

24V DRIVE, ULTRA HIGH SPEED LINE THERMAL PRINTER 4" MECHANISM

FTP-641MCL101/102

■ OVERVIEW

This thermal printer (driven by 24 VDC) provides ultra-high speed printing for 4-inch wide paper (114 mm). This printer is small in size, light weight, and has low power consumption. The print head is designed with open construction for easy maintenance.

This printer is suitable for a variety of applications, such as POS terminals, ticket machines, label printers, measuring devices and medical equipment.

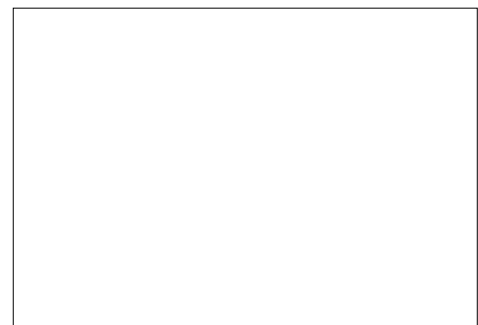
In addition to the interface board, a driving LSI (MCU + Gate Array) is also available.

■ HIGHLIGHTS

- **Ultra high speed printing**
It can print at 100 mm/s (800 dotlines/s) by using Fujitsu Components' unique head drive control system.
- **Compact and lightweight**
The printer has a low profile of only 28 mm, and a light weight of approximately 290 g.
- **Low power consumption**
The peak current for head driving is approximately 6.0 A (at 50 mm/s printing speed, 50% printing ratio).
- **Easy head access**
Head-open construction makes head maintenance easy, especially for head cleaning.
- **Paper auto loading function**
The thermal paper can be loaded without head-up lever operation.
- **High resolution**
8 dots/mm head provides clear print output.
- **Selectable paper paths**
Front or rear insertion types are available.
FTP-641MCL102 can print on paper thicknesses of up to 150 µm.



FTP-641MCL101, 102



FTP-621CU102, FTP-633GA101



FTP-621DCL002

■ DESIGNATION

| Item | | Part number |
|-------------------|--|---------------|
| Printer mechanism | Front paper insertion type | FTP-641MCL101 |
| | Rear paper insertion type (supports thick paper) | FTP-641MCL102 |
| Interface board | | FTP-621DCL002 |
| LSI | Micro Controller Unit | FTP-621CU102 |
| | Gate Array | FTP-633GA101 |

■ GENERAL SPECIFICATIONS

| Item | Specifications | |
|--|--|----------------------------|
| Printing method | Thermal-sensitive line dot method | |
| Dot structure | 832 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 | 104 mm | |
| Number of columns | 69 columns/line (maximum)—Alphanumeric KANA | |
| Maximum printing speed | 800 dotlines/s (100 mm/s) maximum | |
| Character types | JIS ANK : 128 International characters : 130 Semi-graphic : 63 ASCII small characters : 31 Download : 384 | |
| Character composition, dimensions (H×W), Number of columns (standard) | 24 × 12 dots, (3.0 × 1.5 mm), 69 columns 32 × 16 dots, (4.0 × 2.0 mm), 52 columns 24 × 24 dots, (3.0 × 3.0 mm), 34 columns 32 × 32 dots, (4.0 × 4.0 mm), 26 columns | |
| Interface | 1) Centronics standard 2) Bus interface*1 | |
| Power supply | For head 24 VDC ± 5%, average:*2 0.33 (1.72) A (at 25 mm/s printing speed, 25% printing ratio) 0.64 (3.01) A (at 50 mm/s printing speed, 25% printing ratio) 3.09 (5.58) A (at 100 mm/s printing speed, 25% printing ratio) (): Peak | |
| | For motor | 24 VDC ± 5%, 1.0 A maximum |
| | For logic | 5 VDC ± 5%, 0.5 A maximum |
| Weight | Mechanism: approximately 290 g. Interface board: approximately 100 g | |
| Dimensions | Mechanism Interface board 159 (W) × 48 (D) × 28.0 (H) mm (excluding connector) 140 (W) × 89 (D) × 24.0 (H) mm | |

