

# FCL COMPONENTS

## 24 V DRIVE, FTP-607 SERIES

### HIGH SPEED THERMAL PRINTER

### 2-INCH TYPE EASY LOAD MECHANISM

**FTP-627MCL101/113** *DISCONTINUED*

**FTP-627MCL103** - *To be Discontinued*

#### ■ OVERVIEW

The FTP-607MCL Series thermal printer (driven by 24VDC) provides ultra-high speed printing (100mm/s) for 2-inch and 3-inch wide paper. Our original platen removal mechanism allows easy paper loading and maintenance.

The FTP-607 MCL series can be used for a variety of applications, such as POS/ECR, Kiosk terminals, banking terminals, and measurement and medical equipment.



#### ■ HIGHLIGHTS

- **Compact size**  
Height 15.5 mm, width 70.4 mm, depth 33.0 mm for the 2 inch model. The 3-inch product has a width of 92.4mm.
- **High speed printing**  
It can print at 100 mm/s (800 dotlines/s) maximum by using FCL Components head drive control.
- **Easy loading mechanism (ELM) type**  
Our detachable platen removal mechanism improved paper loading and maintenance.
- **Multi-featuring diecast fame**  
By application of multi-featuring diecast frame, continous print by function of heat-sink, high ESD stand by function of earth frame and shock/vibration stand by function of solid frame are valid.
- **High resolution printing**  
8 dots/mm of resolution printing is possible.
- **RoHS compliant**

# FTP-627MCL101/103/113

## ■ PART NUMBERS

Name		Part Number
Printer Mechanism		FTP-627MCL101 (without platen detect switch) FTP-627MCL103 (with platen detect switch) FTP-627MCL113 (with platen bracket and detect switch)
LSI		FTP-627CU201
Interface Board	parallel	FTP-627DCL218
	serial	FTP-627DSL238
Interface Cable (board to mechanism)	Centronics	FTP-628Y202
	RS-232C	FTP-628Y302
Power supply cable	logic	FTP-629Y401
	head, motor	FTP-629Y601

## ■ SPECIFICATIONS

Item	Specifications	
Part number	FTP-627MCL101/103	FTP-627MCL113
Printing method	Thermal-sensitive line dot method	
Dot structure	384 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	48 mm	
Number of columns	ANK 32 columns/line (max.12x 24 dot font)	
Paper width	58 mm <sup>+0</sup> <sub>-1</sub>	
Paper thickness	60 to 100 μm (some paper in this range may not be used because of paper characteristics)	
Printing Speed	Maximum 100mm/sec. (800 dot line/sec.)	
Character types	Alphanumeric, katakana: International and special characters: JIS Kanji (supported when Kanji CG is mounted):	159 types 195 types about 6800 types
Character, dimensions (H×W), number of columns	(1.5 × 3.0mm) (3.0 × 3.0mm) (1.0 × 2.0 mm) (2.0 × 2.0 mm)	12 × 24 dots, 32 columns: ANK 24 × 24 dots, 16 columns: ANK, Kanji 8 × 16 dots, 48 columns: ANK 16 × 16 dots, 24 columns: ANK, Kanji

