

24V DRIVEN, FTP-607 Series

3" HIGH SPEED THERMAL PRINTER

FTP-637MCL401/601

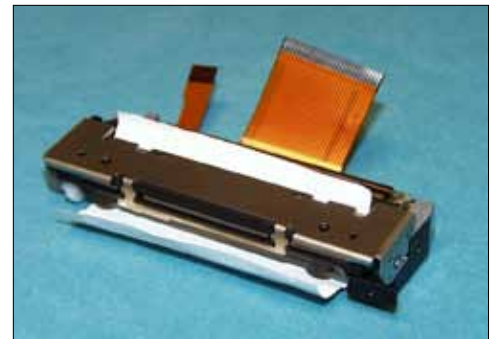
■ OVERVIEW

The FTP-637 MCL Series are 24V driven high-speed printers with a ultra low profile auto cutter and long life.

The FTP-637 MCL 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 103.2/104.5 mm, depth 42.2 mm
- **High speed printing**
It can print at 100/150 mm/s maximum by using Fujitsu's unique head drive control.
- **Auto Cutter**
Long life and high reliable guillotine with dedicated motor.
- **Easy paper setting**
Our lever platen release mechanism allows a wide paper route, so paper can be easily inserted.
Conventional auto loading is also available.
- **Multifunctional die-cast frame**
Wide operating temperature range, long continuous printing, high ESD absorbtion and discharge of static electricity vibration and shock resistant.
- **RoHS compliant**



FTP-637MCL401/601



FTP-637DSL291



FTP-637DSL601R

FTP-637MCL401/601

■ PART NUMBERS

		Part Number	
Easy Load Model with low profile cutter		FTP-637MCL401 FTP-637MCL411 FTP-637MCL601	
LSI for driving	MCL401	FTP-627CU301R	
	MCL601	FTP-627CU601R	
Interface board for Mech/Cutter	Cutter supported	MCL401	FTP-637DSL291R Parallel (Centronics) /Serial (RS-232C)
		MCL411	FTP-627DSL413R FTP-627DSL415R
		MCL601	FTP-627DSL601R High-speed serial (RS-232C) / USB
		MCL401	FTP-637DSL623R USB (V 1.1) FTP-637DSL625R High-speed serial (RS-232C)
		MCL601	FTP-637DSL633R USB (V 1.1) FTP-637DSL635R High-speed serial (RS-232C)/
Interface cables	Parallel (Centronics)		FTP-628Y202
	Serial (RS232C)		FTP-628Y302
	USB		FTP-629Y301
Power cables	Logic		FTP-629Y401
	Head, motor		FTP-629Y601

■ SPECIFICATIONS

Item	Specifications	
Part number	FTP-637MCL401/601	
Printing method	Thermal-line dot method	
Dot structure	576 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	72 mm	
Number of columns	ANK 48 columns/line (maximum 12 x 24 dot font)	
Paper width	80 mm	
Paper thickness paper characteristics)	60 to 85 μ m (some paper in this range may not be used because of	
Printing Speed	MCL401	Maximum 100mm/sec. (800 dot line/sec.)
	MCL411	Maximum 150mm/sec. (1,200 dot line/sec.)
	MCL601	Maximum 150mm/sec. (1,200 dot line/sec.)
Character types	Alphanumeric, kana: International characters: JIS Kanji (Kanji CG loaded board):	159 types 195 types about 6800 types
Character, dimensions (W×H), number of columns	12 × 24 dots, (1.5 × 3.0 mm), 48 columns: ANK 24 × 24 dots, (3.0 × 3.0 mm), 24 columns: ANK 8 × 16 dots, (1.0 × 2.0 mm), 72 columns: ANK 16 × 16 dots, (2.0 × 2.0 mm), 36 columns: ANK	

