

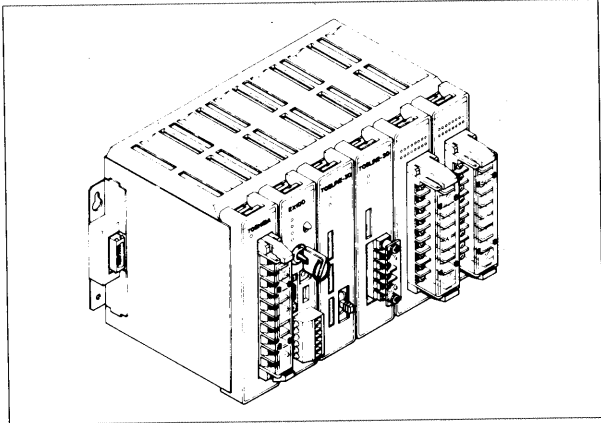
# TOSHIBA

## PROGRAMMABLE CONTROLLER EX100

Program Storage Module

RM11 「EX10\*PRM11」

USER'S GUIDE

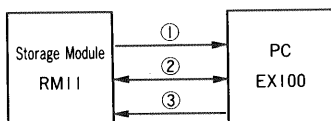


Thank you very much for purchasing a TOSHIBA product. Confirm that the product has arrived in good condition and please use it according to the procedures explained in this guide.

### Introducing the RM11 (Storage Module)

The Toshiba RM11 Storage Module has three functions. It allows you to load the user control program to the EX100 Programmable Controller, to compare the program of the RM11 with the one of the EX100 and to save the program from the EX100. These functions can be executed easily with the two buttons.

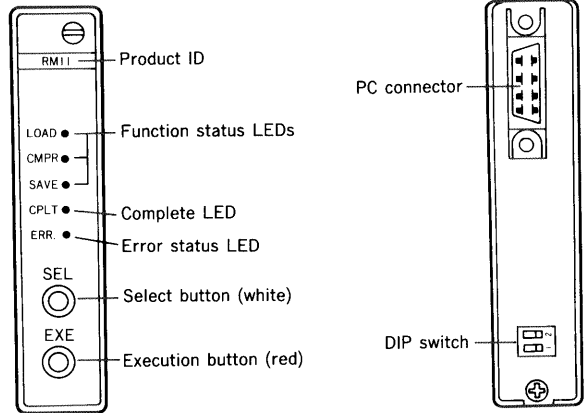
- ① **LOAD** : This function loads the program from The RM11 to the PC Random Access Memory (RAM), executes the following COMPARE function and automatically writes it from the PC RAM to the built-in Electric Erasable Programmable Read Only Memory (EEPROM) of the PC. First install the RM11, the check that the PC operation switch is in the HALT position, or that the operation mode is in the HALT mode.
- ② **COMPARE (CMPR)** : This function compares the program and data registers (in the EX100 3K mode) of the RM11 with those of the EX100's RAM.
- ③ **SAVE** : This function saves the program from the EX100's RAM to the RM11 and executes the COMPARE function.



#### \* PROM WRITE PROTECTION

When the DIP switch-No.1 (R.W.) -is set to OFF, writing onto the RM11 memory is prohibited.

### External features



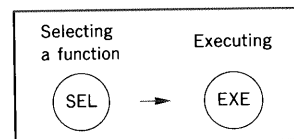
### DIP switch settings

Switch No.	Item	OFF	ON	Shipping
1	PROM write protection	PROM write disable	PROM write enable	ON
2	Operation mode selection	Reserved	Normal operation	ON



### Operations

1. Connection  
The RM11 is connected directly onto the EX100 CPU module.
2. Selecting a function  
Select a function with the Select button (SEL). Repeatedly press the SEL to obtain the designated function. The corresponding function status LED is lit.
3. Executing  
After checking the position of the EX100 CPU operation control switch, press the Execution button (EXE). The corresponding function status LED blinks during executing, and both its LED and the complete LED are lit when the corresponding function has been executed correctly.



FUNCTION	OPERATING	EX100 CPU operation control switch			NOTE
		RUN-P	RUN	HALT	
LOAD	LOAD→CMPR	Not Available	Available		
COMPARE	COMPARE	Available			
SAVE	SAVE→CMPR	Available			The DIP switch No. 1 must be ON

NOTE A program saved from the EX100 3k mode can only be loaded to the same memory mode EX100. The program saved from the EX100 4k memory is the same.

