

# FCL COMPONENTS

## 24V DRIVEN, FTP-607 Series

### 2" HIGH SPEED THERMAL PRINTER

## FTP-627MCL411-RD

#### ■ OVERVIEW

The FTP-627MCL series are 24V driven high-speed printers with a ultra low profile auto cutter with long life.

The FTP-627MCL series can be used for a variety of applications, such as POS terminals, ticket vending machines, label printers, banking terminals, and measurement and medical equipment.

#### ■ HIGHLIGHTS

- **Ultra low profile**  
Height 21.8 mm, width 82.5 mm, depth 42.2 mm
- **High speed printing**  
It can print at 200mm/s (1600 dotlines/s) maximum by using FCL Components' unique head drive control.
- **Auto Cutter**  
Long life and high reliable guillotine style auto cutter (full/partial cut) with dedicated motor.
- **Easy paper**  
Our lever platen release allows for easy paper insertion.
- **Curved paper path**
- **Platen detect switch**
- **Multi die-cast frame**  
The rugged die-cast frame provides excellent ESD performance, is shock/vibration resistant and the heat-sink allows for continuous printing.
- **RoHS compliant**



FTP-627MCL411-RD

## ■ PART NUMBERS

		Part Number
Easy Load Model with low profile cutter		FTP-627MCL411-RD
Interface board for Mech/Cutter		FTP-627DSL441
Interface cables	Serial (RS232C)	FTP-628Y302
	USB	FTP-629Y301#01
Power cables	Logic	FTP-629Y601
	Head, motor	FTP-629Y601

## ■ SPECIFICATIONS

Item	Specifications
Part number	FTP-627MCL411-RD
Printing method	Thermal-line dot method
Dot structure	432 dots/line
Dot pitch (horizontal)	0.125 mm (8dots/mm) - dot density
Dot pitch (vertical)	0.125 mm (8dots/mm) - line feed pitch
Effective printing area	54 mm
Number of columns	ANK 36 columns/line (max. 12/24 dot font)
Paper width	58 mm
Paper thickness	60 to 85µm (some paper in this range may not be used because of paper characteristics)
Printing speed	Maximum 200mm/sec. (1,600dot line/sec.)
Character types	Alphanumeric, Katakana: 159 types International and Special: 195 types OCR character: 229 types Enlarged character: 12 types Download: 224 types External: 94 types JIS Kanj : 6,879 types Traditional Chinese: 13,503 types
Character, dimensions (WxH), number of columns	12 × 24 dots, 24 × 24 dots, 8 × 16 dots, 16 × 16 dots, 24 × 40 dots, 24 × 48 dots, 36 × 60 dots

## ■ SPECIFICATIONS

Item		Specification
Interface		Conforms to RS232C/Centronics / USB
Power supply	For print head	24 VDC $\pm$ 5%, approx. 2.2A (Concurrent applied dot number: 144 dots)
	For motor	24 VDC $\pm$ 5%, 1 A maximum
	For cutter	24 VDC $\pm$ 5%, 1.3 A maximum
	For logic	2.7 to 3.3 VDC or 4.75VDC to 5.25VDC 0.1 A maximum
Dimensions	Mechanism with cutter	82.5 x 42.2 x 21.8 mm (WxDxH)
	Interface board	70 x 60 x 14.2 mm (WxDxH)
Weight	Mechanism with cutter	Approximately 107g
	Interface board	Approximately 22g
Life	Head	Pulse resistance: 150 million pulses/dot (print ratio: 12.5%). Abrasion resistance: paper traveling distance 150km
	Cutter	1,000,000 cuts
	Platen	5,000 times (open/close)
Operating environment	Operating temperature*	-10°C to +50°C
	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-interruptor
	Platen release	Detected by sliding switch
Recommended thermal sensitive paper	High sensitive paper	TF50KS-E45 (Nippon paper)
	Standard paper	TF60KS-E (Nippon paper) PD150R (Oji paper)
	Medium life storage paper	TF60KS-F1 (Nippon paper) PD170R (Oji paper) P220VBB-1 (Mitsubishi paper)
	Long life storage paper	PD160R (Oji paper) AFP-235 (Mitsubishi paper) HA220AA (Nippon paper)

