

EFP-I Instruction Manual

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The contents of the EFP-I instruction manual are subject to change without notification for the purpose of future performance enhancement, etc.

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Introduction

Thank you for selecting the EFP-I. Check the attached package contents check list to make sure nothing is missing. If you find anything to be not in order, contact us directly.

Within the instruction manual:

- * the EFP-I itself is referred to as "EFP-I."
- * EFP control software is referred to as "WinEFP."
- * the parallel unit and serial unit are collectively referred to as "MCU unit."

Warnings and important advice are given in "1. Safety" on page 2 so that you may use the product as intended in order to prevent property damage or injury to you or others. You should read through and get a good understanding of the contents of this section before attempting to use the product. Warnings and important advice are as follows:

WARNING	Indicates situation which could result in injury or property damage through improper handling if the warning is ignored.
IMPORTANT	Indicates information important to know when using the product.

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1. Safety

WARNING Handling, setup and operating environment

- * Do not disassemble or modify the product. Doing so could result in equipment failure.
- * Handle with care. Do not expose to strong impact such as dropping or knocking over.
- * Do not directly touch the pins of the power, serial interface or MCU unit connectors with your hands.
- * Do not use US Standard screws for this product. All screws used in this product are ISO type (metric).
When changing screws, replace with the same type of screw.
- * The product should be used in the standing position.
- * Do not locate in a place exposed to high humidity or water leaking. Spilling water inside the hardware could result in irreparable equipment failure.
- * Maximum rated ambient temperature (upper limit for ambient temperature) when using the product is 40°C. Be careful that ambient temperature does not exceed the maximum rated ambient temperature.
- * If you don't plan to use the hardware for an extended period of time, place in a vinyl bag, etc., to control humidity, and store in a place not exposed to direct sunlight where the temperature is 0 - 40°C.

WARNING MCU unit mounting

- * The MCU unit mounting method is shown in Fig. 1.1.
(1) Mount the MCU unit while being careful not to touch the IC socket. (Make sure orientation is correct.)

