

# FCL Components Thermal Printer

## FTP-62HMCL163#01/463#01 series

FCL Components 2" high speed thermal printer mechanism for 60mm paper width with cutter option

### Overview

The compact, low voltage FTP-62HMCL series provides an ultra low profile design and high speed printing (120mm/s).

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

### Features

- High-speed printing  
It can print at 120mm/s (960 dotlines/s) maximum by using FCL Components' unique head drive control
- Label printing available
- Rear paper insertion mechanism with lock type  
FCL Components' unique platen release mechanism allows for a straight paper path and easy head maintenance
- Multi-feature metal frame  
The rugged metal frame provides excellent ESD performance, is shock/vibration resistant and the heat-sink allows for continuous printing
- Compact size  
FTP-62HMCL163#01: Width: 76.2mm, depth: 20.4mm, height: 36.3mm  
FTP-62HMCL463#01: Width: 80.5mm, depth: 34.8mm, height: 45.6mm
- High resolution  
8 dots/mm head provides clear print out
- Cutter  
FTP-62HMCL463#01: Full or partial cut
- UL recognized, file # E171434
- RoHS compliant



FTP-62HMCL163#01



FTP-62HMCL463#01

■ Part numbers

Item		Part Number
Printer mechanism	Back insertion	FTP-62HMCL163#01 (60mm paper width, without cutter) FTP-62HMCL463#01 (60mm paper width, with cutter)
Interface board		FTP-62HDSL201-R (ANK, Thai, JIS Kanji, Traditional Chinese) *1
LSI for driving		FTP-62HCU201-R
Interface cable	USB	FTP-62GY311#01
	RS-232C	FTP-62GY302
Power supply cable		FTP-629Y603

\*1: Please see page 3 for basic interface board information. More detailed information can be obtained from your local FCL Components sales representative.

## ■ Specifications

Item		Specifications	
Part number		FTP-62HMCL163#01	FTP-62HMCL463#01
Printing method		Thermal sensitive line dot method	
Dot structure		384 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		48mm	
Number of columns		ANK 36 columns/line	
Paper width		60mm +0/-1	
Paper thickness		60-150 $\mu$ m*1	60-80 $\mu$ m*1
Cutting type		---	Full or partial
Printing speed		120mm/s (960 dot lines/s)*2	
Power	Head	4.2 to 9.5VDC 2.4A (Head voltage 7.2VDC, 176 $\Omega$ , +25°C, concurrent applied dot number: 64 dots)	
	Printer motor	4.2 to 9.5VDC 1.5A (using FCL Components' standard constant current circuit drive)	
	Cutter motor	4.75 to 9.5VDC 1.5A max.	
	Logic	3.3VDC $\pm$ 10% or 5VDC $\pm$ 10% 0.1A maximum	
Dimensions	Printer mechanism	76.2 x 20.4 x 36.3mm (WxDxH)	80.5 x 34.8 x 45.6mm (WxDxH)
Weight	Printer mechanism	70g	135g
Expected life	Head	Pulse durability: 100 million pulse/dot (using FCL Components' standard driving method) Wear resistance: 100km (at 12.5% print ratio)	
	Cutter	---	1 million cuts
Environmental conditions	Operating temperature	-10°C to +50°C (no condensation), +5°C to +40°C print density guarantee	
	Operating humidity	20 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	
	Platen open	By slide switch	
Recommended thermal sensitive paper	High sensitive paper	TF50KS-E45 (Nippon paper)	
	Standard paper	PD150R (Oji paper)	
	Long term paper	PD160R (Oji paper), TF50KJ-R (Nippon paper), HA220AA (Mitsubishi paper) *3	

\*1: There may be exceptions.

\*2: Conditions when using PD150R motor current 600mA/phase voltage 7.6V print ratio 12.5% max., operating temperature 25°C, humidity 60 $\pm$ 15%RH.

\*3: Maximum printing speed is 50mm/s when using HA220AA.

