FUJITSU

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

FTP-628WSL100/200-R series

■ OVERVIEW

The supply voltage of the FTP-628WSL Series is 120/240VAC (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, serial and USB interfaces
- 3.7V Lithion battery, 120 or 240 VAC adapter
- Drop-resistant - 1.5 meters
- Water resistant
- Prints 2-D barcodes and stacked barcodes
- 3 hour charge cycle
- Up to 6 paper rolls / charge
- Thin label capability
- RoHS compliant
- IP54 compliant
- Windows®2000/XP, CE 6.0, Linux, and iPhone Bluetooth drivers

■ **INTERFACE SPECIFICATION AT HOST SIDE**

Item	Specifications	
Bluetooth V2.1 + EDR (standard or iOS)	Profile: Modulation: Data speed: Maximum distance: Protocol stack:	GAPSDP, SPP. FHSS/GFSK, 8DPSK 460 kbps, 1306.9kbps 10m IrLAP, IrLMP, IrLAS, TinyTP, IrCoMM
RS-232C	Data speed: Synchronous method: Handshake: Input/output level:	115,200, 19,200 / 9,600 / 4,800 bps Full duplex DTR/DSR, XON/XOFF control RS-232C
IrDA (Ver. 1.2, IrCMM)	Data speed:	115,200 / 57,600 / 38,400 /19,200 / 9,600 bps
USB (2.0 full speed)	Data speed:	12Mbps max.

■ **PART NUMBERS**

Item	Part Number
Bluetooth, IrDA & serial interfaces	FTP-628WSL110#11 (includes 120V AC adapter, battery, belt clip & paper roll) FTP-628WSL110#21 (includes 120/240V AC adapter, battery, belt clip & paper roll)
IrDA & serial (RS-232C) interfaces	FTP-628WSL120#11 (includes 120V AC adapter, battery, belt clip & paper roll) FTP-628WSL120#21 (includes 120/240V AC adapter, battery, belt clip & paper roll)
Bluetooth/USB (iOS)	FTP-628WSL210#20 (includes 120/240V AC adapter & battery)
Bluetooth/USB (Android, Blackberry)	FTP-628WSL211#20 (includes 120/240V AC adapter & battery)
USB only	FTP-628WSL212#20 (includes 120/240V AC adapter & battery)
Serial interface cable	FTP-628Y304
USB interface cable	FTP-629Y301#11

■ **POWER SUPPLY SPECIFICATIONS**

Battery

Type	Lithium Ion, 1 parallel, 1 series
Manufacturer	Panasonic
Model	FTP-628MP0011
Rated voltage	3.7V
Life	300 cycles
Weight	44g

AC Adapter

Type	Switching regulator
Manufacturer	Nogano Japan Radio Co., Ltd.
Model	FTP-628MP0012
Rated voltage	5VDC
Weight	160g

■ SPECIFICATIONS

Item		Specification	
Part Number		FTP-628WSL100 series	FTP-628WSL200 series
Dot structure		384 dots/line	
Dot pitch (horizontal)		0.125mm	
Dot pitch (vertical)		0.125mm	
Effective print area		48mm	
Paper width/diameter		58mm / ID 8mm, OD 36mm max.	
Paper thickness		60 to 100μm[*1]	
Maximum printing speed		Battery 40mm/sec. at 4.2V, AC adapter, 50mm/sec. at 5V (320 dotline/s) at 12.3% print ratio	
Character types		Alphanumeric KANA: 159 International characters: 195 Registered characters: 224 JIS KANJI: APPROX. 6800	
Character dimensions (W x H mm), number of characters		12 x 24 dots (1.5 x 3.0 mm), 32 columns 24 x 24 dots (3.0 x 3.0 mm), 16 columns 8 x 16 dots (1.0 x 2.0 mm), 48 columns 16 x 16 dots (2.0 x 2.0 mm), 24 columns	
Power	Battery (Lithium Ion)	3.7VDC lithium 1,800mAh	
	AC Adapter	100VAC to 120VAC adapter #11 100VAC to 240VAC adapter #20, 21 (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)		84x 136.5 x 30.0mm body / 43.6mm papaer holder	
Case color		Gray	Black
Weight		220g (printer with battery) 270g (battery and paper included)	
Expected life	Head	Pulse durability: 100 million pulse/dot (12.5% print ratio) Wear resistance: 50km	
	Battery	One charge: 100m 300 charge cycles	500 charge cycles
	Paper holder	5,000 times open/close	
MTBF	Mechanism	3,000 hours	
	Interface board	500,000 hours	