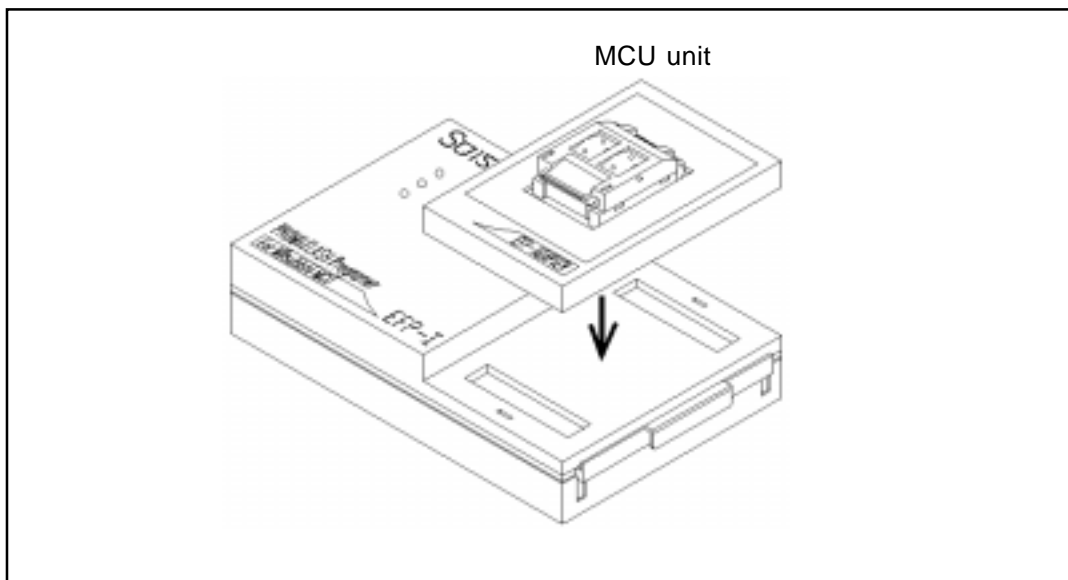
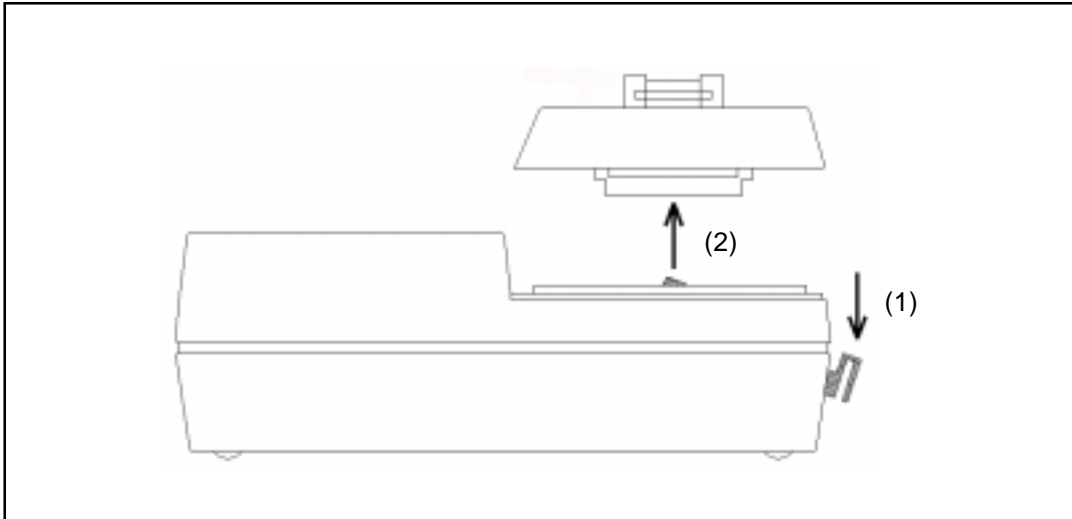


Fig. 1.1: MCU Unit Mounting Method

WARNING MCU unit removal and replacement**• The MCU unit removal method is shown in Fig. 1.2.**

- (1) Push down the MCU unit removal lever in the direction indicated by the arrow.
- (2) Make sure the MCU unit is completely disconnected from the EFP-I and then remove.

**Fig. 1.2: MCU Unit Removal Method****• Keep the following in mind when replacing the MCU unit:**

- (1) After replacing the MCU unit, reset the MCU to be used in the WinEFP environment settings dialog.
- (2) Absolutely do not replace the MCU unit when the device LED is lit.

IMPORTANT	Errors at start-up according to LEDs of the EFP-I
<p>• Operation is as follows when a error is detected when the EFP-I starts up:</p> <p>(1) System check error</p> <p>SERIAL I/F (yellow) DEVICE (green) Lamps flicker alternately off and on. Some sort of error occurred during system check of the EFP-I.</p> <p>(2) MCU unit error</p> <p>SERIAL I/F (yellow) DEVICE (red) Lamps flicker alternately off and on. Error occurs when power is turned on without the MCU unit connected to the EFP-I. Restart after connected the MCU unit to be used to the EFP-I.</p> <p>If the error is not disposed of when restarted, get in touch with your dealer or contact us directly.</p>	

2. System Configuration

2.1 System Configuration

The following equipment is required to use the EFP-I. System configuration of the EFP-I is shown in Fig. 2.1.