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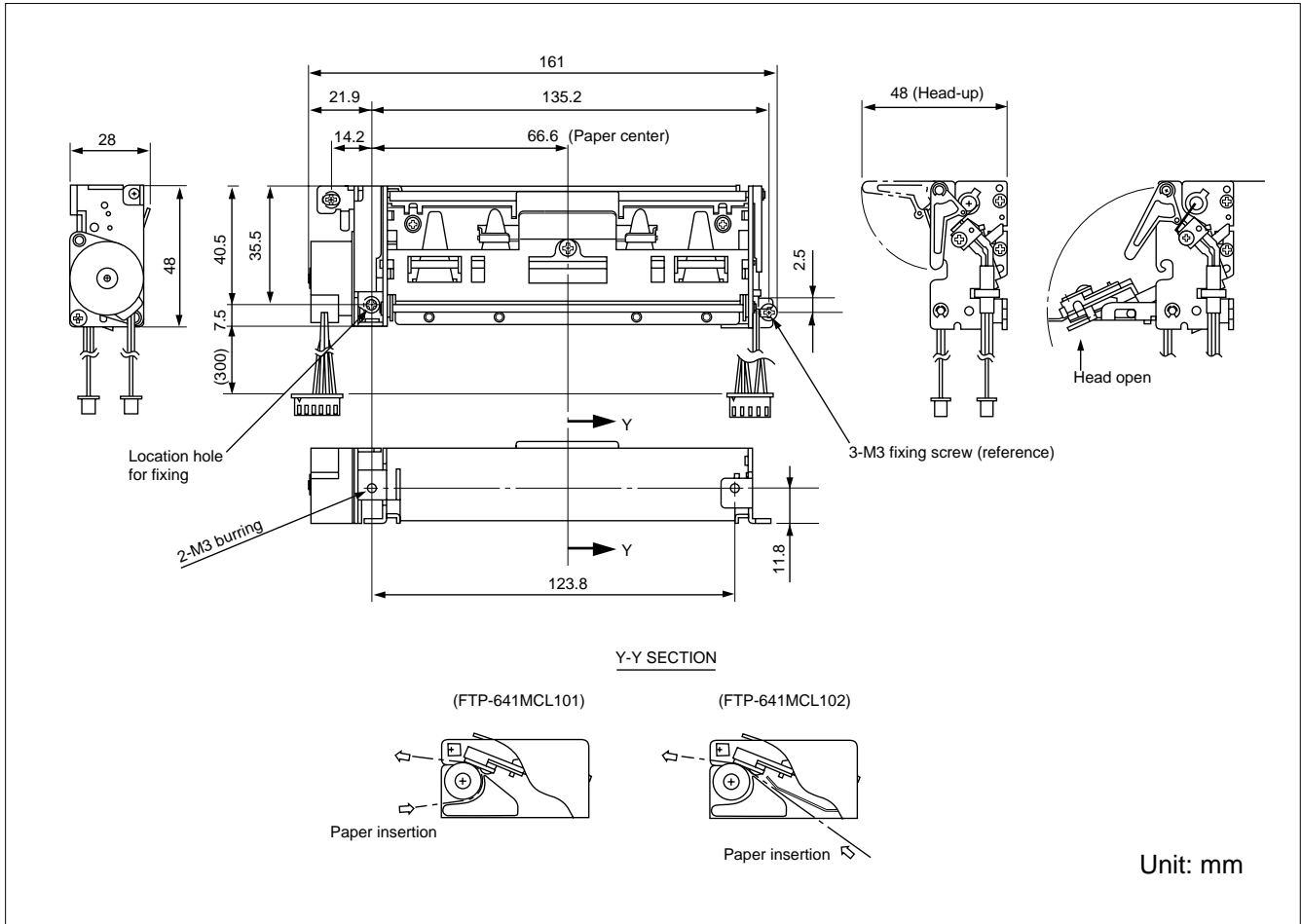
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| Item | | Specifications |
|---------------------------------------|-----------------------|---|
| Thermal head life | | Pulse durability : 1×10^8 pulse/dot (using Fujitsu Takamisawa's standard driving method) Wear resistance: 50 km (at 25% printing ratio) |
| Environmental conditions | Operating temperature | +5 to +40°C*3 |
| | Operating humidity | 20 to 85% RH (no condensation) |
| | Storage temperature | -20 to +60°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 (command set) |
| | Head-up | By microswitch |
| Paper width | | 114 ⁺⁰ ₋₁ mm |
| Recommended thermal sensitive paper*5 | | 1 ply paper in roll : FTP-040P0020 Thicker paper in roll : FTP-040PJ102*4 |

