Chapter 21 System Reserved Words / Bits

Some Local Words and Local Bits are reserved for system usage. Users should not use there reserved words/bits except for the designated purposes.

The range of reserved word/bits is listed as follows:

- Local Bits: 9000~9999 are reserved
- Local Words: 9000~9999 are reserved

1. System status and control

Address	Description	Read & Write	Macro	Remote HMI Control
LB-900n (n = 0~9)	When the HMI starts up, the initial states of these bits will be set as ON.	R / W	R / W	R / W
LB-9017	When the state is ON, the return function of [PLC Control] [Change Base Window] will be disable.	R / W	R / W	R / W
LB-9018	Set ON to make mouse cursor invisible	R / W	R / W	R / W
LB-9070	Toshiba T/C write control bit	R / W	R / W	R / W
LW-9025	CPU loading (0-100%) indicator	R	R	R
LW-9050	Window number that are currently displayed as base windows on the MT8000.	R	R	R
LW-9100~ LW-9115	File names of the MTP projects used by the MT8000.	R	R	R
LW-9116~ LW-9117	Sizes of MTP projects (unit: byte).	R	R	R
LW-9118~ LW-9119	Sizes of MTP projects (unit: K byte).	R	R	R
LW-9120~ LW-9121	Version of complier that is used for MTP projects.	R	R	R
LW-9122	Time (year) of MTP project being complied.	R	R	R
LW-9123	Time (month) of MTP project being complied.	R	R	R
LW-9124	Time (day) of MTP project being complied.	R	R	R
LW-9125	IP0 (The IP address format is IP0. IP1. IP2. IP3.)	R	R	R
LW-9126	IP1	R	R	R
LW-9127	IP2	R	R	R
LW-9128	IP3.	R	R	R
LW-9129	gw0. (The IP address of gateway : gw 0. gw 1. gw 2. gw 3.)	R	R	R

LW-9130	gw1	R	R	R
LW-9131	gw2	R	R	R
LW-9132	gw3	R	R	R
LW-9133	Ethernet port no.	R	R	R
LW-9134	Language mode	R/W	R/W	R/W

2. States of Data Input

Address	Description	Read & Write	Macro	Remote HMI Control
LW-9002~ LW-9003	Maximum value that is allowed to input to the current data input object. The data format is 32-bit (float).	R	R	R
LW-9004~ LW-9005	Minimum value that is allowed to input to the current data input object. The data format is 32-bit (float).	R	R	R
LW-9150~ LW-9181	Data stream input from the keypad, saved in the ASCII format and the length of data is 32 words.	R	R	R
LW-9540	Reserved for the use of the Caps Lock key on the keypad.	R	R	R

3. Recipe Data

Address	Description	Read & Write	Macro	Remote HMI Control
LB-9010	ON when recipe data is in download operation.	R	R	R
LB-9011	ON when recipe data is in upload operation.	R	R	R
LB-9012	ON when recipe data is in either download or upload operation.	R	R	R
LB-9028	If it is set ON, all recipe data will be clear (set to 0).	W	W	W
LB-9029	The MT8000 will save recipe data (RW and RWA) on the flash memory every 5 minutes. If it is set ON, recipe data will be compulsorily saved on the flash memory.	W	W	W

4. Task Button and Fast Selection Window

Address	Description	Read &	Macro	Remote HMI

		Write		Control
LB-9013	If it is set ON, the Fast Selection Window is disable.	W	W	W
LB-9014	If it is set ON, the Task Button is disable.	W	W	W
LB-9015	If it is set ON, both the Fast Selection Window and Task Button is disable.	W	W	W

5. Event Logging

Address	Description	Read & Write	Macro	Remote HMI Control
LB-9021	Clear all event logs of the day when bit is set ON.	W	W	W
LB-9022	The oldest event log message will be deleted when bit is set ON.	W	W	W
LB-9023	Clear all event logs in the MT8000 when bit is set ON.	W	W	W
LB-9024	The MT8000 will recalculate the file sizes of all the event log message when bit is set ON.	W	W	W
LB-9042	Set ON to acknowledge all unacknowledged events	W	W	W
LB-9043	Status ON indicates there are unacknowledged events	R	N/A	N/A
LW-9060	Number of existing event logs.	R	R	R
LW-9061	The file sizes of all event logs (32-bit Unsigned).	R	R	R