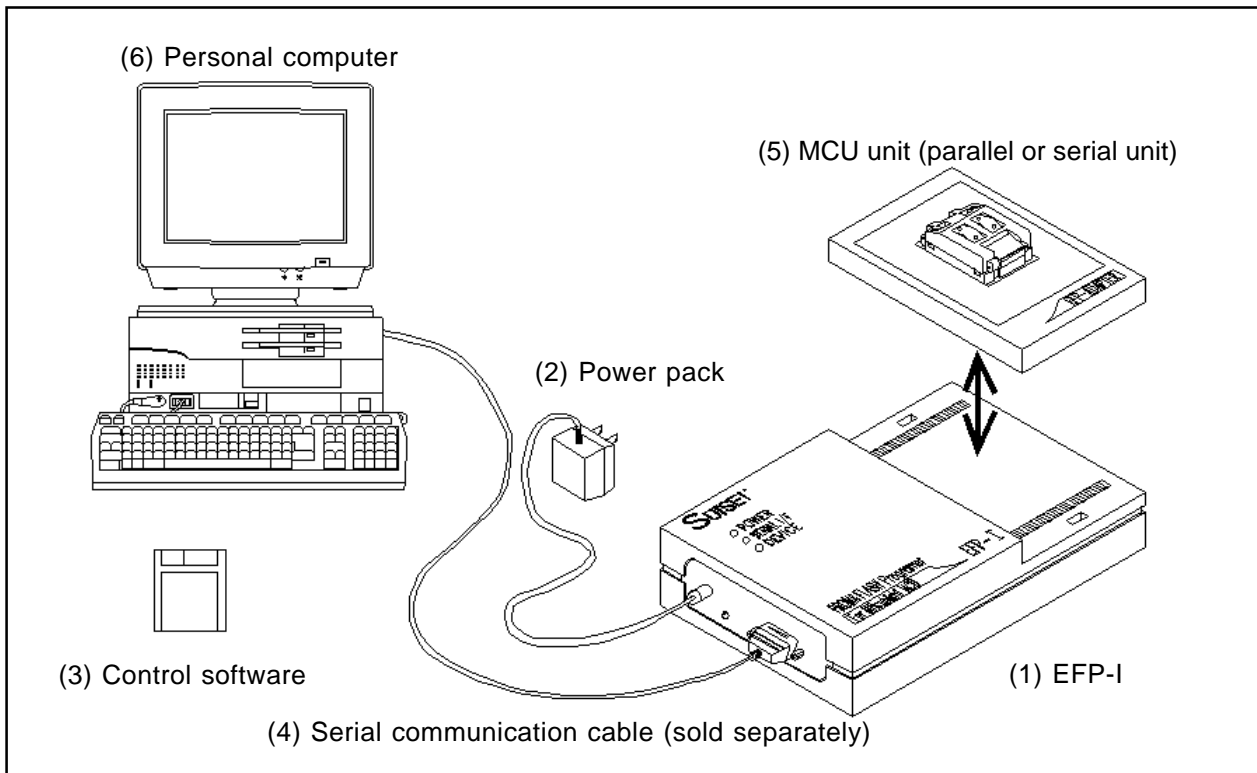


Fig. 2.1: System Configuration

(2) and (3) are included with the (1) EFP-I. The other equipment must be obtained separately.

(1) EFP-I

EFP-I itself

(2) Power pack

Output: 17.5V

Current capacity: Min. 300mA

(3) Control software

Attached control software (WinEFP)

(4) Serial communication cable

RS-232C cross cable (D-sub, 9-pin, female) capable of connecting PC/AT-compatible personal computers

(5) MCU unit (parallel or serial unit)

(6) Personal computer

2.2 EFP-I Panel Parts

Layout of the EFP-I's panel is shown in Fig. 2.2.

