► The precautions explained here only apply to the MasterLogic-200 CPU module. For safety precautions on the PLC system, refer to the MasterLogic-200 CPU User's manual.
- ► The precautions are divided into 2 sections, 'Warning' and 'Caution'. Each of the meanings is represented as follows.



If violated instructions, it may cause a slight injury or slight loss of products

The symbols indicated in the PLC and User's Manual mean as follows

Gives warnings and cautions to prevent from risk of injury, fire, or malfunction.

Gives warnings and cautions to prevent from risk of electric shock.

Store this datasheet in a safe place so that you can take out and read whenever necessary. Always forward it to the end user.

Warning Do not contact the terminals while the power is applied.

- Risk of electric shock and malfunction
- ► Do not drop or insert any metallic object into the product. Risk of fire, electric shock and malfunction.
- ► Do not charge, heat, short, solder and break up the battery.
- Risk of injury and fire by explosion and ignition.

Caution

- Before wiring the PLC, ensure to check the rated voltage and terminal arrangement for the module and observe them correctly. Risk of fire, electric shock and malfunction.
- > Tighten up the terminal screw firmly to defined torque when to wire the PLC. Risk of fire and electric shock if the terminal screw looses.
- ► Use the PLC in an environment that meets the general specifications contained in this datasheet.
- Risk of electrical shock, fire, erroneous operation and deterioration of the PLC.
- Ensure that external load does not exceed the rating of output module.

Risk of fire and erroneous operation.

- ► Do not use the PLC in the environment of direct vibration Risk of electrical shock, fire and erroneous operation.
- ► Do not disassemble, repair or modify the PLC. Risk of electrical shock, fire and erroneous operation.
- ► When disposing of PLC and battery, treat it as industrial waste. Risk of poisonous pollution or explosion.

Precautions for use

- Do not install in any places other than PLC controlled place.
- Ensure that the FG terminal is grounded with class 3 grounding which is dedicated to the PLC. Otherwise, it may cause disorder or malfunction of PLC



- · Connect expansion connector correctly when expansion modules are needed
- ► Do not detach PCB from the case of the module and do not modify the module.
- Turn off the power when attaching or detaching module.
- ► Cellular phone or walkie-talkie should be farther than 30cm from the PLC
- Input signal and communication line should be farther than minimum 100mm from a high-tension line and a power line in order not to be affected by noise and magnetic field.

1. Introduction

This datasheet provides brief information about characteristics, configurations, and usages of MasterLogic-200 CPU module (2MLI-CPUU).

2. General Specifications

No.	Items	Specifications					Standards	
1	Operating temperature		0 to	o 55℃				-
2	Storage temperature	-25 to 70 °C					-	
3	Operating Humidity	5 to	95%RH,	non-conde	ensi	ng		-
4	Storage humidity	5 to	95%RH,	non-conde	ensi	ng		-
			Occasior	nal vibratior	1			
		Frequency	Acce	leration	A	mplitude	Sweep count	
		10≤f∠57 Hz		-	0.	.075 mm		
5	Vibration	57 ≤f≤150 Hz	9.8 m	\$ ⁸ {1G}		-	10 times	IEC 61131-2
		Continuous vibration In each						
		Frequency	Acce	leration	A	mplitude	for	
		10≤f∠57 Hz		-	0.	035 mm	X. Y. Z	
		57≤f≤150 Hz	4.9 m	\${0.5G}		-	.,.,=	
6	Shocks	Maximum shock acce Pulse wave: half sine (3 times in each of X.	shock acceleration: 147 m/ {15G}, Duration time: 11 ms e: half sine wave pulse each of X_X and Z directions)				IEC 61131-2	
		Square wave impulse noise		±1,	±1,500 V			-
		Electrostatic discharge	Electrostatic discharge Voltage :4kV(contact discharge)		rge)	IEC 61131-2 IEC 61000-4-2		
7	Noise immunity	Radiated electromagnetic field		27 to 500 MHz, 10 V/m				IEC 61131-2 IEC 61000-4-3
		Fast transient burst noise	Severity Level	All powe modules	er S	Digita Analo communio	al I/Os ig I/Os cation I/Os	IEC 61131-2 IEC 61000-4-4
				2 kV 1 l		kV		
8	Atmosphere	Free from o	corrosive g	ases and e	xce	ssive dust		-
9	Altitude for use	Up to 2,000m					-	
10	Pollution degree		2 0	r less				-
11	Cooling method		Self-	cooling				-

