

# Thermal Printer

## FTP-638WSL100 series

### (Easy Loading Method)

Compact, battery drive, 3" high speed, standalone thermal printer

#### Overview

The supply voltage of the FTP-638WSL Series is 120/240VAC (via AC adaptor) or battery. The unit uses 3-inch-wide paper.

The semi-rugged printer unit is most suitable for applications such as handheld, mobile and portable devices, as well as for various other equipment.

#### Features

- Lightweight and ultra small size
- Easy paper loading
- Bluetooth®, IrDA interfaces
- 7.4 Lithion battery, 120 or 240VAC adaptor
- Drop-resistant - 1.5 meters
- Water resistant
- Prints 2D barcodes and stacked barcodes
- 3 hour charge cycle
- RoHS compliant
- IP54 compliant
- Windows®/Vista/7/8/8.1/10 printer drivers
- Apple® iOS/Android™ SDK (printer library) support
- Apple® iOS7 drivers support iPhone 6 Plus



FTP-638WSL100

■ Specifications

Item	Specifications	
Part number	FTP-638WSL110 series	
Dot structure	576 dots/lines	
Dot pitch (horizontal)	0.125mm	
Dot pitch (vertical)	0.125mm	
Effective printing area	72 mm	
Paper width/diameter	80mm / ID 8mm, OD 50mm maximum	
Paper thickness	60-80µm* <sup>1</sup>	
Maximum printing speed	Battery 80mm/sec. at 8.4V, AC adaptor, 80mm/sec. at 12V (640 dotlines/s) at 12% print ratio	
Character types	Alphanumeric KANA: 159 International characters: 195 Thai code 18: 128 Download: 224 External: 94 JIS KANJI: approx. 6800	
Character dimensions (W x H), number of characters	12 x 24 dots (1.5 x 3.0mm), 48 columns 24 x 24 dots (3.0 x 3.0mm), 28 columns 8 x 16 dots (1.0 x 2.0mm), 72 columns 16 x 16 dots (2.0 x 2.0mm), 36 columns	
Power	Battery (Lithium Ion)	7.4VDC lithium, 2,090mAh
	AC adaptor	12V - 3.75A 100VAC to 240VAC adaptor#10 (AC cable included)
Power consumption	1.6 - 1.7A printing (print ration 12.5%) standby 30-60mA communication 90-170mA	
Dimensions	106 x 116 x 58mm (WxDxH)	
Case color	White	
Weight	Printer with battery	Approximately 340g
	Battery & paper included	Approximately 380g
Expected life	Head	Pulse durability: 100 million pulse/dot (12.5% print ratio) Wear resistance: 50km
	Battery	One charge: 200m, 300 charge cycles
	Paper holder	5,000 times open/close

\*<sup>1</sup>: there may be exceptions

■ Interface specification at host side

Item	Specifications	
Bluetooth V2.1 +EDR	Profile	SPP
	Modulation	GFSK, $\pi$ / 4-DQPSK, 8DPSK (EDR)
	Data speed	1306.9kbps max.
	Maximum distance	10m
IrDA (Ver. 1.2)	Data speed	115,200 / 38,400 / 19,200 / 9,600bps

■ Part numbers

Item	Part Number	Adaptor	Included
Bluetooth, IrDA interfaces	FTP-638WSL110#10	120/240 VAC	With AC cable

■ Power supply

- Battery

Item	Specifications
Type	Lithium Ion, 2 cell
Manufacturer	Fujitsu Limited
Model	KD54004-L301
Rated voltage	7.4V, 2,090mAh
Life	300 cycles, 35 hours
Weight	110g

- AC adaptor

Item	Specifications
Type	Switching regulator
Manufacturer	SANKEN ELECTRIC CO. LTD.
Model	KD02902-5420
Rated voltage	12V
Weight	230g

