DT105X / PB105 Series

Cash Drawer Trigger
& Printer Beeper
User's Manual

Contents

FCC COMPLIANCE STATEMENT

Information

■ Cash Drawer Trigger & Printer Beeper

MACHINE TYPE	FUNCTION
DT105U Cash Drawer Trigger USB Interface Command control and RTS/DTR signal control	USB Ver 1.1 LED STATUS O/P DC 24V AUTO TEST BEEP POS EPSON POS CITIZEN POS PROTOLINK POS STAR COMMAND RTS/DTR
DT105R Cash Drawer Trigger RS232 Interface Command control and RTS/DTR signal control	RS-232 LED STATUS O/P DC 24V AUTO TEST BEEP POS EPSON POS CITIZEN POS PROTOLINK POS STAR DC 9 V - 12 V COMMAND RTS/DTR
PB105 Printer Beeper	LED STATUS DC 8 ~ 24 V POS PRINTER CASH DRAWER OUTPUT BEEP 105 d B DC24 V

■ Standard Package

DT105U
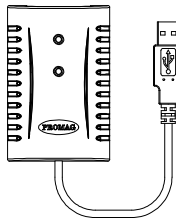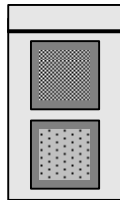
Main unit
(DT105U)   **Velcro Fastener**
(ASY-M93-1049-46)   **CD-ROM**
(DISK5140)
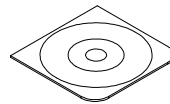
DT105R
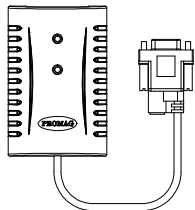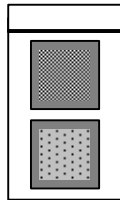
Main unit
(DT105R)   **Velcro Fastener**
(ASY-M93-1049-46)   **Power Plug**
(ASY-M93-6022-1)   **CD-ROM**
(DISK5140)
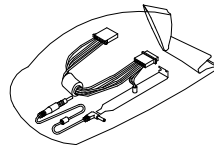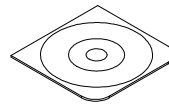
PB105
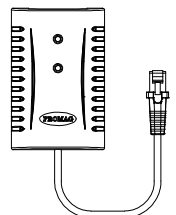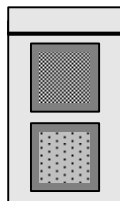
Main unit
(PB105)   **Velcro Fastener**
(ASY-M93-1049-46)

■ Optional
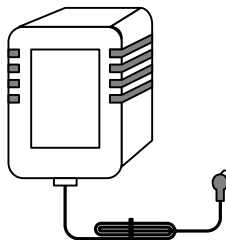
Power Adaptor
DC9V/120VAC (APR-1025)or DC9V/230VAC (APR-1013)

Technical And Operational Description

■ Front Panel and Operations

PHONE JACK

DRIVE INDICATOR

READY/ RECEIVE INDICATOR (DT105X)

BUZZER HOLE (PB105)