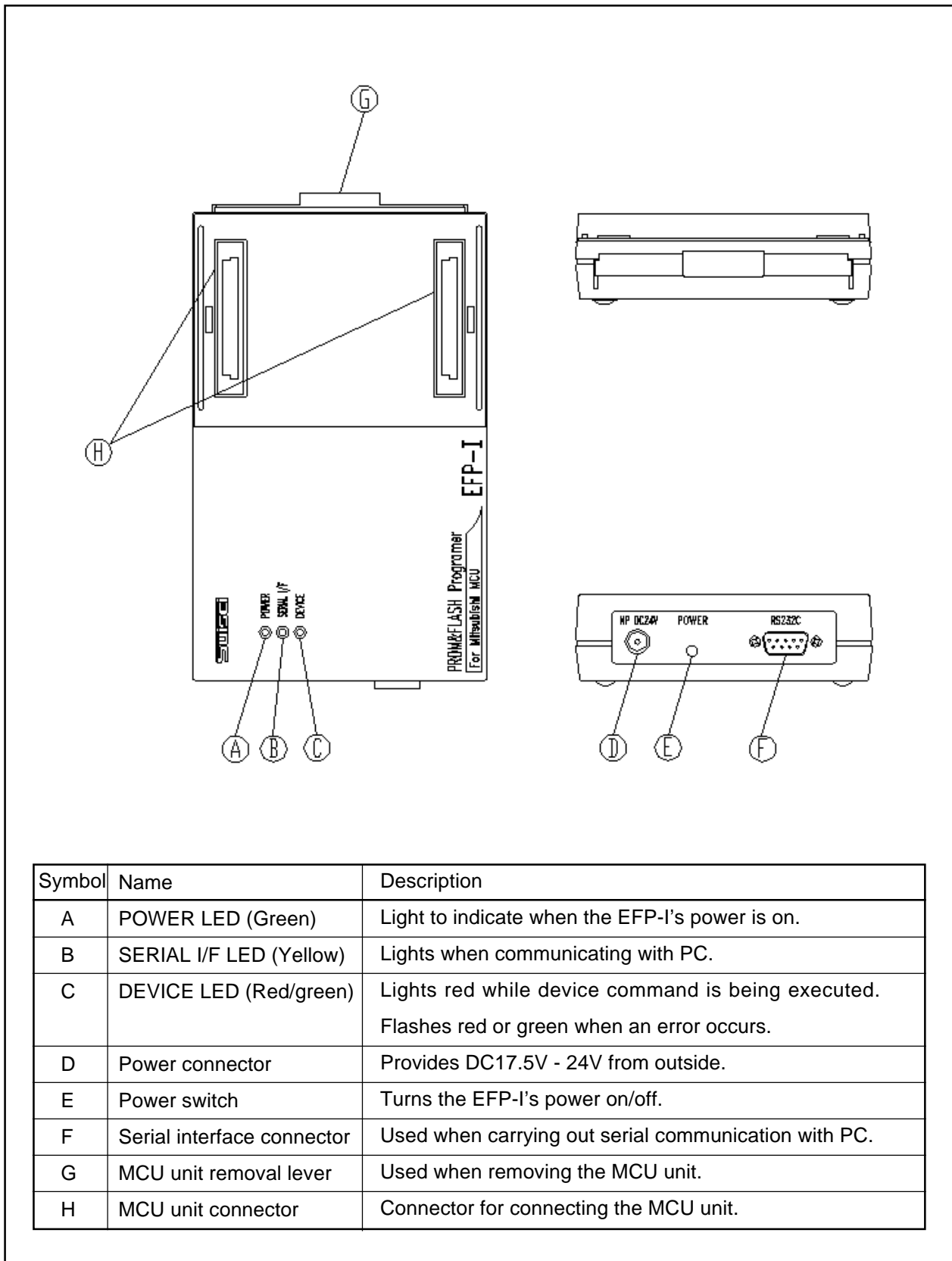


Fig. 2.2: EFP-I Panel Layout

3. Set-Up Method

3.1 EFP-I Set-Up

- (1) Connect the AC adaptor to a 100V AC electrical outlet, and connect the plug to the EFP-I's power jack (N.P 24V DC).
- (2) Connect the serial communication cable to the EFP-I's RS-232C connector, and connect the other end to the PC's RS-232C connector.

*NOTE

Before connecting, turn off the power and take measures against accidental electrostatic discharge.

