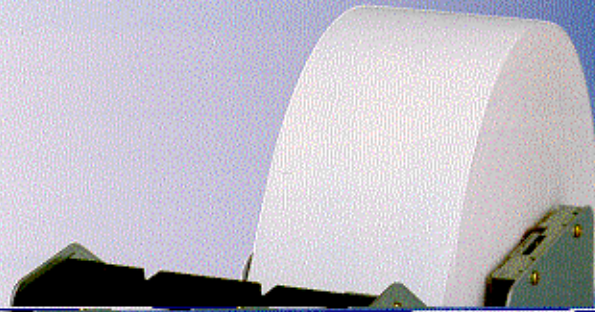


LINE THERMAL PRINTER MECHANISM
PRINTER PRESENTER UNIT

CITIZEN

PPU-231/PHU-131

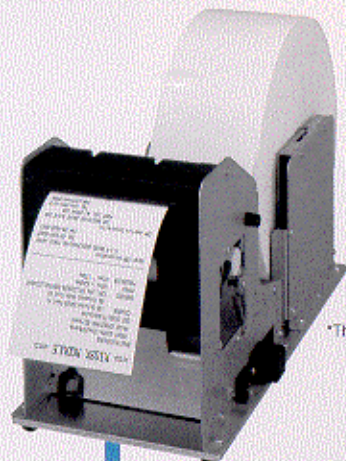


LINE THERMAL PRINTER MECHANISM PRINTER PRESENTER UNIT

PPU-231/PHU-131

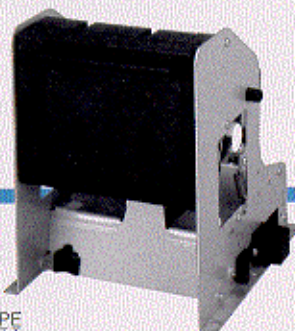
Unit breakdown

Complete unit
PPU-230/PHU-131



*The bottom plate is not included.

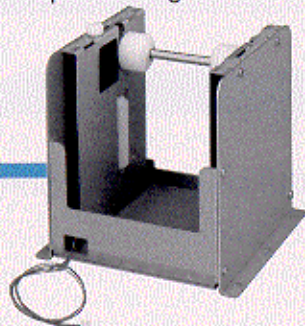
PPU series
●Printer presenter unit



PPU-231PE

- Model
- Printing method
2: Thermal
- Paper width
3: 80mm
- Product number
1: Standard
- Interface
P: Parallel
R: Serial
- Character set
K: Japan
U: US
E: Europe

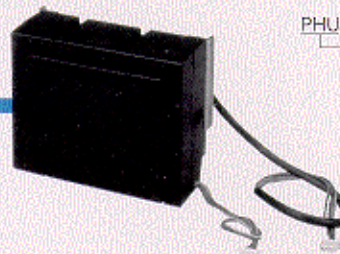
PHU series
●Paper holding unit



PHU-131

- Model
- Product number

PRU series
●Presenter unit



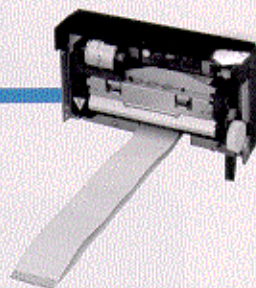
PHU-130

- Model
- Product number
- Paper width
3: 80mm
- Custom code

< Configuration >

1. Presenter (PR-1)
2. Auto cutter (ACS230F)
3. Presenter bracket

PMU series
●Printer mechanism unit



PMU-230

- Model
- Printing method
2: Thermal
- Paper width
3: 80mm
- Custom code

< Configuration >

1. Printer mechanism (LT380V)
2. Paper guide
3. Intermediate PCB
4. Mechanism bracket

BD2 series
●Control board set



BD2-380APE

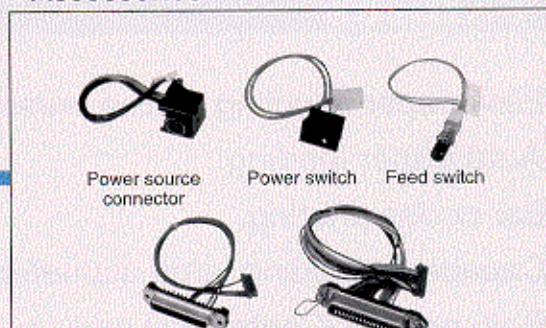
- Custom code
- Interface
P: Parallel
R: Serial
- Character set
K: Japan
U: US
E: Europe

< Configuration >

1. Main control PCB
2. Accessories

* Choose I/F connector harness Assy.

