MANUFACTURER DOCUMENT PACKAGE

Manufacturer's Manual

Reference package for procurement and maintenance review

ALLEN-BRADLEY

1762-MM1

CONTROLLER PROGRAM MEMORY MODULE

Used with the applicable MicroLogix 1200 configuration.

REFERENCE PACKAGE

OFFICIAL DOCUMENT

Selected official manufacturer pages follow this cover.

Source: Rockwell1762-UM001I-EN-P,05/2024,pp.69 to 71; exact1762-MM1 product page lists6KB and0 to 55degC



MicroLogix 1200 Programmable Controllers

Bulletin 1762 Controllers and Expansion I/O Modules

Allen-Bradley
by ROCKWELL AUTOMATION

User Manual

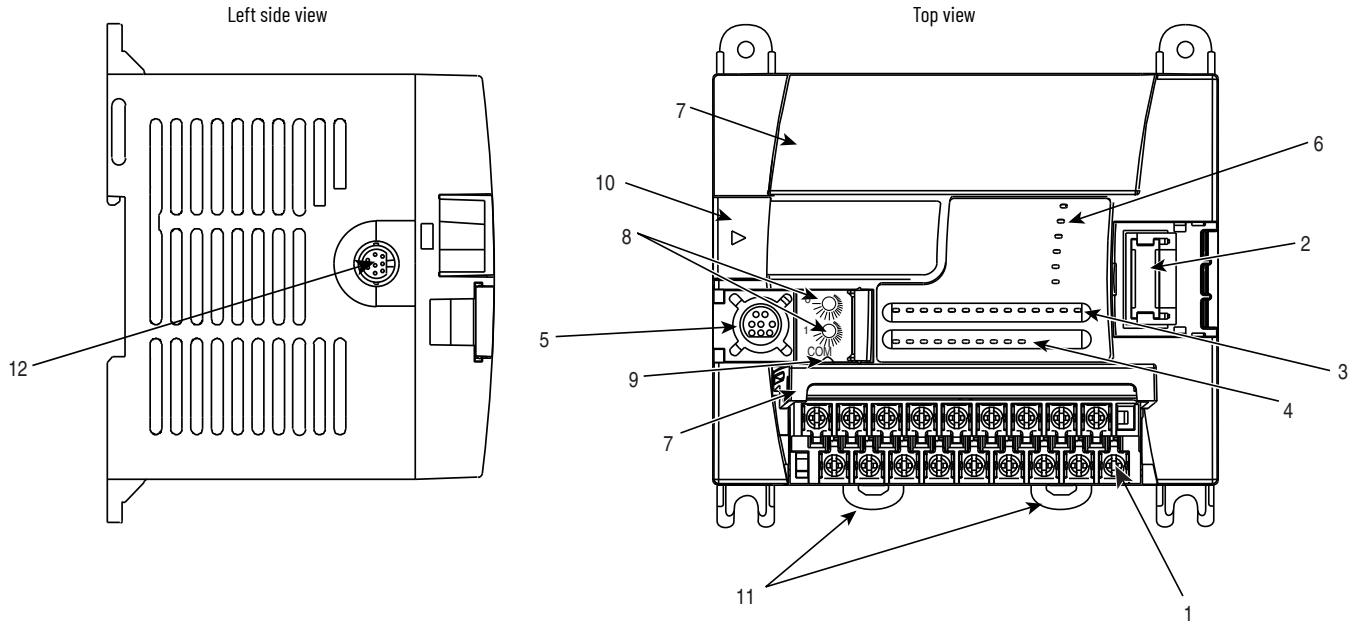
Original Instructions

Hardware Overview

Hardware Features

The MicroLogix 1200 programmable controller contains a power supply, input and output circuits, and a processor. The controller is available in 24 I/O points and 40 I/O points configurations.

Figure 1 - Controller Hardware Features



Controller Description

	Description		Description
1	Terminal blocks (Removable terminal blocks on 40-point controllers only)	7	Terminal doors and labels
2	Bus connector interface to expansion I/O	8	Trimpots
3	Input LEDs	9	Communications Toggle push button
4	Output LEDs	10	Memory module port cover[1] or memory module and/or real-time clock[2]
5	Communication port/Channel 0	11	DIN rail latches
6	Status LEDs	12	Programmer/HMI port (Equipped with 1762-LxxxxxR controllers only)

(1) Shipped with controller
(2) Optional equipment

Controller Input Power and Embedded I/O

Catalog Number	Description		
	Input Power	Inputs	Outputs
1762-L24AWA, 1762-L24AWAR	120/240V AC	14 120V AC	10 relay
1762-L24BWA, 1762-L24BWAR	120/240V AC	10 24V DC 4 fast 24V DC	10 relay
1762-L24BXB, 1762-L24BXBR	24V DC	10 24V DC 4 fast 24V DC	5 relay, 4 24V DC FET 1 high-speed 24V DC FET

Use Real-time Clock and Memory Modules

For more information on 'Real-time Clock Function File' and 'Memory Module Information File', see the MicroLogix 1200 and MicroLogix 1500 Programmable Controllers Instruction Set Reference Manual, publication 1762-RM001.

