

# FUJITSU Component Thermal Printer FTP-63GMCL153/453 series

Fujitsu 3" high speed (200mm/s) thermal printer mechanism with cutter option

## Overview

The FTP-63GMCL series thermal printer driven by 24VDC provides high speed printing (200mm/s) for 3-inch wide paper.

The series is suitable for a variety of applications, such as POS/ECR, kiosk terminals, ticket machines, label printers, banking machines, measuring devices, medical equipment, etc.

## Features

- **High-speed printing**  
It can print at 200mm/s (1600 dotlines/s) maximum by using Fujitsu Components' unique head drive control
- **Rear paper insertion mechanism with lock type**  
Fujitsu Components' unique platen release mechanism allows straight paper path and easy head maintenance
- **Auto Cutter**  
Printer with ultra-low profile auto cutter (full cut/partial cut) is available. It can be mounted on top of the mechanism (FTP-63GMCL453)
- **Multi-featuring diecast frame**  
By application of multi-featuring diecast frame, continuous print by function of heat-sink, high ESD with stand by function of earth frame and shock/vibration resistance by function of solid frame are valid
- **Compact size**  
Depth: 20.4mm, width: 96.2mm, height: 36.3mm (FTP-63GMCL153)  
Depth: 32.4mm, width: 100.5mm, height: 45.6mm (FTP-63GMCL453)
- **High resolution**  
8 dots/mm head provides clear print out
- **RoHS compliant**
- **UL recognized. File number E171434**



FTP-63GMCL153



FTP-63GMCL453

## ■ Part numbers

| Item                  | Part Number         |   |
|-----------------------|---------------------|---|
| Printer mechanism     | Back insertion      | FTP-63GMCL153                               |
| Mechanism with cutter | Rear insertion      | FTP-63GMCL453                               |
| Interface board       | Serial (RS232C/USB) | FTP-62GDSL001#01 (Japanese font)            |
|                       | Serial (RS232C/USB) | FTP-62GDSL001#02 (Traditional Chinese font) |
| Interface cable       | Serial              | FTP-62GY302                                 |
|                       | USB                 | FTP-62GY301                                 |
| Power supply cable    | Logic, head, motor  | FTP-62GY601                                 |

## ■ Specifications

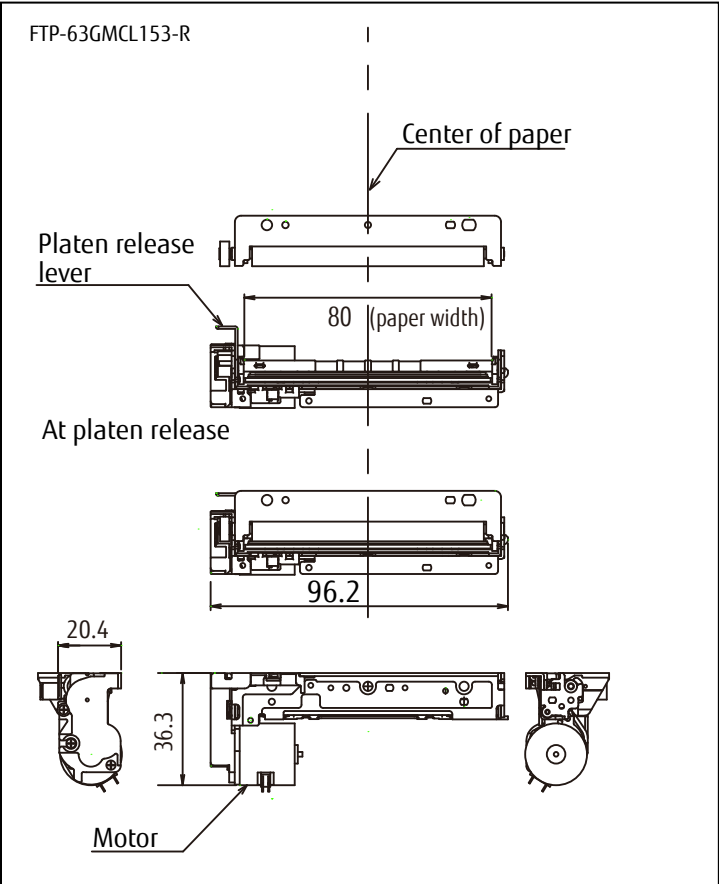
| Item   | Specifications   |   |
|--|--|---|
| Part number  | FTP-63GMCL153  | FTP-63GMCL453   |
| Printing method                                    | Thermal sensitive line dot method  |   |
| Dot structure                                      | 576 dots/lines   |   |
| Dot pitch (horizontal)                             | 0.125mm (8 dots/mm) - Dot density  |   |
| Dot pitch (vertical)                               | 0.125mm (8 dots/mm) - Line feed pitch  |   |
| Effective printing area                            | 72mm   |   |
| Number of columns                                  | ANK 48 columns/line (12 x 24 x dot font), OCD 24 columns (24 x 40)   |   |
| Paper width  | 80mm +0/-1   |   |
| Paper thickness                                    | 60-150 $\mu$ m*1   | 60-100 $\mu$ m*1  |
| Cutting type                                       | ---  | Full or partial   |
| Printing speed                                     | 200mm/s (1600 dot lines/s)   |   |
| Interface types                                    | FTP-62GDSL series  |   |
| Character types                                    | Alphanumeric KANA<br>International and special<br>OCR I<br>OCR III<br>OCR IV<br>Extended numeric<br>JIS KANJI level 1, 2, non-Kanji<br>Traditional Chinese | 159 types<br>195 types<br>103 types<br>13 types<br>103 types<br>12 types<br>JIS KANJI: approx. 6800<br>13, 503  |
| Character dimensions (W x H), number of characters | 8 x 16 dots, 72 columns, ANK<br>12 x 24 dots, 48 columns, ANK<br>16 x 16 dots, 36 columns, ANK<br>24 x 24 dots, 24 columns, ANK                            | 24 x 40 dots, 24 columns, OCR I<br>24 x 48 dots, 24 columns, OCR II<br>36 x 60 dots, 16 columns, OCR IV<br>24 x 48 dots, 24 columns, extended numeric |
| Interface standard                                 | Serial (RS232C/USB)  |   |