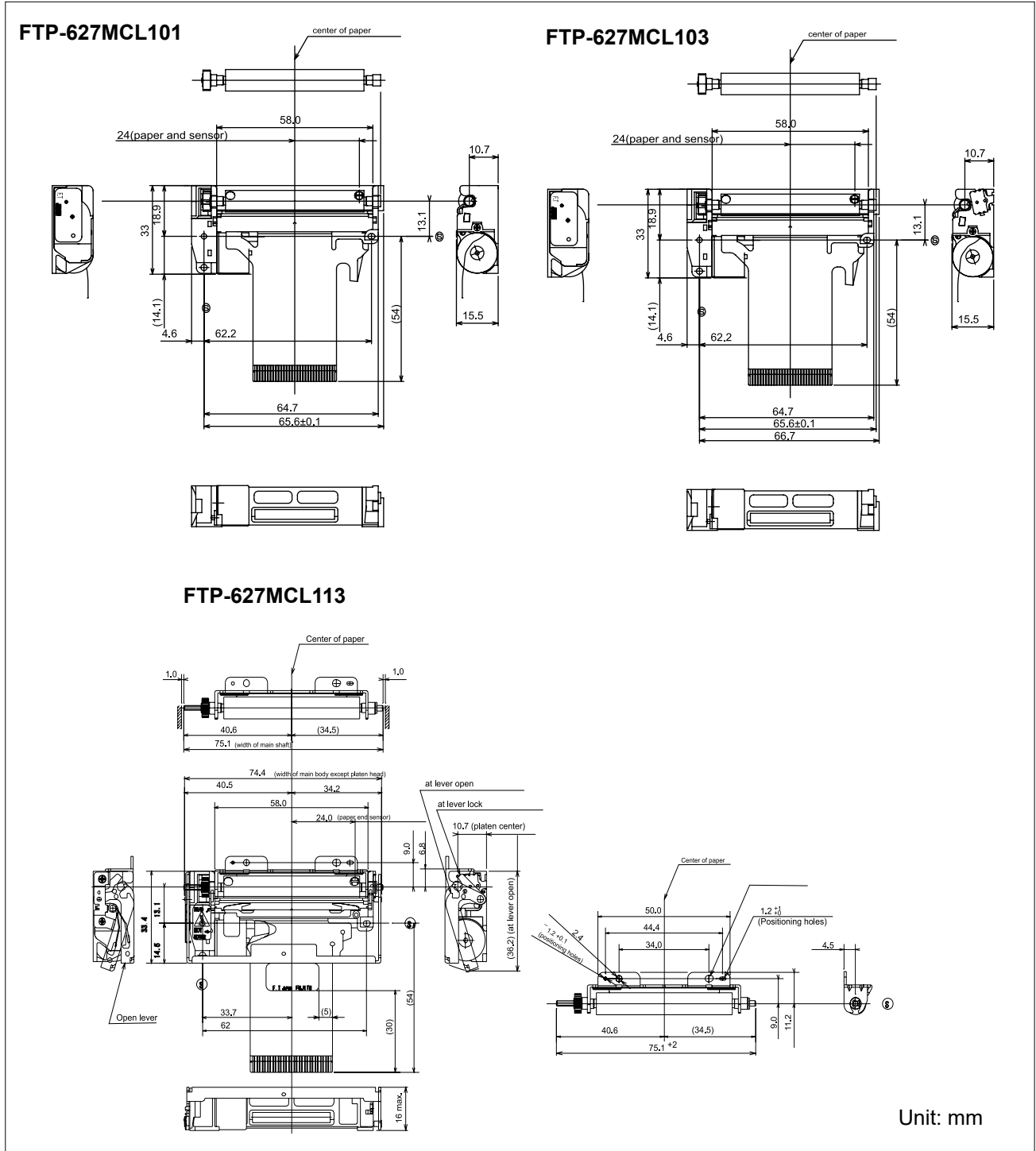
## ■ SPECIFICATIONS

Item		Specification	
		FTP-627MCL101/103	FTP-627MCL113
Interface		Conforms to RS232C / Centronics	
Operating Voltage	For print head	24 VDC $\pm$ 5%, 1.0 A average (1.5A peak) 24V, 25% printing ratio	
	For motor	24 VDC, 1 A maximum	
	For logic	3.3 to 5.25 VDC $\pm$ 5%, 0.1 A maximum	
Dimensions	Printer mechanism	72.4 x 33.0 x 15.5 mm (WxDxH)	75.0 x 33.4 x 15.5 mm (WxDxH)
	Interface board	70 x 60 x 11.6 mm (WxDxH)	
Weight	Mechanism	Approximately 42g	Approximately 54g
	Interface board	Approximately 55g	
Life	Head	Pulse resistance: 50 million pulses/dot (under our standard conditions). Abrasion resistance: paper traveling distance 50km (print ratio: 25% or less)	
	Platen open	5,000 times	
Operating environment	Operating temperature	0° C to +50° C*1	
	Operating humidity	20 to 85% RH (no condensation)	
	Storage temperature	-20° C to +60° C (paper not included)	
	Storage humidity	5 to 95% RH (no condensation)	
Detection function	Head temperature detection	Detected by thermistor	
	Paper out/mark detection	Detected by photo-interrupter	
	Platen release detection	Detected by slide switch (103/383 only)	
Recommended thermal sensitive paper		High Sensitive Paper	TF50KS-E4 (Nippon Paper)
		Standard paper:	TF60KS-E(Nippon Paper), FTP-020PU001 (58mm), PD105R (Oji Paper), FTP-020P0701 (58mm)
		Medium Life Paper	TF60KS-F1, FTP-020P0102 (58mm), PD170R (Oji Paper), P220VBB-1 Mitsubishi Paper)
		Long Life Paper	PD160R-N (Oji Paper), AFB-235 (Mitsubishi Paper), TP50KJ-R (Nippon Paper), HA220AA (Nippon Paper)