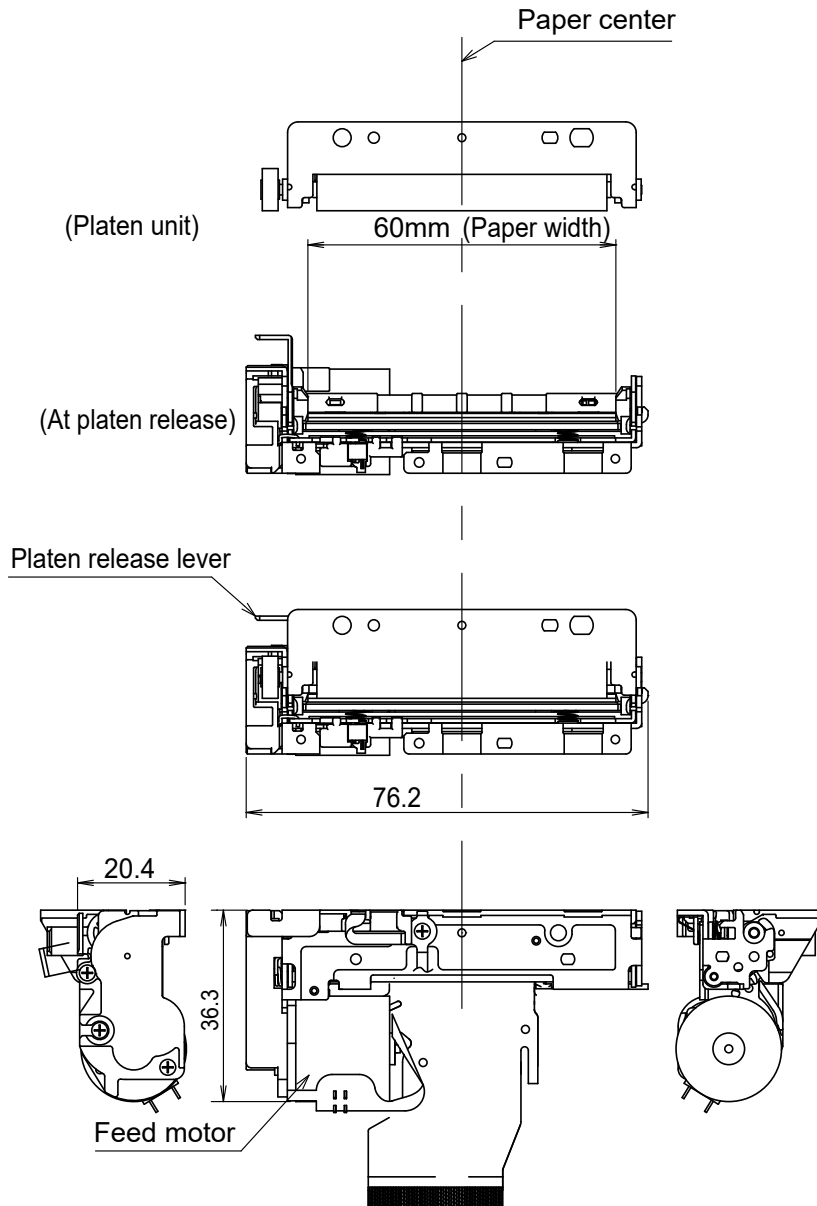
## ■ Interface boards

Item		Specifications	
Part number		FTP-62HDSL201-R	
Power		6.0 to 9.5V	
Character type		Alphanumeric, Kana, International & special OCR, enlarged characters, downloaded characters, external characters	
		ANK, Thai, JIS Kanji, Traditional Chinese	
Characteristic dimensions (W x H)		8 x 16 dots, 12 x 24 dots, 16 x 16 dots, 24 x 24 dots, 24 x 40 dots, 24 x 48 dots, 36 x 60 dots	
Interface		USB, RS-232C	
Dimensions (W x D)		70 x 35 mm	

