

24V DRIVEN, FTP-607 Series

2" HIGH SPEED THERMAL PRINTER

FTP-627MCL401

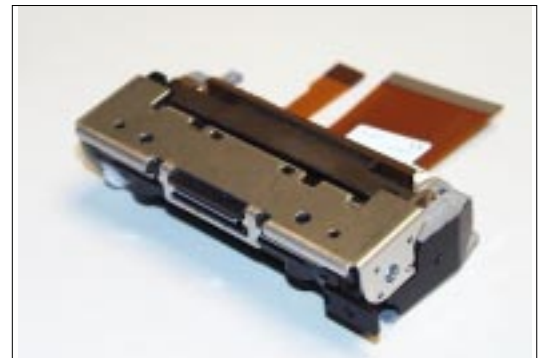
■ OVERVIEW

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

The FTP-627 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 81.2 mm, depth 42.2 mm
- **High speed printing**
It can print at 100 mm/s (800 dotlines/s) maximum by using Fujitsu's unique head drive control.
- **Auto Cutter**
Long life and high reliable guilotine 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.



FTP-627MCL401



FTP-627DSL290

■ PART NUMBERS

		Part Number
Printer mechanism with Cutter		FTP-627MCL401 (Easy Load Model with low profile cutter)
LSI for driving		FTP-627CU301
Interface Board for Mech/Cutter	Cutter supported	FTP-627DCL290 Parallel (Centronics) FTP-627DSL291 Serial (RS232C)
	Parallel (Centronics)	FTP-628Y202
Interface cables	Serial (RS232C)	FTP-628Y302
	Logic	FTP-629Y401
Power cables	Head, motor	FTP-629Y601

■ SPECIFICATIONS

Item	Specifications
Part number	FTP-627MCL401
Printing method	Thermal-line dot method
Dot structure	432 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	54 mm
Number of columns	ANK 36 columns/line (maximum 12 x 24 dot font)
Paper width	58 mm
Paper thickness	60 to 100 μ m (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, kana: 159 types International characters: 195 types JIS Kanji (Kanji CG loaded board): about 6800 types
Character, dimensions (W×H), number of columns	12 × 24 dots, (1.5 × 3.0 mm), 36 columns: ANK 24 × 24 dots, (3.0 × 3.0 mm), 18 columns: ANK 8 × 16 dots, (1.0 × 2.0 mm), 54 columns: ANK 16 × 16 dots, (2.0 × 2.0 mm), 27 columns: ANK

■ SPECIFICATIONS

Item		Specification
Interface		Conforms to RS232C / Centronics
Power supply	For print head	24 VDC average current, 0.38A (0.88A peak) (print ratio: 12.5%, print speed: 100mm/sec.)
	For motor	24 VDC \pm 5%, 1A maximum
	For cutter	24 VDC \pm 5%, 1A maximum
	For logic	3.3 to 5.25 VDC, 0.1 A maximum
Dimensions	Mechanism with cutter	81.2 x 42.2 x 21.8 mm (WxDxH)
	Interface board	70 x 60 x 12mm
Weight	Mechanism with cutter	Approximately 97g
	Interface board	Approximately 25g
Life	Head	Pulse resistance: 50 million pulses/dot (under our standard conditions); Abrasion resistance: paper traveling distance 50km (print ratio: 12.5% or less)
	Cutter	500,000 cuts
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-interrupter
	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), 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)