- (3) The method of mounting the MCU unit is shown in Fig. 3.1. Mount the MCU unit while being careful not to touch the IC socket. (Make sure orientation is correct.)

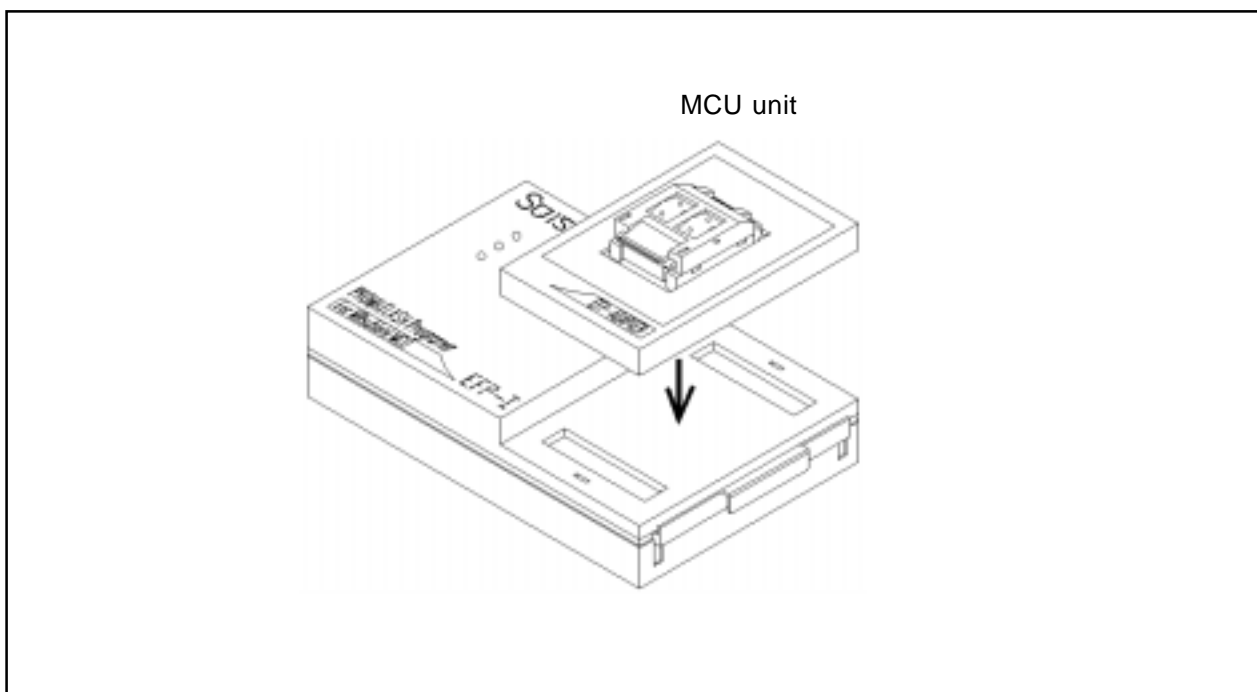


Fig. 3.1: MCU Unit Mounting Method

3.2 EFP-I Start-Up

When the POWER switch is pressed, the POWER (green), SERIAL I/F (yellow), and DEVICE (red) lamps light. After system check (approx. 1 second), the SERIAL I/F and DEVICE lamps go off and the EFP-I is then waits for a command.

3.3 WinEFP Start-Up

Checks if the EFP-I is standing by for a command. Start up WinEFP in accordance with the software manual.

