FCL Components Thermal Printer
FTP-62GMCL163/163#01/463/463#01 series

FCL Components 2” high speed (200mm/s)thermal printer mechanism with cutter option

Overview

The compact, ultra low profile design FTP-62GMCL series thermal printer (driven by 24VDC) provides high speed printing (200mm/s) for 2-inch wide paper.

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-62GMCL163#01

FTP-62GMCL463

Features

- High-speed printing
  It can print at 200mm/s (1,600 dotlines/s) maximum by using FCL Components’ unique head drive control
- Rear paper insertion mechanism with lock type
  FCL Components’ unique platen release mechanism allows for a straight paper path and easy head maintenance
- Auto cutter
  Optional ultra-low profile auto cutter (full/partial cut) mounted at the factory (FTP-62GMCL463/ FTP-62GMCL463#01)
- Multi-featuring metal frame
  The rugged metal frame provides excellent ESD performance, is shock/ vibration resistant and the heat-sink allows for continuous printing
- Compact size
  Without cutter: Width: 76.2mm, depth: 20.4mm, height: 36.3mm (FTP-62GMCL163 / FTP-62GMCL163#01)
  With cutter: Width: 80.5mm, depth: 34.8mm, height: 45.6mm (FTP-62GMCL463)
- High resolution
  8 dots/mm head provides clear print
- UL recognized, file # E171434
- RoHS compliant

■ Part numbers

Item		Part Number
Printer mechanism	Back insertion	FTP-62GMCL163 (58mm paper width)
		FTP-62GMCL163#01 (60mm paper width)
Printer mechanism with cutter	Back insertion	FTP-62GMCL463 (58mm paper width, with cutter)
		FTP-62GMCL463#01 (60mm paper width, with cutter)
LSI for driving		FTP-62GCU101-R
Interface board	Serial (RS232C, USB)	FTP-62GDSL101#01 (Japanese font)
	Serial (RS232C, USB)	FTP-62GDSL101#02 (Traditional Chinese font)
Interface cable	Serial	FTP-62GY302
	USB	FTP-62GY311#01
Power supply cable	Logic, head, motor	FTP-629Y603

■ Specifications

Item		Specifications			
Part number		FTP-62GMCL163	FTP-2G MCL163#01	FTP-62GMCL463	FTP-62G MCL463#01
Printing method		Thermal sensitive line dot method			
Dot structure		432 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		54mm			
Number of columns		ANK 36 columns/line			
Paper width		58mm +0/-1	60mm +0/-1	58mm +0/-1	60mm +0/-1
Paper thickness		60-150µm*1	60-150µm*1	60-100µm*1	60-100µm*1
Cutting type		---	---	Full or partial	Full or partial
Printing speed		200mm/s (1600 dot lines/s)			
Character types	Alphanumeric KANA	159 types			
	International and special	195 types			
	OCRI	103 types			
	OCRIII	23 types			
	OCRIV	103 types			
	Extended numeric	12 types			
	JIS KANJI level 1, 2, non-Kanji	JIS KANJI: approx. 6800 (FTP-628GDSL101#01)			
	Traditional Chinese	13, 503 (FTP-62GDSL101#02)			
Character dimensions (W x H), number of characters		8 x 16 dots, 54 columns, ANK 12 x 24 dots, 36 columns, ANK 16 x 16 dots, 27 columns, ANK 24 x 24 dots, 18 columns, ANK		24 x 40 dots, 18 columns, OCRI 24 x 48 dots, 18 columns, OCRII 36 x 60 dots, 12 columns, OCRIV 24 x 48 dots, 18 columns, extended numeric	