PROMAG

CABLE
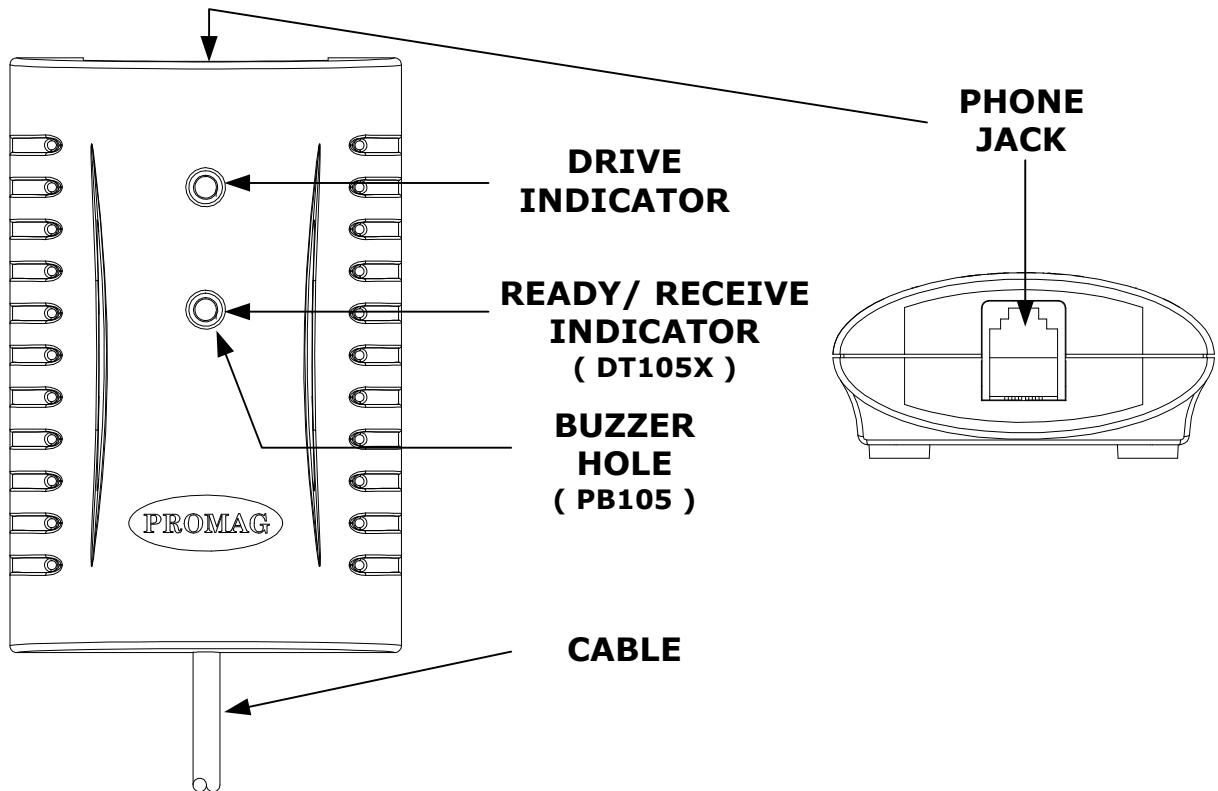
- **DRIVE INDICATOR (Red color)**
  The status LED provides visual indication of the deivce output operating

- **READY/ RECEIVE INDICATOR (Green color) <DT105X>**
  Indicating the device is ready to accept new inputs and communication status from Host.

- **BUZZER HOLE < PB105 >**
  The sound's hole for Buzzer.

- **PHONE JACK**
  For connection to Cash Drawer .

- **CABLE**
  Connect to USB or RS232 (include power supply) interface.

■ Introduction

This manual provides basic information about the Models of DT105U (DT105R) Universal Serial Bus (RS232 Serial Port) Cash Drawer Triggers, and the PB105 Printer Beeper.

The DT105U(DT105R) Cash Drawer Trigger is designed to provide USB (RS232) interfacing to the cash drawer. This allows cash drawers, previously connected to POS printers and cash registers, to be connected to a USB (RS232) port of the computer.

The DT105U USB Trigger uses a Virtual Serial Port Driver, making it appear to have the software like a standard RS232 Serial Port. This way the existing POS Software can communicate with the USB Cash Drawer Trigger as if it were connected to a Serial Port. A unique serial number is assigned to each USB Trigger Module and the Driver Software will assign the next available Serial Port to each device it recognises (multiple Triggers can be used on one PC).

The DT105U(DT105R) module is designed to accept modular cash drawer connectors.All standard POS printer drawer open commands are used to trigger the device and the ESC/POS status command is also available to read the drawers open or closed condition.

* **DT105U** is to open the cash drawer when it receives the trigger command or the RTS/DTR signal control from the computer via USB port.
* **DT105R** is to open the cash drawer when it receives the trigger command or the RTS/DTR signal control from the computer via RS232 port.