4. Specifications

4.1 General Specifications

Table 4.1: General Specifications

Writing system	Mitsubishi Electric MCU parallel I/O mode, Mitsubishi Electric MCU serial I/O mode
Writing targets	Mitsubishi Electric MCU with flash memory (NOR, DINOR) or MCU with internal EPROM (limited to parallel I/O mode and serial I/O mode support products).
Memories	RAM: 512 Kbytes (4 Mbytes) user program buffer ROM: 64 Kbyte flash memory (for storing firmware program) (Firmware version can be upgraded.)
Interface	RS-232C: 9,600 - 115,200bps (D-SUB 9-pin connector)
Control method	WinEFP (for Windows 95)
Display	LED display (POWER, SERIAL I/F, DEVICE)
Power input	17.5 - 24V DC (min. 0.3 A)
Outer dimensions	110 (W) x 180 (D) x 36 (H) mm (Projecting parts not included.)
Weight	Approx. 400 g
Ambient environment	Operating temperature: 0 - 40°C Operating humidity: Max. 80% (Must be no condensation.)

4.2 Serial Cable Specifications (Optional)

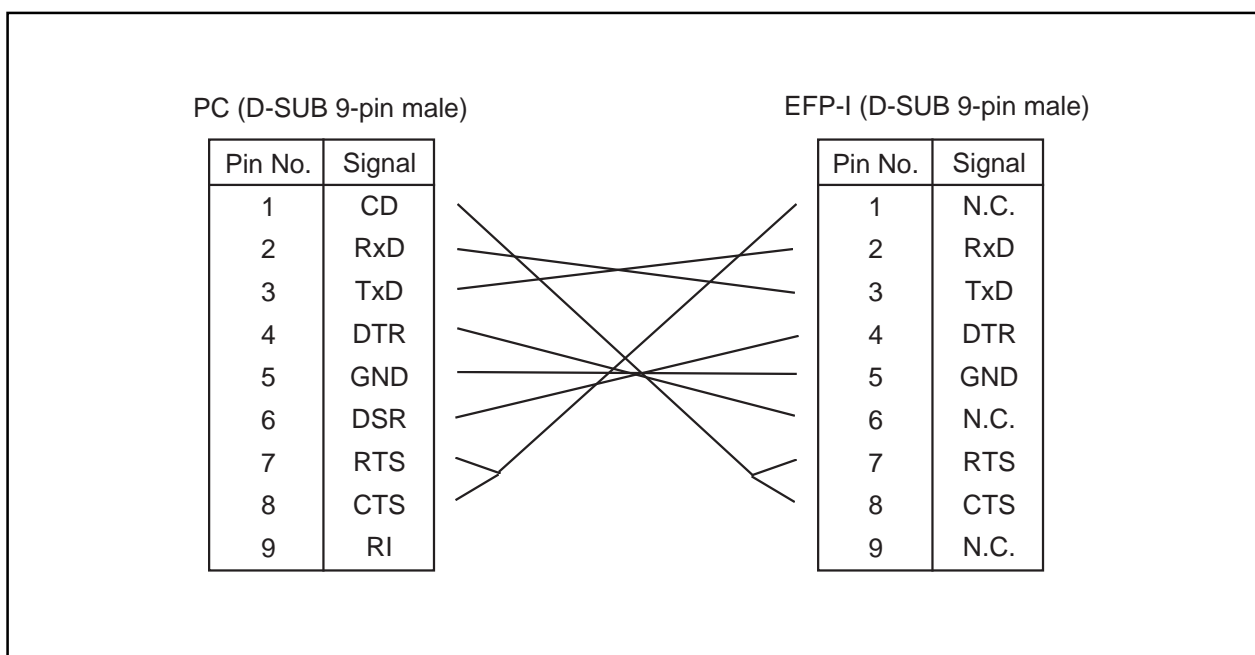


Fig. 4.1: Serial Interface Cable Connection Diagram

4.3 Outer Dimensions

Outer dimensions of the EFP-I are given in Fig. 4.2.

