

FCL Components Thermal Printer FTP-62GUSL001/101 series (High Speed)

FCL Components 2" high speed (170mm/s) thermal printer unit with cutter option

Overview

The FTP-62GUSL series thermal printer (driven by 24VDC) provides high speed printing (170mm/s) for 2-inch wide paper.

The series is suitable for a variety of applications, such as POS/ECR, kiosk terminals, ticket machines, banking machines, measuring devices, medical equipment, etc.

Features

- High-speed printing
It can print at 170mm/s (1,360 dotlines/s) maximum by using FCL Components' unique head drive control
- FCL Components' unique platen release mechanism
- Auto Cutter
Full cut or partial cut commands available. FCL unique jam free mechanism allows easy maintenance when jam occurs.
- Compact size
FTP-62GUSL001: Depth: 95.9mm, width: 92mm, height: 115.4mm
FTP-62GUSL101: Depth: 97.2mm, width: 96.3mm, height: 119mm
- High resolution
8 dots/mm head provides clear print out
- RoHS compliant



FTP-62GUSL001



FTP-62GUSL101

■ Part numbers

Item		Part Number
Printer unit	Panel mount	FTP-62GUSL001#01/#02 (Japanese/ Traditional Chinese font types)
	Metal frame	FTP-62GUSL101#01/#02 (Japanese/Traditional Chinese font types)
Interface cable	USB	FTP-62GY311#01
	RS-232C	FTP-62GY302
Power supply cable	Logic, head, motor	FTP-629Y603

■ Driver software

Item	Operating system
Driver	Windows-10, Linux*1
SDK	OPOS

*1: Linux drivers are available to our customers by request; please contact us for details.