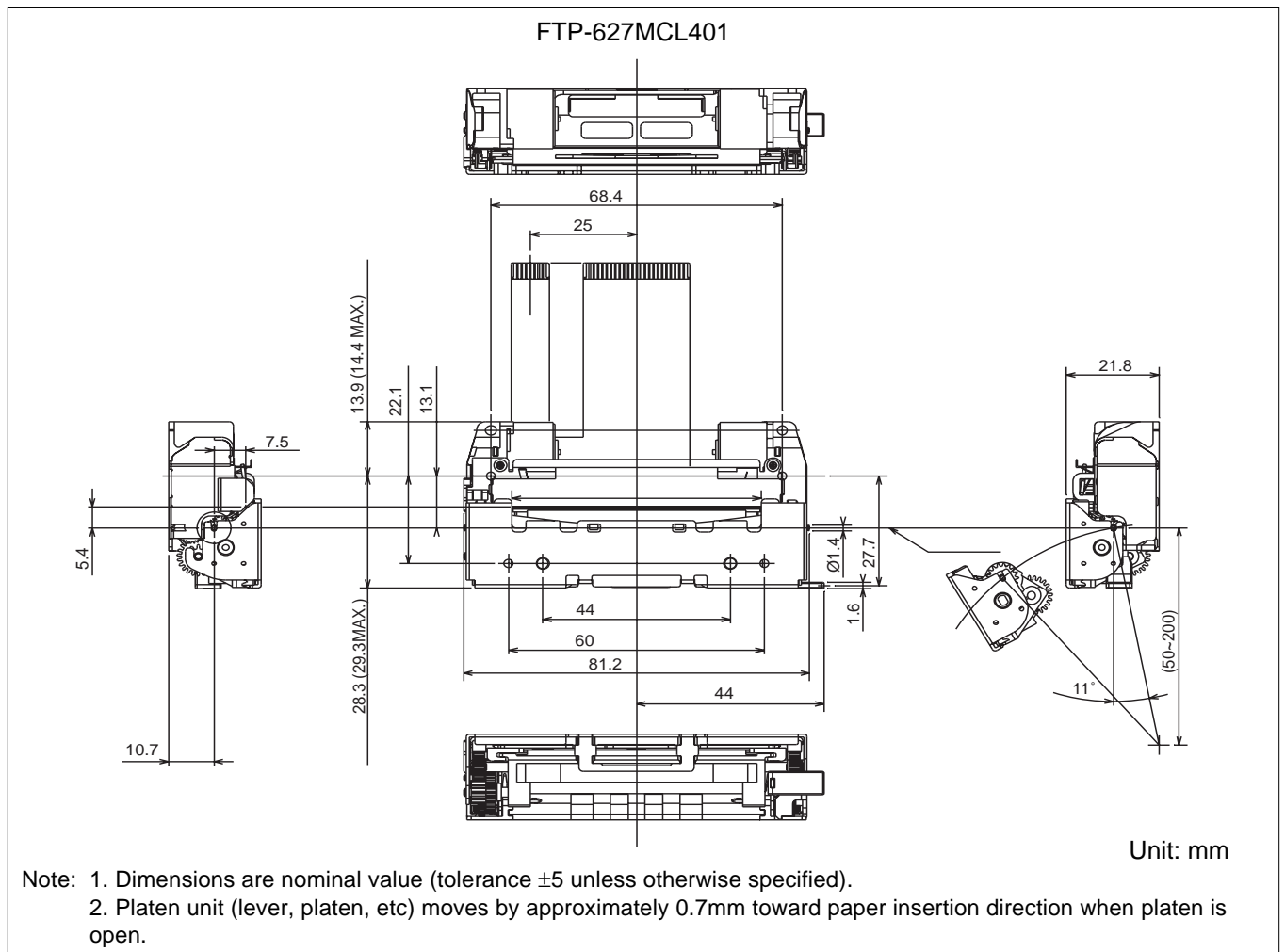
*+5°C to +40°C printing density assurance range.

