

# FUJITSU Component Thermal Printer FTP-63GUSL001-R series (High Speed)

Fujitsu 3" high speed (150mm/s) thermal printer unit with cutter option

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## Overview

The FTP-63GUSL series thermal printer (driven by 24VDC provides high speed printing (150mm/s) for 3-inch wide paper.

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



FTP-63GUSL001

## Features

- **High-speed printing**  
It can print at 150mm/s (1200 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 auto cutter (full cut/partial cut) is available. It can be mounted on top of the mechanism
- **Compact size**  
Depth: 90mm, width: 111mm, height: 116mm
- **High resolution**  
8 dots/mm head provides clear print out
- **RoHS compliant**

## ■ Part numbers

| Item               |                    | Part Number                                       |
|--------------------|--------------------|---------------------------------------------------|
| Printer unit       |                    | FTP-63GUSL001#01 (Japanese font types)            |
|                    |                    | FTP-63GUSL001#02 (Traditional Chinese font types) |
| Interface cable    | USB                | FTP-62GY301                                       |
|                    | RS-232C            | FTP-62GY302                                       |
| Power supply cable | Logic, head, motor | FTP-62GY601                                       |

## ■ Specifications

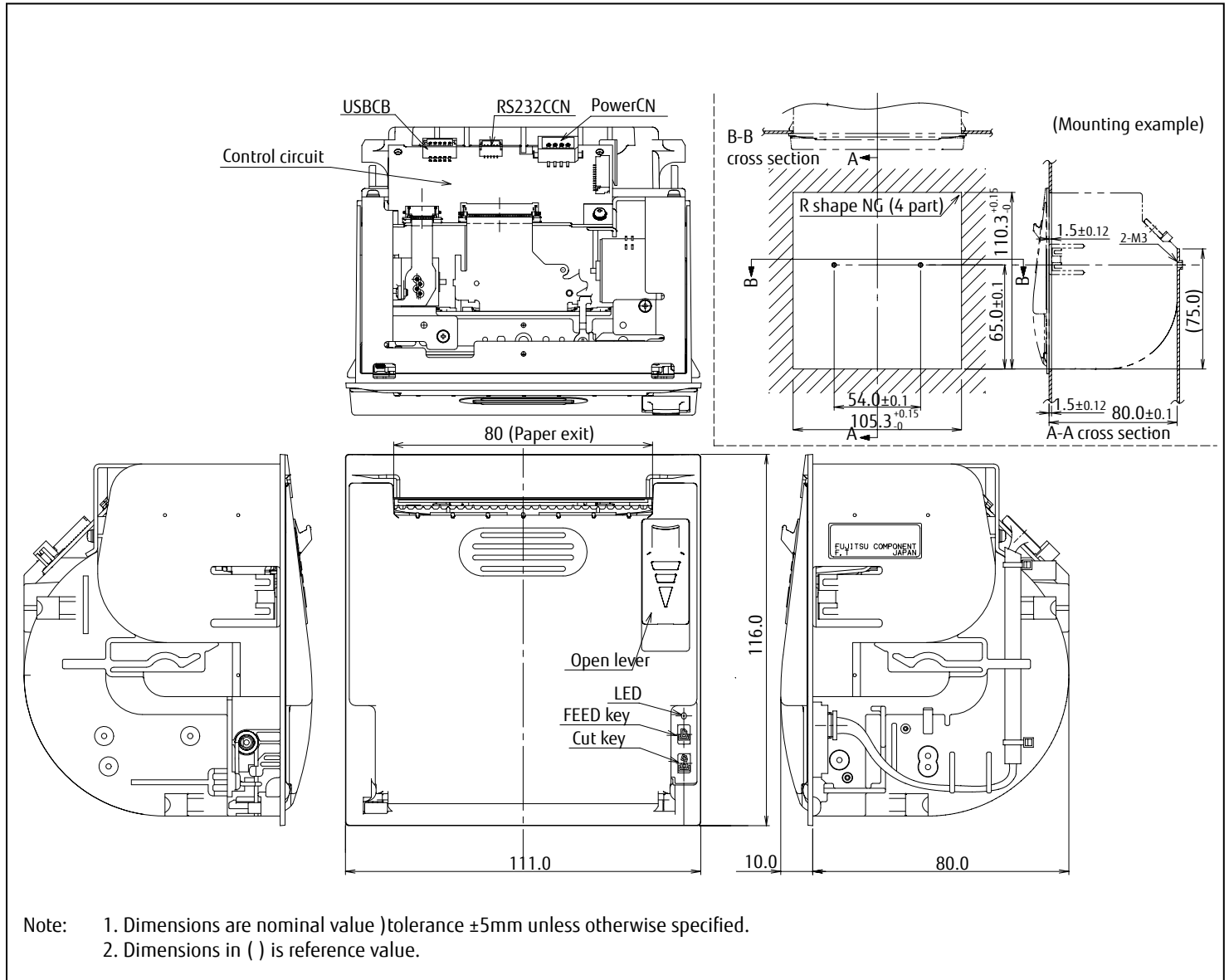
| Item                                                                                          |                                 | Specifications                                                                                                                  |                                                                                                                                                    |
|-----------------------------------------------------------------------------------------------|---------------------------------|---------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|
| Part number                                                                                   |                                 | FTP-63GUSL001#01                                                                                                                | FTP-63GUSL001#02                                                                                                                                   |
| 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)                                                                                        |                                                                                                                                                    |
| Paper width                                                                                   |                                 | 80mm +0/-1                                                                                                                      |                                                                                                                                                    |
| Paper thickness                                                                               |                                 | 60-100µm* <sup>1</sup>                                                                                                          |                                                                                                                                                    |
| Cutting type                                                                                  |                                 | Full or partial                                                                                                                 |                                                                                                                                                    |
| Printing speed                                                                                |                                 | FTP-62GDSL<br>150mm/s (1200 dot lines/s) page mode                                                                              |                                                                                                                                                    |
| Character types                                                                               | Alphanumeric KANA               | 159 types                                                                                                                       |                                                                                                                                                    |
|                                                                                               | International and special       | 195 types                                                                                                                       |                                                                                                                                                    |
|                                                                                               | OCRI                            | 103 types                                                                                                                       |                                                                                                                                                    |
|                                                                                               | OCRIII                          | 23 types                                                                                                                        |                                                                                                                                                    |
|                                                                                               | OCRIV                           | 103 types                                                                                                                       |                                                                                                                                                    |
|                                                                                               | Extended numeric                | 12 types                                                                                                                        |                                                                                                                                                    |
|                                                                                               | Thai code 18                    | 128 types                                                                                                                       |                                                                                                                                                    |
|                                                                                               | JIS KANJI level 1, 2, non-Kanji | JIS KANJI: approx. 6800                                                                                                         |                                                                                                                                                    |
| Traditional Chinese                                                                           |                                 |                                                                                                                                 | 13, 503                                                                                                                                            |
| Character dimensions (W x H), number of characters<br>(applicable for FTP-63GUSL001#01 & #02) |                                 | 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, OCRI<br>24 x 48 dots, 24 columns, OCRII<br>36 x 60 dots, 16 columns, OCRIV<br>24 x 48 dots, 24 columns, extended numeric |
| Interface standard                                                                            |                                 | RS-232C, USB                                                                                                                    |                                                                                                                                                    |