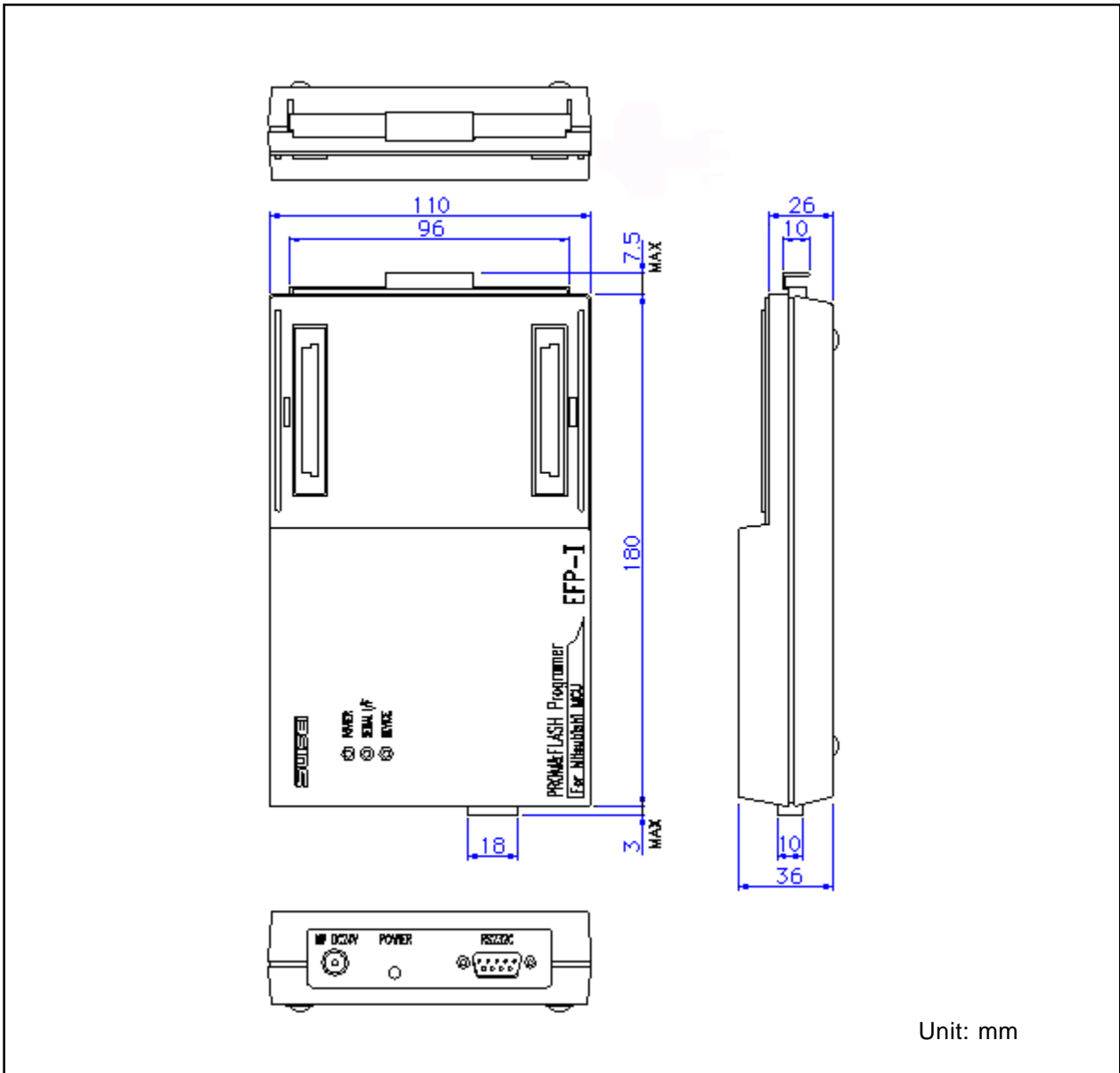


Fig. 4.2: Outer Dimensions

Technical Support Form

Date:

(Total No. of pages:)

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EFP-I Customer Support

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Customer Information	Product Information
Name:	Serial No:
Position in Company:	Date of Purchase:
Person in Charge:	Name of MCU Unit:
Telephone No:	
Fax No:	
E-mail	
Address	
Dealer	Handled By:

Description of Problem (Lists, etc. may be attached.)