Three modules with different levels of functionality are available for use with the MicroLogix 1200 controller.

Catalog Number	Function
1762-RTC	Real-time Clock
1762-MM1	Memory Module
1762-MM1RTC	Memory Module and Real-time Clock

Real-time Clock Operation

Removal/Insertion Under Power

At power-up and when the controller enters a run or test mode, the controller determines if a real-time clock module (RTC) is present. If an RTC is present, its values (date, time, and status) are written to the RTC Function File in the controller.

The RTC module can be installed or removed at any time without risk of damage to either the module or the controller. If an RTC is installed while the MicroLogix 1200 controller is in a run or test mode, the module is not recognized until either a power cycle occurs or until the controller is placed in a non-executing mode (program mode, suspend mode, or fault condition).

Removal of the RTC during run mode is detected within one program scan. Removal of the RTC while in run mode causes the controller to write zeros to the RTC Function File.

Table 13 indicates the accuracy of the RTC for various temperatures.

Table 13 - RTC Accuracy

Ambient Temperature	Accuracy(1)
0 °C (+32 °F)	+34...-70 seconds/month
+25 °C (+77 °F)	+36...-68 seconds/month
+40 °C (+104 °F)	+29...-75 seconds/month
+55 °C (+131 °F)	-133...-237 seconds/month

(1) These numbers are maximum worst case values over a 31-day month.

Write Data to the Real-time Clock

When valid data is sent to the real-time clock from the programming device or another controller, the new values take effect immediately.

The real-time clock does not allow you to load or store invalid date or time data.

Use the Disable Clock button in your RSLogix programming software to disable the real-time clock before storing a module. This decreases the drain on the RTC battery during storage.

RTC Battery Operation

The real-time clock has an internal battery that is not replaceable. The RTC Function File features a battery low indicator bit (RTC:0/BL), which shows the status of the RTC battery. When the battery is low, the indicator bit is set (1). This means that the battery may fail within 14 days and the real-time clock module needs to be replaced. When the battery low indicator bit is clear (0), the battery level is acceptable or a real-time clock is not attached.

If the RTC battery is low and the controller is powered, the RTC operates normally. If the controller power is removed and the RTC battery is low, RTC data is lost.

Life Span	Operating Temperature	Storage Temperature(1)
5 years	0...40 °C (32...104 °F)	-40...+60 °C (-40...+140 °F)

(1) Stored for six months.

ATTENTION: Operating with a low battery indication for more than 14 days may result in invalid RTC data unless power is on continuously.

Memory Module Operation

The memory module supports the following features:

- User Program and Data Back-up
- User Program Compare
- Data File Download Protection
- Memory Module Write Protection
- Removal/Insertion Under Power

ATTENTION: Electrostatic discharge can damage the memory module. Do not touch the connector pins or other sensitive areas.

User Program and Data Back-up

The memory module provides a simple and flexible program/data transport mechanism, allowing the user to transfer the program and data to the controller without the use of a personal computer and programming software.

The memory module can store one user program at a time.

During program transfers to or from the memory module, the controller's RUN LED flashes.

Program Compare

The memory module can also provide application security, allowing you to specify that if the program stored in the memory module does not match the program in the controller, the controller will not enter an executing (run or test) mode. To enable this feature, set the S:2/9 bit in the system status file. See 'Status System File' in the MicroLogix 1200 and MicroLogix 1500 Programmable Controllers Instruction Set Reference Manual, publication 1762-RM001 for more information.

Data File Download Protection

The memory module supports data file download protection. This allows user data to be saved (not overwritten) during a download.

Data file download protection is only functional if the processor does not have a fault, size of all protected data files in the memory module exactly match the size of protected data files within the controller, and all protected data files are of the same type. See 'Protecting Data Files During Download' in the MicroLogix 1200 and MicroLogix 1500 Programmable Controllers Instruction Set Reference Manual, publication 1762-RM001.

Memory Module Write Protection

The memory module supports write-once, read-many behavior. Write protection is enabled using your programming software.

IMPORTANT	Once set, write protection cannot be removed. A change cannot be made to the control program stored in a write-protected memory module. If a change is required, use a different memory module.

Removal/Insertion Under Power

The memory module can be installed or removed at any time without risk of damage to either the memory module or the controller, except during a data transaction. If the memory module is removed during a data transaction, data corruption can occur.

If a memory module is installed while the MicroLogix 1200 controller is executing, the memory module is not recognized until either a power cycle occurs, or until the controller is placed in a non-executing mode (program mode, suspend mode, or fault condition).