3. Performance Specifications

The perfe	ormance specifi	cations of	CPU module (2MLI-CPUU) are as follows.		
	Items		Specifications (2MLI-CPUU)	Remarks	
(Operation metho	d	Cyclic, Time-driven, Fixed Period Scan Operation	-	
L	/O control metho	d	Scan synchronized batch processing method (Refresh method), Direct method by instruction	-	
Pro	gramming Langu	lage	Ladder Diagram (LD) SFC (Sequential Function Chart)	-	
	Operator		18	-	
	Basic funct	ion	136 + Floating-point Arithmetic Functions	-	
Numbers	Basic funct	ion block	43	-	
instructio	Special fun	ction	Each special modules have their own special function blocks.	-	
	LD)	0.028 #s/Step	-	
	MO	/F	0.084 //s/Step	-	
speed(Ba instruction	asic on) Floating	-point	±: 0.392 μs(S), 0.924 μs(D) x : 0.896 μs(S), 2.240 μs(D)	S: Single real number	
	diluin	ielic	÷: 0.924 μs(S), 2.254 μs(D)	D. DOUDIE Teal	
Prog	ram memory car	hacity	1M hyte(Approx 128kstep)	-	
Tiog	Max I/O points	Juony	6 144 points	-	
Max I/O n	points memory ma	nning area	131 072 points	-	
Widek. In O p	Symbolic variab	le area(A)	512K byte (Max. 256K byte retain setting available)	-	
	Input varial	ble(I)	16K byte	-	
	Output variable(Q)		16K byte	-	
		M	256K byte (Max. 128K byte retain setting available)	-	
D /	Direct variable	R	64K byte * 2 blocks	64K byte per 1 bloc	
Data		W	128K byte	-	
memory		F	4K byte	System flag	
		K	16K byte	PID flag	
	Flag variable	L	22K byte	High-speed link flag	
	-	N	42K byte	P2P flag	
		U	8K byte	Analog refresh flag	
	Flash area		2 M byte, 32 blocks	Using R device	
	Timer		No limit in points Time range: 0.001~ 4,294,967.295 s (1,193 hours)	1 timer occupies 20 byte of symbolic variable area	
	Counter		No limit in points Counter range: 64 bit range	1 counter occupies 8 byte of symbolic variable area	
	Number of total	programs	256	-	
Program	Initialization	n task	1	-	
types	Time driver	n task	32	-	
	Internal devi	ce task	32	-	
Operation modes		S	RUN, STOP, DEBUG	-	
	Restart modes		Cold, Warm	-	
Self-diagnostic functions		ions	Watchdog timer, Memory error detection, I/O error detection, Battery error detection, Power supply error detection, etc	-	
Data prote	ection method at po	ower failure	Set to retain area in basic parameter	-	
Ma	ax. extension sta	ges	8	Totally 15 m	
Intern	al current consur	nption	960mA	-	
	Weight		0.12kg	-	

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4. Operation Processing Methods

1) Cyclic operation

MasterLogic-200 PLC program is sequentially executed from the first step to the last step, which is called scan. This sequential processing is called cyclic operation. Cyclic operation of the PLC is continued as long as conditions are not changed for interrupt processing during program execution. This processing is classified into the following stages.

Stages	Processing
Start Operation	-
Initialization	Stage for the start of a scan processing. It is executed only one time when the power is applied or reset is executed. It executes the following processing. I/O modules reset Data clear Execution of self-diagnosis I/O module address allocation and type registration
Input image area refresh	 Input module conditions are read and stored into the input image area before operation.
Program operation processing Start program End program	- Program is sequentially executed from the first step to the last step
Output image area refresh	 When operation processing of a program is finished, it outputs the contents which are stored in the output image area to output modules.
END processing	 Stage for the return to the first step after the CPU module has finished 1 scan. The following processing is executed. Execution of self-diagnosis Change of the present values of timer and counter, etc. Processing data communications in the computer link module and communications module. Checking the switch for mode setting.

2) Interrupt operation method (time driven, internal device task)

In case of a situation which is requested to be urgently processed while executing the PLC program, this operation method discontinues the executed program temporarily and processes the interrupt program immediately. The signal which informs the CPU module of those urgent conditions is called interrupt signal.

