

# BATTERY DRIVE, MOBILE TYPE COMPACT STANDALONE THERMAL PRINTER 2" EASY LOADING MODEL

## FTP-628WSL110/120

### OVERVIEW

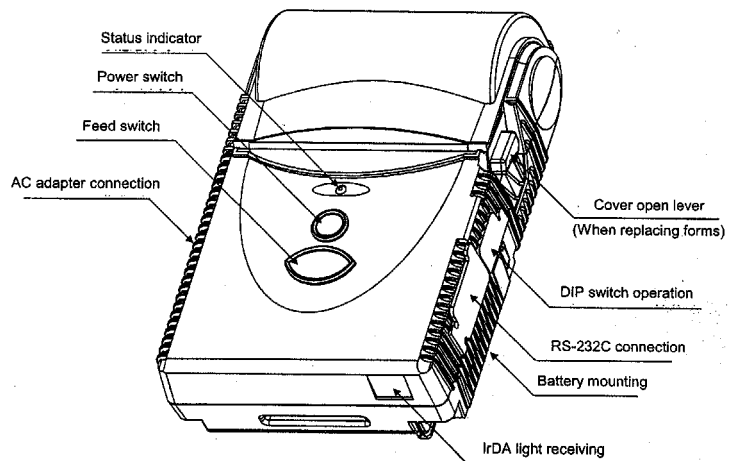
The supply voltage of the FTP-628WSL Series is 120VAC (via AC adaptor) or battery. The unit uses 2 inch wide paper. The mechanism and interface board is a standard multiple purpose unit.

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®, infrared and serial interfaces
- 3.7V Lithion battery, 120 or 240 VAC adapter
- Drop-resistant - 1.5 meters
- Water resistant
- Prints 2-D barcodes
- 3 hour charge cycle
- Up to 6 paper rolls / charge
- Thin label capability
- RoHS compliant
- IP54 compliant
- Windows®2000/XP, Linux drivers



### INTERFACE SPECIFICATION AT HOST SIDE

Item	Specifications
Bluetooth V2.0 Class 2	Profile: GAPSDP, SPP. Modulation: FHSS/GFSK Data speed: 460 kbps Maximum distance: 10m Protocol stack: IrLAP, IrLMP, IrLAS, TinyTP, IrCoMM
RS-232C	Data speed: 115,200, 19,200 / 9,600 / 4,800 kbps Synchronous method: Full duplex Handshake: DTR/DSR, XON/XOFF control Input/output level: RS-232C
IrDA (Ver. 1.2, IrCoMM)	Data speed: 115,200 / 57,600 / 38,400 / 19,200 / 9,600 kbps

# FTP-628WSL110 /120 Series

## ■ PART NUMBER

Item	Part Number
Bluetooth , IrDA and serial interfaces	FTP-628WSL110#10 (includes 120V AC adapter, battery, belt clip and paper roll)
	FTP-628WSL110#20 (includes 120/240V AC adapter, battery, belt clip and paper roll)
IrDA and serial (RS-232C) interfaces	FTP-628WSL120#10 (includes 120V AC adapter, battery, belt clip and paper roll)
	FTP-628WSL120#20 (includes 120/240V AC adapter, battery, belt clip and paper roll)
Serial interface cable	FTP-628Y303