## ■ Dimensions

- Printer mechanism: 2-inch

FTP-62HMCL163#01

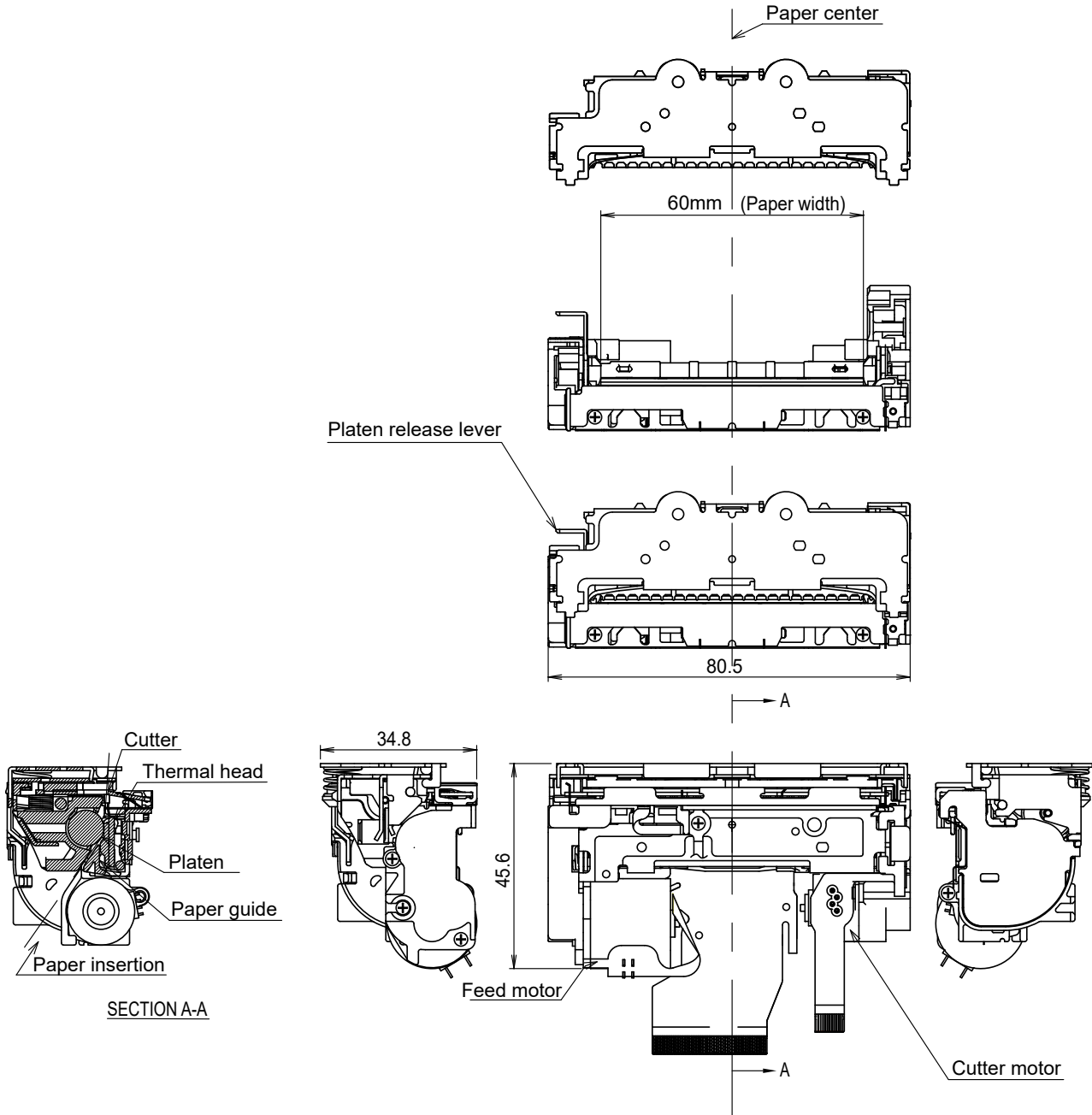


Note: 1. Dimensions are nominal value) tolerance  $\pm 0.5\text{mm}$  unless otherwise specified.  
2. Dimensions in ( ) is reference value.

■ Dimensions

- Printer mechanism: 2-inch

FTP-62HMCL463#01



Note: 1. Dimensions are nominal value) tolerance  $\pm 0.5\text{mm}$  unless otherwise specified.  
2. Dimensions in ( ) is reference value.

# ■ Connector pin assignments of printer mechanism (FPC)

No	Signal	Content	I/O
1	VSEN	Paper sensor power	IN
2	PHK	Cathode for photo interrupter	OUT
3	PHE	Emitter for photo interrupter	OUT
4	N.C.	Not connected	-
5	N.C.	Not connected	-
6	VH	Head drive power	IN
7	VH	Head drive power	IN
8	VH	Head drive power	IN
9	VH	Head drive power	IN
10	DI	Data in	IN
11	CLK	Clock	IN
12	GND	Head ground	-
13	GND	Head ground	-
14	GND	Head ground	-
15	GND	Head ground	-
16	STB6	Strobe6	IN
17	STB5	Strobe5	IN
18	STB4	Strobe4	IN
19	VDD	Logic power	IN
20	TM	Thermistor	OUT
21	TM	Thermistor	OUT
22	STB3	Strobe3	IN
23	STB2	Strobe2	IN
24	STB1	Strobe1	IN
25	GND	Head ground	-
26	GND	Head ground	-
27	GND	Head ground	-
28	GND	Head ground	-
29	/LAT	/Data latch	IN
30	DO	Data out	OUT
31	VH	Head drive power	IN
32	VH	Head drive power	IN
33	VH	Head drive power	IN
34	VH	Head drive power	IN
35	N.C.	Not connected	-
36	N.C.	Not connected	-
37	SW	Platen release switch	OUT
38	SW	Platen release switch	OUT
39	FG	Flame ground	-
40	MTM	Motor thermistor	OUT

No	Signal	Content	I/O
41	MTM	Motor thermistor	OUT
42	N.C.	Not connected	-
43	MT_/A	Excitation signal /A	SINK/SOURCE
44	MT_/A	Excitation signal /A	SINK/SOURCE
45	MT_A	Excitation signal A	SINK/SOURCE
46	MT_A	Excitation signal A	SINK/SOURCE
47	MT_/B	Excitation signal /B	SINK/SOURCE
48	MT_/B	Excitation signal /B	SINK/SOURCE
49	MT_B	Excitation signal B	SINK/SOURCE
50	MT_B	Excitation signal B	SINK/SOURCE

#### ■ Connector pin assignments of cutter (FPC)

No	Signal	Content	I/O
1	MT_B	Excitation signal B	SINK/SOURCE
2	MT_B	Excitation signal B	SINK/SOURCE
3	MT_/B	Excitation signal /B	SINK/SOURCE
4	MT_/B	Excitation signal /B	SINK/SOURCE
5	MT_A	Excitation signal A	SINK/SOURCE
6	MT_A	Excitation signal A	SINK/SOURCE
7	MT_/A	Excitation signal /A	SINK/SOURCE
8	MT_/A	Excitation signal /A	SINK/SOURCE
9	N.C.	Not connected	-
10	VSEN	Paper sensor power	IN
11	PHE	Emitter for photo interrupter	OUT
12	PHK	Cathode for photo interrupter	OUT

#### Contact

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