FUNCTION OF INTERFACE BOARD

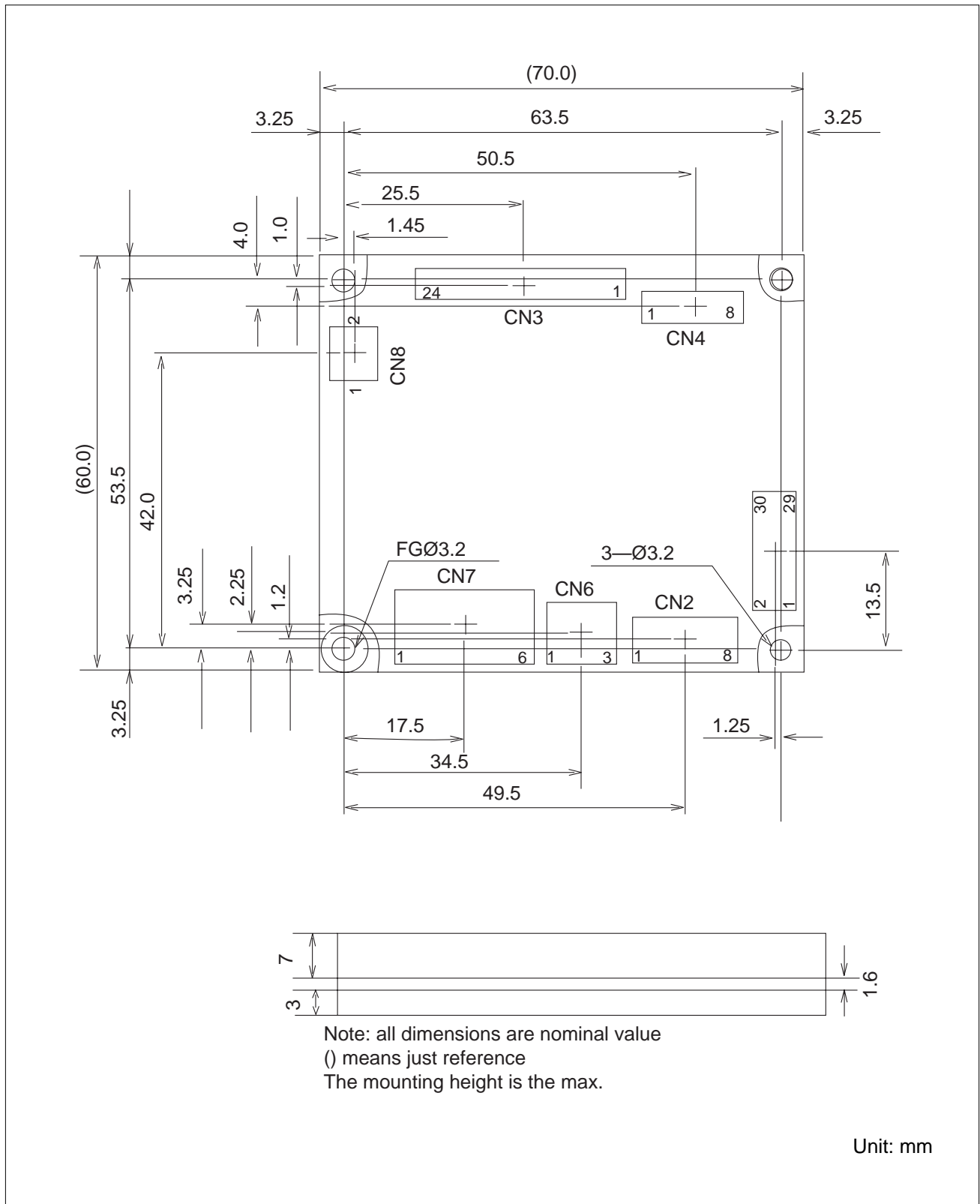
Item	Item
1. Test print function	8. Cutter trouble detect
2. Paper out detection	9. Motor power saving function
3. Paper near end detection	10. Mark detection function
4. Platen open detection	11. MCU operation abnormality detection
5. Thermal head temperature abnormality detection	12. Power ON/OFF sequence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

DIMENSIONS

1. Printer mechanism



2. Interface board



1. Connector (FPC) specification (CN4)

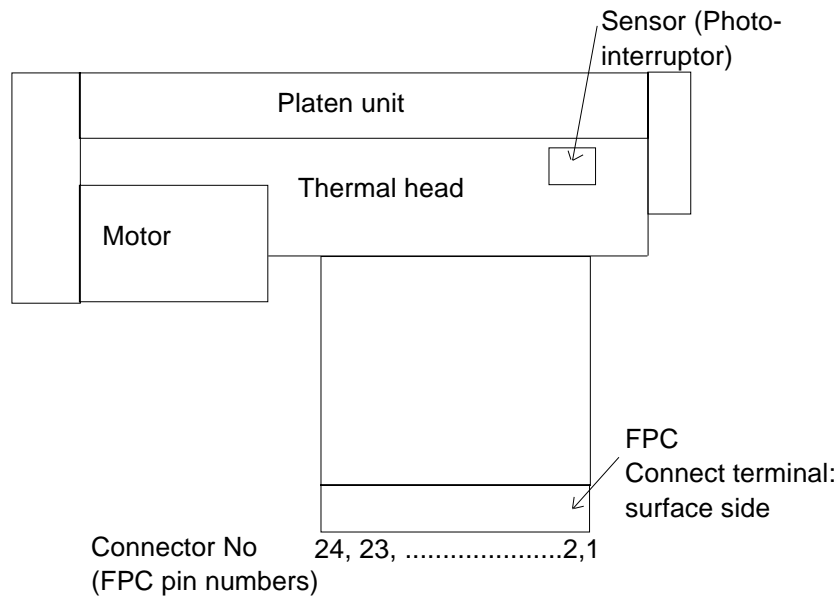
(1) Connector

Mechanical unit side: FPC connector

Remote side (housing site): 52610-2490 (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 (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 (CN5)

Connector on control circuit side: 52610-0890 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 \bar{A}	6	MT/B	I	Motor excite signal B
7	MT/ \bar{B}	I	Motor excite signal \bar{B}	8	NC	—	Not connected

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