*1: there may be exceptions

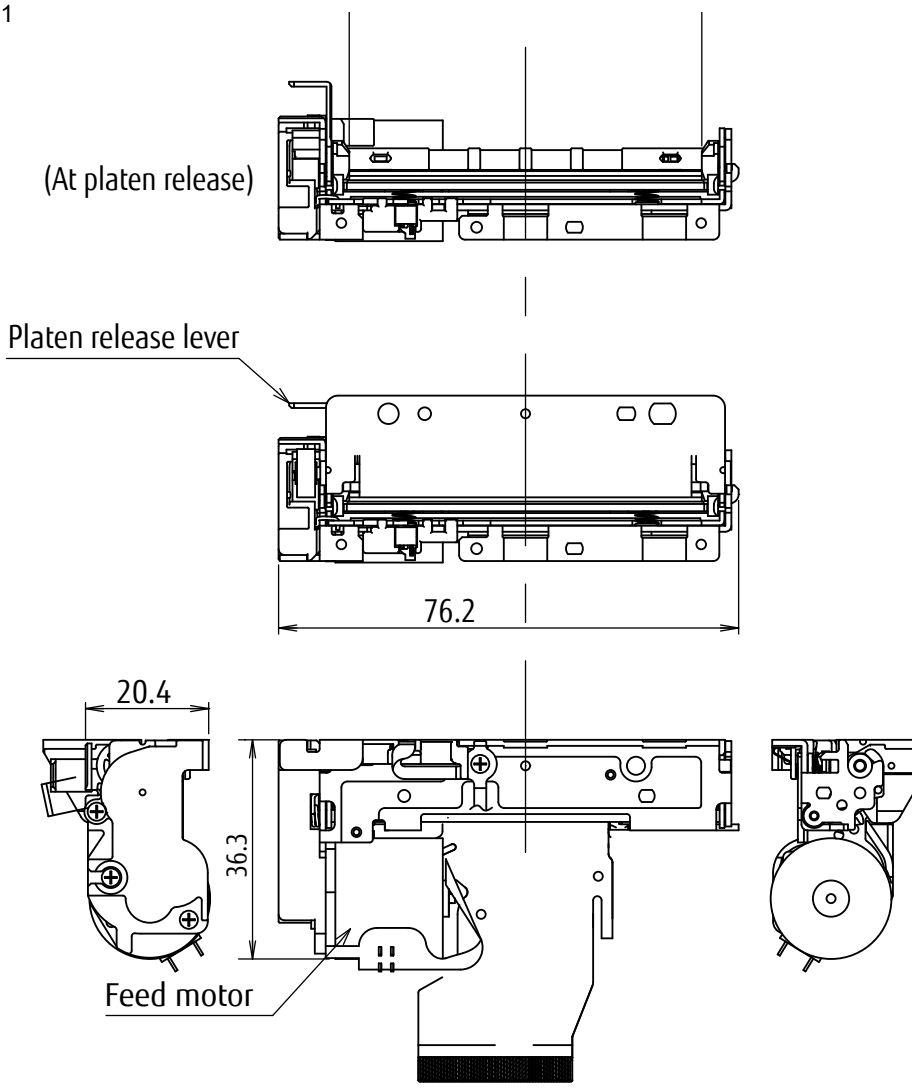
Item		Specifications			
Part number		FTP-62GMCL163	FTP-62G MCL163#01	FTP-62GMCL463	FTP-62G MCL463#01
Power	For head	24VDC ±10% 2.0A (1,500Ω, +25°C, concurrent applied dot number: 128 dots)			
	For printer motor	24VDC ±10% 1.5A maximum			
	For logic	3.3 or 5VDC ±5% 45mA maximum			
Dimensions (WxDxH)	Printer mechanism	76.2 x 36.3 x 20.4mm		80.5 x 45.6 x 34.8mm	
	Interface board (DSL)	70 x 37mm			
Weight	Printer mechanism	70g		135g	135g
	Interface board (DSL)	15g			
Expected life	Head	Pulse durability: 100 million pulse/dot (using FCL Components' standard driving method) Wear resistance: 100km (at 12.5% print ratio)			
Cutter		---	---	1,000,000 cuts min.*2	
Environmental conditions	Operating temperature	+5°C to +40°C (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	TF-60KS-E (Nippon paper) PD150R (Oji paper)			
	Medium term paper	TF-60KS-F1 (Nippon paper) P220VBB-1 (Mitsubishi paper)			
	Long term paper	PD160R (Oji paper) TP50KJ-R (Nippon paper) HA220AA (Mitsubishi paper) AFP235 (Mitsubishi paper)			

*2: Under conditions of 20±5°C, 40 to 60% RH, cut cycle: min. 3 sec., max. 20 cuts per min.