## ■ SPECIFICATIONS

Item		Specification
Part Number		FTP-628WSL110 / 120
Dot structure		384 dots / line
Dot pitch (horizontal)		0.125 mm
Dot pitch (vertical)		0.125 mm
Effective print area		48 mm
Paper width/diameter		58mm / ID 8mm, OD 36mm max.
Paper thickness		60 to 100 $\mu$ m*1
Maximum printing speed		Maximum 40mm/sec. (320 dotline/s) at 12.5% print ratio
Character types		Alphanumeric KANA: 159 International characters: 195 Registered characters: 224 JIS KANJI: approx. 6800
Character dimensions (WxH mm), number of characters		12 x 24 dots (1.5 x 3.0mm), 32 columns 24 x 24 dots (3.0 x 3.0mm), 16 columns 8 x 16 dots (1.0 x 2.0mm), 48 columns 16 x 16 dots (2.0 x 2.0mm), 24 columns
Power	Battery (Lithium Ion)	3.7VDC lithium 1,800mAh
	AC Adapter	100VAC to 120VAC adapter #10 100VAC to 240VAC adapter #20 (AC cable not included)
Power consumption		1.6-1.7A Printing (print ratio 12.5%) standby 30-60mA communication 90-170mA
Dimensions (W X D X H)		84 x 136.5 x 30.0 mm body / 43.6mm paper holder
Weight		280 g (battery and belt clip included)
Expected Life	Head	Pulse durability: 100 million pulse/dot (25% print ratio) Wear resistance: 50Km
	Battery	One charge: 100m (at 12.5% printing ratio), 300 charge cycles
	Paper Holder	5000 times open / close
MTBF	Mechanism	3,000 hours
	Interface Board	500,000 hours

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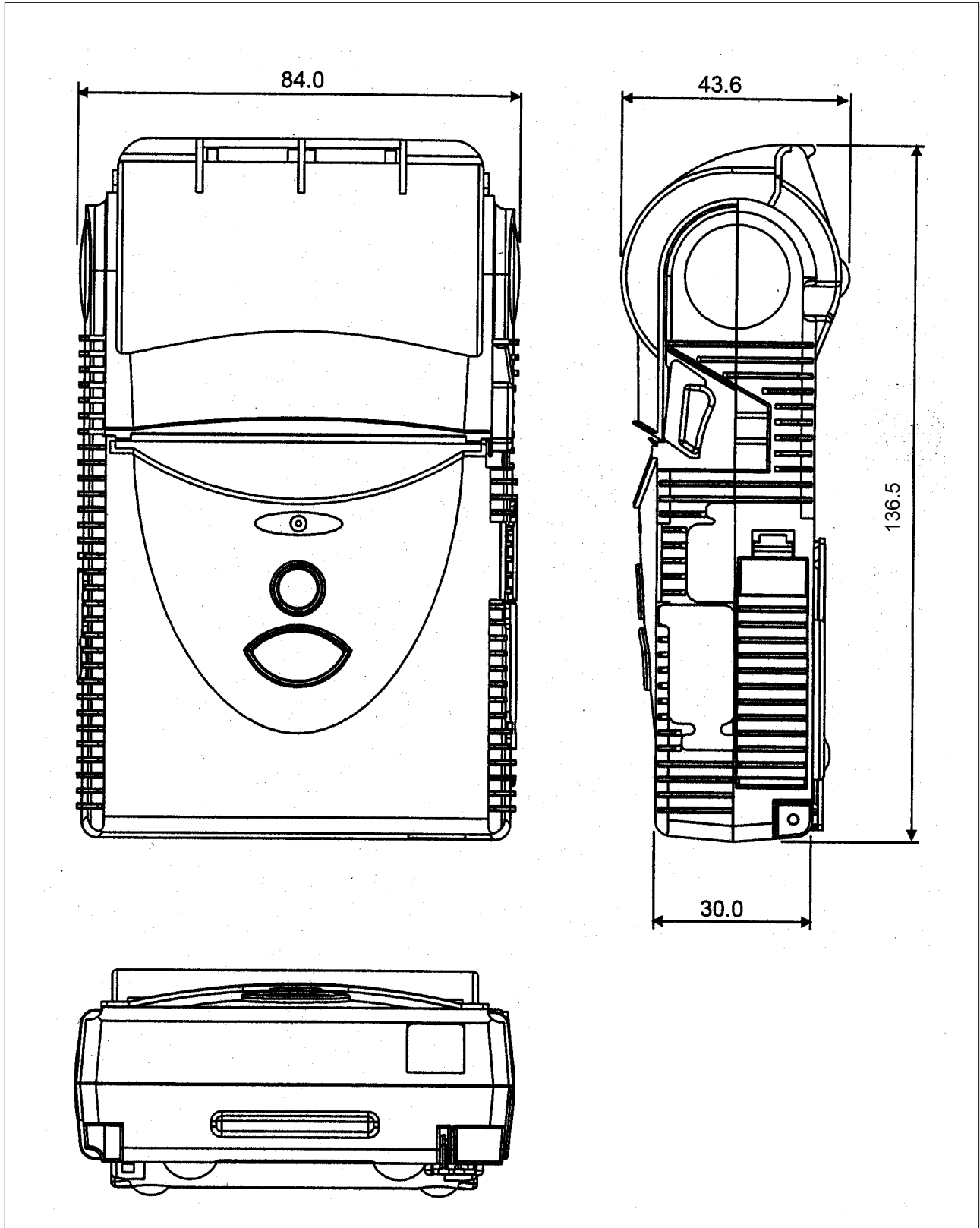
FTP-628WSL110/120 Specs continued