\*1: there may be exceptions

| Item                                |                             | Specifications   |                       |
|-------------------------------------|-----------------------------|--|-----------------------|
| Part number                         |                             | FTP-63GMCL153  | FTP-63GMCL453         |
| Power                               | For head                    | 24VDC $\pm$ 10% 3A (24V, concurrent applied dot number: 192 dots)  |                       |
|                                     | For printer motor           | 24VDC $\pm$ 10% 0.6A maximum   |                       |
|                                     | For logic                   | 2.7 to 3.3 / 4.75 to 5.25 VDC 0.1A maximum   |                       |
| Dimensions (WxDxH)                  | Printer mechanism           | 96.2 x 20.4 x 36.3mm   | ---                   |
|                                     | Printer mechanism w/ cutter | ---  | 100.5 x 32.6 x 45.6mm |
|                                     | Interface board (DCL/DSL)   | TBA  |                       |
| Weight                              | Printer mechanism           | 79g  | ---                   |
|                                     | Printer mechanism w/ cutter | ---  | 155g                  |
|                                     | Interface board (DCL/DSL)   | TBA  |                       |
| Expected life                       | Head                        | Pulse durability: 100 million pulse/dot (using Fujitsu Components' standard driving method)<br>Wear resistance: 100km (at 12.5% print ratio) |                       |
|                                     | Cutter                      | ---  | 500,000 cuts min.     |
| Environmental conditions            | Operating temperature       | +5°C to +40°C (guarantee)  |                       |
|                                     | Operating humidity          | 20 to 85% RH (no condensation)   |                       |
|                                     | Storage temperature         | -20°C to +60°C (excluding paper)   |                       |
|                                     | Storage humidity            | 5 to 95% RH (no condensation)  |                       |
| Detection functions                 | Head temperature            | By thermistor  |                       |
|                                     | Paper out/Mark detect       | By photointerrupter  |                       |
|                                     | Head release                | By slide switch  |                       |
| Recommended thermal sensitive paper | High sensitive paper        | TF50KS-E4 (Nippon paper)   |                       |
|                                     | Standard paper              | TF-60KS-E (Nippon paper), FTP-020P0104 (58mm), PD150R (Oji paper), FTP-020P0701 (58mm)   |                       |
|                                     | Medium term paper           | TF-60KS-F1 (Nippon paper), FTP-020P0102 (58mm) PD170R (Oji paper) P220VBB-1 (Mitsubishi paper)   |                       |
|                                     | Long term paper             | PD160R-N (Oji paper)   |                       |

