FUJITSU

BATTERY DRIVE, FTP-60D Series

2” HIGH SPEED THERMAL PRINTER

FTP-62DMCL101#02/111#02, Easy Loading Method

■ OVERVIEW

The 2-inch (58mm), FTP-62DMCL series is an ultra compact, low voltage thermal printer mechanism with a removable platen for easy paper loading and maintenance.

The FTP-62D MCL series can be used for a variety of low voltage applications, such as portable terminals, POS, banking terminals, and measurement and medical equipment.

FTP-62D series

■ HIGHLIGHTS

- **Easy loading type**
  Our unique removable platen mechanism improves paper loading and maintenance, providing a better customer experience
- **Ultra compact**
  The compact design (19mm x 69.5mm x 46mm) allows you to reduce the overall footprint of you design
- **High speed printing**
  Print at 100mm/s (at 9.5VDC) maximum
  Print at 75mm/s (at 7.2 VDC) maximum
- **High resolution printing**
  8 dots/mm of resolution printing is possible
- **Straight paper path**
- **RoHS compliant**

■ PART NUMBERS

Item		Part number
Printers		FTP-62DMCL101#02 (FPC length 38mm) without platen detect switch FTP-62DMCL111#02 (FPC length 65mm) without platen detect switch
LSI for driving		FTP-62DCU001
Interface boards	USB/RS-232C	FTP-62DDSL001-R
Interface cables	USB	FTP-62GY301
Power cable (head, motor, logic) & RS232C interface cable		FTP-62DY001-12
Platen replacement		FTP-62DMP0221

■ SPECIFICATIONS

Item	Specifications
Part number	FTP-62DMCL101#02/111#02
Printing method	Thermal-line dot method
Dot structure	384 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	48 mm
Number of columns	ANK 32 columns/line (maximum 12x 24 dot font)
Paper width	58 mm $^{+0}_{-1}$
Paper thickness	60 to 85 µm (some paper in this range may not be used because of paper characteristics
Printing Speed	Maximum 100mm/sec. (800 dot line/sec.) at 9.5V*1 Maximum 75mm/sec. (600 dot line/sec.) at 7.2V*2
Character types	Alphanumeric, katakana: 159 types International and special characters: 195 types
Character, dimensions (H×W), number of columns	12 × 24 dots, (1.5 × 3.0mm), 32 columns: ANK 8 × 16 dots, (1.0 × 2.0 mm), 48 columns: ANK 8 × 6 dots, 48 columns: International 12 × 24 dots, (1.5 × 3.0 mm), 32 columns: International

Notes:
*1: Head voltage 9.5V, ambient temperature 25℃, concurrent applied dots 64 dots maximum, applied energy S.L.T. =1.25msec., E0Maz=0.235mJ/dot maximum, use PD150R (Oji Paper)
*2 Head voltage 7.2V, ambient temperature 25℃, concurrent applied dots 64 dots maximum, applied energy S.L.T. =1.67msec., E0Maz=0.27mJ/dot maximum, use PD150R (Oji Paper)

■ SPECIFICATIONS

Item		Specification	
		FTP-62DMCL101#02/111#02	
Interface		Conforms to RS232C / USB	
Operating Voltage	For print head	4.2 VDC to 9.5 V, approx. 2.3A at 25°C, rav=176Ω, concurrently electrified with 64 dots	
	For motor	4.2 to 9.5VDC, 1A maximum	
	For logic	3.3VDC ±10% or 5VDC±10%, 0.1 A maximum	
Dimensions	Printer mechanism	69.5 x 46 x 19mm (WxDxH)	
	Interface board	33 x 24mm	
Weight	Printer mechanism	Approximately 31g	
	Interface board	Approximately 5g	
Head life		Pulse resistance: 100 million pulses/dot (under our standard conditions). Abrasion resistance: paper traveling distance 50km (print ratio: 12.5 % or less)	
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	
Recommended thermal sensitive paper		High sensitive paper:	TF50KS-E4 (Nippon Paper)
		Standard paper	TK60KS-E (Nippon Paper) PD150R (Oji Paper)
		Medium life storage paper	TK60KS-F1 (Nippon Paper) PD170R (Oji Paper) P220VBB-1 (Mitsubishi Paper)
		Long life storage paper	PD160R-N (Oji Paper)

*+5˚C to +40˚C printing density assurance rance (-25 to 70˚C capability)

