Seiko Instruments GmbH

LTP Series

LTP2000 SERIES PRINTERS

The LTP2000 Series answers the need for versatile, high-performance thermal printing in a compact unit. Available in models to handle paper widths of up to 112 mm, the LTP2000 Series combines high printing speeds with high print quality and quiet operation. The rugged and reliable LTP2000 Series features more than four million character lines, and with optional interface, allows for automatic paper loading. The LTP2000 Series offers performance and value for a wide range of popular applications, including measuring instruments, medical equipment, bar code, label and receipt printing, kiosks and gas tank level sensing devices.

- High resolution printing (8 dots/mm)
- High speed printing (90 mm/s attainable with LTP2242)
- Compact and light-weight
- Prints on label stock

LTP2342

- Two possible paper paths, straight or curved; thick paper printing is possible on straight path
- Paper can be automatically loaded when used in conjunction with the paper sensor
- Wide opening head for easy access



Model		LTP2242	LTP2342	LTP2442			
Printing	Method	Thermal line dot system					
	No. of dots/line	432	576	832			
	No. of characters/line	27	36	52			
	Width (mm)	54	72	104			
	Resolution	8 dots/mm					
	Paper feed pitch (mm)	0.125					
	Speed (mm/s)	90 75					
	Speed (cl/s)	18 15					
Detection	Head temperature	By thermistor					
	Paper out detection	By photo interrupter					
	Head up detection	By mechanical switch					
Dimensions (WxDxH) mm		85.2 x 61.4 x 27	106.4 x 61.4 x 27	138.2 x 61.4 x 27			
Mass (g)	Approx.	115	135	160			
Power supply	Operating voltage	24 VDC ± 2.4					
	Current consumption	1.6 A Max. @ 24 Vp (25% print ratio)	2.1 A Max. @ 24 Vp (25% print ratio)	3.1 A Max. @ 24 Vp (25% print ratio)			
S ervice life	Pulse activation	100 million pulses or more (25% print ratio)					
	Abrasion resistance	50km or more					
Operating temperature (°C)		0 to 50					
Storage environment (°C)		-20 to 60					
Paper	Width (mm)	60 +0/-1	80 +0/-1	112 +0/-1			
	Path	S traight or curved					
	Thickness (μm)	59 - 125					

CUTTERS, INTERFACE BOARD & CPU

ACU2000 SERIES AUTO CUTTERS

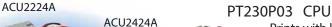
ACU2000 Series Auto Cutters are guillotine type cutters developed for the LTP2000 Series thermal line printer mechanism.

• Full or partial paper cut (on point remaining uncut) a vailable by command input

· Easily mounts on printer mechanism, opens for easy maintenance

IF2303 INTERFACE BOARD

The IF2303 is an interface board used specifically for the LTP2000 Series. It is equipped with 8-bit parallel and serial TLL data input terminals. It brings printing functions into full play using a wide variety of characters and function commands.



Prints with less current using dynamic di vision control (via number of dots to be activated)

Supports both parallel and serial input

Ensures high-quality print by measuring the temperature and voltage, automatically adjusting print density

Provides a wide variety of downloadable userdefined character functions including doublewidth/double-height, inverse print, underlining, and character spacing control

- Supports bit image and character printing, auto paper loading
- Ruler line function enables ruler line and char acter integration

