

# 24V DRIVEN RECEIPT, TICKET PRINTER

## 2" KIOSK PRINTER UNIT

### FTP-629USL010/011

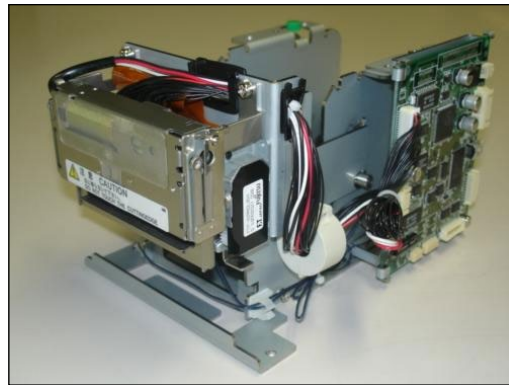
#### ■ OVERVIEW

The FTP-629USL Series is 24V driven receipt printer unit with cutter for 2 inch wide paper. The unit has our high-speed FTP-629MCL mechanism, cutter and control board, with an integrated paper feed and built-in paper guide section.

The receipt printer unit is most suitable for applications such as POS, ATM, and receipt and ticket issuing printers for various other equipment.

#### ■ FEATURES

- Medium duty unit (mounting is easy)
- High speed printer (200mm / sec.)
- Auto cutter included
- Paper near end-detection function
- Up to 3.25 inch paper diameter
- Low power consumption
- Printer double tilt function
- Prints 2-D barcodes



#### ■ DESIGNATION

|                          | Item                         | Part Number    |
|--------------------------|------------------------------|----------------|
| Printer module interface | USB (Ver. 1.1)               | FTP-629USL010* |
|                          | Serial (RS-232C)             | FTP-629USL011* |
| Cables                   | USB Interface                | FTP-629Y301    |
|                          | Serial Interface             | FTP-629Y302    |
|                          | Power for logic, head, motor | FTP-629Y60 1   |

\*: Interface board is FTP-629DSL100 serie

## ■ SPECIFICATIONS

| Item   |                       | Specifications  |
|--|-----------------------|---|
| Part number  |                       | FTP-629USL010/011   |
| Printing method  |                       | Thermal-sensitive line dot method   |
| Dot structure  |                       | 432 dots/line   |
| Dot pitch (Horizontal)   |                       | 0.125 mm (8 dots/mm)—Dot density  |
| Dot pitch (Vertical)   |                       | 0.125 mm (8 dots/mm)—Line feed pitch  |
| Effective printing area  |                       | 54 mm   |
| Paper width  |                       | 58 <sup>+0</sup> <sub>-1</sub> mm   |
| Paper thickness  |                       | 60 to 150 μm  |
| Paper print length   |                       | 50 to 250mm   |
| Cutting type   |                       | Full or partial   |
| Number of columns  |                       | 36 columns/line (12×24 dot font)  |
| Maximum printing speed   |                       | 1600 dotlines/s (200 mm/s)  |
| Page mode  | Low speed mode        | 40mm/sec  |
|  | Middle speed mode     | 80mm/sec.   |
|  | High speed mode       | 125 mm/sec.   |
|  | Ultra high speed mode | 200 mm/sec.   |
| Character types  |                       | Alphanumeric KANA: 159<br>International characters: 195<br>JIS KANJI (FTP-622DSL107, DSL112): approximately 6800  |
| Character composition, dimensions (H×W),<br>Number of characters |                       | 24 × 12 dots, (3.0 × 1.5 mm), 48 columns<br>24 × 24 dots, (3.0 × 3.0 mm), 24 columns<br>16 × 8 dots, (2.0 × 1.0 mm), 72 columns<br>16 × 16 dots, (2.0 × 2.0 mm), 36 columns   |
| Interface  |                       | Serial RS232C, USB  |
| Power supply   | For head              | 24VDC ± 5%, Voltage<br>Current : average ( ): Peak<br>TBA (2.04) A (at 200 mm/s printing speed, 12.5% printing ratio)<br>TBA (1.03) A (at 80 mm/s printing speed, 12.5% printing ratio)<br>TBA (0.51) A (at 40 mm/s printing speed, 12.5% printing ratio) |
|  | For print motor       | 24VDC ± 5%, 1.0 A maximum   |
|  | For conveyance motor  | 24VDC ± 5%, 1.0 A maximum   |
|  | For cutter            | 24VDC ± 5%, 1.2 A maximum   |
|  | For logic             | 5VDC ± 5%, 0.2 A maximum  |
| Dimensions   |                       | 119.5(W) × 170.5(D) × 104(H) mm   |
| Weight (mechanism, cutter, board, frame)                         |                       | Approximately 1.1 kg  |