■ Indicators Information

DT105X with COMMAND control

STATUS	GREEN LED	RED LED	BUZZER	COMMUNICATION
POWER ON	BLINK 2 TIMES	BLINK 2 TIMES	BEEP-BEEP	X
READY	ON	OFF	X	O
OPEN CASH DRAWER	OFF	ON	BEEP	X
COMMUNICATION	BLINK	OFF	X	X

DT105X with RTS/DTR signal control

STATUS	GREEN LED	RED LED	BUZZER	RTS/DTR
POWER ON	BLINK 2 TIMES	BLINK 2 TIMES	BEEP-BEEP	X
READY	ON	OFF	X	H/L
X	OFF	OFF	X	L/L , H/H
OPEN CASH DRAWER	OFF	ON	BEEP	L/H

PB105

STATUS	GREEN LED	BUZZER
READY	OFF	X
ACTION	ON	BEEP

Connections

WAS-1510
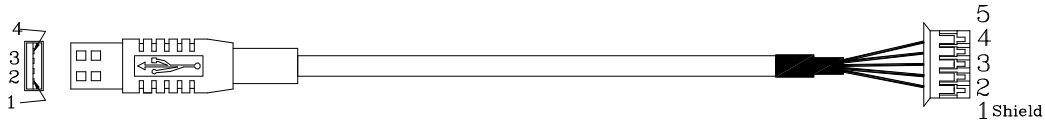
USB	COLOR	FUNCTION	5 PIN
1	RED	POWER +	5
2	WHITE	D -	4
3	GREEN	D +	3
4	BLACK	GND	2
Shell	Drain Wire	Shield	1

WAS-1526
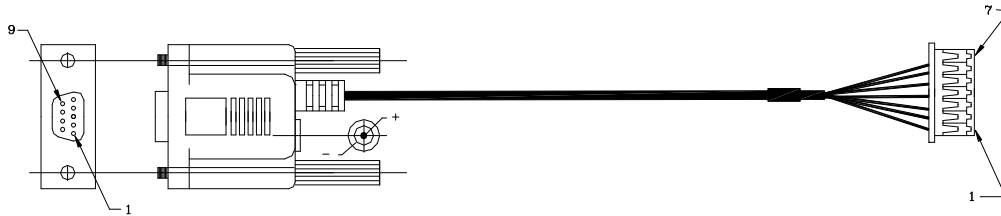
DSB 9P FEMALE *	COLOR	FUNCTION	7 PIN
3	PURPLE	TXD	5
2	WHITE	RXD	6
4	YELLOW	DTR	2
5	BLACK	GND	4
7	BLACK	RTS	1
8	BLUE	CTS	3
POWER JACK			
+	RED	9-12Vdc **	7
-	BLACK	GND	4

* DSB 9P FEMALE Pin 6,7 connected togeter

** 5Vdc to customer specifications

WAS-1528
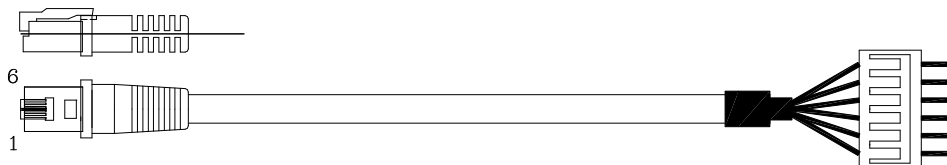
6P6C	COLOR	FUNCTION	6 PIN
1	BLACK	GND	1
2	WHITE	Sol -	2
3	RED	Status	3
4	YELLOW	Sol +	4
5	PURPLE	Sol -	5
6	BLUE	GND	6