■ Specifications

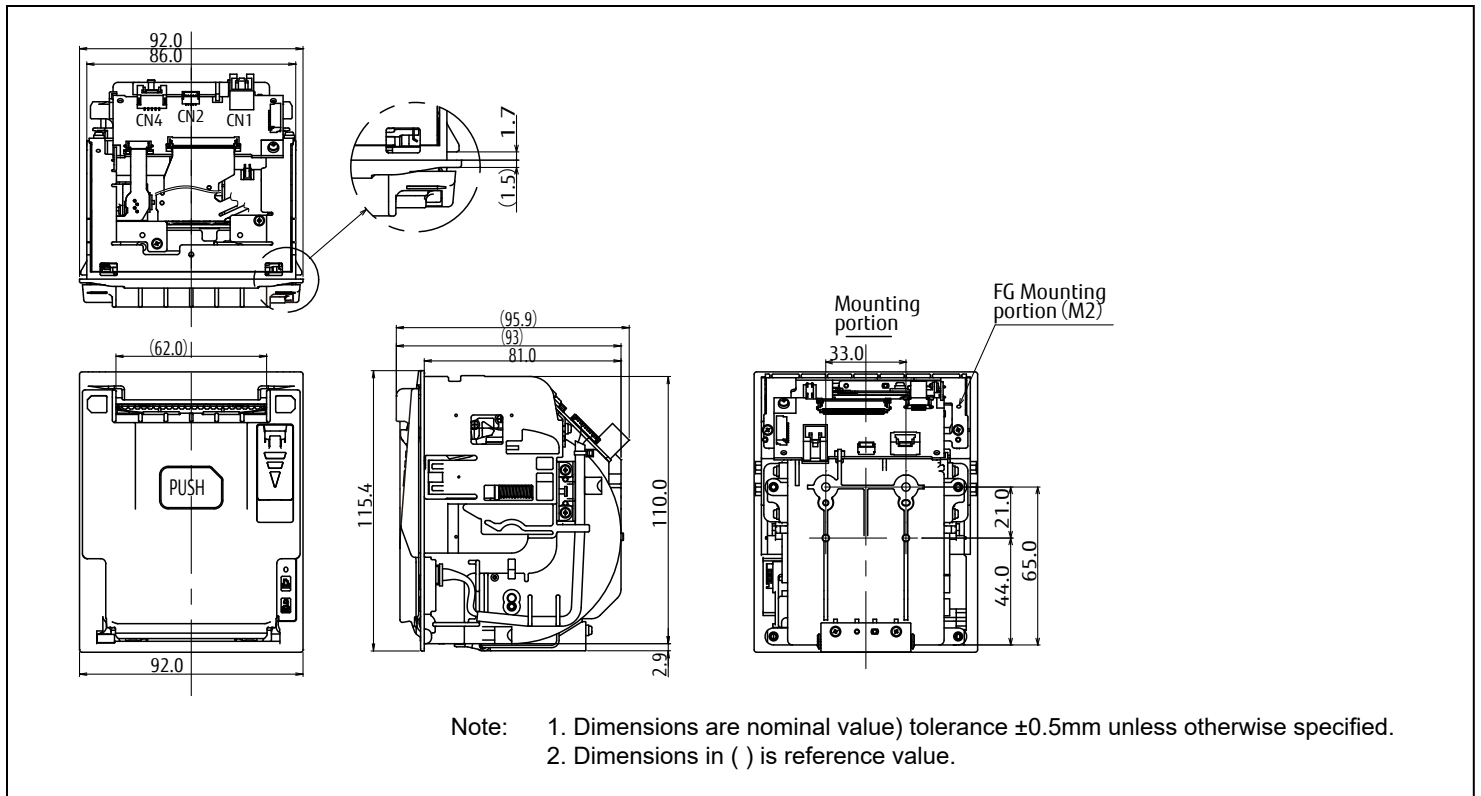
Item	Specifications	
Part number	FTP-62GUSL001#01/#02	FTP-62GUSL101#01/#02
Printing method	Thermal sensitive line dot method	
Dot structure	432 dots/lines	
Dot pitch (horizontal)	0.125mm (8 dots/mm) - Dot density	
Dot pitch (vertical)	0.125mm (8 dots/mm) - Line feed pitch	
Effective printing area	54mm	
Number of columns	ANK 36 columns/line (12 x 24 x dot font)	
Paper width	58mm +0/-1	
Paper thickness	60-100µm*1	
Paper roll diameter	Max. Ø83mm	
Cutting type	Full or partial	
Printing speed	170mm/s (1,360 dot lines/s)	
Paper feed	Forward / backward	
Print mode	Line / page	
Character types	Alphanumeric KANA	159 types
	International and special	195 types
	OCRI	103 types
	OCRIII	23 types
	OCRIV	103 types
	OCRIV	12 types
	Extended numeric	128 types
	Thai code 18	6,879 (#01)
	JIS KANJI level 1, 2, non-Kanji	13, 503 (#02)
	Traditional Chinese (big 5)	224 types
	Download	94 types
	External character	
Font	Japanese / Traditional Chinese	

