

# SYSMAC Option Memory Card

# HMC-EF183

CSM\_HMC-EF183\_DS\_E\_3\_1

## Large-capacity Memory Card (128 MB) That's RoHS Compliant!

- Memory Cards serve as external memory to store user programs, PLC Setups, I/O Tables, and other data for CS/CJ-series PLCs or NSJ Controllers.
- A Memory Card Adaptor can be used to mount a Memory Card in a PCMCIA slot of a personal computer to enable editing the data on the computer.



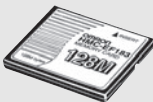

## Features

- Save or read I/O memory data, user programs, and PLC Setup data as files.
- Use ROM operation from a Memory Card when at PLC startup.
- Log a specified range of I/O memory data in CSV or TXT format using instructions in the user program or Smart FBs (function blocks).
- Edit CSV/TXT data logged on a Memory Card on a personal computer using a Memory Card Adaptor.
- Use instructions in the user program or Smart FBs to rename, create, or delete directories or files in the Memory Card, to format files, or to perform other operations.
- Back up all CPU Unit data and all data from mounted Special I/O Units and CPU Bus Units on a Memory Card without a Programming Device.

## Standard Models

### International Standards

- The standards are abbreviated as follows: U: UL, U1: UL (Class I Division 2 Products for Hazardous Locations), C: CSA, UC: cULus, UC1: cULus (Class I Division 2 Products for Hazardous Locations), CU: cUL, N: NK, L: Lloyd, and CE: EC Directives
- Contact your OMRON representative for further details and applicable conditions for these standards.

Product name	Specifications	Model number	International standards
<b>Memory Card</b> 	Flash memory, 128MB	<b>HMC-EF183</b>	—
<b>Memory Card Adaptor</b> 	For computer PCMCIA slot	<b>HMC-AP001</b>	CE

- Note:**
1. The Memory Cards cannot be used with CS1G-CPU□□H, CS1H-CPU□□H, CJ1G-CPU□□H, or CJ1H-CPU□□H CPU Units manufactured before January 9, 2002 (lot number 020108 or earlier) or NS7-series PTs manufactured before May 8, 2002 (lot number 0852 or earlier). Confirm applicability when ordering.
  2. The HMC-EF183 Memory Card cannot be used with the CS1G-CPU□□(-V1) or CS1H-CPU□□(-V1) CPU Units. Confirm applicability when ordering.

## Basic Specifications

Item	Model	HMC-EF183
Common specifications	Memory capacity	128 MB
	Dimensions	42.8×36.4×3.3 mm (W × H × T)
	Weight	15 g max.
	Current consumption	Approx. 30 mA (when used with PLC)
	Application/storage environment	Same a general specifications of PLC
	No. of writes	100,000 (guaranteed value)
Factory specifications	No. of files writable to root directory	511
	File system	FAT16
Files that can be stored when mounted in CS/CJ-series PLC or NSJ Controller (See note.)		1. Program files 2. Parameter files 3. Data files 4. Conversion table files 5. Comment files 6. Program index files 7. Unit/Board backup files

**Note:** Refer to the operation manual for the CS/CJ-series PLCs and NSJ Controller for details on files that can be stored.

## Precautions

Confirm the following items before using a Memory Card. Refer to the *CS/CJ/NSJ Series Programmable Controller Programming Manual (W394)* for details.

### Format

The Memory Cards are already formatted when shipped; there is no need to format them again after purchase. To format a Memory Card that has been used, always format it in the CPU Unit using the CX-Programmer or a Programming Console. You will not be able to use a Memory Card in the CPU Unit if you format it on a personal computer or in an SPU Unit.

### Write Life

Flash memory can be written only a limited number of times. The guaranteed limit for writing to a Memory Card is set at 100,000 writes. That means if you write to a Memory Card continuously once every 10 minutes, you will exceed 100,000 writes in two years.

### Minimum File Size

If many small files, such as ones containing only a few words of DM Area data, are stored on a Memory Card, the Memory Card will become full sooner than expected. For example, for a Memory Card with an allocation unit size set to 2,048 bytes, a single file will always use 2,048 bytes of space on the Memory Card no matter how little data it contains.

## Precautions during Memory Card Access

The BUSY indicator on the CPU Unit will light when the Memory Card is being accessed.

1. Never turn OFF the power to the PLC while the BUSY indicator is lit.
2. Never remove the Memory Card while the BUSY indicator is lit. Before removing a Memory Card, press the button to stop power supply to the Memory Card and wait for the BUSY indicator to go out. It may become impossible to use the Memory Card if either the power is turned OFF or the Memory Card is removed while the Memory Card is being accessed.
3. Several seconds are sometimes required for the CPU Unit to detect the Memory Card after the the Memory Card is inserted. The time required will depend on the cycle time of the PLC, the Memory Card capacity, the number of files on the Memory Card, and other factors. When accessing a Memory Card, use the Memory Card Detected Flag (A34315) in a NO input condition for the instruction accessing the Memory Card. Refer to the *CS/CJ/NSJ Series Programmable Controller Programming Manual (W394)* for a programming example.

## Precaution when Inserting a Memory Card

The direction the Memory Card must face when it is inserted depends on the model of CPU Unit that is used. With a CS-series CPU Unit, the label on the Memory Card must face to the right. If a Memory Card is forced into the slot when it is facing the wrong direction, the CPU Unit or Memory Card may be damaged and fail to operate properly.

## Read and Understand This Catalog

Please read and understand this catalog before purchasing the products. Please consult your OMRON representative if you have any questions or comments.

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- Outdoor use, uses involving potential chemical contamination or electrical interference, or conditions or uses not described in this catalog.
- Nuclear energy control systems, combustion systems, railroad systems, aviation systems, medical equipment, amusement machines, vehicles, safety equipment, and installations subject to separate industry or government regulations.
- Systems, machines, and equipment that could present a risk to life or property.

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OMRON shall not be responsible for the user's programming of a programmable product, or any consequence thereof.

## Disclaimers

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### DIMENSIONS AND WEIGHTS

Dimensions and weights are nominal and are not to be used for manufacturing purposes, even when tolerances are shown.

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