FCL Components Thermal Printer
FTP-63HMCL163/463 series

FCL Components 3” high speed thermal printer mechanism for 80mm paper width with auto cutter option

Overview

The compact, low voltage FTP-63HMCL series provides an ultra low profie design and high speed printing (100mm/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.

FTP-63HMCL163

FTP-63HMCL463

Features

- High-speed printing
  It can print at 100mm/s (800 dotlines/s) maximum by using FCL Components’ unique head drive control
- Label printer 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-63HMCL163: Width: 96.2mm, depth: 20.4mm, height: 36.3mm
  FTP-63HMCL463: Width: 100.5mm, depth: 32.6mm, height: 45.6mm
- High resolution
  8 dots/mm head provides clear print out
- Cutter
  FTP-63HMCL463: Full or partial cut
- UL recognized, file # E171434
- RoHS compliant

■ Part numbers

Item		Part Number
Printer mechanism	Back insertion	FTP-63HMCL163 (80mm paper width, without cutter) FTP-63HMCL463 (80mm paper width, with cutter)
Interface board		FTP-62HDSL101#01 (ANK, Thai, JIS Kanji)*1 FTP-62HDSL101#02 (ANK, Thai, Traditional Chinese) *1
LSI for driving		FTP-62HCU101-R
Interface cable	USB	FTP-629Y301#01 *2
	RS-232C	FTP-629Y302
Power supply cable		FTP-629Y601

*1: Please see page 3 for basic interface board information. More detailed information can be obtained from your local FCL Components sales representative.
*2: USB mini-B type cable can be used.

■ Specifications

Item		Specifications	
Part number		FTP-63HMCL163	FTP-63HMCL463
Printing method		Thermal sensitive line dot method	
Dot structure		576 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		72mm	
Paper width		80mm +0/-1	
Paper thickness		60-150µm*1	60-80µm*1
Cutting type		---	Full or partial
Printing speed		100mm/s (800 dot lines/s)*2	
Power	Head	4.2 to 9.5VDC 2.4A (Head voltage 7.2VDC, 176Ω, +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	7.2 to 9.5VDC 1.5A max.	
	Logic	3.3 ±10% or 5.5 ±10%, 0.1A (max.)	
Dimensions	Printer mechanism	96.2 x 20.4 x 36.3mm (WxDxH)	100.5 x 32.6 x 45.6mm (WxDxH)
Weight	Printer mechanism	80g	155g
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)	

Item		Specifications
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: Head voltage 7.6V, ambient temperature 25°C, concurrent applied dots 128 dots maximum, high speed mode, motor drive current 600mA/phase, use standard paper
*3: Maximum printing speed is 50mm/s when using HA220AA