*1: there may be exceptions

Item	Specifications	
Part number	FTP-62GUSL001#01/#02	FTP-62GUSL101#01/#02
Bar codes	1D	UPC-A, UPC-E, JAN(EAN)13, JAN(EAN)8, CODE 39, ITF, CODABAR, CODE128, GS1 DataBar-14, GS1 DataBar-14 Truncated, GS1 DataBar Limited
	2D	QR Code, GS1 DataBar-14 stacked, GS1 DataBar-14 Omnidirectional, GS1 DataBar-14 Expanded, PDF-417
Bit images	Size	Horizontal: 8 to 432 dots, vertical: 1 to 1, 023 dots
	Modification	Black/white reversible
Download images	Size	Horizontal: 8 to 432 dots, vertical: 1 to 255 dots (memory: 192KB)
	Modification	Black/white reversible, horizontal x 2, vertical x 2, x4, upside down
Download character	8x16 ANK, 12x24 ANK, 16x16 ANK, 24x24 ANK, 16x16 KANJI, 24x24 KANJI	
Detection functions	Marks, no paper, thermal head temperature irregularity, power voltage irregularity, platen open, cutter irregularity, transmission data irregularity, blowout of fuse, hardware irregularity, MCU operation irregularity, thermal head's thermal runaway, thermal head cable drop, non-volatile memory registration error, RAM irregularity	
Character modification	Horizontal tab, under line, black-white reversed, positional alignment, line spacing, character spacing, font type, font size, code table, 90° clockwise rotation	
Interface standard	RS-232C, USB Ver.2.0 (Full Speed)	
Reset	Reset with software	
Character dimensions (W x H), number of characters	8 x 16 dots, 54 columns, ANK	24 x 40 dots, 18 columns, OCRI
	12 x 24 dots, 36 columns, ANK	24 x 48 dots, 18 columns, OCR11
	16 x 16 dots, 27 columns, ANK	36 x 60 dots, 12 columns, OCR1V
	24 x 24 dots, 18 columns, ANK	24 x 48 dots, 18 columns, large numeric
Power voltage	24VDC ±10%	
Power current	Logic	0.1A max.
	Thermal head	1.5A max. (at 24V, print ratio 12.5%)
	Paper feed motor	1.5A max.
	Cutter motor	1.5A max.
Dimensions (WxDxH)	92.0 x 95.9 x 115.4mm	97.2 x 96.3 x 119.0mm
Weight	336g	700g
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.
Environmental conditions	Operating temperature	0°C to +50°C (guaranteed, print quality assurance: +5°C to +40°C)
	Operating humidity	20 to 85% RH (no condensation)
	Storage temperature	-20°C to +60°C (excluding paper)
	Storage humidity	5 to 90% RH (no condensation)
Detection functions	Head temperature	By thermistor
	Paper out/Mark detect	By photointerrupter
	Head release	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	TP-60KS-F1 (Nippon paper), P220VBB-1 (Mitsubishi paper)
	Long term paper	PD160R (Oji paper), TF50KJ-R (Nippon paper), HA220AA (Nippon paper), AFP-235 (Mitsubishi paper)
MTBF	Mechanism	3,000 hours
	Control board	500,000 hours

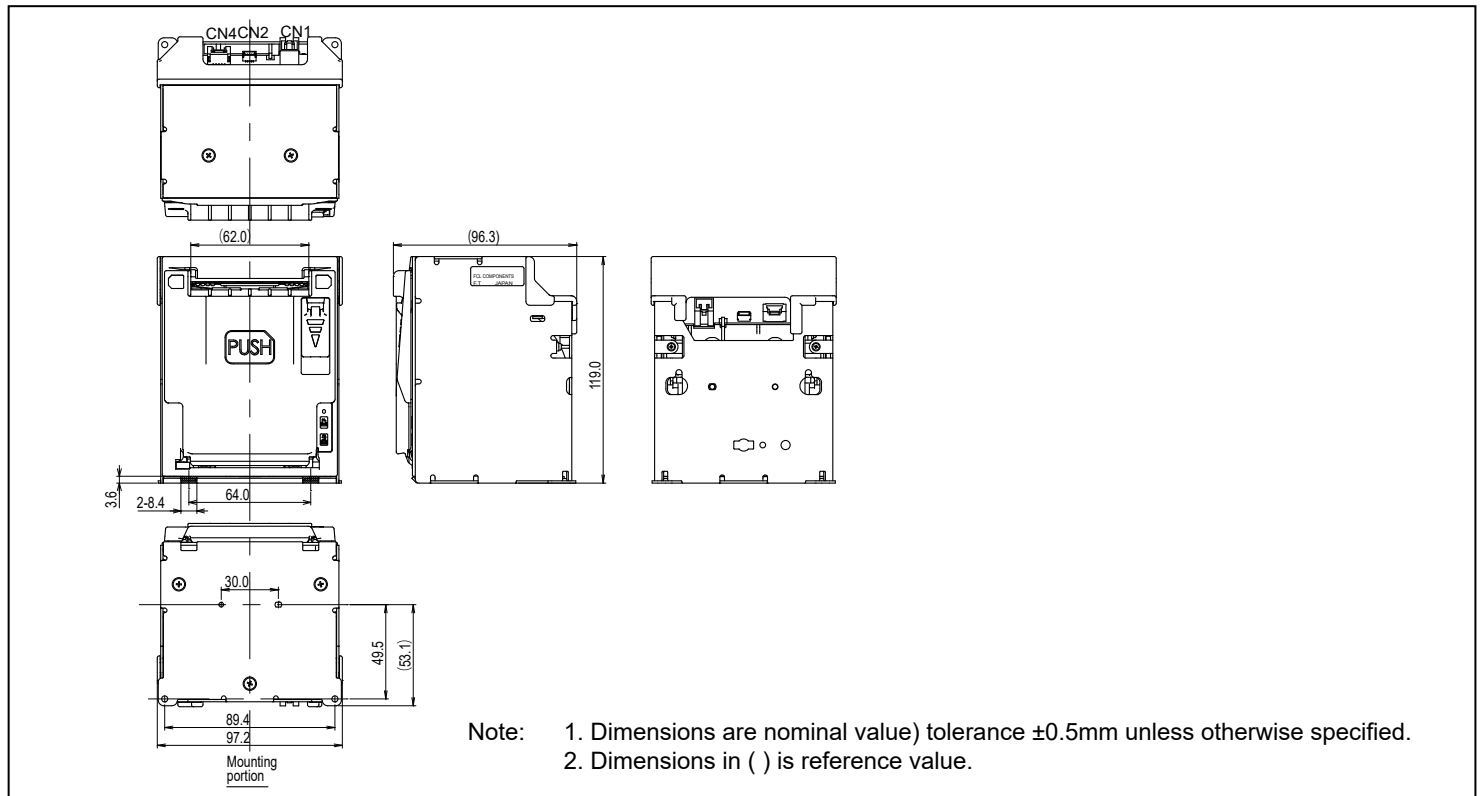
■ Dimensions (FTP-62GUSL001#01/#02)