There is time driven interrupt method which is processed at every pre-set interval. Moreover, there is internal device task program which is processed by states of internal device

3) Fixed period operation method (constant scan)

This operation method processes scan program at every pre-set interval. After the process of the scan program is finished, it is on standby, and then it is reactivated at every pre-set interval. With time driven interrupt program, it is different that the process is synchronized with input and output data refresh.

5. Parts Names and Descriptions

1 CPU Module

The following describes the names and functions of parts of the CPU module.

1) 2MLI-CPUU



No.	Names
1-a	RUN/STOP LED
①-b	REM LED
1-c	ERR LED
①-d	PS LED (Programmable Status)
1)-e	BAT LED
1-f	CHK LED
②-a	Boot/Nor Switch
②-b	REMOTE Mode Switch
(2-c	M.XCHG (Module Exchange Switch)
3	RUN/STOP Mode Switch
(4)	Reset/ D.Clear Switch
5	USB Connector
6	RS-232C Connector

No.	Name	Description
(1-a	RUN/STOP LED	Indicator of CPU operation mode ON(Green) : 'RUN' mode in normal operation ON(Red) : 'STOP' mode in normal operation
①-b	REMLED	ON(Yellow) : Permission of "REMOTE" mode OFF(Yellow) : Prohibition of "REMOTE" mode
①-c	ERR LED	ON(Red) : Error where operation is impossible OFF(Red) : Normal operation
1-d	PS LED (Programmable Status)	• ON(Red) ① In case of that 'user defined flag' is 'On' ② In case of that operation is continued in error state when 'Continue running when error occurs' is selected. ③ In case of that module is attached or detached when 'M.XCHG' switch is 'On' • OFF(Red) : Normal operation
①-e	BAT LED	ON(Red) : In case of that battery voltage is low OFF(Red) : Normal operation
1)-f	CHK LED	 ON(Red) : In case of that setting is not default OFF(Red) : In case of that setting is default
@-a	Boot/Nor Switch	ON(Right) : Processing control operation in normal mode OFF(Left) : O/S download mode (user-handling prohibited) Caution: Boot/Nor switch must be always set to ON(Right). It can cause malfunction if it is set to OFF(Left).
@-b	REMOTE Mode Switch	It restricts the PLC operation of remote connection. ON(Right): All functions are allowed. (Remote Mode) OFF(Left): Remote functions are restricted.
@-c	M.XCHG (Module Exchange Switch)	It is used in case of that module is changed without the system being stopped. ON(Right) : Module exchange is allowed. OFF(Left) : Module exchange is finished.
3	RUN/STOP Mode Switch	 It sets the operation mode of CPU module. STOP → RUN : Operation execution of program RUN → STOP : Operation stop of program
4	Reset/ D.Clear Switch	 Reset operation is executed when the switch is set to left and then released. Set to left → Return to center : RESET operation execution Set to left → Hold over 3 seconds → Return to center : Overall RESET operation execution Data clear operation is executed when the switch is set to right and then released. Set to right → Return to center : Clear M, automatic variable retain area and general area data Set to right → Hold over 3 seconds → Return to center : Clear M, automatic variable retain area, general area data and R area data
Ē	LICD Connector	Caution: Data clear operation is executed in "STOP" mode.
9	USB Connector	
6	RS-232C Connector	 RS-232C connector to connect with external device SoftMaster-200 connection: supported basically Modbus device connection: Modbus protocol is supported. TX: Pin No. "7", RX: Pin No. "8", GND: Pin No. "5"

6. Power Supply Modules

This chapter describes the selection method, type and specification of the power supply modules

1) Selection of power supply module

Selection of the power supply module is determined by the total current consumption of digital input/output modules, special modules and communication modules, etc. whose opers are supplied by the power supply module. If total load overruns the rated output capacity, the system will not normally operate.

When configuring a system, select a power supply module with due consideration of current consumption of each module.