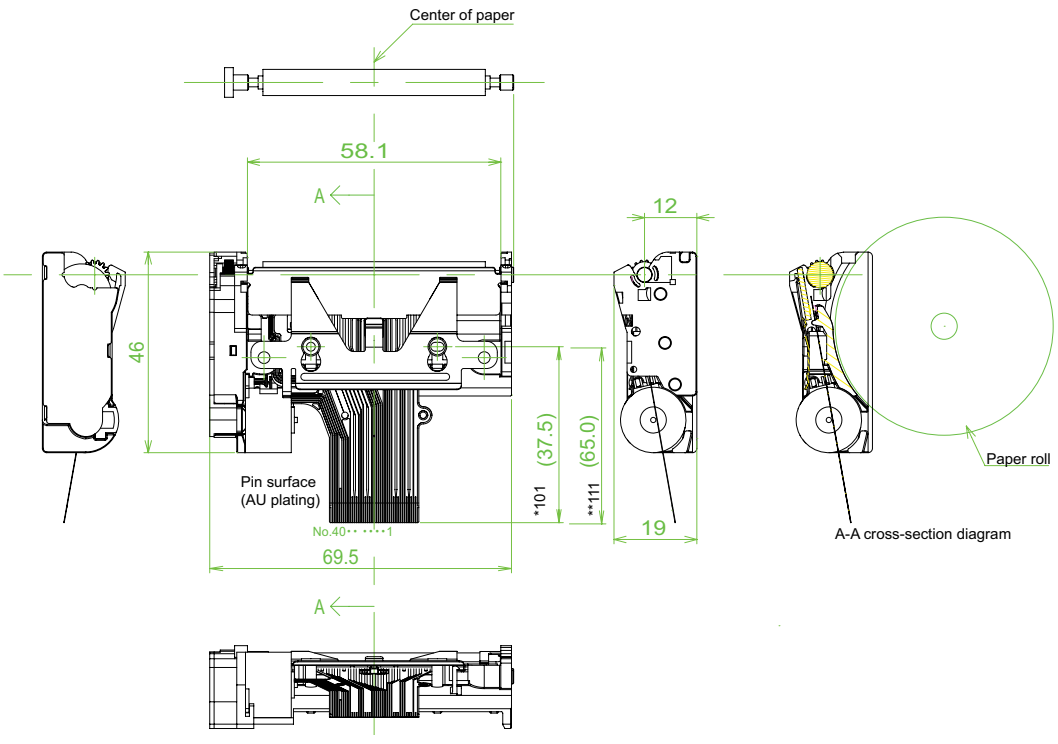
■ FUNCTION

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

■ DIMENSIONS

1. Printer mechanism: 2- inch

FTP-62DMCL101*/111**



Unit: mm

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

■ PRINTER CONNECTOR (FLEXIBLE PT BOARD) PIN ARRAYS

Thermal head, control circuit side connector: 54104-4031 Molex or equivalent product

No.	Symbol	I/O	Signal Name
1	N.C.	-	No connection
2	N.C	-	
3	COM	I	Head drive power
4	COM	I	
5	COM	I	
6	COM	I	
7	SI	I	Data in
8	CLK	I	Clock
9	GND	-	Head ground
10	GND	-	
11	GND	-	
12	GND	-	
13	STB6	I	Strobe 6
14	STB5	I	Strobe 5
15	STB4	I	Strobe 4
16	Vdd	I	Logic power
17	TM	O	Thermistor
18	TM	O	
19	STB3	I	Strobe 3
20	STB2	I	Strobe 2
21	STB1	I	Strobe 1
22	GND	-	Head ground
23	GND	-	
24	GND	-	
25	GND	-	
26	/LAT	I	/ Data latch
27	SI	O	Data out
28	COM	I	Head drive power
29	COM	I	
30	COM	I	
31	COM	I	
32	N.C.	-	No connection
33	PHK	-	Cathode for photo interrupter
34	VSEN	I	Paper sensor power
35	PHE	O	Emittor for photo interruptor
36	N.C.	-	No connection
37	MT A	I	Excitation signal A
38	MT /A	I	Excitation signal /A
39	MT B	I	Excitation signal B
40	MT /B	I	Excitation signal /B

Do not plug or unplug the FPC when power is on.

Contact

Japan
FUJITSU COMPONENT LIMITED
Shinagawa Seaside Park Tower
12-4, Higashi-shinagawa 4-chome,
Tokyo 140 0002, Japan
Tel: (81-3) 3450-1682
Fax: (81-3) 3474-2385
Email: fcl-contact@cs.jp.fujitsu.com
Web: www.fujitsu.com/jp/group/fcl/en/

North and South America
FUJITSU COMPONENTS AMERICA, INC.
2290 North First Street, Suite 212
San Jose, CA 95131 U.S.A.
Tel: (1-408) 745-4900
Fax: (1-408) 745-4970
Email: components@us.fujitsu.com
Web: http://us.fujitsu.com/components/

Europe
FUJITSU COMPONENTS EUROPE B.V.
Diamantlaan 25
2132 WV Hoofddorp
Netherlands
Tel: (31-23) 5560910
Fax: (31-23) 5560950
Email: info@fceu.fujitsu.com
Web: emea.fujitsu.com/components/

Asia Pacific
FUJITSU COMPONENTS ASIA, Ltd.
102E Pasir Panjang Road
#01-01 Citilink Warehouse Complex,
Singapore 118529
Tel: (65) 6375-8560 / Fax: (65) 6273-3021
Email: fcal@sg.fujitsu.com
www.fujitsu.com/sg/products/devices/components/

China
FUJITSU ELECTRONIC COMPONENTS (SHANGHAI) CO., LTD.
Unit 4306, InterContinental Center
100 Yu Tong Road, Shanghai 200070, China
Tel: (86 21) 3253 0998 /Fax: (86 21) 3253 0997
Email: fcal@sg.fujitsu.com
www.fujitsu.com/sg/products/devices/components/

Hong Kong
FUJITSU COMPONENTS HONG KONG Co., Ltd.
Room 06, 28/F, Greenfield Tower, Concordia Plaza, No.1 Science Museum Road,
Tsim Sha Tsui East, Kowloon, Hong Kong
Tel: (852) 2881 8495 Fax: (852) 2894 9512
Email: fcal@sg.fujitsu.com
www.fujitsu.com/sg/products/devices/components/

Korea
FUJITSU COMPONENTS KOREA, LTD.
Alpha Tower #403,
645 Sampyeong-dong,
Bundang-gu, Seongnam-si,
Gyeonggi-do, 13524 Korea
Tel: (82 31) 708-7108
Fax: (82 31) 709-7108
Email: fcal@sg.fujitsu.com
www.fujitsu.com/sg/products/devices/components/

Copyright