- 2-inch panel mount printer



■ Dimensions (FTP-62GUSL101#01/#02)

- 2-inch metal frame printer



■ Connector for power supply

- Connector for Logic, Head, Motor Power supply (CN1)

Mating connector part number: VHR-2N (J.S.T.) or equivalent

No.	Signal	I/O	Content	No.	Signal	I/O	Content
1	Vp	I	+24V power	2	GND	-	Ground

■ RS-232C standard

Connector (CN2)

Mating connector part number: SHR-05V-S (J.S.T.) or equivalent

No.	Signal	I/O	Content	No.	Signal	I/O	Content
1	RXD	I	Receive data	2	TXD	O	Transmission data
3	RTS (DTR)	O	Request to send	4	GND	-	Signal ground
5	CTS (DSR)	I	Clear to send				

■ USB standard

- (1) Connector (CN4)

Mating connector part number: GHR-05V-S (J.S.T.) or equivalent

No.	Signal	I/O	Content	No.	Signal	I/O	Content
1	Vbus	I	Bus power supply	2	D-	I/O	Differential data I/O D- terminal
3	D+	I/O	Differential data I/O D+ terminal	4	GND	-	Signal ground
5	FG	-	Frame ground				

Note: Symbol “-” in above tables mean a negative logic signal.
 “I” or “O” means a signal direction from the interface board side (I: Input, O: Output).

■ Host Interface

Item	Specifications
Interface standard	RS-232C
	9,600bps (460,800bps, 230,400bps, 115,200bps, 38,400bps, 19,200bps - Selectable by command) Synchronization: Asynchronous, full-duplex transmission Flow control: RTS(DTR)/CTS(DSR) or XON/XOFF –Selectable by command I/O level: RS-232C level
	USB Ver. 2.0 (full speed)
	Transmission speed: Full speed (max. 12Mbps) Data input/output format: Differential