Cut method Silde Type Cut width (mm) 63 85 116 Cut condition Full or partial cut (leaving one point, 2 mm wide) Drive voltage (Vc) Motor 24 ± 2.4 Detector 5 ± 0.25 Secondary (secondary) Starting current (A) 1.2 max Operating time (ms/cycle) 500 max. Cut frequency (cuts/minute) 30 max. Life (cuts) 300,000 Dimensions (WXDxH) mm 79 x 66.5 x 16.5 100 x 66.5 x 17 126 x 69.3 x 17.5 Weight (g) 120 200 260 Operating temperature (*C) -20 to 60 5 Storage temperature (*C) -20 to 60 5 Paper thickness (µm) All LPT2000 Series CPU PT330P01 PT330P01 Input control method B-bit paralle (modified Centronics) Serial (TTL, level) Character type IBM compatible, extended graphics character set Dimensions (WXDxH) mm 90 x 100 x 22 Weight (g) 70 70 Operating portage Vccs ±	Model		ACU2224A	ACU2342A	ACU2442A			
Cut condition	Cut method			Slide Type				
Drive voltage (Vcc) Motor Detector 2.4 ± 2.4 Detector 5 ± 0.25 Starting current (A) 1.2 max.	Cut width (mm)		63	85	116			
Detector S ± 0.25	Cut condition	Cut condition		Full or partial cut (leaving one point, 2 mm wide)				
Starting current (A)	Drive voltage (Vcc)	Motor						
Operating time (ms/cycle) 500 max. Cut frequency (cuts/minute) 30 max. Life (cuts) 30 0000 Dimensions (WxDxH) mm 79 x 66.5 x 16.5 100 x 66.5 x 17 126 x 69.3 x 17.5 Weight (g) 120 200 260 Operating temperature (°C) -20 to 60 9 Storage temperature (°C) -20 to 60 9 Applicable mechanism All LPT2000 Series 9 CPU PT23.0P01 9 Input control method 8-bit parallel (modified Centronics) 9 Carrier type IBM compatible, extended graphics character set 9 Dimensions (WxDxH) mm 90 x 100 x 22 9 Weight (g) 70 70 Operating voltage Vcc 5 ± 0.5 V, Vp -24 ± 2.4V Vcc 10 to 60 Wax. 170 mA @ 5 VDC (strandby) 9 Nax. 170 mA @ 5 VDC (printing) Operating temperature (°C) -20 to 60 -20 to 60 Applicable mechanism All LTP2000 Series -20 to 60 Applicable mechanism All LTP2000 Series -20 to 60 Applicabl		Detector	5 ± 0.25					
Cut frequency (cuts/minute) 30 max. Life (cuts) 30,0000 Dimensions (WxDxH) mm 79 x 66.5 x 16.5 100 x 66.5 x 17 126 x 69.3 x 17.5 Weight (g) 120 200 260 Operating temperature (°C) 0 to 50 260 Storage temperature (°C) -20 to 60 30.000 Paper thickness (µm) 65 - 125 Applicable mechanism All LPT2000 Series CPU PT230PO1 Input control method 8-bit parallel (modified Centronics) Serial (TIL level) 30.000 Character type IBM compatible, extended graphics character set Dimensions (WxDxH) mm 9 x 10 x 2 Weight (g) 70 Operating voltage Vcc 5 ± 0.5 V Vp=24 ± 2.4V Current consumption (lcc) Max. 70 m A @ 5 VDC (printing) Operating temperature (°C) 0 to 50 Storage temperature (°C) -20 to 60 Applicable mechanism All LTP2000 Series Applicable mechanism All LTP2000 Series Package form 128 + in Application -20 to 60	Starting current (A)		1.2 max.					
Life (cuts) 300,000 Dimensions (WxDxH) mm 79 x 66.5 x 16.5 100 x 66.5 x 17 126 x 69.3 x 17.5 Weight (g) 120 200 260 Operating temperature (°C) 0 to 50 3.00,000 Storage temperature (°C) -20 to 60 Paper thickness (μm) 65 - 125 Applicable mechanism All LPT2000 Series CPU PT230P01 Input control method 8-bit parallel (midfied Centronics) Serial (TTL level) Serial (TTL level) Character type IBM compatible, extended graphics character set Downloaded, user-defined characters, Option Font Dimensions (WxDxH) mm Dimensions (WxDxH) mm 90 x 100 x 22 Weight (g) 70 Operating voltage Vcc=5±0.5 V, Vp=24±2.4V Current consumption (lcc) Max. 50 mA @ 5 VDC (standby) Max. 170 mA @ 5 VDC (printing) Max. 170 mA @ 5 VDC (printing) Operating temperature (°C) -20 to 60 Applicable mechanism Applicable mechanism All LTP2000 Series Package form 128-p	Operating time (ms/cyc	cle)	500 max.					
Dimensions (WxDxH) mm 79 x 66.5 x 16.5 100 x 66.5 x 17 126 x 69.3 x 17.5 Weight (g) 120 200 260 Operating temperature (°C) 0 to 50	Cut frequency (cuts/minute)		30 max.					
Weight (g)	Life (cuts)		300,000					