●Accessories



Power source connector

Power switch

Feed switch

Standard Specifications

Printing method	Line thermal dot printing
Printing width	72mm/576 dots
Dot pitch	8 dots/mm
Printing speed	62.5mm/sec. [Max.] (500 dot lines/sec.)
Column count	48 columns (12 x 24 Font A), 64 columns (9 x 24 Font B)
Font size	1.25mm x 3.00mm (12 x 24 Font A) 0.88mm x 3.00mm (9 x 24 Font B)
Fonts	Alphanumeric, International characters
Bar codes	UPC-A, JAN (EAN) 13 col./8 col., ITF, CODE39, CODE128, CODABAR
Line spacing	4.23mm (1/6") Selectable by command set (minimum: 1/203")
Printing paper	Thermal roll paper Width: 80mm External diameter: ø203mm (with paper holder unit) Internal diameter: ø25.4mm Paper thickness: 60 to 85µm Recommended paper: TF-50KS-E, TF-62KS-E (Nippon Paper Industries)
Presenter	Standard length: 64~305mm (Max. 457mm Under certain condition.)
Interface	Serial (RS-232C) or Parallel (Centronics)
Input buffer	4K bytes
Command	ESC/POS
Sensors	Paper near end sensor (adjustable, for PHU series) Paper end sensor (for PMU series) Black mark sensor (option)
Power source voltage	24V±7%
Power consumption	100W
Weight	PPU: 1.6 kg (incl. control PCB) PHU: 0.9 kg (excl. roll paper)
External dimensions	See back page
Operating temperature/humidity	5 to 40°C, 35 to 85%RH (No condensation)
Storage temperature/humidity	-20 to 60°C, 10 to 90%RH (No condensation)
Reliability	Head: 50 million pulses (12.5% printed area) 30 km (normal temperature/humidity with recommended paper) Auto cutter: 300,000 cuts (normal temperature/humidity with recommended paper)

* ESC/POS is a trademark of Seiko Epson Corporation.

Connector Connection

● Parallel Interface

No.	Signals	No.	Signals
1	STROBE	19	TWISTED PAIR GND
2	DATA 0	20	TWISTED PAIR GND
3	DATA 1	21	TWISTED PAIR GND
4	DATA 2	22	TWISTED PAIR GND
5	DATA 3	23	TWISTED PAIR GND
6	DATA 4	24	TWISTED PAIR GND
7	DATA 5	25	TWISTED PAIR GND
8	DATA 6	26	TWISTED PAIR GND
9	DATA 7	27	TWISTED PAIR GND
10	ACK	28	TWISTED PAIR GND
11	BUSY	29	TWISTED PAIR GND
12	PE	30	TWISTED PAIR GND
13		31	RESET
		32	FAULT
		33	
16		34	
17	FRAME GND 35	35	
18		36	

< Note >

Data input: 8 bit parallel (DATA 0 to 7)

Control signals: ACK, BUSY, STROBE, FAULT, PE, RESET

Compatible connectors: Printer side: 57GE-40360 (Amphenol) or equivalent

Cable side: 57-30360 (Amphenol) or equivalent

● Serial interface

No.	Signal	Input/output	Function
1	FG		Ground
7	GND		GND for signal
3	RxD	Input	Receiving data
20	DTR	Output	Printer BUSY signal
2	TxD	Output	Sending data
6	DSR	Input	Data set ready

< Note >

1. System: Non-synchronous system

2. Baud rate: 1200, 2400, 4800, 9600, 19200 bps (chosen by user)

3. Word architecture

Start bit : 1 bit

Data bit : 8 or 7 bit (set upon delivery)

Parity bit : Odd, even, or no parity (set by user)

Stop bit : 1 bit or more

4. Signal polarity

RS-232C

* Mark = Logic "1" (-3V to -12V)

* Space = Logic "0" (+3V to +12V)

5. Receiving data (RxD signal)

* Mark = 1

* Space = 0

6. Receiving control (DTR signal)

* Mark : Unable to transmit data

* Space : Able to transmit data

7. Sending control (TxD signal)

DC1 code (11H) X-ON : Able to send data

DC3 code (13H) X-OFF : Unable to send data

< Note >

1. The RS-232C signal is based on EIA RS-232C.

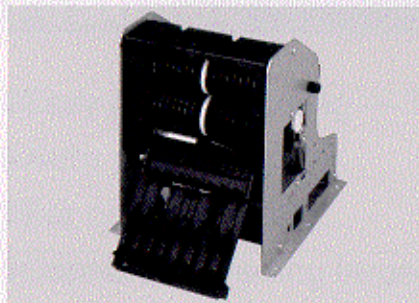
2. Keep receiving data in the Mark condition when no data transmission is taking place.

