

# FUJITSU Components Thermal Printer

## FTP-839MCL113 series (Easy loading, curl pass)

## FTP-839MCL114 series (Auto loading, straight pass)

Fujitsu 3" 24V Driving mechanism

### Overview

The high-speed FTP-839MCL series is a 24V driven mechanism for 3 inch wide paper. The mechanism has no control board.

The receipt/label printer mechanism is most suitable for applications such as Kiosk, ATM, lottery, pharmacy, and ticket issuing printers for various other equipment.

### Features

- High resolution 300 dpi (11.8 dots/mm)
- Ultra high-speed (200mm/sec.)
- Medium duty united (mounting is easy)
- Up to 10-inch paper roll diameter
- Rear paper auto loading
- Paper jam detection
- Prints 2-D barcodes
- UL file no. E171434



FTP-839MCL series

### ■ Designation

| Item              | Part Number                       | Comment       |
|-------------------|-----------------------------------|---------------|
| Printer mechanism | USB (ver. 2.0)                    | FTP-839MCL113 |
|                   | Serial (RS-232C) / USB (ver. 2.0) | FTP-839MCL114 |

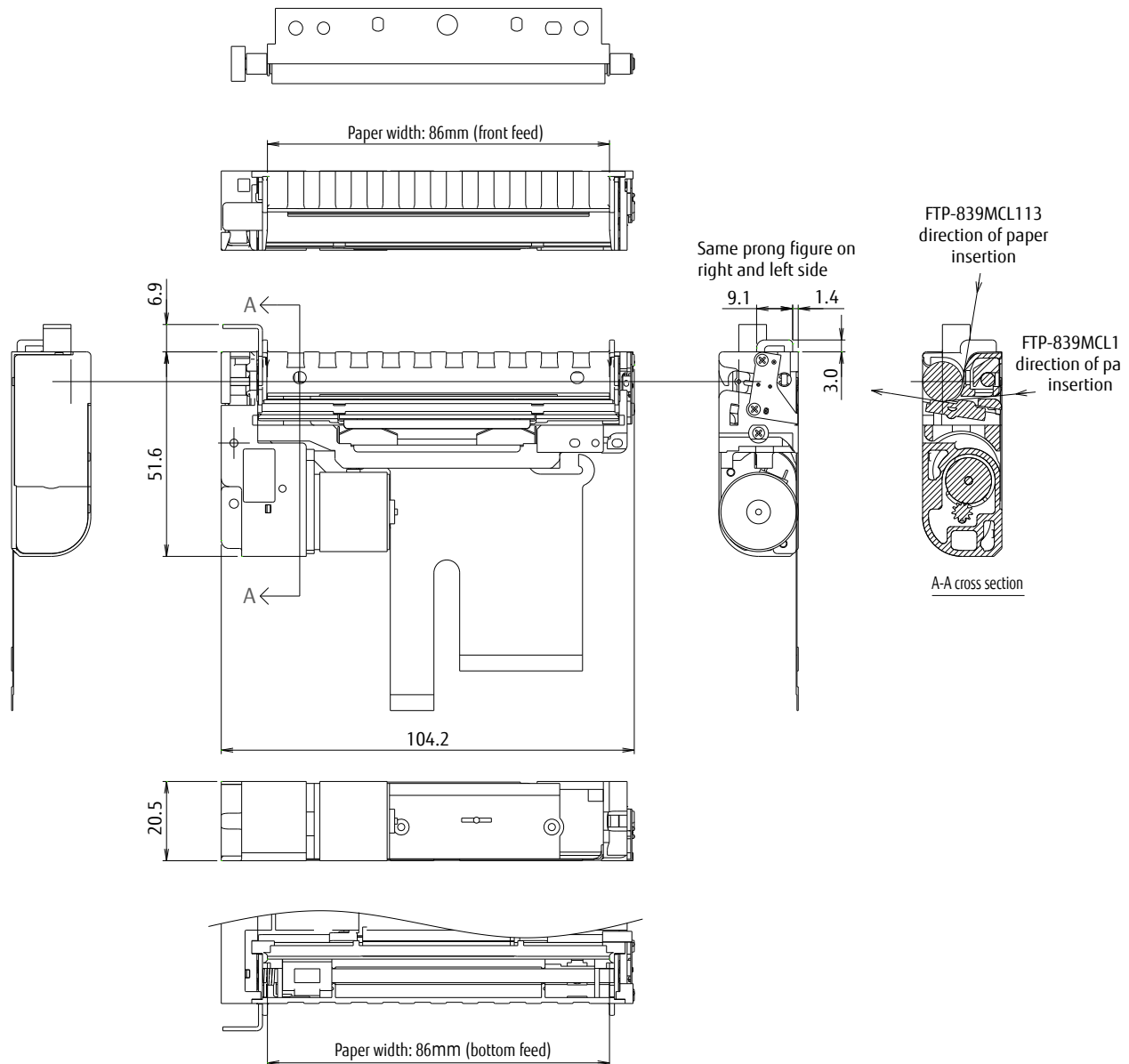
## ■ Specifications

| Item                                    |                        |   | Specifications   |
|---|------------------------|---|--|
| Part number                             |                        |   | FTP-839MCL113/114  |
| Printing method                         |                        |   | Thermal-sensitive line dot method  |
| Dot structure                           |                        |   | 960dots/line   |
| Dot pitch                               | Horizontal             | 0.0847 mm (dot density: 11.8 dots/mm, 300dpi)   |  |
|   | Vertical               | 0.0847 mm (line feed pitch; 11.8 dots/mm, 300dpi)                                       |  |
| Effective printing area                 |                        |   | 81.312 mm  |
| Paper                                   | Width                  | 86±1 mm (standard setting)  |  |
|   | Thickness              | 60 to 100 μm (depending on paper specifications)  |  |
| Printing speed                          |                        |   | Max. 200 mm/s (2,360 dotlines/s) (High speed batch image printing, at 25°C using PD150R Oji paper) |
| Interface                               |                        |   | Serial (RS232C), USB   |
| Power supply                            | For head               | 24VDC ±10%, approx. 3.22A (24VDC, 970Ω, + 25°C, concurrent applied dot number 128 dots) |  |
|   | For printer motor      | 24VDC ±10%, 1.0 A maximum (Fujitsu Component Limited standard circuit)                  |  |
|   | For logic              | 5VDC ±5%, 0.32 A maximum or 3.3VDC±5%, 0.12A maximum                                    |  |
| Dimensions (WxDxH)                      |                        |   | 104.2 x 51.6 x 20.5 mm   |
| Weight (approximately, excluding paper) |                        |   | 145 g  |
| Expected life                           | Head                   | Pulse resistance  | 100 milion pulse/dot (using Fujitsu's standard printing conditions)                                |
|   |                        | Wear resistance   | 100 km (at max. 12.5% printing ratio (using Fujitsu's standard printing conditions)                |