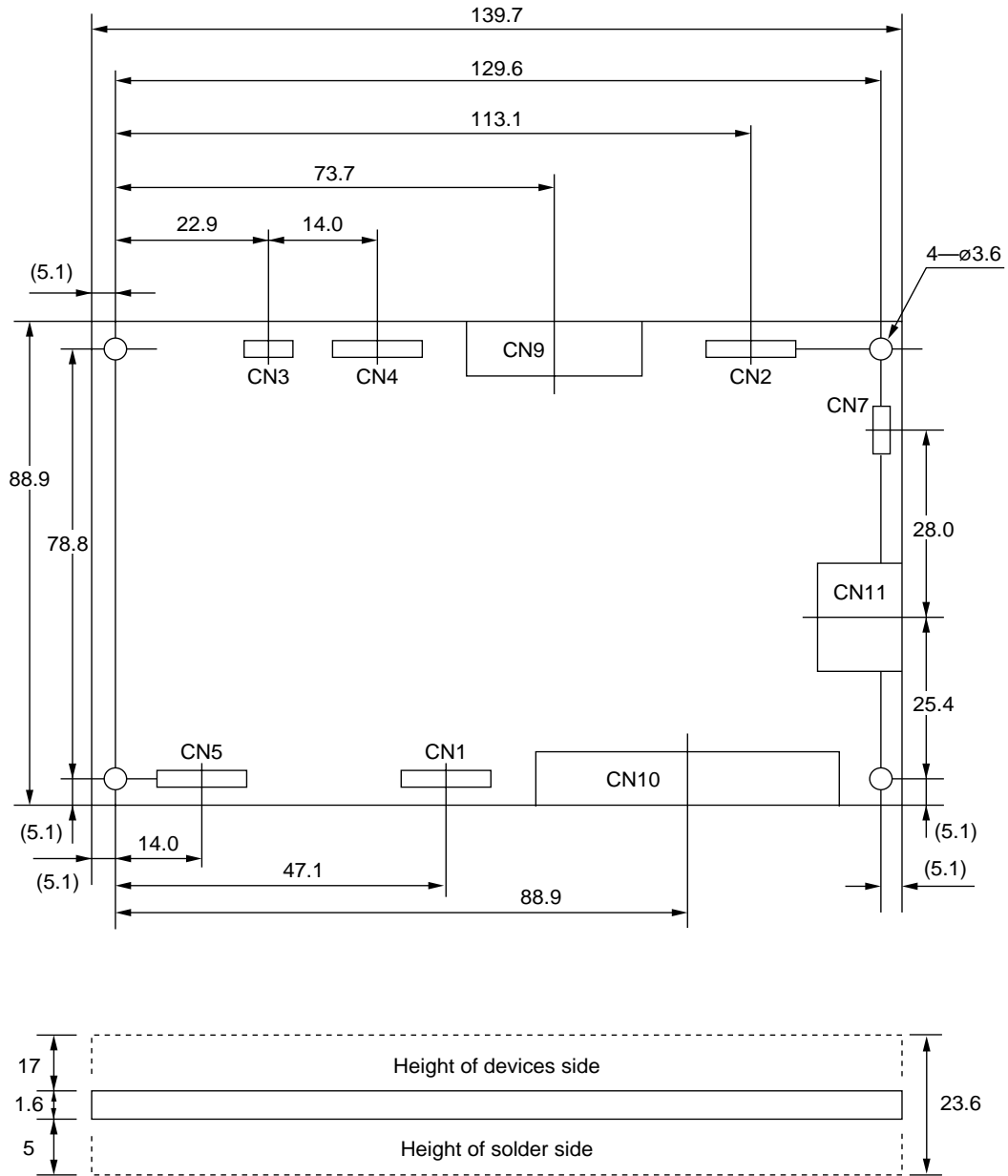
- *1: The data to be printed is automatically read out by the printer driver equipment memory (host system frame memory). The communication is parameter transfer.
- *2: At 25°C, maximum applied voltage, minimum head resistance, specified paper, stable printing ratio.
- *3: Temperature range for guaranteed printing density. It can operate at 0 to +40°C.
- *4: Printer mechanism FTP-641MCL102 is to be used.
- *5: Please contact us for other thermal papers.

■ DIMENSIONS

Printer mechanism



Interface board



Unit:mm

■ INTERFACE, COMMAND, OPTIONS

Please refer to the FTP-621DCL002/012 DATA SHEET for Interface, Command, and Options.

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