Operating temperature (°C) 0 to 50 Storage temperature (°C) -20 to 60 Paper thickness (µm) 65 - 125 Applicable mechanism Applicable mechanism All LPT2000 Series CPU PT230P01 Input control method 8-bit parallel (modified Centronics) Serial (TTL level) Serial (TTL level) Character type IBM compatible, extended graphics character set Dimensions (WxDxH) mm 90 x 100 x 22 Weight (g) 70 Operating voltage Vcc=5 ± 0.5 V, Vp=24 ± 2.4V Current consumption (Icc) Max. 50 mA @ 5 VDC (strantey) Max. 170 mA @ 5 VDC (strantey) Max. 170 mA @ 5 VDC (strantey) Operating temperature (°C) 0 to 50 Storage temperature (°C) -20 to 60 Applicable mechanism All LTP2000 Series Package form 128-pin QFP Dimensions (WxDxH) mm 22 x 16 x 3.1 Configuration C-MOS LSI Input method 8-bit parallel (Centronics), USB, (TTL) serial Operating voltage (Vcc) 5 VDC ± 10%	Dimensions (WxDxH) mm		79 x 66.5 x 16.5	100 x 66.5 x 17	126 x 69.3 x 17.5			
Storage temperature (°C) -20 to 60 Paper thickness (µm) 65 - 125 Applicable mechanism All LPT2000 Series CPU PT230P01 Input control method 8-bit parallel (modified Centronics) Serial (TTL level) Serial (TTL level) Character type IBM compatible, extended graphics character set Downloaded, user-defined characters, Option Font Dimensions (WxDxH) mm 90 x 100 x 22 Weight (g) 70 Operating voltage Vcc=5 ± 0.5 V, Vp=24 ± 2.4V Current consumption (Icc) Max. 50 m & 5 VDC (stradby) Max. 170 m A @ 5 VDC (stradby) Max. 170 m A @ 5 VDC (printing) Operating temperature (°C) 0 to 50 Storage temperature (°C) -20 to 60 Applicable mechanism All LTP2000 Series Package form 128-pin QFP Dimensions (WxDxH) mm 22 x 16 x 3.1 Configuration C-MOS LSI Input method 8-bit parallel (Centronics), USB, (TTL) serial Operating voltage (Vcc) 5 VDC ± 10%	Weight (g)		120	200	260			
Paper thickness (μm) 65 - 125 Applicable mechanism All LPT2000 Series CPU PT230P01 Input control method 8-bit parallel (modified Centronics) Serial (TTL level) Character type IBM compatible, extended graphics character set Dimensions (WxDxH) mm 90 x 100 x 22 Weight (g) 70 Operating voltage Vcc=5 ± 0.5 V, Vp=24 ± 2.4V Current consumption (lcc) Max. 50 mA § 5 VDC (standby) Max. 170 mA § 5 VDC (printing) Operating temperature (°C) 0 to 50 Storage temperature (°C) -20 to 60 Applicable mechanism All LTP2000 Series Package form 128-pin QFP Dimensions (WxDxH) mm 2 x 16 x 3.1 Configuration C-MOS LSI Input method 8-bit parallel (Centronics), USB, (TTL) serial Operating voltage (Vcc) 5 VDC ± 10%	Operating temperature (°C)		0 to 50					
Applicable mechanism CPU PT230P01 Input control method B-bit parallel (modified Centronics) Serial (TTL level) Character type IBM compatible, extended graphics character set Downloaded, user-defined characters, Option Font Dimensions (WxDxH) mm P0 x 100 x 22 Weight (g) T0 Operating voltage Vc=5 ± 0.5 V, Vp=24 ± 2.4V Current consumption (lcc) Max. 50 mA @ 5 VDC (standby) Max. 170 mA @ 5 VDC (printing) Operating temperature (°C) Storage temperature (°C) T0 Operating temperature (°C) Operating temperature	Storage temperature (°C)		-20 to 60					
CPU PT230P01 Input control method 8-bit parallel (modified Centronics) Serial (TTL level) Character type IBM compatible, extended graphics character set Downloaded, user-defined characters, Option Font Dimensions (WxDxH) mm 90 x 100 x 22 Weight (g) 70 Operating voltage Vcc=5 ± 0.5 V, Vp=24 ± 2.4V Current consumption (lcc) Max. 50 mA @ 5 VDC (standby) Max. 170 mA @ 5 VDC (printing) Operating temperature (°C) 0 to 50 Storage temperature (°C) -20 to 60 Applicable mechanism All LTP2000 Series Package form 128-pin QFP Dimensions (WxDxH) mm 2 x 16 x 3.1 Configuration C-MOS LSI Input method 8-bit parallel (Centronics), USB, (TTL) serial Operating voltage (Vcc) 5 VDC ± 10%	Paper thickness (μm)		65 - 125					