\*1: there may be exceptions

| Item                                |                             | Specifications                                                                                                                               |
|-------------------------------------|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|
| Part number                         |                             | FTP-63GUSL001#01 FTP-63GUSL001#02                                                                                                            |
| Power                               |                             | 24VDC $\pm 10\%$ 4.9A (24V, concurrent applied dot numners: 192 dots)                                                                        |
| Dimensions (WxDxH)                  | Printer mechanism w/ cutter | 111 x 90 x 116mm (external), 105 x 80 x 110mm (internal)                                                                                     |
| Weight                              | Printer unit                | 315g                                                                                                                                         |
| 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       | 0°C to +50°C (guaranteed)                                                                                                                    |
|                                     | Operating humidity          | 30 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)<br>PD150R (Oji paper)                                                                                               |
|                                     | Medium term paper           | TF-60KS-F1 (Nippon paper)<br>P220VBB-1 (Mitsubishi paper)                                                                                    |
|                                     | Long term paper             | PD160R-N (Oji paper)<br>AFP-235 (Mitsubishi paper)<br>TR50KJ-R (Nippon paper)<br>HA220AA (Nippon paper)                                      |

## ■ Dimensions

- Printer mechanism/cutter: 3-inch



### ■ Connector for power supply

- Connector for Logic, Head, Motor Power supply (CN1)

Board side: DF3-4S-2C (Hirose)

Other side: XHP-6 or equivalent

| No. | Signal | I/O | Content    | No. | Signal | I/O | Content    |
|-----|--------|-----|------------|-----|--------|-----|------------|
| 1   | Vp     | I   | +24V power | 2   | Vp     | I   | +24V power |
| 3   | GND    | -   | Ground     | 4   | GND    | -   | Ground     |

### ■ RS-232C standard

Connector (CN2)

Connector part number: SHR-05V-S (J.S.T.) or equivalent

Mating connector part number: (J.S.T.). or equivalent

| No. | Signal    | I/O | Content             | No. | Signal | I/O | Content           |
|-----|-----------|-----|---------------------|-----|--------|-----|-------------------|
| 1   | RXD       | I   | Receive data        | 2   | TXD    | O   | Transmission data |
| 3   | RTS (DTR) | O   | Data terminal ready | 4   | GND    | -   | Signal ground     |
| 5   | CTS (DSR) | I   | Data set ready      |     |        |     |                   |

Note: Symbol "-" means a negative logic signal.  
"I" or "O" means a signal direction from the interface board side.