6. Data Logging

Address	Description	Read & Write		Remote HMI Control
LB-9025	Set ON to delete the oldest data sampling log. (The function can only work for data sampling logs on the MT8000.)	W	W	W
LB-9026	Set ON to delete all the data sampling log. (The function can only work for data sampling logs on the MT8000.)	W	W	W
LB-9027	The MT8000 will recalculate the file sizes of all the data sampling log when bit is set ON.	W	W	W
LW-9063	The number of data sampling logs on the MT8000.	W	W	W
LW-9064	The file sizes of all data sampling logs on the MT8000 (32-bit Unsigned).	W	W	W

7. Password and Operation Level

Address	Description	Read & Write	Macro	Remote HMI Control
LB-9050	Set ON to logout	W	W	W
LB-9060	ON when a password error occurs.	R	N/A	N/A
LB-9061	When set ON , the MT8000 will copy data stored in [LW9500] to [LW9535] and use it as valid password.	W	N/A	N/A
LW-9219	Show the existing user No. 0 user 1, user 2, or user 3.	R	R	R
LW-9220 ~ LW-9221	Address for password entering (32-bit).	R / W	R / W	R / W
LW-9222	Level (0~6) of currently entered password.	R	R	R
LW-9500 ~ LW-9501	A new password for user 1	R / W	R / W	R / W
LW-9502 ~ LW-9503	A new password for user 2	R / W	R / W	R / W
LW-9504 ~ LW-9504	A new password for user 3	R / W	R / W	R / W
LW-9506 ~ LW-9505	A new password for user 4	R / W	R / W	R / W
LW-9508 ~ LW-9506	A new password for user 5	R / W	R / W	R / W
LW-9510 ~ LW-9511	A new password for user 6	R / W	R / W	R / W
LW-9512 ~ LW-9513	A new password for user 7	R / W	R / W	R / W
LW-9514 ~ LW-9515	A new password for user 8	R / W	R / W	R / W

LW-9516 ~ LW-9517	A new password for user 9	R / W	R / W	R / W
LW-9518 ~ LW-9519	A new password for user 10	R / W	R / W	R / W
LW-9520 ~ LW-9521	A new password for user 11	R / W	R / W	R / W
LW-9522 ~ LW-9523	A new password for user 12	R / W	R / W	R / W

8. Time of HMI

Address	Description	Read & Write	Macro	Remote HMI Control
LW-9010	Local time (second, BCD)	R / W	R / W	R / W
LW-9011	Local time (minute, BCD)	R / W	R / W	R / W
LW-9012	Local time (hour, BCD)	R / W	R / W	R / W
LW-9013	Local time (day, BCD)	R / W	R / W	R / W
LW-9014	Local time (month, BCD)	R / W	R / W	R / W
LW-9015	Local time(year, BCD)	R / W	R / W	R / W
LW-9016	Local time (week, BCD)	R	R	R
LW-9017	Local time (second, BIN)	R / W	R / W	R / W
LW-9018	Local time (minute, BIN)	R / W	R / W	R / W
LW-9019	Local time (hour, BIN)	R / W	R / W	R / W
LW-9020	Local time (day, BIN)	R / W	R / W	R / W
LW-9021	Local time (month, BIN)	R / W	R / W	R / W
LW-9022	Local time (year, BIN)	R / W	R / W	R / W
LW-9023	Local time (week, BIN)	R	R	R
LW-9030~ LW-9031	System time (in units of 0.1 second), timing from the machine starts up.	R	R	R

9. Hardware of HMI

Address	Description	Read & Write	Macro	Remote HMI Control
LB-9019	Set ON to disable Sound and Buzzer Set OFF to enable Sound and Buzzer	R / W	R / W	R / W
LB-9040	Set OFF to ON increase the brightness of CCFL backlight one step.	W	W	W
LB-9041	Set OFF to ON decrease the brightness of CCFL backlight one step.	W	W	W
LW-9070	free space for event logs (K bytes)	R / W	R / W	R / W
LW-9071	System reserved free space size (K bytes)	R / W	R / W	R / W
LW-9072	MT8000 available free space (K bytes)	R / W	R / W	R / W

10. The States of Communicating with Remote HMI(s)

Address	Description	Read & Write	Macro	Remote HMI Control
LB-910n	n = 0~31 The registers can be used to indicate the states of communication with remote HMIn. .ON indicates the communication is normal, while OFF indicates the communication is disconnected from remote HMIn; at this time set the state to ON, the MT8000 will try to connect to remote HMIn again.	R / W	R / W	R / W