Internal current cor	nsumption of M	MasterLogic-2	001 series modules	s(5VDC)	(Unit: MA
Туре	Module	Current Consumption	Туре	Module	Current Consumption
CPU	2MLI-CPUU	960		2MLF-AV8A	420
	2MLI-D21A	20	Analog Input	2MLF-AC8A	420
	2MLI-D22A	30		2MLF-AD8A	560
	2MLI-D22B	30		2MLF-DV4A	190(140)
24\/DC Input	2MLI-D24A	50	Analog Output	2MLF-DC4A	190(210)
24VDC Input	2MLI-D24B	50	Analog Output	2MLF-DV8A	190(180)
	2MLI-D28A	60		2MLF-DC8A	190(300)
	2MLI-D28B	60	2MLF-DC8A Thermocouple Input 2MLF-TC4S High-speed Counter 2MLF-HO2A 2MLF-PO3A 2MLF-PO3A	610	
110VAC Input	2MLI-A12A	30	High-speed	2MLF-HO2A	270
220VAC Input	2MLI-A21A	20	Counter	2MLF-HD2A	330
	2MLQ-RY1A	250		2MLF-PO3A	400
Relay Output	2MLQ-RY2A	500		2MLF-PO2A	360
	2MLQ-RY2B	500	Desitioning	Module 2MLF-AV8A 2MLF-AV8A 2MLF-AD8A 2MLF-DV4A 2MLF-DV4A 2MLF-DV8A 2MLF-DV8A 2MLF-DV8A 2MLF-TC4S 2MLF-H02A 2MLF-P03A 2MLF-P03A 2MLF-P04A 2MLF-P04A 2MLF-P04A 2MLF-P04A 2MLF-P04A 2MLF-DV4S 2MLF-DV4S 2MLF-DV4S 2MLL-EFMT 2MLL-EFMT 2MLL-EFMT 2MLL-ESHF	336
	2MLQ-TR2A	70	Fusitioning	2MLF-DV8A 2MLF-DC8A 2MLF-TC4S 2MLF-HO2A 2MLF-HO2A 2MLF-PO3A 2MLF-PO3A 2MLF-PO1A 2MLF-PD1A 2MLF-PD1A 2MLF-PD1A 2MLF-PD1A 2MLF-PD4S 2MLF-D4S	860
	2MLQ-TR2B	70		2MLF-PD2A	790
Transistor Output	2MLQ-TR4A	130		2MLF-PD1A	510
	2MLQ-TR4B	130	RTD Input	2MLF-RD4A	490
	2MLQ-TR8A	230	Channel-Isolated		610
	2MLQ-TR8B	230	Analog Input	Module 2MLF-AV8A 2MLF-AC8A 2MLF-DV4A 2MLF-DV4A 2MLF-DV4A 2MLF-DV4A 2MLF-DV4A 2MLF-DC4A 2MLF-DC4A 2MLF-DC4A 2MLF-DC4A 2MLF-DC4A 2MLF-PO2A 2MLF-HO2A 2MLF-PO3A 2MLF-PO4A 2MLF-PO4A 2MLF-PO4A 2ML-EFMT 2MLL-EDMT 2MLL-ESHF <td>010</td>	010
TRIAC Output	2MLQ-SS2A	300	Channel-Isolated	2MLF-DC4S	200(220)
	2MLL-C22A	330	Analog Output	2MLF-DV4S	200(150)
Snet I/F Module	2MLL-C42A	300	EE not I/E Modulo	2MLL-EFMF	650
	2MLL-CH2A	340	FENet I/F Module	2MLF-AV8A 2MLF-AC8A 2MLF-AC8A 2MLF-DV4A 2MLF-DV4A 2MLF-DV8A 2MLF-DV8A 2MLF-DV8A 2MLF-H02A 2MLF-H02A 2MLF-P03A 2MLF-P01A 2MLF-P01A 2MLF-P01A 2MLF-P01A 2MLF-P01A 2MLF-P01A 2MLF-P01A 2MLF-D04S 2MLF-D04S 2MLF-D04S 2MLF-D04S 2MLF-EDMF 2MLL-EFMT 2MLL-EFMT 2MLL-EDMF	420
Rnet I/F Module	2MLL-RMEA	410	FDEnet I/F	2MLL-EDMF	650
Pnet I/F Module	2MLL-PMEA	560	Module (Master)	2MLL-EDMT	420
Dnet I/F Module	2MLL-DMEA	440	Fiber Optic Ring	2MLL-ESHF	1,200
-	-	-	Switch Module		

() indicates current consumption of external 24VDC.