*1: there may be exceptions

FTP-628WSL100/200 Specs continued

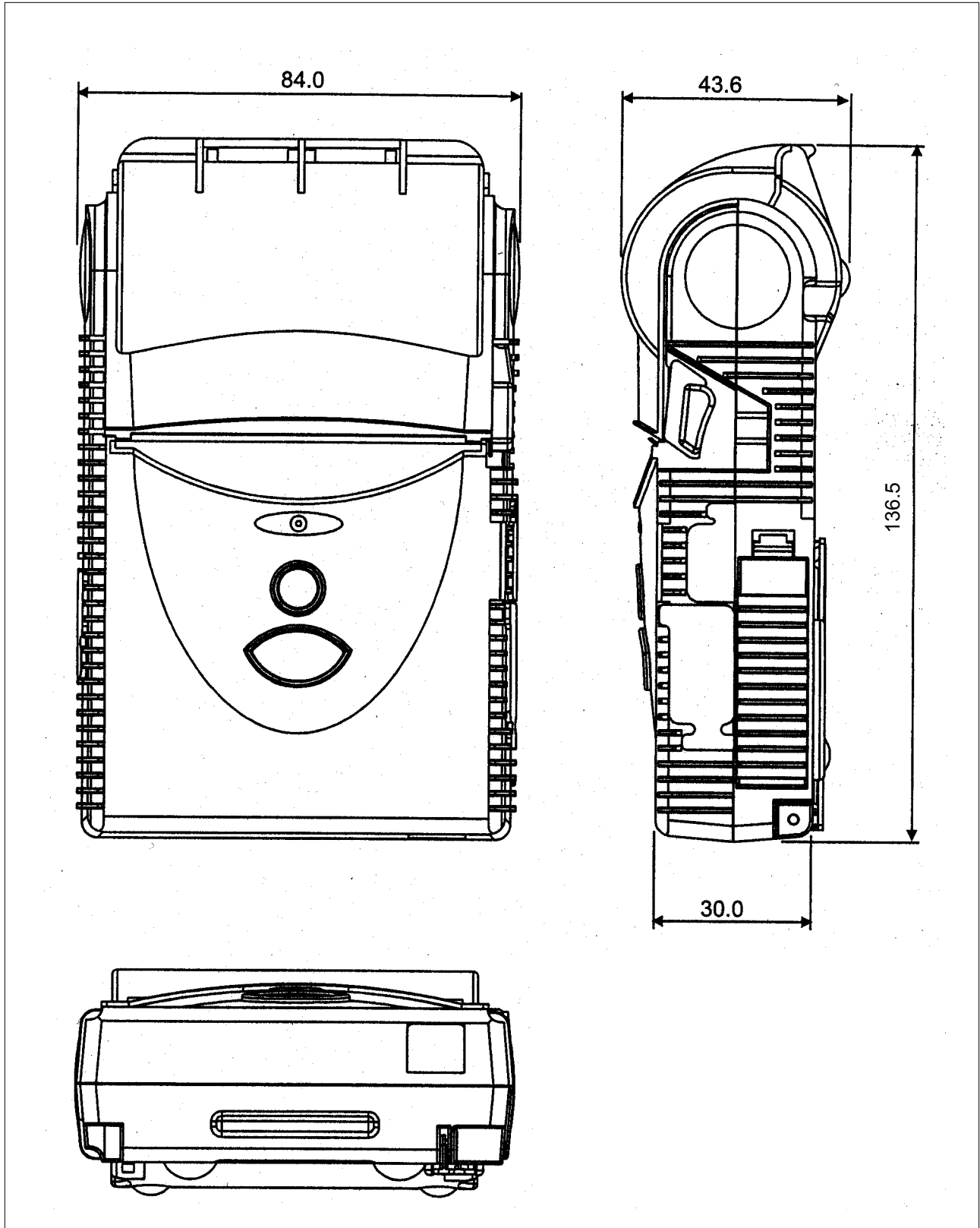| Item		Specification
Bar Code Type	Standard	UPC-A, UPC-E, JAN13, JAN8, CODE 39, ITF, CODABAR, CODE 128
	2-D	MAXI, PDF417, QR
Interface	Serial	RS-232C
	IrDA	Version 1.2 (Ir COMM protocol)
	Bluetooth*3	Version 2.1 +EDR (standard and iOS)
	USB	2.0 full speed
Safety Standard	Noise	FCC Class B, FCC Part 15
	Water resistant	JIS C0920 Class 2
Environmental conditions	Operating temperature	0°C to +50° C*4
	Operting humidity	30 to 85% RH (no condensation)
	Storage temperature	-20°C to +60℃
	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)
	Long term paper	(Oji paper) HA220AA (Mitsubishi)
	Label paper	HW54T (Nippon paper)

Notes: *3: FTP-628WSL110, 211 (standard), FTP-628WSL210 (iOS)
      *4: 0 to +40°C guarantee of print quality

■ **DIMENSIONS**

■ **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 $ + n1 + n2	Horizontal absolute position setting
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 - + n	Underline setting
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 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 selectio
ESC Q + n + ! + j	Frame overlay selection
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

Commands continued

Command	Contents
ESC c+1+n	Sets internal processing.
ESC s+n	Print speed setting
ESC {+n	Sets/resets upside down printing
ESC Y + SOH ESC+ x + a + DLE + n	RS-232C communication setting*
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 + c1 + d1~dn	User defined character definition
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 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 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 k + m + n + pL + pH + d1~dn	Barcodes (GS1 Databar) print

Commands continued

Command	Contents
GS k + m + n + k1 + k2 + k3 + k4	Barcode (GS1 DataBar) setting
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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