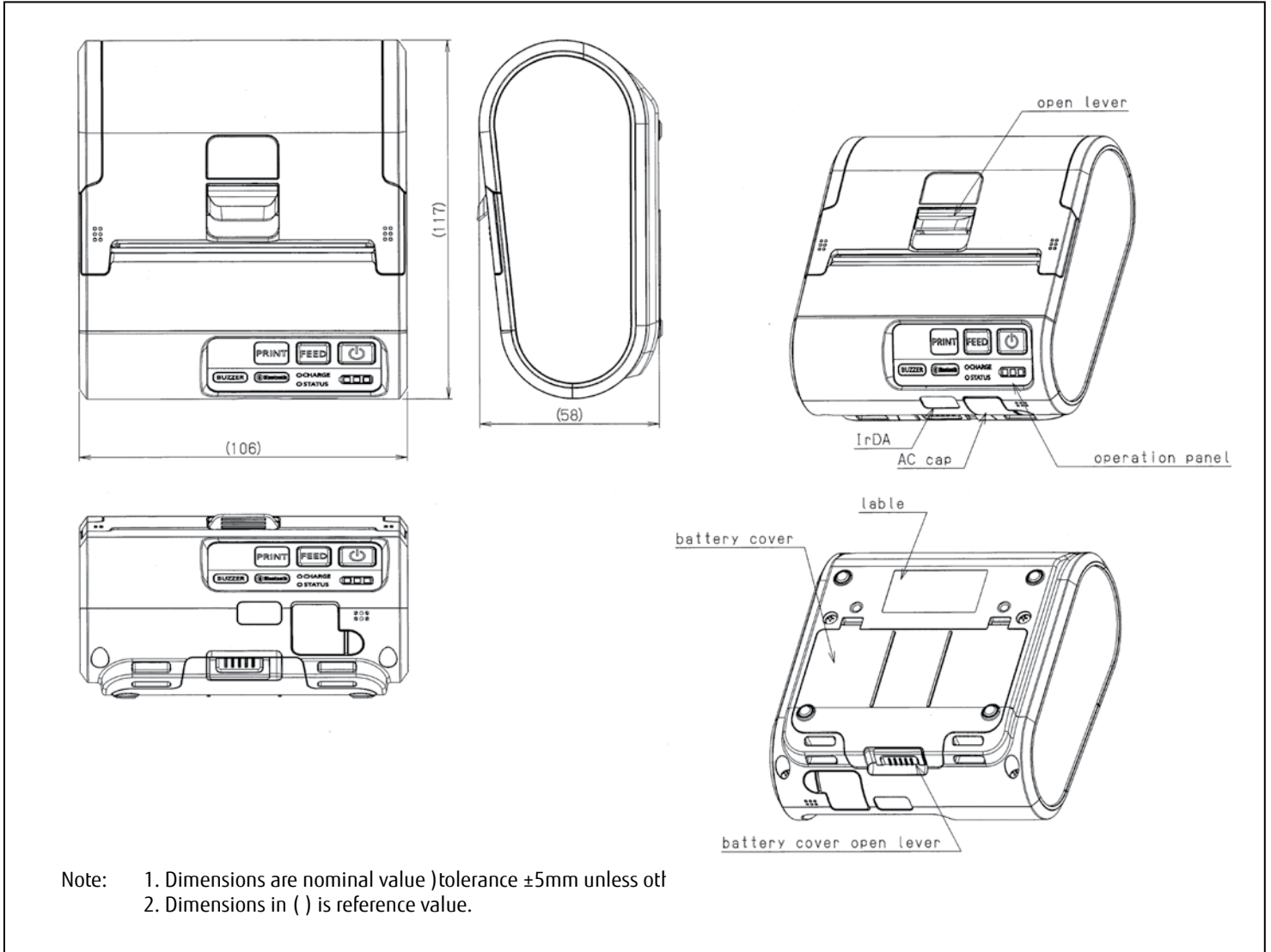
Item		Specifications
Bar code type	Standard	UPC-A, UPC-E, JAN13, JAN8, CODE39, ITF, CODABAR, CODE 128, GS1 DataBar-14, GS1 DataBar Limited, GS1 DataBar -14 Truncated
	2-D	MAXI, PDF417, QR. GS1 DataBar-14 Stacked, Omnidirectional, GS1 DataBar expanded
Safety standard	Noise	FCC, IC, CE marking
Environmental conditions	Operating temperature	0°C to +50°C*4
	Operating humidity	30 to 85% RH (no condensation)
	Storage temperature	-20°C to +60°C
	Storage humidity	5 to 90% RH (no condensation)
Detection functions	Head temperature	Detected by thermistor
	Head detect	Detected by photo-interruptor
	Paper out	Detected by photo-interruptor
	Cover open	Detected by micro-switch
Major functions	Page mode Registration of character and image Enlarge characters Auto status reply	
Recommended thermal sensitive paper	High sensitive paper	FT50KS-E45 (Nippon paper)
	Standard paper	TF-60KS-E (Nippon paper) PD150R (Oji paper)
	Medium term paper	TF-60KS-F1 (Nippon paper) PD170R (Oji paper) P220VBB-1 (Mitsubishi paper)
	Long term paper	HA220AA (Mitsubishi paper)
	Label paper	HW54S (Nippon paper)

\*2: FTP-638WSL110 (standard)

\*3: 0° to +40°C guarantee of print quality

■ Dimensions

- Printer mechanism: 3-inch



Note: 1. Dimensions are nominal value )tolerance  $\pm 5\text{mm}$  unless otf  
2. Dimensions in ( ) is reference value.