2) Specif	ication					
	Item	2MLP-ACF1	2MLP-ACF2	2MLP-AC23	2MLP-DC42	
	Rated voltage	100 to 240VAC 200 to 240VAC +10%/-15% +10%/-15% (85 to 264VAC) (170 to 264VAC)		24VDC +20%/-20% (19.2 to 28.8VDC)		
1	Input frequency	50 /	-			
	Inrush current	2	80A peak or less			
Input	Efficiency		65% or more		60% or more	
	Fuse	Built-in (Unchang	eable by user), UL	certification (SI	ow Blow Type)	
	Permissible instantaneous power failure time					
	Voltage		5VDC (±2%)		5VDC (±2%)	
1	Current	3 A	6 A	8.5 A	6A	
Output1	Overcurrent protection	3.2A or more	6.6 A or more	9A or more	6.6 A or more	
	Overvoltage protection		5.5V to 6	6.5V		
	Voltage	DC24V (±10%)				
	Current	0.6 A	-			
Output2	Overcurrent protection	0.7 A or more			-	
	Overvoltage protection	None				
	Application		RUN coi	ntact		
	Rated switching voltage/current					
Relay	Minimum switching load	5VDC, 1 mA				
output	Response time	Off to	On: 10 ms max. / C	Dn to Off: 12 ms	max.	
	Life	Mechanical: More than 2 million times Electrical: More than 100 thousand times at rated switching voltage/current				
Operati	on indication	LED indication (lit at 5VDC output)				
Applica	ble wire size	0.75 to 2 mm ²				
Applicable crimping terminal		RAV1.25 to 3.5, RAV2 to 3.5				
Weiaht		0.4	kg	0.6 kg	0.5 kg	



No.	Name	Description
1	Power LED	LED indicator for 5VDC power
2	24VDC terminal 24VDCG terminal	Supply 24VDC power to the other modules (2MLP-ACF1 only) ► No connection (2MLP-ACF2, 2MLP-AC23)
3	RUN terminal	CPU module operating status output Relay switched off at an error stop of CPU module Relay switched off at an CPU mode change to STOP
4	FG terminal	Frame ground terminal
5	LG terminal	Line ground terminal
6	Power input terminal	Power input terminal ▶2MLP-ACF1, 2MLP-ACF2: connect 100 to 240VAC ▶2MLP-AC23: connect 200 to 240VAC ▶2MLP-DC42: connect 24VDC
7	Terminal cover	Cover for protection of terminal

7. Base Units

1) Main Base Board					
Type Item	2MLB-M12A	2MLB-M08A	2MLB-M06A	2MLB-M04A	
Number of I/O modules mounted	12	8	6	4	
External dimensions (mm)	426 X 98 X 19	318 X 98 X 19	264 X 98 X 19	210 X 98 X 19	
Panel installation hole dimensions (mm)	406 X 75	298 X 75	244 X 75	190 X 75	
Panel installation hole size					
FG terminal connection screws specification	(+)PHM 3 X 6 washer(\(\phi 5))				
Weight (kg)	0.6	0.5	0.4	0.3	

2) Expansion Base Board Туре 2MLB-E12A 2MLB-E08A 2MLB-E06A 2MLB-E04A Item Number of I/O modules 12 8 6 4 mounted External dimensions (mm) 426 X 98 X 318 X 98 X 19 264 X 98 X 19 210 X 98 X 1 Panel installation hole 406 X 75 298 X 75 244 X 75 190 X 75 dimensions (mm) Panel installation hole size $\varphi\,4.5$ (for M4 screw) FG terminal connection (+)PHM 3 X 6 washer(\u03c6 5) screws specification Weight (kg) 0.6 0.5 0.4 0.3

8. Troubleshooting

The following explains contents, diagnosis and corrective actions for various errors that can occur during system operation.

8.1 Basic Procedures of Troubleshooting System reliability not only depends on reliable equipment but also on short downtimes in the event of faults. The short discovery and corrective action is needed for speedy operation of system. The following shows the basic instructions for troubleshooting. 1) Visual checks

Check the following points

Machine operating condition (in stop and operating status)
 Power On/Off

Status of I/O devices

- Condition of wiring (I/O wires, extension and communications cables) Display states of various indicators (such as POWER LED, RUN LED, ERR. LED and I/O LED). After checking them, connect peripheral devices and check the operation status of the PLC and the program contents.

2) Trouble Check

- Observe any change in the error conditions during the following.
 Switch to the STOP position, and then turn the power on and off.
- Range limitation According to above procedures, assume the cause of faults as follows.
- Is it caused by PLC or External Environment?
 Is it caused by I/O modules or others?
- · Is it caused by programming mistakes?

8.2 Troubleshooting Refer to MasterLogic-2001 CPU User's Manual in order to understand error contents, diagnosis and corrective actions in details.