Item		Specification
Bar Code Type	Standard	UPC-A, UPC-E, JAN13, JAN8, CODE 39, ITF, CODABAR, CODE 128
	2-D	MAXI, PDF417, QR
Interface	Serial	RS-232C
	IrDA	Version 1.2 (Ir COMM protocol)
	Bluetooth*3	Version 2.0 (Class 2)
Safety Standard	Noise	FCC Class B, FCC Part 15
	Water resistant	JIS C0920 Class 2
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
	Mark 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 papers	High sensitive paper	TF50KS-E4 (Nippon paper)
	Standard Paper	FTP-020P0704 TF-60KS-E (Nippon paper), PD150R (Oji paper)
	Medium term paper	TF-60KS-F1 (Nippon paper), PD170R (Oji paper), P220VBB-1 (Mitsubishi paper), FH65BC-3H (Oji Film)
	Long term paper	PD160R-N (Oji paper), AFP-235 (Mitsubishi)
	Label paper	HW54T (Nippon paper)

Notes: \*1: There may be exceptions  
\*2: ESC/POS™ Seiko/Epson trademark  
\*3: FTP-628WSL110 only  
\*4: 0 to +40°C guarantee of print quality

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## ■ DIMENSIONS



# FTP-628WSL110 /120 Series

## ■ COMMANDS

Command	Contents
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 ! + n	Sets print mode.
ESC % + n	External registration character specification / cancellation.
ESC & + y + c1 + c2 + x + d1 ~ dn	External registration character definition.
ESC * + m + n1 + n2 + [d1 ~ dn]	Bit image mode registration
ESC 3 + n	Sets the line feed length.
ESC ? + n	External registration character deletion.
ESC @	Printer initialization.
ESC A + n	Sets the space between lines.
ESC C + n	Sets the page length by character line.
ESC D + n	Sets the tab position.
ESC J + n	Feeds paper in forward direction and prints.
ESC K + n	Reverse paper feed.
ESC L	Page print mode selection.
ESC R + n	Selects international character.
ESC S	Line print mode selection.
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 c + 1 + n	Sets internal processing.
ESC s + n	Print speed setting.
ESC { + n	Sets/resets upside down printing.
ESC Y SOH x a DLE + n	RS-232C communication setting.
FS ! + n	Kanji printing mode collective specification.
FS &	Kanji printing mode specification.

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Commands continued

Command	Contents
FS .	Kanji printing mode cancellation.
FS 9+n	Sets the detection functions.
FS C+n	Kanji code system selection.
FS E+n	Correction of impressed energy.
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 a+n	Setting and cancelation of status transmission. (non-protocol mode).
GS e+n+m	Bar code width setting.
GS h+n	Bar code height setting.
GS k+m+n+d1~dN	Bar code printing.
GS k+m+k1+k2+k3+k4+d1~dn	Two dimensional code printing.
GS (A ETX +n	Bluetooth link time setting.
GS (A ACK +m+n	Bluetooth security mode setting.
GS (A BS +n+d1 to dn	Bluetooth PIN code setting.
GS (A HT +n+d1 to dn	Bluetooth device name setting
GS (A ENQ	Bluetooth, information printing (WSL110 only).

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