11. The States of Communicating with PLC

Address	Description	Read & Write	Macro	Remote HMI Control
LB-9150	When the state is ON, the system will automatically resume connection if the PLC device with COM 1 is disconnected. When the state is OFF, the disconnection to the PLC device will not be resumed	R / W	R / W	R / W
LB-9151	When the state is ON, the system will automatically resume connection if the PLC device with COM 2 is disconnected. When the state is OFF, the disconnection to the PLC device will not be resumed .	R / W	R / W	R / W
LB-9152	When the state is ON, the system will automatically resume connection if the PLC device with COM 3 is disconnected. When the state is OFF, the disconnection to the PLC device will not be resumed .	R / W	R / W	R / W
LB-9153~ LB-9184	When the state is ON, the system will automatically resume connection if the PLC device with the Ethernet port is disconnected; n = 0~31. When the state is OFF, the disconnection to the PLC device will not be resumed .	R / W	R / W	R / W
LB-9200~ LB-9455	The registers can be used to indicate the states of communication with the PLC device on COM 1. LB9200 is to indicate the states of communication with the PLC on the station no. 0, LB9201 is to indicate the states of communication with the PLC on the station no. 1, and so on. When the state is ON, it indicates the communication is normal. When the state is OFF, it indicates the disconnection to the PLC device; at this time set the state at ON, and the system will try to connect the PLC device again.	R / W	R / W	R / W

Address	Description	Read & Write	Macro	Remote HMI Control
LB-9500~ LB-9755	The registers can be used to indicate the states of communication with the PLC device on COM 2. LB9500 is to indicate the states of communication with the PLC on the station no. 0, LB9501 is to indicate the states of communication with the PLC on the station no. 1, and so on. When the state is ON, it indicates the communication is normal. When the state is OFF, it indicates the disconnection to the PLC device; at this time set the state at ON, and the system will try to connect to the PLC device again.	R / W	R / W	R / W
LB-9800~ LB-10055	The registers can be used to indicate the states of communication with the PLC device on COM 3. LB9800 is to indicate the states of communication with the PLC on the station no. 0, LB9801 is to indicate the states of communication with the PLC on the station no. 1, and so on. When the state is ON, it indicates the communication is normal. When the state is OFF, it indicates the disconnection to the PLC device; at this time set the state at ON, and the system will try to connect to the PLC device again.	R / W	R / W	R / W
LB-10100 ~ LB-10131	The registers can be used to indicate the states of communication with the PLC device on the Ethernet port. When the state is OFF, it indicates the disconnection to the PLC device; at this time set the state at ON, and the system will try to connect to the PLC device again.	R / W	R / W	R / W
LW-930n	The number of the driver that is used by local PLC device.	R	R	R
LW-935n	The number of unprocessed commands that are gave to the local PLC device.	R	R	R
LW-940n	The content of the latest connection error when connecting to the local PLC device.	R	R	R

12. Client connected to Server

Address	Description	Read & Write	Macro	Remote HMI Control

| LB-9016 | Set ON when client connects to server. | R / W | R / W | R / W |
| LW-9006 | The number of clients connected to server. | R | R | R |

13. MODBUS Server Station no.

Address	Description	Read & Write	Macro	Remote HMI Control
LW-9541	device station no.(COM 1) if configured as Modbus server	R / W	R / W	R / W
LW-9542	device station no.(COM 2) if configured as Modbus server	R / W	R / W	R / W
LW-9543	device station no. (COM 3) if configured as Modbus server	R / W	R / W	R / W
LW-9544	device station no. (Ethernet) if configured as Modbus server	R / W	R / W	R / W

14. COM Communication

Address	Description	Read & Write	Macro	Remote HMI Control
LB-9030	Set LB9030 from OFF to ON force the system to use LW9550~LW9554 as new communication parameter of COM1	R / W	R / W	R / W
LW-9550	COM 1 mode 0: RS232 1: RS232 2W 2: RS232 4W	R / W	R / W	R / W
LW-9551	COM 1 baud rate 0: 4800 1: 9600 2: 19200 3: 38400 4: 57600 5: 115200	R / W	R / W	R / W
LW-9552	COM 1 data bits 7 : 7 bits 8: 8 bits	R / W	R / W	R / W
LW-9553	COM 1 parity	R / W	R / W	R / W