■ Commands

Command	Content
HT	Horizontal tab
LF	Line feed with printing
FF	Feeds forms (new page)
ECS RS	Sets reverse printing
ESC US	Resets reverse printing
ESC FF	Data printing in page print mode
ESC SP + n	Character space setting
ESC ! +n	Sets print mode
ESC \$ + n1+n2	Horizontal absolute position setting
ESC % + n	External registration character specification / cancellation
ESC &+y+c1+c2+x+d1 to dn	External registration character definition
ESC*+m+n1+n2+[d1 to dn]	Bit image mode registration
ESC -+n	Underline setting
ESC 3+n	Sets the line feed length
ESC ?+n	External registration character deletion
ESC @	Printer initialization
ESC A+n	Set the space between lines
ESC C+n	Sets the page length by character line
ESC D+n1 to nk + null	Set the tab position
ESC E+n	Printing specification / cancellation
ESC J+n	Feeds paper in forward direction and prints
ESC K+n	Reverse paper feed
ESC L	Page print mode selection
ESC Q+n+!+j	Frame overlay detection
ESC R+n	Selects international character
ESC S	Line print mode selection
ESC T+n	Print direction setting in page mode
ESC V+n	Right rotation 90° specification / cancellation
ESC W+x1+x2+y1+y2+dx1+dx2+dy1+dy2	Print area setting in page print mode
ESC X+m+n	Sleep mode time setting
ESC ¥+n1+n2	Internal process setting
ESC c+1+n	Set internal processing
ESC s+n	Print speed setting
ESC {+n	Sets/resets upside down printing
FS !+n	Kanji printing mode collective specification
FS &	Kanji printing mode specification
FS -+n	Kanji underline specification / cancellation
FS .	Kanji printing mode cancellation
FS 2+C1+C2+d1 to dn	User defined character definition
FS 9+n	Sets the detection functions
FS C+n	Kanji code system selection

Command	Content
FS E+n	Correction of impressed energy
FS S+n1+n2	Kanji space setting
FS r+n	Parameter transmission (valid for non-protocol mode)
GS \$+n+1+2	Vertical absolute position specification in page print mode
GS &+m+x+y1+y2+[d]k	Registration of image data
GS'+m+n	Prints registered image data
GS <	Line feeds to the next mark
GS A+m+n	Sets the line feed length after mark detection
GS B+n	Bar code angle setting
GS E+n	Print quality setting
GS L+n1+n2	Left margin setting
GS W+n1+n2	Print area width setting
GS ¥+ n1+n2	Vertical relative position setting in page mode
GS a+n	Setting & cancellation of status transmission (non-protocol mode)
GS e+m+n	Bar code width setting
GS h+n	Bar code height setting
GS k+m+n+d1 to dn	Bar code printing
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]16	Two dimensional code (QR code) print
GS k+m+k1+k2+k3+k4+k5+d1 to dn	Two dimensional code (Maxi Code) print
GS k+m+k1+k2+k3+k4+k5+k6+d1 to dn	Two dimensional code (PDT-417) print
GS k+m+n+k+pL+pH+d1+dn	Barcode (GS1 DataBar) print
GS k+m+n+k1+k2+k3+k4	Barcode (GS1 DataBar) setting
GS (+A+ETX+n	Bluetooth automatic disconnection time setting
GS (+A+ACK+m+n	Bluetooth security mode setting
GS (+A+HT+n+d1 to dn	Bluetooth device name setting
GS (+A+EOT	Bluetooth information print
GS (+A+BS+n+d1 to dn	Bluetooth PIN code setting
ESC Y+SOH+ESC+x+a+DC1+m	Bluetooth automatic connection/specification/cancellation
ESC t+n	Character code table selection
ESC Y+SOH+ESC+x+a+DLE+n	Communication mode setting

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