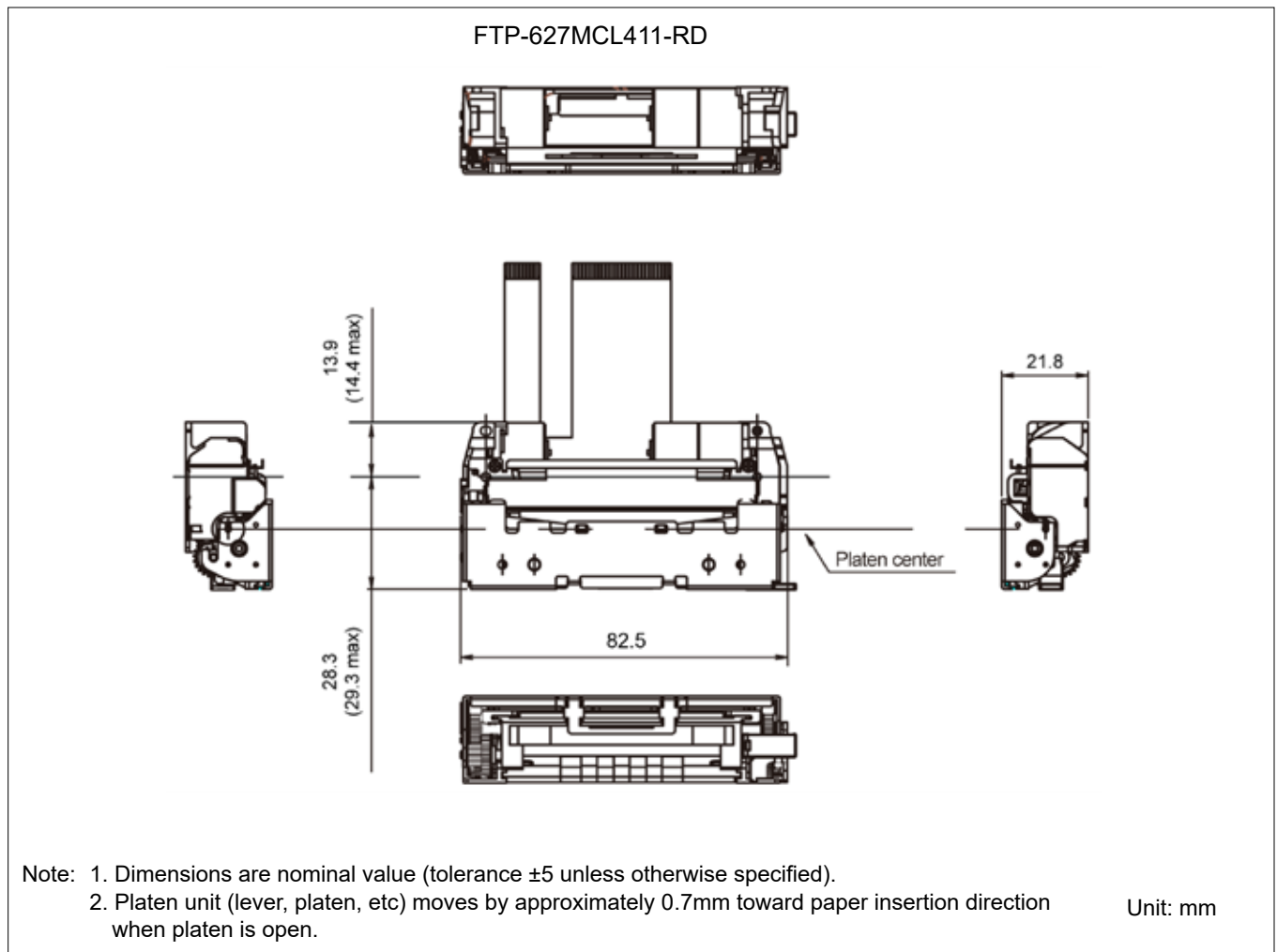
\*+5°C to +40°C printing density assurance rance.