### ■ USB standard

- (1) Connector (CN4)

Connector part number: ZHR-5 (J.S.T.) or equivalent

Mating connector part number: (Molex). or equivalent

| No. | Signal | I/O | Content                           | No. | Signal | I/O | Content                           |
|-----|--------|-----|-----------------------------------|-----|--------|-----|-----------------------------------|
| 1   | Vbus   | I   | Bus power supply                  | 2   | D-     | I/O | Differential data I/O D- terminal |
| 3   | D+     | I/O | Differential data I/O D+ terminal | 4   | GND    | -   | Signal ground                     |
| 5   | FG     | -   | Frame ground                      |     |        |     |                                   |

Note: Symbol "-" means a negative logic signal.  
"I" or "O" means a signal direction from the interface board side.

## ■ Commands

| Command                  | Content                                                    |
|--------------------------|------------------------------------------------------------|
| HT                       | Moves print position                                       |
| LH                       | Line feed                                                  |
| FF                       | Feeds forms (new page)                                     |
| ESC EM+n                 | Setting the amount of feeding at automatic paper feed      |
| ESC RS                   | Sets reverse printing                                      |
| ESC SP+n                 | Right side character spacing                               |
| ESC US                   | Resets reverse printing                                    |
| ESC !+n                  | Sets print mode                                            |
| ESC %+n                  | External registration character specification/cancellation |
| ESC &+y+c1+c2+x+d1 to dn | External registration character definition                 |
| ESC *+m+n1+n2+d1+dk      | Set bit image mode                                         |
| ESC -+n                  | Undeline setting                                           |
| ESC 2                    | Sets 1/6 inch line feed length                             |
| ESC 3+n                  | Sets the line feed length                                  |
| ESC ?+n                  | External registration character deletion                   |
| ESC @                    | Printer initialization                                     |
| ESC A+n                  | Set the space between the line                             |
| ESC C+n                  | Sets the page length by character line                     |
| ESC D+n1+nk+NUL          | Set the tab position                                       |
| ESC J+n                  | Feeds paper in forward direction and prints                |
| ESC K+n                  | Reverse paper feed                                         |
| ESC R+n                  | Selects international character                            |
| ESC V+n                  | Right rotation 90° specification/cancellation              |
| ESC X+n+m                | Setting the turning time of the motor excitation           |
| ESC c+1+n                | Sets internal processing                                   |
| ESC c+5+n                | Panel switch valid/invalid setting                         |
| ESC d+n                  | Printing and n-line feeding                                |
| ESC e+n                  | Prints and reverses feeds n-line                           |
| ESC j                    | Full cut                                                   |
| ESC m                    | Partial cut                                                |
| ESC s+n                  | Sets printing speed                                        |
| ESC t+n                  | Character code table selection                             |
| ESC {+n                  | Sets/resets upside down printing                           |
| ESC DEL +n               | Flash memory erase                                         |
| FS !+n                   | Kanji printing mode collective specification               |
| FS &                     | Kanji printing mode specification                          |
| FS *+m+n1+n2+d1 to dk    | High speed collective image printing specified             |
| FS -+n                   | Kanji underline specification/cancellation                 |
| FS .                     | Kanji printing mode cancellation                           |
| FS 2+c1+c2+d1 to dn      | External character definition                              |
| FS 9+n                   | Sets the detection functions                               |

## ■ Commands

| Command                                                                             | Content                                                            |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------------|
| FS C+n                                                                              | Kanji code system selection                                        |
| FS E+n                                                                              | Correction of impressed energy                                     |
| FS S+n1+n2                                                                          | Kanji spacing setting                                              |
| FS W+n                                                                              | Kanji double height and width printing specification/cancellation  |
| FS r+n                                                                              | Parameter transmission (serial mode)                               |
| GS !+n                                                                              | Character size setting                                             |
| GS &+m+x+y1+y2+d1 to dn                                                             | Registered bit image definition                                    |
| GS '+m+n                                                                            | Registered bit image printing                                      |
| GS (+E+L1+L2+fn+d1 to d9                                                            | RS-232C communication setting                                      |
| GS <                                                                                | Line feeds to the next mark                                        |
| GS A+m+n                                                                            | Sets the line feed length after mark detection                     |
| GS E+n                                                                              | Sets print quality                                                 |
| GS L+n1+n2                                                                          | Left margin setting                                                |
| GS V+m+n                                                                            | Paper cutting (this command is only available for chip)            |
| GS W+n1+n2                                                                          | Setting and cancellation of auto status transmission (serial mode) |
| GS a+n                                                                              | HRI character font selection                                       |
| GS e+m+n                                                                            | Sets bar code height                                               |
| GS h+n                                                                              | Barcode height setting                                             |
| GS k+m+n+d1~dn                                                                      | Selects bar code type and prints                                   |
| GS k+m+k1+k2+k3+k4+{[p1][d(1, 1)] to [d(1, j)]} to {[pi][d(i, 1)] to [d(i, j)]}[00] | 2D code (QR code) print                                            |
| GS k+m+n+k+pL+pH+d1 to dp                                                           | Bar code (GS1 DataBar) print                                       |
| GS k+m+n+k1+k2+k3+k4                                                                | Bar code (GS1 DataBar) setting                                     |
| GS w+n                                                                              | Sets bar code width magnification                                  |

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