(Continued)

(Continued)

| Item                                |                       | Specifications   |
|-------------------------------------|-----------------------|--|
| Expected life                       | Mechanism             | Pulse durability : 100 million pulse/dot (using Fujitsu's standard driving method)<br>Wear resistance: 100 km (at 12.5% printing ratio)  |
|                                     | Cutter                | 500,000 cuts   |
| Environmental conditions            | Operating temperature | 0°C to +50°C   |
|                                     | Operating humidity    | 20 to 85% RH (no condensation)   |
|                                     | Storage temperature   | -20°C to +65°C (excluding paper)   |
|                                     | Storage humidity      | 5 to 95% RH (no condensation)  |
| Detection                           | Head temperature      | By thermistor (applied energy control, abnormal temperature detection)   |
|                                     | Paper out/Mark detect | By photointerrupter  |
|                                     | Platen open           | By microswitch   |
|                                     | Near end paper        | By mechanical switch   |
| Recommended thermal sensitive paper |                       | For front insertion use (80 mm width) : FTP-030P0701/P0102<br>Recommended papers<br>· Oji Paper : PD150R,PD160R-N,PD170R<br>· NIPPON Paper : TF50KS-E,TF60KS-E,TF50KS-E4<br>· MITSUBISHI Paper Mills : P220VBB-1,AFP-233 |
| Paper diameter                      | Standard              | 83mm   |
|                                     | Extended (attachment) | 120mm  |

\*1: 24VDC, minimum head resistance.

## ■ FUNCTIONS

| Item  | Item                                      |
|---|---|
| 1. Test print function                            | 9. Internal RAM abnormality detection     |
| 2. Paper feed                                     | 10. Cutter abnormality detection          |
| 3. Paper out detection                            | 11. Mark detection                        |
| 4. Paper near end detection                       | 12. MCU operation abnormality detection   |
| 5. Platen open detection                          | 13. Motor power saving                    |
| 6. Thermal head temperature abnormality detection | 14. Power supply disconnection protection |
| 7. Motor temperature detection                    | 15. Motor protection                      |
| 8. Voltage abnormality detection                  | 16. Thermal head protection               |

## ■ INTERFACE , COMMAND, OPTIONS

Please refer to the FTP-629DSL100 series. Interface command options, please see FTP-609 datasheet.



## ■ COMMANDS

| Command                  | Contents  |
|--------------------------|---|
| HT                       | Moves print position to the next tab.                       |
| LF                       | Line feed.  |
| FF                       | Feeds forms (new page).                                     |
| ESC FF                   | Data printing in page printing mode.                        |
| ESC EM+n                 | Setting the amount of the feeding at automatic paper feed.  |
| ECS RS                   | Sets reverse printing.                                      |
| ESC US                   | Resets reverse printing.                                    |
| ESC SP+n                 | Character spacing setting.                                  |
| ESC ! + n                | Sets print mode.  |
| ESC \$+n1+n2             | Absolute position spacing.                                  |
| ESC % + n                | External registration character specification/cancellation. |
| ESC & +y+c1+c2+x+d1to dn | External registration character definition.                 |
| ESC *+m+n1+n2+d1+dN      | Sets 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                  | Sets the space between the line.                            |
| ESC C+n                  | Sets the page length by character line.                     |
| ESC D+d1+dN +NUL         | Sets the tab position.                                      |
| ESC E+n                  | Highlighted printing specification/cancellation.            |
| ESC G+n                  | Double printing specification/cancellation.                 |
| ESC J+n                  | Feeds paper in forward direction and prints.                |
| ESC K+n                  | Reverse paper feed.   |
| ESC L+n                  | Page printing mode selection.                               |
| ESC Q+n+!+j              | Frame overlay function.                                     |
| ESC R+n                  | Selects international character.                            |
| ESC S+n                  | Line printing mode.   |
| ESC T+n                  | Print direction setting (only page mode).                   |
| ESC V+n                  | Right Rotation 90° specification / cancellation.            |

