LTP Series

LTPV345 / LTPV445 PRINTER

LTPV345 and LTPV445 of Seiko Instruments are new 3" and 4" thermal line dot printer mechanisms which belong to the "Easy-Paper-Operation" product-line. They are unique in featuring straight paper paths, i.e. they present the first easy-loading mechanisms suitable for label printing. Paper up to a thickness of 125µm can be printed on. There is also an option of mounting the paper end sensor either on the frame or the platen differing from specific requirements. Finally, both versions can be battery driven. Thus, LTPV series printers are perfectly applicable for measuring instruments and analysers, POS-EFT and ECR as well as for a variety of hand-held applications.

- Straight paper path: label printing possible up to paper thickness of 125µm
- Position of paper end sensor optional: frame or platen
- Improved operability of paper installation and head cleaning by release lever operation
- High resolution printing (8 dots/mm)
- High speed, low voltage printing (45mm/s @ 5V, 85mm/s @ 7.2V)
- Battery operation of 4 to 6 cells Ni-MH / Ni-Cd batteries or 2 cells of lithium-ion batteries for hand-held applications
- Low 4.2V to 8.5V power supply operation
- Design to fit easily into the outer case (reduced number of outer case parts)

LTPV345

LTPV445

Model		LTPV345A-576	LTPV445A-832
Printing	Method	Thermal line dot printing	
	No. of dots/line	576	832
	Common activatable dots/line	192	192
	Resolution (mm)	8 dots	
	Width (mm)	72	104
	Speed (mm/s)	45 @ 5V, 85 @ 7.2V, 85 @ 8.5V	
	Paper feed pitch (mm)	0.0625	
Detection	Head temperature	By thermistor	
	Lever position detection	By mechanical switch	
	Out-of-paper detection	By photo interrupter	
Dimensions (WXDXH) mm[1]		93 x 34.5 x 39.5 mm	125 x 34.5 x 39.5 mm
Weight (g)		apprx. 95	apprx. 115
Power supply	Operating voltage	Vp line: 4.2V to 8.5 V; Vdd line: 5V +/- 5%	
	Current consumption[2]	1.96A max. @ 5V, 2.82A max. @ 7.2V, 3.33A max. @ 8.5V	
Service life	Pulse activation	100 million pulses or more	
	Abrasion resistance	50km or more	
Operating temperature (°C)		0 to +50	
Storage temperature (°C)		-20 to +60	
Paper	Width (mm)	80	112
	Paper feed force	0.49N (50gf) or more	
	Paper hold force	0.78N (80gf) or more	
	Thickness	125µm	

[1] Excluding the lever projections
[2] When the number of activated dots is specified as 64

Seiko Instruments GmbH
Siemensstraße 9 b
D-63263 Neu-Isenburg
Telephone: 49-6102-297-0
Facsimile: 49-6102-297222

Specifications subject to change without notice.

INTERFACE BOARD & CPU

IFV001-01B INTERFACE BOARD FOR LTPV345 AND LTPV445

The interface IFV001-01B is an interface used with LTPV series printers. It processes and converts data input sent from a host device. The IFV001-01B is compatible with both parallel and serial data input. It prints extended character sets as well as bit images. Furthermore, the interface provides an output of internal test patterns and informs about the status of the printer.

PTV00P01 CPU FOR LTPV345 AND LTPV445

- For individual design-in into various applications
- Drives LTPV345 and LTPV445 printer mechanisms
- Supports both parallel and serial input
- Provides high quality printing by automatically adjusting print density according to temperature and voltage
- Reduces consumption current using the power saving function
- Registers and prints any font using the downloaded character function and the user-defined character function
- Downloaded characters, user-defined characters, option fonts, character strings, stamps etc. can be stored in external ROM
- Prints barcodes using the barcode print function

Model	IFV001-01B	
Application	LTPV series printer mechanism	
Character type	Extended graphics character set Downloaded characters User-defined characters Optional font	
Character configuration	16-dot	24-dot
Standard size character	16x8	24x12[1]
Kanji size character	16x16	24x24[1]
Input control method	Parallel (modified Centronics) Serial (C-MOS level)	
No. of characters/line[2]	36	52
Line spacing	16 dots[1]	
Character spacing	4 dots[1]	
Maximum print speed[3]	45.1 @ 5V, 85 @ 7.2V, 85 @ 8.5V4	
Operating voltage range		
Vcc	5V+/-10%	
Vp	4.2V to 8.5V	
Current consumption (Icc)[5]		
Printing	100mA max.	
Stand by	25mA max.	
Stop mode	12mA max.	
Operating temperature (°C)	0 to +50	
Storage temperature (°C)	-20 to +60	
Dimensions (WxDxH) mm	70 x 60 x 10.6	
Weight (g)	appr. 28	

[1] The default value is changeable through commands
[2] 24-dot standard size character, character spacing 4 dots
[3] Dynamic division 64 dots, 24-dot font standard size character, 16-dot line spacing, 4-dot character spacing, number of simultaneously activated dots is 64 or less
[4] Respectively for LTPV345 and LTPV445
[5] Vcc = 5V, 25°C, no error, when no input/output terminal is connected.

Model	PTV00P01	
Applicable printer	LTPV345	LTPV445
Package type	80 pin flat package	
Dimension (WxDxH) mm	22.8 x 16.8 x 3.05	
Configuration	C-MOS LSI	
Character type	Extended graphics character set Katakana character set[1] JIS 1st and 2nd level Kanji, Chinese, Korean[1] Downloaded characters[2] User-defined characters Option font[2]	
Input control method	Parallel (simplified Centronics) Serial (2400-38400 bpc, C-MOS level)	
Operating voltage		
Vcc	5V+/-10%	
Vp	4.2V to 8.5V	
Operating frequency	25 MHz+/-0.5%	
Current consumption[3]		
Printing	100mA	
Standby	25mA	
Stop mode	12mA	
Operating temperature (°C)	0 to +50	
Storage tempperature (°C)	-20 to +60	
Remark	Use this CPU and a gate array (PT301GA1) as a pair	

[1] To print Kanji / Katakana characters, the Japanese CG (PTJCG2) is necessary. To print Chinese / Korean characters, the respective CGs for Chinese and Korean are necessary.
[2] External RAM or ROM must be needed.
[3] Vcc = 5V, 25°C, no error, when input/output terminal is not connected.

SII Seiko Instruments

Seiko Instruments GmbH
Siemensstraße 9 b
D-63263 Neu-Isenburg
Telephone: 49-6102-297-0
Facsimile: 49-6102-297222