8.3 Error Code List

Error code	Cause	Corrective Action (Solution)	Opera- tion status	LED status	Diagnosis timing
02	Data bus error	Contact the service center if it reactively occurs when the power is re-applied.	Defect	All LEDs flicker sequentially	When power is applied
03	Data RAM error	Contact the service center if it reactively occurs when the power is re-applied.	Defect	All LEDs flicker sequentially	When power is applied
04	RTC fault	Contact the service center if it reactively occurs when the power is re-applied.	Defect	ERR: On	When power is applied
06	Program memory error	Contact the service center if it reactively occurs when the power is re-applied.	Defect	ERR: On	When power is applied
10	USB IC error	Contact the service center if it reactively occurs when the power is re-applied.	Defect	ERR: On	When power is applied
11	Backup RAM error	Contact the service center if it reactively occurs when the power is re-applied.	Defect	ERR: On	When power is applied
12	Backup Flash memory error	Contact the service center if it reactively occurs when the power is re-applied.	Defect	ERR: On	When power is applied
13	Base information error	Contact the service center if it reactively occurs when the power is re-applied.	STOP	ERR: On	When power is applied, change into the RUN mode
22	Program error of backup flash memory	Correct the memory module program and re-operate the system	Defect	ERR: On	Reset and change into the RUN mode.
23	Abnormal program	1.Re-load program and start it. 2.Replace battery if it gets trouble. 3.Replace CPU module if it gets trouble after the program re-loading.	STOP	ERR: On	Reset and change into the RUN mode.
24	I/O parameter error	1.Re-load I/O parameter and start it. 2.Replace battery if it gets trouble. 3.Replace CPU module if it gets trouble after the I/O parameter re-loading.	STOP	ERR: On	Reset and change into the RUN mode.
25	Basic parameter error	1.Re-load basic parameter and start it. 2.Replace battery if it gets trouble. 3.Replace CPU module if it gets trouble after the basic parameter re-loading.	STOP	ERR: On	Reset and change into the RUN mode.
30	Inconsistency between the specified modules by parameters and the loaded modules	Module type inconsistency error. Check the incorrect slot or parameter by SoftMaster-200, and correct it and then re-start the system.	STOP (RUN)	ERR: On (PS: On)	Change into the RUN mode.
31	Module dismounting or additional mounting during run	Module mounting/dismounting error. Check the incorrect slot by SoftMaster- 200, and correct it and then re-start the system.	STOP (RUN)	ERR: On (PS: On)	When scan is completed
32	Fuse disconnection of output module during run	Check fuse LED of output module and replace the module.	STOP (RUN)	ERR: On (PS: On)	When scan is completed
33	Abnormal I/O module data access during run	I/O module read/write error. Check the incorrect slot by SoftMaster- 200, and replace the module and then re-start the system.	STOP (RUN)	ERR: On (PS: On)	When scan is completed
34	Abnormal special/ link module data access during run	Special/ link module interface error. Check the incorrect slot by SoftMaster- 200, and replace the module and then re-start the system.	STOP (RUN)	ERR: On (PS: On)	When scan is completed
39	Abnormal PLC CPU completion or fault	Contact the service center if it reactively occurs when the power is re-applied.	STOP	RUN: On ERR: On	Always
40	During run, Scan time over than the scan delay time specified by parameters	Check the scan delay time specified by parameters and correct the parameters or the program, and then re-start the system.	STOP	RUN: On ERR: On	During execution of program
41	Operating error in the user program	Correct the operating error and re-load the program and then restart the system. -STOP: Check the details of the operating error using SoftMaster- 200 and correct the program. -RUN: Check the error step in F area.	STOP	RUN: On ERR: On	During execution of program
42	Stack overflow during execution of program	Re-start the system.	STOP	RUN: On ERR: On	During execution of program
44	Timer index error	Correct timer index program and re-load program and then re-start the system.	STOP (RUN)	RUN: On ERR: On	When scan is completed
50	External device fatal error	Refer to the external device fatal error flag and correct the fault devices and then re-start the system.	STOP (RUN)	ERR: On (PS: On)	When scan is completed
60	The 'E-STOP' function has been executed	Correct the program so that the error elements that invoked the 'E_STOP' function can be eliminated in the program and re-start the system	STOP	RUN: On ERR: On	During execution of program
500	Data memory backup error	If the battery has no error, re-apply the power. It is changed to STOP mode in the remote mode.	STOP	ERR: On	Reset
501	RTC data error	If the battery has no error, re-set the time using SoftMaster-200	-	CHK: On	Always
502	Lower battery voltage	Replace the battery when the power is applied	-	BAT: On	Always



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