■ 6P6C Modular Jack Connector

Pin 6   Pin 1
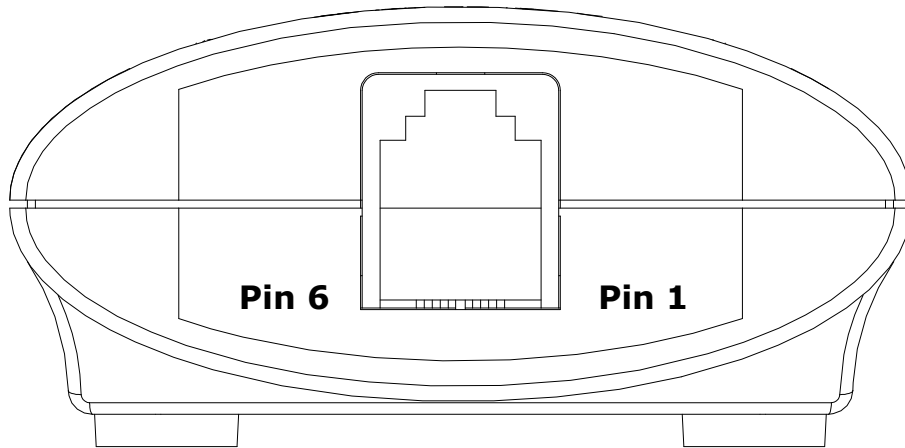
Pin Number	Function
6	GND
5	Sol - (for EPSON drawer 2)
4	Sol +
3	Status
2	Sol -
1	GND

■ Application Note

PIN 6

PIN 5   (for EPSON drawer 2)