| Environmental conditions                | Operating temperature  |   | -10°C to +60°C*1   |
|   | Operating humidity     |   | 20 to 85% RH (no condensation) (at 0 to +40°C)   |
|   | Storage temperature    |   | -40°C to +70°C   |
|   | Storage humidity       |   | 5 to 90% RH (no condensation)  |
| Detection                               | Motor head temperature |   | By thermistor (applied energy control, abnormal temperature detection)                             |
|   | Paper out/Mark detect  |   | By photointerrupter  |
|   | Platen open            |   | By mechanical switch   |
| Recommended thermal sensitive paper     |                        |   | PD150R (Oji paper) (Standard paper)  |
| Paper diameter                          |                        |   | Max. 83 mm   |

\*1: Color density is guaranteed: +5° to +40°C with PD150R (Oji paper).

## ■ Dimensions

- FTP-839MCL113



Unit: mm

- Note:
1. Dimensions are nominal value )tolerance  $\pm 0.5\text{mm}$  unless otherwise specified.
  2. Dimensions in ( ) is reference value.

## ■ Connector pin assignments of printer mechanism (FPC)

| No | Signal | Content                       |
|----|--------|-------------------------------|
| 1  | SW     | Platen open switch            |
| 2  | SW     | Platen open switch            |
| 3  | VH     | + 24 head drive power         |
| 4  | VH     | + 24 head drive power         |
| 5  | VH     | + 24 head drive power         |
| 6  | Vsf*1  | + 24 head drive power         |
| 7  | DI2    | Data in 2                     |
| 8  | DO2    | Data out 2                    |
| 9  | GND    | Head ground                   |
| 10 | GND    | Head ground                   |
| 11 | GND    | Head ground                   |
| 12 | GND    | Head ground                   |
| 13 | STB2   | Strobe2                       |
| 14 | TM     | Thermistor                    |
| 15 | TM     | Thermistor                    |
| 16 | Vdd    | +5V logic power               |
| 17 | /LAT   | Data latch                    |
| 18 | CLK    | Clock                         |
| 19 | STB1   | Strobe1                       |
| 20 | GND    | Head ground                   |
| 21 | GND    | Head ground                   |
| 22 | GND    | Head ground                   |
| 23 | GND    | Head ground                   |
| 24 | GND    | Head ground                   |
| 25 | DI1    | Data in 1                     |
| 26 | DO1    | Data out 1                    |
| 27 | VH     | + 24 head drive power         |
| 28 | VH     | + 24 head drive power         |
| 29 | VH     | + 24 head drive power         |
| 30 | VH     | + 24 head drive power         |
| 31 | N.C.   | Not connected                 |
| 32 | TM     | Motor thermistor              |
| 33 | TM     | Motor thermistor              |
| 34 | MT/A   | Excitation signal /A          |
| 35 | MT A   | Excitation signal A           |
| 36 | MT/B   | Excitation signal /B          |
| 37 | MT B   | Excitation signal B           |
| 38 | PHK    | Cathode for photo interrupter |
| 39 | VSEN   | Paper sensor power            |
| 40 | PHE    | Emitter for photo interrupter |

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