CPU PT230P01 Input control method 8-bit parallel (modified Centronics) Serial (TTL level) Character type IBM compatible, extended graphics character set Downloaded, user-defined characters, Option Font Dimensions (WxDxH) mm 90 x 100 x 22 Weight (g) 70 Operating voltage Vcc=5 ± 0.5 V, Vp=24 ± 2.4V Current consumption (lcc) Max. 50 mA @ 5 VDC (standby) Max. 170 mA @ 5 VDC (printing) Operating temperature (°C) 0 to 50 Storage temperature (°C) -20 to 60 Applicable mechanism All LTP2000 Series Package form 128-pin QFP Dimensions (WxDxH) mm 2 x 16 x 3.1 Configuration C-MOS LSI Input method 8-bit parallel (Centronics), USB, (TTL) serial Operating voltage (Vcc) 5 VDC ± 10%								
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Serial (TTL level) Character type IBM compatible, extended graphics character set Downloaded, user-defined characters, Option Font Dimensions (WxDxH) mm 90 x 100 x 22 Weight (g) 70 Operating voltage Vcc=5 ± 0.5 V, Vp=24 ± 2.4V Current consumption (lcc) Max. 50 mA @ 5 VDC (standby) Max. 170 mA @ 5 VDC (printing) Operating temperature (°C) 10 to 50 Storage temperature (°C) Applicable mechanism All LTP2000 Series Package form 128-pin QFP Dimensions (WxDxH) mm 22 x 16 x 3.1 Configuration C-MOS LSI Input method 8-bit parallel (Centronics), USB, (TTL) serial Operating voltage (Vcc) 5 VDC ± 10%								
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Weight (g) 70 Operating voltage Vcc=5 ± 0.5 V, Vp=24 ± 2.4V Current consumption (lcc) Max. 50 mA @ 5 VDC (standby) Max. 170 mA @ 5 VDC (printing) Operating temperature (°C) 0 to 50 Storage temperature (°C) -20 to 60 Applicable mechanism All LTP2000 Series Package form 128-pin QFP Dimensions (WxDxH) mm 22 x 16 x 3.1 Configuration C-MOS LSI Input method 8-bit parallel (Centronics), USB, (TTL) serial Operating voltage (Vcc) 5 VDC ± 10%	71.							
Operating voltage Vcc=5 ± 0.5 V, Vp=24 ± 2.4V Current consumption (lcc) Max. 50 mA @ 5 VDC (standby) Max. 170 mA @ 5 VDC (printing) Operating temperature (°C) 0 to 50 Storage temperature (°C) -20 to 60 Applicable mechanism All LTP2000 Series Package form 128-pin QFP Dimensions (WxDxH) mm 22 x 16 x 3.1 Configuration C-MOS LSI Input method 8-bit parallel (Centronics), USB, (TTL) serial Operating voltage (Vcc) 5 VDC ± 10%	Dimensions (WxDxH) n	nm						
Current consumption (Icc) Max. 50 mA @ 5 VDC (standby) Max. 170 mA @ 5 VDC (printing) Operating temperature (°C) 0 to 50 Storage temperature (°C) -20 to 60 Applicable mechanism All LTP2000 Series Package form 128-pin QFP Dimensions (WxDxH) mm 22 x 16 x 3.1 Configuration C-MOS LSI Input method 8-bit parallel (Centronics), USB, (TTL) serial Operating voltage (Vcc) 5 VDC ± 10%	Weight (g)		70					
Max. 170 mA @ 5 VDC (printing) Operating temperature (°C) 0 to 50 Storage temperature (°C) -20 to 60 Applicable mechanism All LTP2000 Series Package form 128-pin QFP Dimensions (WxDxH) mm 22 x 16 x 3.1 Configuration C-MOS LSI Input method 8-bit parallel (Centronics), USB, (TTL) serial Operating voltage (Vcc) 5 VDC ± 10%	Operating voltage		Vcc=5 ± 0.5 V, Vp=24 ± 2.4V					
Operating temperature (°C) 0 to 50 Storage temperature (°C) -20 to 60 Applicable mechanism All LTP2000 Series Package form 128-pin QFP Dimensions (WxDxH) mm 22 x 16 x 3.1 Configuration C-MOS LSI Input method 8-bit parallel (Centronics), USB, (TTL) serial Operating voltage (Vcc) 5 VDC ± 10%	Current consumption (lcc)		Max. 50 mA @ 5 VDC (standby)					
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Configuration C-MOS LSI Input method 8-bit parallel (Centronics), USB, (TTL) serial Operating voltage (Vcc) 5 VDC ± 10%			128-pin QFP					
Input method 8-bit parallel (Centronics), USB, (TTL) serial Operating voltage (Vcc) 5 VDC ± 10%	Dimensions (WxDxH) mm		22 x 16 x 3.1					
Input method 8-bit parallel (Centronics), USB, (TTL) serial Operating voltage (Vcc) 5 VDC ± 10%	Configuration		C-MOS LSI					
Operating voltage (Vcc) 5 VDC ± 10%	Input method							
	Operating voltage (Vcc)		5 VDC ± 10%					
	Operating frequency (MHz)		18.43 ± 0.5%					

ACU2324A