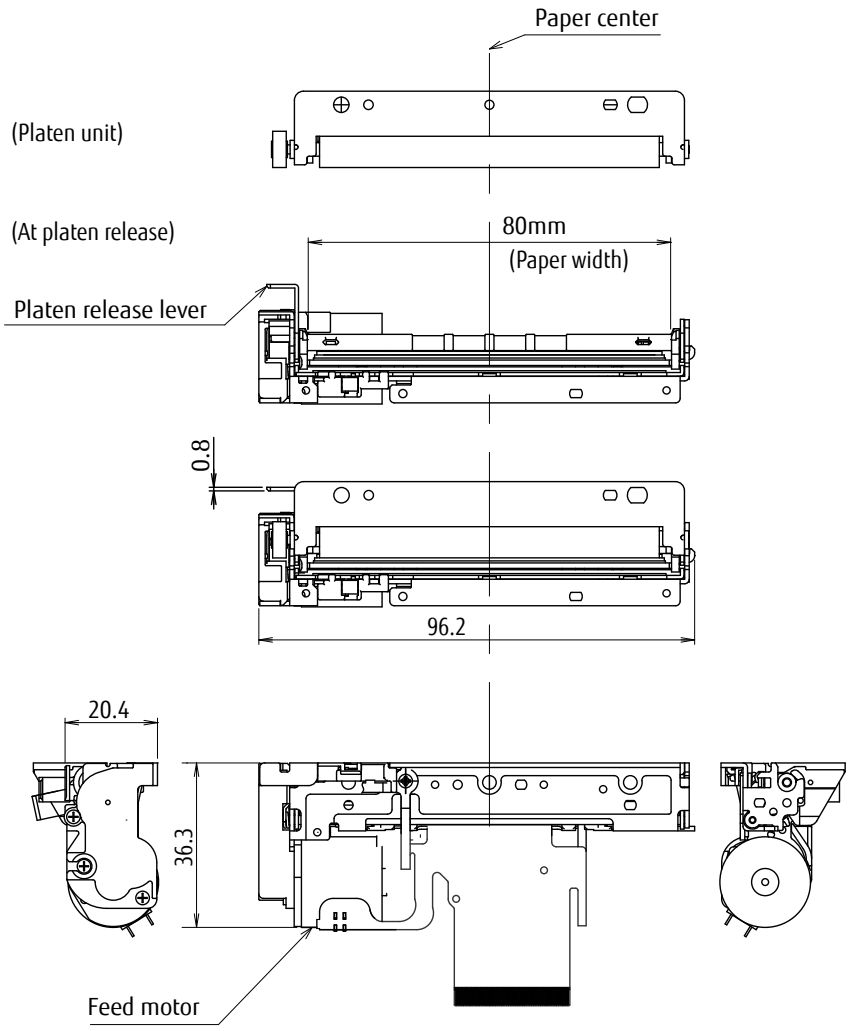
■ Interface boards

Item	Specifications	
Part number	FTP-62HDSL101#01	FTP-62HDSL101#02
Power	6.0 to 9.5V	
Character type	Alphanumeric, Kana, International & special OCR, enlarged characters, downloaded characters, external characters	
	Extended Kaji (#01)	Traditional Chinese(#02)
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, RS232C	
Dimensions (W x D)	75 x 70 mm	

■ Dimensions

- Printer mechanism: 3-inch

FTP-63HMCL163

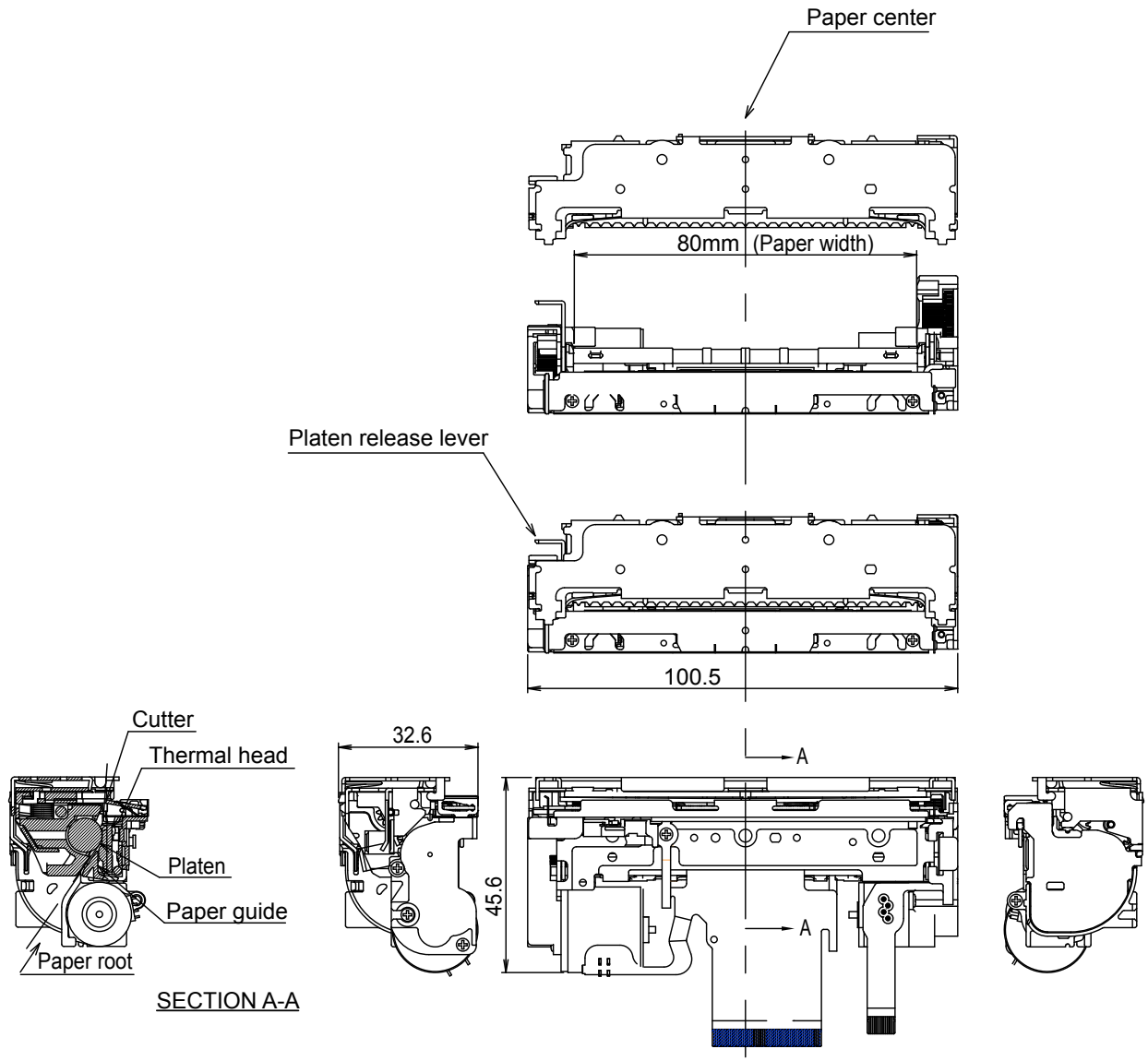


Note: 1. Dimensions are nominal value)tolerance ±0.5mm unless otherwise specified.
2. Dimensions in ( ) is reference value.

■ Dimensions

- Printer mechanism: 2-inch

FTP-63HMCL463



Note: 1. Dimensions are nominal value) tolerance ±0.5mm 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	N.C.	Not connected	-
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

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