■ Commands

Command	Content
HT	Horizontal tab
LF	Line feed
FF	Forms feed
ESC FF	Data print in page mode *4
ESC EM+n	Auto loading amount setting
ESC RS	Black-white reversed printing specification
ESC US	Black-white reversed printing cancellation
ESC SP+n	Character space setting
ESC !+n	Sets print mode
ESC \$+n1+n2	Horizontal absolute position setting *4
ESC %+n	Downloaded character specification/cancellation
ESC &+y+c1+c2+x+d1 to dn	Downloaded character definition *1, 3
ESC *+m+n1+n2+d1 to dk	Bit image print
ESC -+n	Undeline setting
ESC 2	Set default line spacing
ESC 3+n	Line pitch setting
ESC ?+n	Downloaded character deletion *1, 3
ESC @	Printer reset
ESC A+n	Line spacing setting
ESC C+n	Page length setting in line mode
ESC D+n1 to nk+NUL	Horizontal tab position setting
ESC E+n	Emphasis printing specification / cancellation
ESC J+n	Print and forward paper feed
ESC K+n	Print and reverse paper feed
ESC L	Page mode selection *4
ESC Q+n+!+j	Frame overlay function setting *1, 3
ESC R+n	Selects international character
ESC S	Line mode selection *4
ESC T+n	Print direction setting in page mode *4
ESC V+n	90° clockwise rotation specification/cancellation
ESC W+x1+x2+y1+y2+dx1+dx2+dy1+dy2	Print area setting in page mode *4
ESC X+m+n	Setting the turning time of the motor excitation
ESC Y+SOH+ESC+x+a+FF+m+n+d~	Firmware download *1
ESC ¥+n1+n2	Horizontal relative position setting *4
ESC a+n	Position alignment
ESC c+1+n	Sets internal processing
ESC c+5+n	Panel switch valid/invalid setting
ESC d+n	Print and feed paper n-lines
ESC e+n	Prints and reverses feed paper n-lines
ESC j	Full cut
ESC m	Partial cut
ESC s+n	Sets printing speed
ESC t+n	Character code table selection
ESC {+n	Upside down printing specification/cancellation

■ Commands

ESC DEL +n	Non-volatile memory deletion *1, 3
FS !+n	Kanji printing mode collective specification *2
FS &	Kanji printing mode specification *2
FS *+m+n1+n2+d1 to dk	High speed batch image print *4
FS -+n	Kanji underline specification/cancellation *2
FS .	Kanji printing mode cancellation *2
FS 2+c1+c2+d1 to dn	User defined character definition *1, 2, 3
FS 9+n	Sets/resets the detection functions
FS C+n	Kanji code system selection *2
FS E+n	Standard energy setting
FS S+n1+n2	Kanji spacing setting *2
FS W+n	Specify/cancel double-tall, double wide Kanji characters *2
FS r+n	Reply parameter setting
GS !+n	Select character size
GS \$+n1+n2	Vertical absolute position setting in page mode *4
GS &+m+x+y1+y2+d1 to dn	Downloaded bit image definition *1,3
GS '+m+n	Downloaded image print *3
GS (+E+L1+L2+fn+d1 to d9 (fn=67)	RS-232C communication setting *1, 3
GS (+E+L1+L2+fn+d1 to d9 (fn=68)	USB communication setting *1, 3
GS <	Mark detection execution
GS A+m+n	After-mark-detection head distance setting
GS B+n	Bar code angle setting *4
GS E+n	Sets print quality
GS H+n	HRI character printing position selection
GS L+n1+n2	Left margin setting
GS V+m+n	Cut paper
GS W+n1+n2	Print area width setting
GS ¥+n1+n2	Vertical relative position setting in page mode *4
GS a+n	Sets automatic status transmission
GS e+m+n	Sets bar code width
GS f+n	HRI character font selection *4
GS h+n	Sets barcode height
GS k+m+n+d1 to dn	Bar code print
GS k+m+k1+k2+k3+k4+{[p1][d(1, 1)] to [d(1, j)]} to {[pi][d(i, 1)] to [d(i, j)]}[00] NUL	QR code print
GS k+m+k1+k2+k3+k4+nL+nH+d1 to dn	PDF417 code print
GS k+m+n+k+pL+pH+d1 to dp	Bar code (GS1 DataBar) print
GS k+m+n+k1+k2+k3+k4	Bar code (GS1 DataBar) setting
GS w+n	Sets bar code width magnification

Notes: *1: Makes write/erase to the nonvolatile memory. 3: Only the model equipped with the extended nonvolatile memory.
*2: Only the model is equipped with Kanji character. 4: Only the model equipped with the extended volatile memory.

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

Europe

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

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

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

Asia Pacific

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

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