■ Dimensions

- Printer mechanism: 2-inch

FTP-62GMCL163/163#01

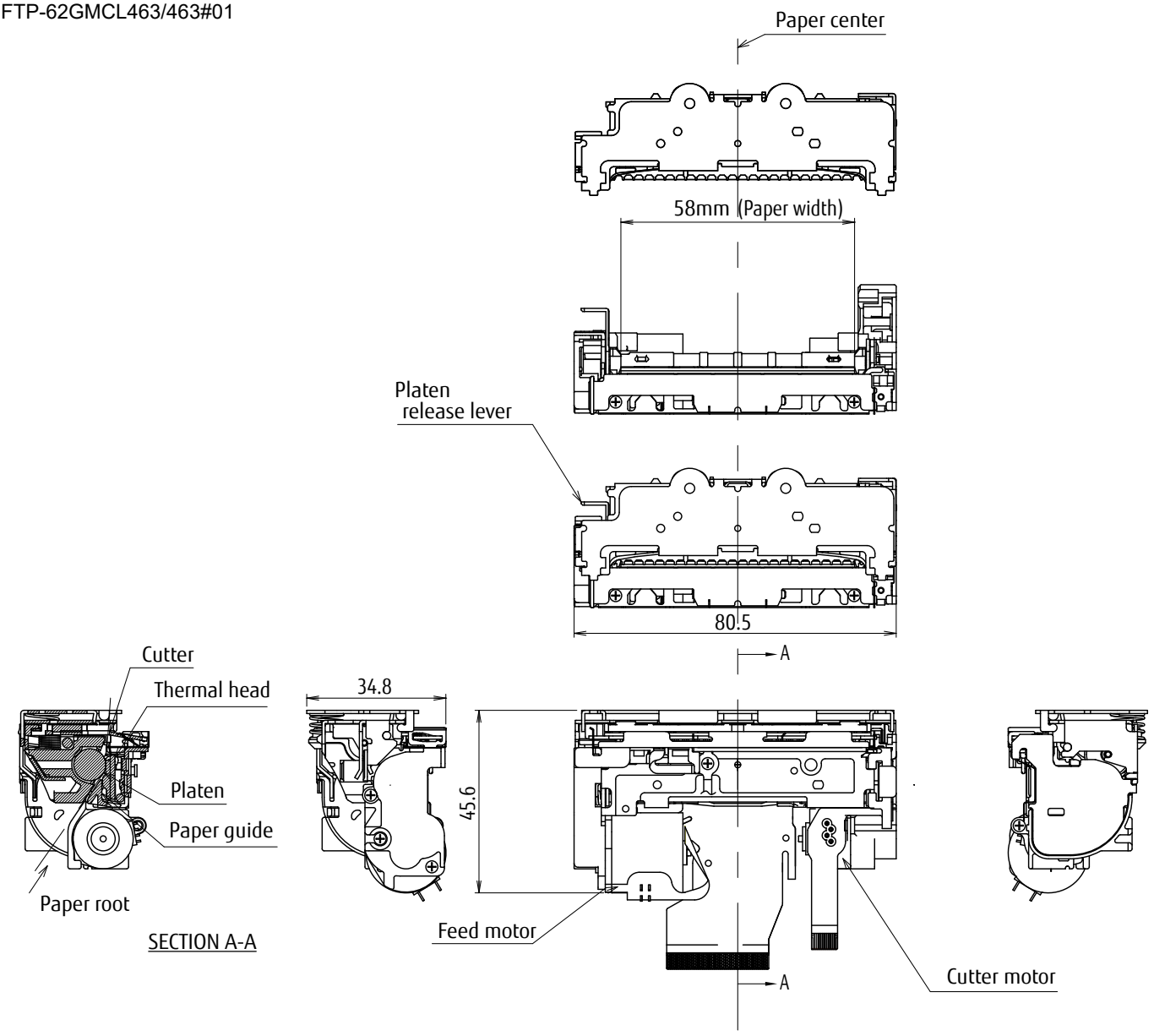


Note: 1. Dimensions are nominal value)tolerance ±0.5mm unless otherwise specified.
2. Dimensions in ( ) is reference value.

■ Dimensions

- Printer mechanism: 2-inch, with cutter

FTP-62GMCL463/463#01



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)
  Recommended connector of head FPC: 54104-5031 (Molex) or equivalent

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	VH	Head drive power	IN
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	VH	Head drive power	IN
11	DI	Data in	IN
12	/STB2	/Strobe2	IN
13	/STB3	/Strobe3	IN
14	VDD	Logic power	IN
15	GND	Head ground	-
16	GND	Head ground	-
17	GND	Head ground	-
18	GND	Head ground	-
19	GND	Head ground	-
20	GND	Head ground	-
21	GND	Head ground	-
22	GND	Head ground	-
23	GND	Head ground	-
24	GND	Head ground	-
25	GND	Head ground	-
26	GND	Head ground	-
27	TM	Thermistor	OUT
28	N.C.	Not connected	-
29	/STB1	/Strobe1	IN
30	/LAT	/Data latch	IN
31	CLK	Clock	IN
32	VH	Head drive power	IN
33	VH	Head drive power	IN
34	VH	Head drive power	IN
35	VH	Head drive power	IN
36	VH	Head drive power	IN
37	VH	Head drive power	IN
38	N.C.	Not connected	-
39	SW	Platen switch release	OUT
40	SW	Platen switch release	OUT