Compatible connector (D-Sub connector)

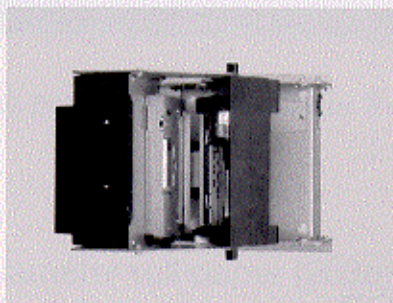
Printer side : 17LE-13250 (Amphenol) or equivalent

Cable side : 17LE-23250 (Amphenol) or equivalent

Printer Presenter Unit PPU-231

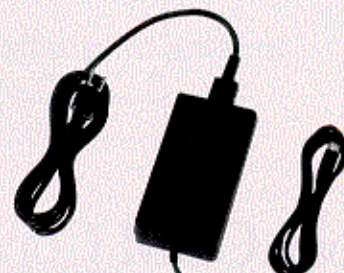


Presenter unit (opened view)



Presenter unit and printer

Power supply unit

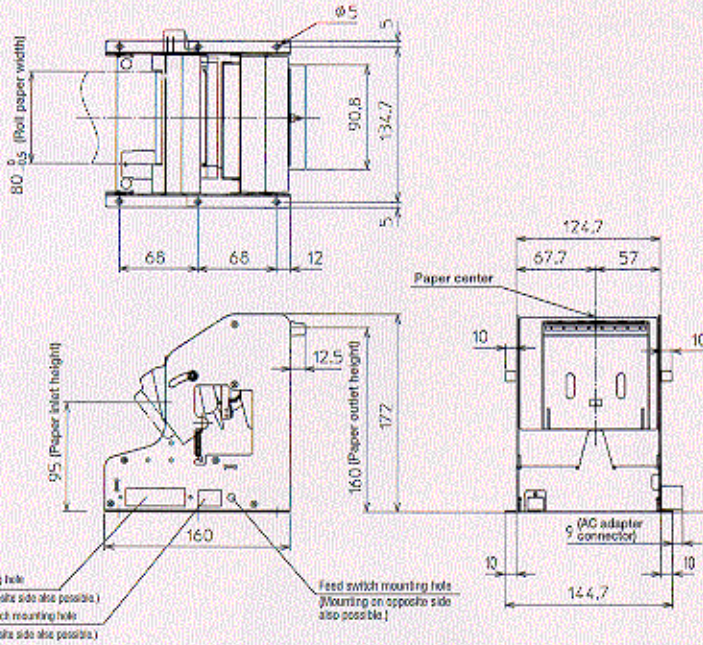


LINE THERMAL PRINTER MECHANISM
PRINTER PRESENTER UNIT

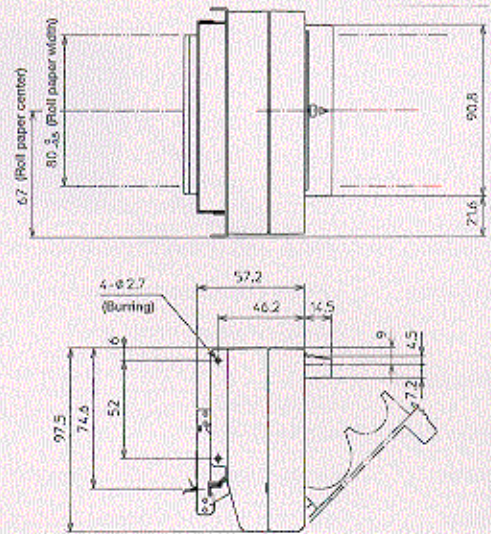
PPU-231/PHU-131

External dimensions

●Printer presenter unit
PPU-231



●Presenter unit
PRU-130



●Paper handling unit
PHU-131



●Printer mechanism unit
PMU-230

4- $\phi 2.7$