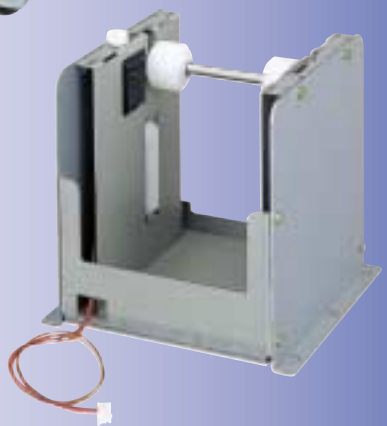
CITIZEN®

LINE THERMAL PRINTER MECHANISM
PRINTER PRESENTER UNIT

PPU-231/PHU-131

Printer presenter unit
PPU-231



Paper holding unit
PHU-131

Features

- Easy paper handling — The presenter unit feeds the paper after print and cut.
- Paper auto loading.
- Bar codes printing.
- Capable of loading large diameter roll paper (203ø).
- Both parallel (Centronics) and serial (RS-232C) interfaces available.
- Equipped with a paper end sensor and paper near end sensor.
- AC adapter available.

*The bottom plate in the above illustration is not included.

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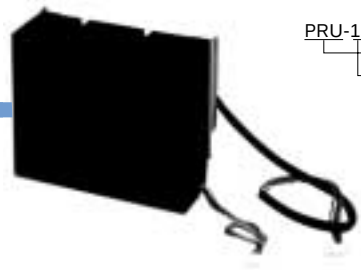
Unit breakdown

Complete unit
PPU-231/PHU-131

*The bottom plate is not included.

PRU series
●Presenter unit



PRU-130
- Model
- Product number
- Paper width
  3: 80mm
- Custom code

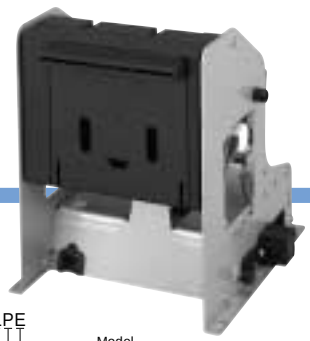
< Configuration >
1. Presenter (PR-1)
2. Auto cutter (ACS230F)
3. Presenter bracket

PMU series
●Printer mechanism unit

PMU-230
- Model
- Printing method
  2: Thermal
- Paper width
  3: 80mm
- Custom code

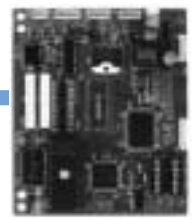
< Configuration >
1. Printer mechanism (LT380V)
2. Paper guide
3. Intermediate PCB
4. Mechanism bracket

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

BD2 series
●Control board set

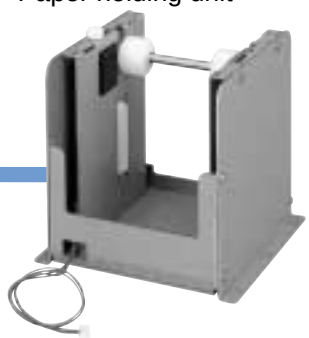


BD2-380APE
- Custom code
- Interface
  P: Parallel
  R: Serial
- Character set
  K: Japan
  U: US
  E: Europe

< Configuration >
1. Main control PCB
2. Accessories

* Choose I/F connector harness Assy.

PHU series
●Paper holding unit



PHU-131
- Model
- Product number
- Paper width
  3: 80mm
- Paper near end sensor
  1: 1 sensor
  2: 2 sensors

●Accessories

Power source connector

Power switch

Feed switch

I/F connector harness Assy
(for serial) (for parallel)

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)
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: 1.6kg (incl. control PCB) PHU: 0.9kg (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) 30km (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	STOROBE	19	TWISTED PAIR GND
2	DATA 0	20	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 : 17JE-23250 (Amphenol) or equivalent

Printer Presenter Unit PPU-231

Presenter unit (opened view)

Presenter unit and printer
(opened view, shown from above)

Easy access for maintenance and cleaning.