Commands continued

| Command                          | Contents   |
|----------------------------------|--|
| ESC W+X1+X2+1+Y2+dX1+dX2+dX1+dY2 | Page printing mode printing area setting.                          |
| ESC X+m+n                        | Setting the turning time of the motor excitation.                  |
| ESC Y+01h+ESC+x+a+m+d~           | Program download.  |
| ESC Y+01h+ESC+x+a+m+d~           | Printer test.  |
| ESC\+n1+n2                       | Relative position setting.   |
| ESC a+n                          | Positional alignment.  |
| ESC c+1+n                        | Sets internal processing.  |
| ESC c+4+n                        | Paper-out detector selection.                                      |
| ESC c+5+n                        | Panel switch enable/disable setting.                               |
| ESC d+n                          | Printing and n-line feeding.                                       |
| ESC e+n                          | Prints and reverse feeds n-lines.                                  |
| ESC i                            | Full cut   |
| ESC m                            | Partial cut  |
| ECS s+n                          | Sets printing speed.   |
| ECS t+n                          | Character code table selection.                                    |
| ESC u+n                          | Status of peripherals.   |
| ESC v                            | The status of the paper sensor is notified.                        |
| ESC {+n                          | Sets/resets upside down printing.                                  |
| FS !+n                           | Kanji printing mode collective specification.                      |
| FS &                             | Kanji printing mode specification.                                 |
| FS_+n                            | Kanji underline specification/cancellation.                        |
| FS *+ m+n1+n2+d1 to dn           | High speed collective image printing specified.                    |
| FS .                             | Kanji printing mode cancellation.                                  |
| FS 2+c1+c2+d1 to dn              | External character definition.                                     |
| FS 9+n                           | Sets the detection functions.                                      |
| FS C+n                           | Kanji code system selection.                                       |
| FS E+n                           | Correction of impressed energy.                                    |
| FS S+n+n1+n2                     | Kanji spacing setting.   |
| FS W+n                           | Kanji double height and width printing specification/cancellation. |
| FS r+n* <sup>1</sup>             | Parameter transmission.  |
| GS ! + n                         | Character size specification.                                      |

Commands continued

| Command  | Contents   |
|--|--|
| GS \$ + n1 + n2  | Vertical absolute position specification in page printing mode.                                    |
| GS & +m + x + y1 + y2 + d1 to dn   | Registered bit image definition.   |
| GS' + m + n  | Registered bit image printing.   |
| GS *+x+y+d1 to dx*y*8  | Registered bit image definition.   |
| GS/ +m   | Registered bit image printing.   |
| GS :   | Macro definition start/end.  |
| GS <   | Line feeds to the next mark.   |
| GS A+m+n   | Sets the line feed length after mark detection.  |
| GS B+m   | Angle setting of bar code.   |
| GS E+n   | Sets print quality.  |
| GS H+n   | HRI character printing position selection.   |
| GS I+n+m   | Printer ID registration  |
| GS L+n1+n2   | Left margin position setting.  |
| GS R+n   | Printer ID demand.   |
| GS W + n1 + n2   | Printing area width setting.   |
| GS\ +n1 + n2   | Vertical relative position specification in page printing mode (vertical direction of characters). |
| GS^ + r + t + m  | Mark detection execution.  |
| G a+n  | Automatic notification setting status.   |
| GS e+n+m   | Sets bar code width.   |
| GS f + n   | HRI character font selection.  |
| GS h+n   | Sets bar code height.  |
| y) GS k+m +d1to dk + NUL<br>x) GS k+m+n+ d1 to dn                            | Bar code printing.   |
| GS k+m+k1+k2+k3+k4+{[p1][d(1,1)] ~ [d(1,i)] ~ {[pi][d(i,1)]~[d(i,j)]} [00]16 | Print of 2Dcode (QR).  |
| GS k+m+k1+k2+k3+k4+k5+d1~dn  | Print of 2 Dcode (maxi).   |
| GS k+m+k1+k2+k3+k4+k5+k6+d1~dn   | Print of 2 Dcode (PDF417).   |
| GS v   | Notification of firmware version.  |
| GS w+n   | Sets bar code length.  |

\*1: These commands are valid with FTP-629DSL100 series.

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