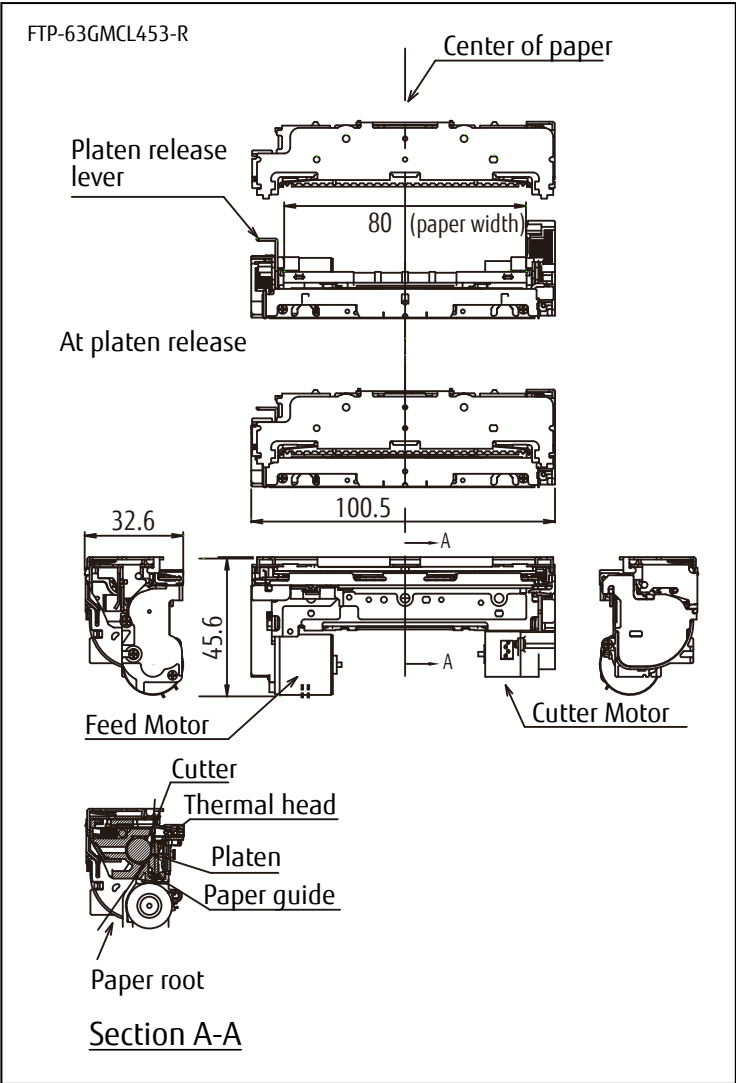
■ Dimensions

- Printer mechanism 3-inch



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

- Printer mechanism / cutter 3-inch



■ Connector pin assignments of cutter (FPC) 52559-4052 (Molex)

| No | Signal | Content                       | I/O         |
|----|--------|-------------------------------|-------------|
| 1  | VSEN   | Paper sensor power            | IN          |
| 2  | PHK    | Cathode for photo interrupter | OUT         |
| 3  | PHE    | Emitter for photo interrupter | OUT         |
| 4  | N.C.   | Not connected                 | -           |
| 5  | VH     | Head drive power              | IN          |
| 6  | VH     | Head drive power              | IN          |
| 7  | VH     | Head drive power              | IN          |
| 8  | VH     | Head drive power              | IN          |
| 9  | DI     | Data in                       | IN          |
| 10 | /STB3  | /Strobe3                      | IN          |
| 11 | /STB4  | /Strobe4                      | IN          |
| 12 | VDD    | Logic power                   | IN          |
| 13 | GND    | Head ground                   | -           |
| 14 | GND    | Head ground                   | -           |
| 15 | GND    | Head ground                   | -           |
| 16 | GND    | Head ground                   | -           |
| 17 | GND    | Head ground                   | -           |
| 18 | GND    | Head ground                   | -           |
| 19 | GND    | Head ground                   | -           |
| 20 | GND    | Head ground                   | -           |
| 21 | TM     | Thermistor                    | OUT         |
| 22 | /STB1  | /Strobe1                      | IN          |
| 23 | /STB2  | /Strobe2                      | IN          |
| 24 | /LAT   | /Data latch                   | IN          |
| 25 | CLK    | Clock                         | IN          |
| 26 | VH     | Head drive power              | IN          |
| 27 | VH     | Head drive power              | IN          |
| 28 | VH     | Head drive power              | IN          |
| 29 | VH     | Head drive power              | IN          |
| 30 | N.C.   | Not connected                 | -           |
| 31 | SW     | Platen switch release         | OUT         |
| 32 | SW     | Platen switch release         | OUT         |
| 33 | MT_/A  | Excitation signal /A          | SINK/SOURCE |
| 34 | MT_/A  | Excitation signal /A          | SINK/SOURCE |
| 35 | MT_A   | Excitation signal A           | SINK/SOURCE |
| 36 | MT_A   | Excitation signal A           | SINK/SOURCE |
| 37 | MT_/B  | Excitation signal /B          | SINK/SOURCE |
| 38 | MT_/B  | Excitation signal /B          | SINK/SOURCE |
| 39 | MT_B   | Excitation signal B           | SINK/SOURCE |
| 40 | MT_B   | Excitation signal B           | SINK/SOURCE |

## ■ Connector pin assignments of printer mechanism (FPC) 52745-1297 (Molex)

| No | Signal | Content                       | I/O         |
|----|--------|-------------------------------|-------------|
| 1  | MT_/B  | Excitation signal B           | SINK/SOURCE |
| 2  | MT_/B  | Excitation signal B           | SINK/SOURCE |
| 3  | MT_B   | Excitation signal /B          | SINK/SOURCE |
| 4  | MT_B   | Excitation signal /B          | SINK/SOURCE |
| 5  | MT_/A  | Excitation signal A           | SINK/SOURCE |
| 6  | MT_/A  | Excitation signal A           | SINK/SOURCE |
| 7  | MT_A   | Excitation signal /A          | SINK/SOURCE |
| 8  | MT_A   | Excitation signal /A          | SINK/SOURCE |
| 9  | N.C.   | Not connected                 | -           |
| 10 | VSEN   | Paper sensor power            | IN          |
| 11 | PHE    | Emitter for photo interrupter | OUT         |
| 12 | PHK    | Cathode for photo interrupter | OUT         |

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