PIN 4

PIN 3

PIN 2

PIN 1

Cash Drawer Lock
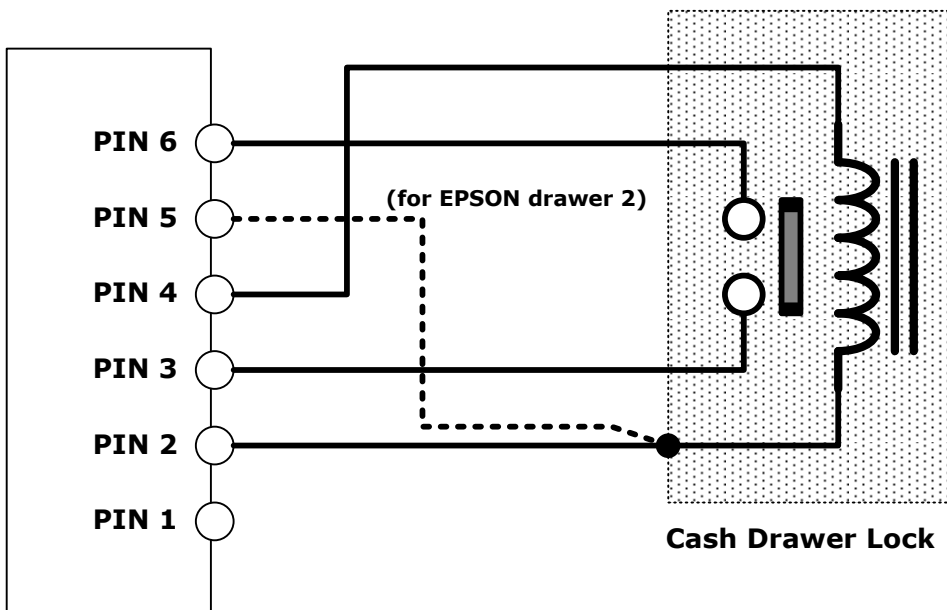
DT105U
DT105R

Load Test

■ Load Test Circuit
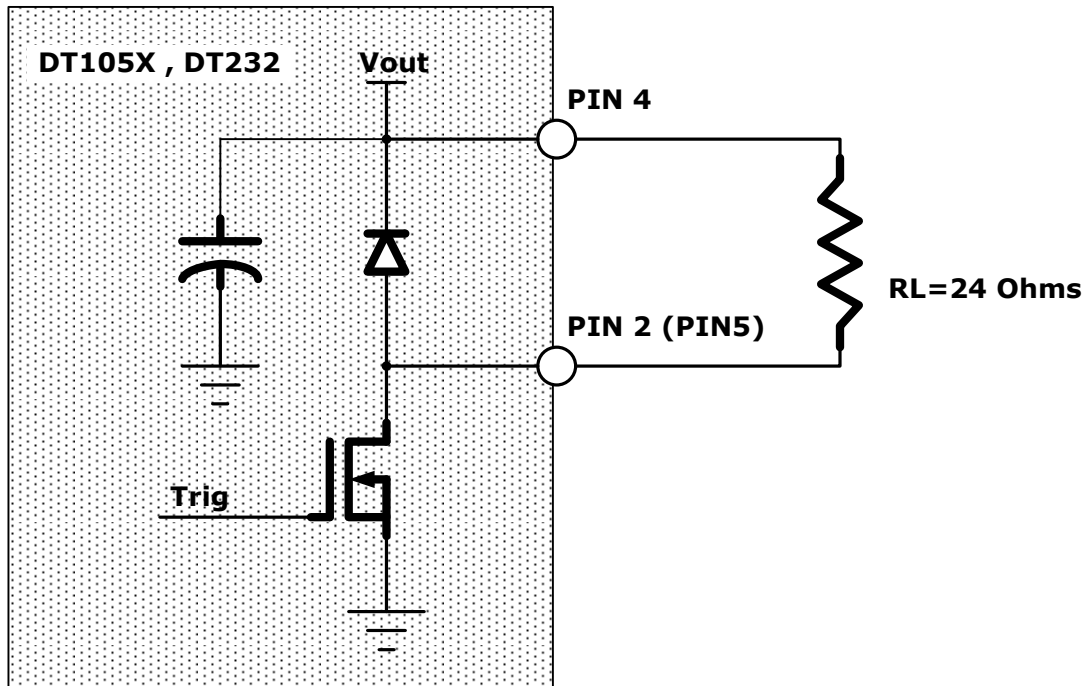
■ Load Test Timing Diagram
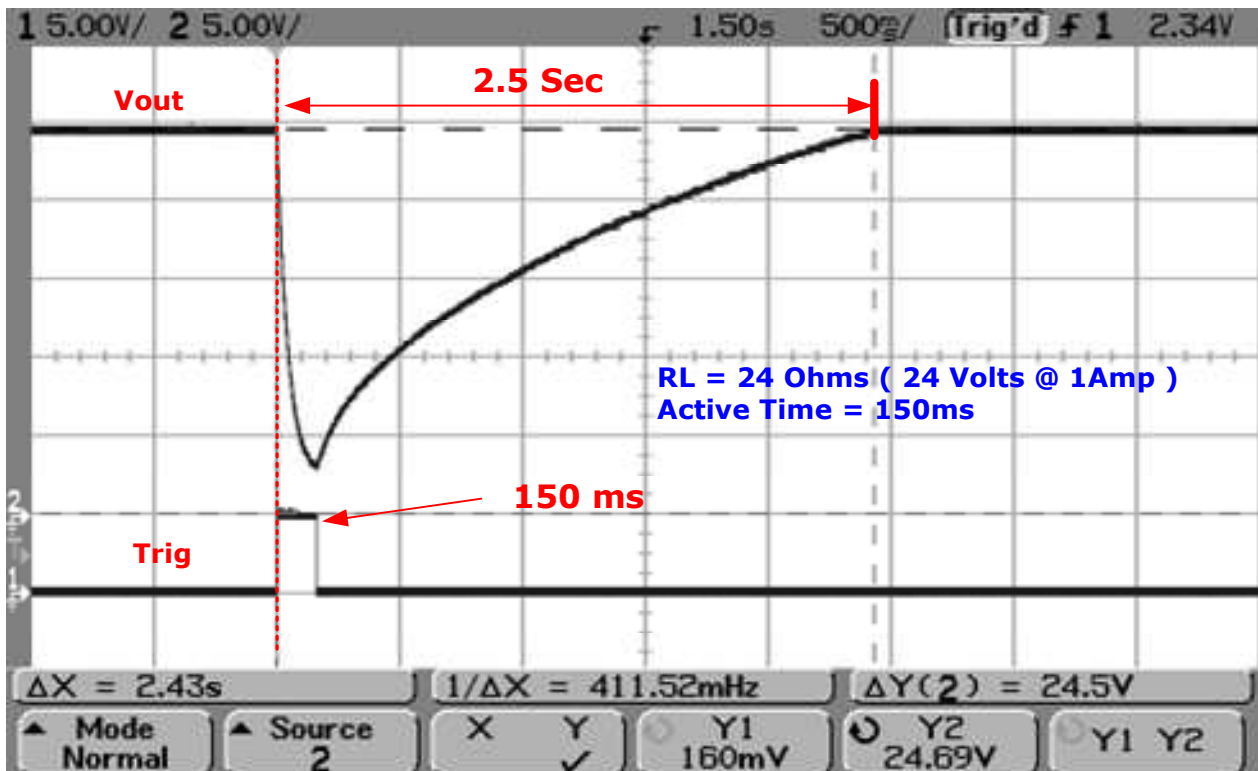
Specifications
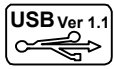
USB Interface (for DT105U)
USB 1.1 virtual comm. port
Available USB 1.1/USB 2.0/USB 3.0 port required