## Troubleshooting

If one of the following error condition appears in the error status LED, execute the corresponding remedy.

LED INDICATION				ITEM	CAUSE	REMEDY
LOAD	CMPR	SAVE	ERR			
○	○	○	●	Self-diagnosis error	There is an error in the RM11-hardware.	Repair the module.
●	○	○	●	PC operation mode error	The PC operation mode is in the RUN mode.	Change the PC mode to the HALT mode.
○	○	○	●	Memory-type mismatch error	The RM11 memory type is mismatched to the PC memory mode.	Check the PC memory mode (3k or 4k).
○	○	○	●	PC error	The PC is in Error mode.	Reset the error.
○	○	○	●	Transmission data error	The transmission data is affected by noise etc.	Disconnect the RM11 and reconnect it.
○	○	○	●	Memory error	The RM11 memory data is abnormal.	Save a correct program again.
○	○	○	●	Compare error	The RM11 memory data is different from the loaded data of the PC	Repair the module.
○	○	○	●	Memory-type mismatch error	The RM11 memory type is mismatched to the PC memory mode.	Check the PC memory mode (3k or 4k).
○	○	○	●	PC error	The PC is in Error mode.	Reset the error.
○	○	○	●	Transmission data error	The transmission data is affected by noise etc.	Disconnect the RM11 and reconnect it.
○	○	○	●	Compare error	The RM11 memory data is different from the loaded data of the PC.	Check the program.

LED INDICATION				ITEM	CAUSE	REMEDY
LOAD	CMPR	SAVE	ERR			
○	○	○	●	Memory-type mismatch error	The RM11 memory type is mismatched to the PC memory mode.	Check the PC memory mode (3k or 4k).
○	○	○	●	PC error	The PC is in Error mode.	Reset the error.
○	○	○	●	Transmission data error	The transmission data is affected by noise etc.	Disconnect the RM11 and reconnect it.
○	○	○	●	Memory error	a) The RM11 memory data is abnormal. b) DIP switch-No.1-is off.	a) Repair the module. b) Switch the DIP switch-No.1-to ON side.
○	○	○	●	Compare error	The RM11 memory data is different from the loaded data of the PC.	Repair the module.
○	○	○	●	Memory error	The RM11 memory data is abnormal.	Save a correct program again.

- : lit
- ◐ : blink
- : not lit

\* Try to operate again after executing the remedy, disconnecting the RM11 and reconnecting it if the ERR LED is lit.

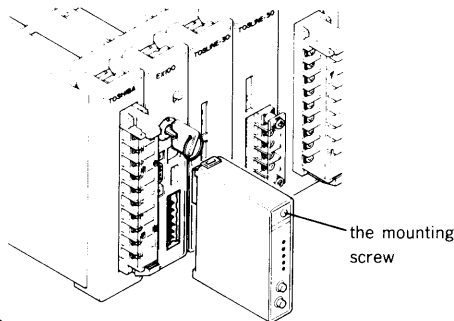
\* Press the select button to reset the RM11 if the ERR LED is blinking.

\* The program has been loaded from the RM11 to the PC's RAM, but isn't written from the RAM to the EEPROM of the PC when the CPLT LED is blinking.

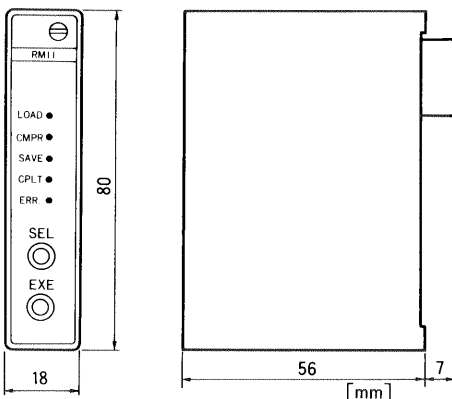
## Connection

The connector of the Storage Module RM11 is directly connected with the programmer connector of the EX100 CPU module (PUI1/11A, PUI2/12A).

NOTE To connect the PUI2/12A, remove the computer link terminal block.



## Dimensions



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