\*1: printing density assurance range, operation is possible at -25°C to +70°C

## ■ DIMENSIONS

### 1. Printer mechanism



## ■ CONNECTOR PIN ASSIGNMENT OF MECHANISM (FPC)

### 1. Thermal Head

Part number : 52610-3071 Molex or equivalent

#### FTP-627MCL101/103 PIN ASSIGNMENT

No	Signal	I/O	Contents
1	PHK	—	Photointerrupter (Cathode)
2	VSEN	—	Ground power supply for paper sensor
3	PHE	O	Photointerrupter (Emittor)
4	SW	—	Platen open switch
5	SW	O	Platen open switch
6	VH	I	Power supply for thermal head
7	VH	I	
8	VH	I	
9	DI	I	Print data in
10	$\overline{\text{STB3}}$	I	Strobe 3
11	VDD	I	Power for logic
12	TH	O	Thermistor
13	GND	—	Ground power supply for thermal head
14	GND	—	
15	GND	—	
16	GND	—	
17	GND	—	
18	GND	—	
19	$\overline{\text{STB1}}$	I	Strobe 1
20	$\overline{\text{STB2}}$	I	Strobe 2
21	$\overline{\text{LAT}}$	I	Print data latch
22	CLK	I	Clock
23	NC	—	Not connected
24	VH	I	Power supply for thermal head
25	VH	I	
26	VH	I	
27	MT A	I	Stepping motor excitation signal
28	$\overline{\text{MT A}}$	I	
29	MT B	I	
30	$\overline{\text{MT B}}$	I	

---

## Contact

### Japan

FCL COMPONENTS LIMITED  
Shinagawa Seaside Park Tower  
12-4, Higashi-shinagawa 4-chome,  
Tokyo 140 0002, Japan  
Tel: +81 3 3450 1682  
Email: fcl-contact@cs.fcl-components.com

### Europe

FCL COMPONENTS EUROPE B.V.  
Diamantlaan 25  
2132 WV Hoofddorp  
Netherlands  
Tel: +31 23 5560910  
Email: info@fcl-components.eu

### China

FCL COMPONENTS (SHANGHAI) CO., LTD.  
Unit 1105, Central Park –Jing An, No.329 Heng  
Feng Road, Shanghai 200070, China  
Tel: +86 021 3253 0998  
Email: fcsh@fcl-components.com

### North and South America

FCL COMPONENTS AMERICA, INC.  
2055 Gateway Place, Suite 480  
San Jose, CA 95110 U.S.A.  
Tel: +1 408 745 4900  
Email: fcai.components@fcl-components.com

### Asia Pacific

FCL COMPONENTS ASIA, LTD.  
No. 20 Harbour Drive, #07-01B  
Singapore 117612  
Tel: +65 6375 8560  
Email: fcal@fcl-components.com

### Hong Kong

FCL COMPONENTS HONG KONG CO., LIMITED  
Room 13, 23/F, Seapower Tower, Concordia Plaza,  
No.1 Science Museum Road,  
Tsim Sha Tsui East, Kowloon, Hong Kong  
Tel: +852 2881 8495  
Email: fcsh@fcl-components.com

**Web:** [www.fcl-components.com/en/](http://www.fcl-components.com/en/)

---

## Copyright

All trademarks or registered trademarks are the property of their respective owners. FCL Components America or its affiliates do not warrant that the content of datasheet is error free. In a continuing effort to improve our products FCL Components America, Inc. or its affiliates reserve the right to change specifications/datasheets without prior notice.

Copyright ©2024 FCL Components America, Inc. All rights reserved. Revised February 1, 2024.

---