	0: none 1: even 2: odd			
LW-9554	COM 1 stop bits 1: 1 bit 2: 2 bits	R / W	R / W	R / W
LB-9031	Set LB9031 from OFF to ON force the system to use LW9556~LW9559 as new communication parameter of COM2	R / W	R / W	R / W
LW-9556	COM 2 baud rate 0: 4800 1: 9600 2: 19200 3: 38400 4: 57600 5: 115200	R / W	R / W	R / W
LW-9557	COM 2 data bits 7 : 7 bits 8: 8 bits	R / W	R / W	R / W
LW-9558	COM 2 parity 0: none 1: even 2: odd	R / W	R / W	R / W
LW-9559	COM 2 stop bits 1: 1 bit 2: 2 bits	R / W	R / W	R / W
LB-9032	Set LB9032 from OFF to ON force the system to use LW9560~LW9564 as new communication parameter of COM3	R / W	R / W	R / W
LW-9560	COM 3 mode 0: RS232 2: RS232 4W	R / W	R / W	R / W
LW-9561	COM 3 baud rate 0: 4800 1: 9600 2: 19200 3: 38400 4: 57600	R / W	R / W	R / W

	5: 115200			
LW-9562	COM 3 data bits 7 : 7 bits 8: 8 bits	R / W	R / W	R / W
LW-9563	COM 3 parity 0: none 1: even 2: odd	R / W	R / W	R / W
LW-9564	COM 3 stop bits 1: 1 bit 2: 2 bits	R / W	R / W	R / W

15. File manager

Address	Description	Read & Write	Macro	Remote HMI Control
LB-9034	Save event/data log to HMI	W	W	W
LB-9035	HMI free space insufficiency alarm	R	N/A	N/A
LB-9036	CF free space insufficiency alarm	R	N/A	N/A
LB-9037	USB1 free space insufficiency alarm	R	N/A	N/A
LB-9038	USB2 free space insufficiency alarm	R	N/A	N/A
LB-9039	Status of file backup activity	R	R	R
LW-9074	CF current free space	R	N/A	N/A
LW-9076	USB1 current free space	R	N/A	N/A
LW-9078	USB2 current free space	R	N/A	N/A

16. PLC & Remote HMI IP address setting

Address	Description	Read & Write	Macro	Remote HMI Control
LW-9600 ~ LW-9629	PLC 4's IP address setting (IP0:IP1:IP2:IP3)	R/W	R/W	R/W
LW-9800 ~ LW-9839	Remote HMI's IP address setting (IP0:IP1:IP2:IP3)	R/W	R/W	R/W

17. Printer server setting

Address	Description	Read & Write	Macro	Remote HMI Control
LW-9770 ~ LW-9773	Remote printer server setting (IP0:IP1:IP2:IP3)	R/W	R/W	R/W
LW-9774	Remote printer server user name	R/W	R/W	R/W
LW-9780	Remote printer server password	R/W	R/W	R/W

18. Address index function

Address	Description	Read & Write	Macro	Remote HMI Control
LW-9200 ~ LW-9260	Address index	R/W	R/W	R/W

19. The address ranges of local HMI memory

Bits

Memory	Device type	Address Range	Address Format
Local Memory Bits	LB	0~11999	AAAAA
Local Word Bits	LW_BIT	0~9999	AAAAABB AAAAA: address BB: bit offset (00~15) Example: 567<u>12</u> address = 567 bit offset = 12
Retentive Memory Bit Index	RBI	0~65535	AAAAAB AAAAA: address B: bit offset (0~f) Example:

			567<u>a</u> RW_Bit address = 567 + [LW9000] bit offset = a
Retentive Memory Word Bits	RW_Bit	0~65535	AAAAAB AAAAA: address B: bit offset (0~f) Example: 567<u>a</u> address = 567 bit offset = a
Retentive Memory A Word Bits	RW_A_Bit	0~65535	AAAAAB AAAAA: address B: bit offset (0~f) Example: 567<u>a</u> address = 567 bit offset = a

Words

Memory	Device type	Address Range	Format
Local Memory Words	LW	0~9999	AAAAA AAAAA: address
Retentive Memory Words	RW	0~65535	AAAAA AAAAA: address
Retentive Memory Word Index	RWI	0~65535	AAAAAB AAAAA: address Example: 567 RW address = 567 + [LW9000]
Retentive Memory A Word	RW_A	0~65535	AAAAA AAAAA: address

Extended Memory Words	EM0~EM9	AAAAAAAAAA
		Limited by device, Maximum 2 GB

20. Touch screen X and Y position

Address	Description	Read & Write	Macro	Remote HMI Control
LW-9041	Touch status word (bit 0 ON = user is touching the screen)	R	R/W	R/W
LW-9042	Touch X position	R	R/W	R/W
LW-9043	Touch Y position	R	R/W	R/W
LW-9044	Leave X position	R	R/W	R/W
LW-9045	Leave Y postion	R	R/W	R/W

21. Variable station no.

Address	Description	Read & Write	Macro	Remote HMI Control
LW-10000~ LW-10015	Var0~Var15 station no. variable (Usage: Var0#address)	R/W	R/W	R/W