■ SPECIFICATIONS

Item		Specification	
Interface		Conforms to RS232C/Centronics	
Power supply	For print head	MCL401	24 VDC average current, 0.7A (1.3A peak)
		MCL601	24 VDC average current, 1.3A (2.5 A peak) (print ratio: 12.5%, print speed 100mm/sec.)
	For motor		24 VDC \pm 5%, 1.0 A maximum
	For cutter	MCL401	24 VDC \pm 5%, 1.1 A maximum
		MCL601	24 VDC \pm 5%, 1.3 A maximum
	For logic	MCL401/601	3.3 to 5.25 VDC, 0.2 A maximum
MCL411		2.7 to 5.25 VDC, 0.2 A maximum	
Dimensions	Mechanism with cutter		104.5 x 42.2 x 21.8 mm (WxDxH)
	Interface board	DSL291	70 x 60 x 12 mm (WxDxH)
		DSL6xx	95 x 70 x 21.6 mm (WxDxH)
Weight	Mechanism with cutter		Approximately 118g/122g
	Interface board		Approximately 50g / 50g
Life	Head	MCL401	Pulse durability: 50 million pulses/dot (print ratio: 12.5% or less).
		MCL411	Pulse durability: 100 million pulses/dot (print ratio: 12.5% or less).
		MCL601	Pulse durability: 100 million pulses/dot (print ratio: 12.5% or less).
		MCL401	Abrasion resistance: paper traveling distance 50km
		MCL411	Abrasion resistance: paper traveling distance 100km
		MCL601	Abrasion resistance: paper feed length 100km.
	Cutter	MCL401	500,000 cuts
		MCL411	1,000,000 cuts
		MCL601	1,000,000 cuts
Platen		5,000 times (open/close)	
Operating environment	Operating temperature*		0°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-E4 (Nippon paper)
		Standard paper	TF60KS-E (Nippon paper), FTP-020PU001 (58mm) PD150R (Oji paper) FTP-020PU701 (58mm)
		Medium life paper	TF60KS-F1 (Nippon paper) FTP-020P0102 (58mm) PD170R (Oji paper) P220VBB-1 (Mitsubishi paper)
		Long life paper	PD160R (Oji paper) AFP-235 (Mitsubishi paper) TP50KJ-R (Nippon paper) HA220AA (Nippon paper)

*+5°C to +40°C printing density assurance range.

1. Connector (FPC) specification (CN4)

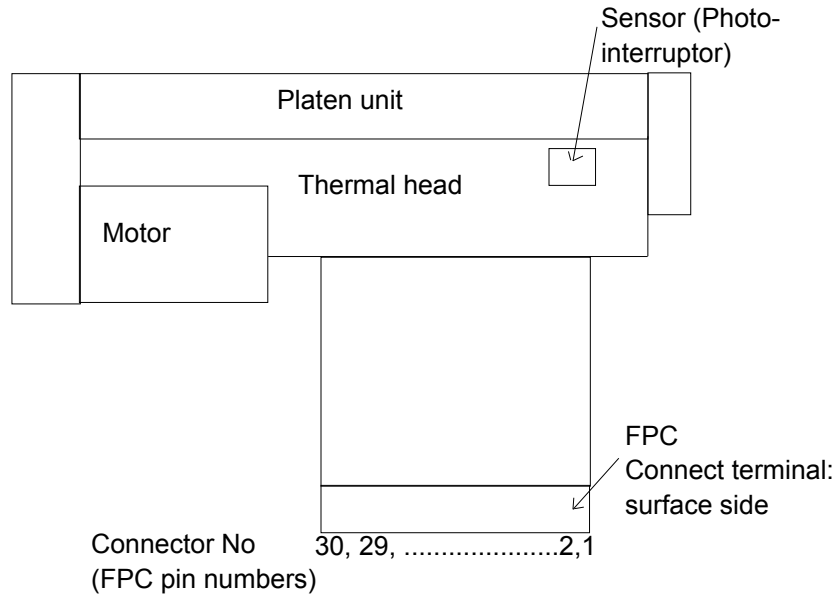
(1) Connector

Mechanical unit side: FPC connector

Remote side (housing site): 52610-3071 (made by 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 (Emitter)
4	VH	I	Head drive power
5	VH	I	Head drive power
6	VH	I	Head drive power
7	DI	I	Data input
8	STB3	I	Strobe 3
9	STB4	I	Strobe 4
10	VDD	—	Logic Power
11	GND	—	Head ground
12	GND	—	Head ground
13	GND	—	Head ground
14	GND	—	Head drive power
15	GND	—	Head drive power
16	GND	—	Head drive power
17	TM	O	Thermistor
18	STB1	I	Strobe 1
19	STB2	I	Strobe 2
20	LAT	I	Data Latch
21	CLK	I	Clock
22	VH	I	Head drive power
23	VH	I	Head drive power
24	VH	I	Head drive power
25	SW	—	Platen open switch
26	SW	—	Platen open switch
27	MT A	I	Motor excite signal A
28	MT A	I	Motor excite signal A
29	MT B	I	Motor excite signal B
30	MT B	I	Motor excite signal B



2. Cutter (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	—	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

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