41	MTM	Motor thermistor	OUT

No	Signal	Content	I/O
42	MTM	Motor thermistor	OUT
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)
Recommended connector of cutter motor FPC: 52745-1297 (Molex) or equivalent

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

Japan
FCL COMPONENTS LIMITED
Shinagawa Seaside Park Tower
12-4, Higashi-shinagawa 4-chome,
Tokyo 140 0002, Japan
Tel: +81 3 3450 1682
Email: fcl-contact@cs.fcl-components.com

North and South America
FCL COMPONENTS AMERICA, INC.
2055 Gateway Place, Suite 480
San Jose, CA 95110 U.S.A.
Tel: +1 408 745 4900
Email: fcai.components@fcl-components.com

Europe
FCL COMPONENTS EUROPE B.V.
Diamantlaan 25
2132 WV Hoofddorp
Netherlands
Tel: +31 23 5560910
Email: info@fcl-components.eu

Asia Pacific
FCL COMPONENTS ASIA, LTD.
No. 20 Harbour Drive, #07-01B
Singapore 117612
Tel: +65 6375 8560
Email: fcal@fcl-components.com

China
FCL COMPONENTS (SHANGHAI) CO., LTD.
Unit 1105, Central Park –Jing An, No.329 Heng
Feng Road, Shanghai 200070, China
Tel: +86 021 3253 0998
Email: fcsh@fcl-components.com

Hong Kong
FCL COMPONENTS HONG KONG CO., LIMITED
Room 13, 23/F, Seapower Tower, Concordia Plaza,
No.1 Science Museum Road,
Tsim Sha Tsui East, Kowloon, Hong Kong
Tel: +852 2881 8495
Email: fcsh@fcl-components.com

Web: www.fcl-components.com/en/