Power supply unit

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External dimensions

●Printer presenter unit

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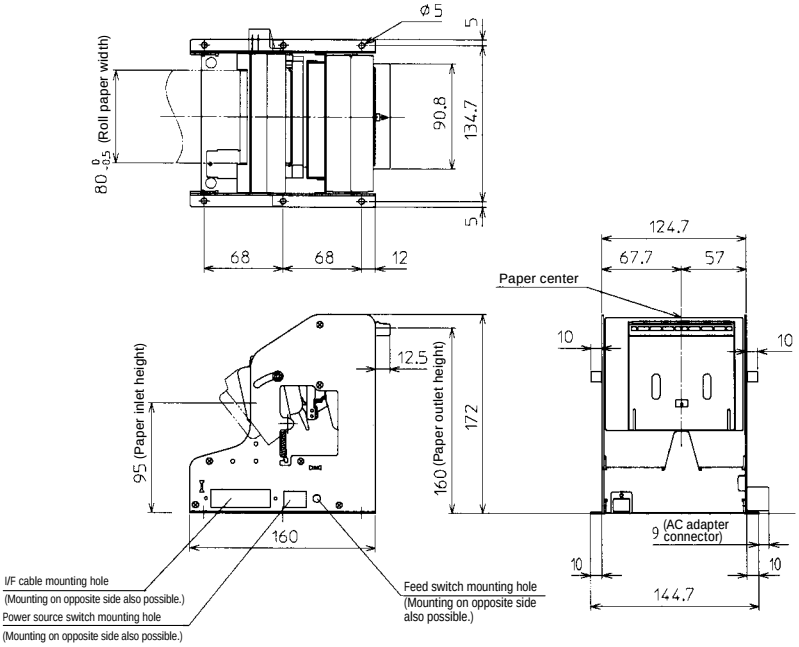
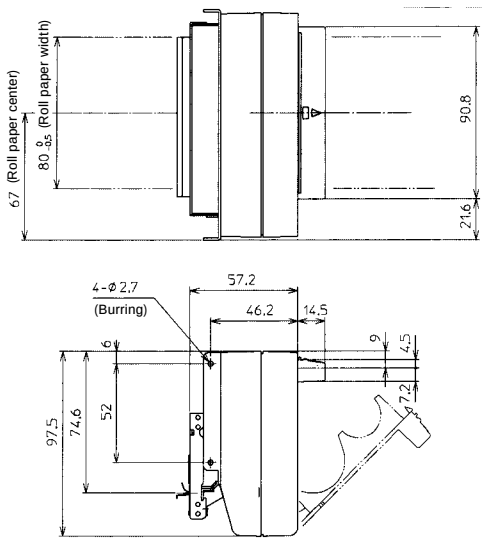


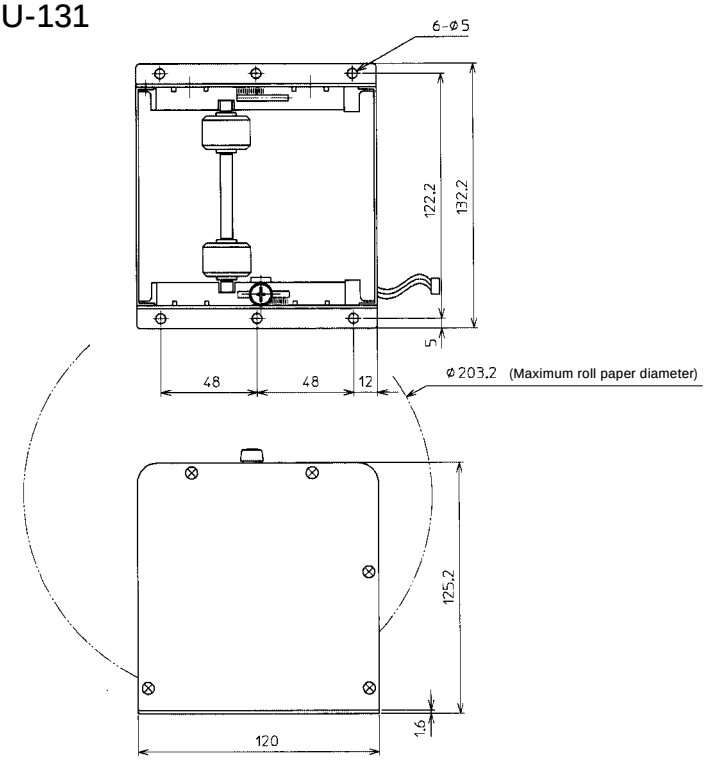
●Presenter unit

PRU-130



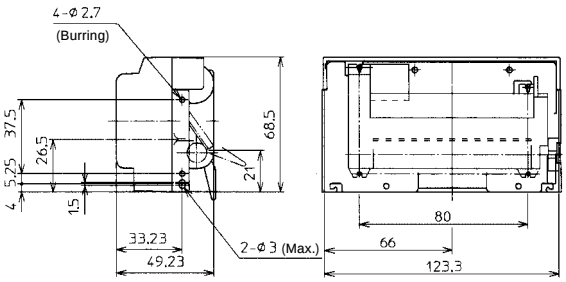
●Paper handling unit

PHU-131



●Printer mechanism unit

PMU-230



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