## ■ FUNCTION OF INTERFACE BOARD

Item	Item
1. Test print function	8. Cutter trouble detect
2. Paper out detection	9. Motor power saving function
3. Paper near end detection	10. Mark detection function
4. Paten open detection	11. MCU operation abnormality detection
5. Thermal head temperature abnormality detection	12. Power ON/OFF sequence protection
6. Blow-out fuse detection	13. Motor over-current protection
7. Head voltage abnormality detection	14. Hardware timer

## ■ DIMENSIONS

### 1. Printer mechanism



## FTP-627MCL411-RD

### 1. Connector (FPC) specification (CN3/CN10)

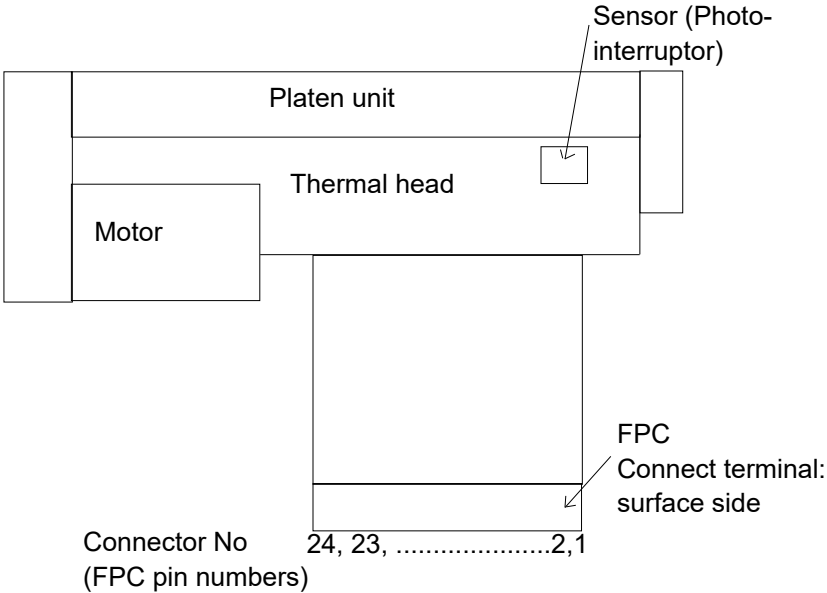
(1) Connector

Mechanical unit side: FPC connector

Remote side (housing site): IMSA-9619S-24Y916 (IRISO) or 52610-2471 (Molex)

(2) Pin assignment on the mechanical side

No	Signal	I/O	Contents
1	PHK	—	Photointerrupter (Cathode)
2	VSEN	I	Ground power supply for paper sensor
3	PHE	O	Photointerrupter (Emittor)
4	VH	I	Head drive power
5	DI	I	Data input
6	$\overline{\text{STB2}}$	I	Print enable signal 2
7	$\overline{\text{STB3}}$	I	Print enable signal 3
8	VDD	I	Logic Power
9	GND	—	Head ground
10	GND	—	Head ground
11	GND	—	Head ground
12	TH	O	Thermistor
13	$\overline{\text{STB1}}$	I	Print enable signal 1
14	$\overline{\text{LAT}}$	I	Data Latch
15	CLK	I	Clock
16	VH	I	Head drive power
17	VH	I	Head drive power
18	SW	—	Platen open switch
19	SW	—	Platen open switch
20	MT A	I	Motor excite signal A
21	$\overline{\text{MT A}}$	I	Motor excite signal $\overline{\text{A}}$
22	MT B	I	Motor excite signal B
23	$\overline{\text{MT B}}$	I	Motor excite signal $\overline{\text{B}}$
24	NC	—	Not connected



## 2. Cutter (CN4/CN5)

Connector on control circuit side: 52610-0871 Molex or equivalent

No.	Signal	I/O	Contents	No.	Signal	I/O	Contents
1	VSEN	I	Paper sensor power	2	PHE	O	Photo interruptor (emittor)
3	PHK	O	Photo interruptor (cathode)	4	MT A	I	Motor excite signal A
5	MT $\bar{A}$	I	Motor excite signal A	6	MT B	I	Motor excite signal B
7	MT $\bar{B}$	I	Motor excite signal B	8	NC	—	Not connected

**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.