RS232 Interface (for DT105R)
RS232 , Half-Duplex , 8N1 , 9600 bps
RTS (Request To Send) & DTR (Data Terminal Ready) be used

Output Power
RJ12 Connector , Rating suits 10 - 36 Ohms solenoid (24Volts @1Amp), On time : 150ms, Repeat rate : 3 seconds
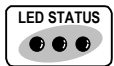
MULT-COLOR LED Display
Green LED - Ready / Communication
Red LED - Open Cash Drawer

Operate Sound (for DT105U, DT105R)
3Khz , 45 dB , Built in the device
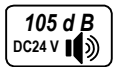
Operate Sound (for PB105)
3Khz , Min 105 dB at 30cm / 24 Volts

Power Supply (for DT105R)
DC 9V -12V , 500mA   (DC 5V to customer specifications)
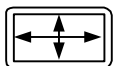
Dimensions
D 26 x W 56 x H 85 mm
Cable Lenght -   DT105U : 1650 mm
                 DT105R,DT232,BP105 : 1550 mm

Weight
DT105U : 90g (including cable)
DT105R : 110g (including cable)
BP105 : 70g (including cable)
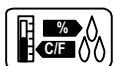
Environment :
Operating Temp : 0 ~ 55 Deg.C
Storage Temp : -10 ~ 55 Deg.C
Humidity : 10 ~ 90 % relative
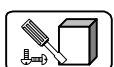
Mounting :
Portable or Any surface

Communication Protocol

DT105U & DT105R Communication Protocol

1. CITIZEN OPEN CASH DRAWER 1

ASCII	BEL

HEX	07

Reply (HEX)

14	00	00	0F	Cash drawer close
10	00	00	0F	Cash drawer open

2. STAR OPEN CASH DRAWER 1

ASCII	BEL	or	FS

HEX	07	or	1C

Reply (HEX)

14	00	00	0F	Cash drawer close
10	00	00	0F	Cash drawer open

3. EPSON OPEN CASH DRAWER 1 AND 2

ASCII	ESC	p	m	t1	t2

HEX	1B	70	00,30 01,31	00~FF	00 ~ FF

* m = 00h, 30h   Drawer kick-out connector pin2.
* m = 01h, 31h   Drawer kick-out connector pin5.
* Open Cash Drawer Time = t1 * 2 ms

Reply (HEX)

14	00	00	0F	Cash drawer close
10	00	00	0F	Cash drawer open

PS.
1. m = 00h, 01h, 30h, 31h
2. t1=t2=0 ~ 255 (t1=0 not active)
3. t2>t1 or t2=t1

4. PROTOLINK OPEN CASH DRAWER 1

ASCII	C	C		1	CR

HEX	43	43	20	31	0D

Reply (HEX)

14	00	00	0F	Cash drawer close
10	00	00	0F	Cash drawer open

5. PROTOLINK DUMP FIRMWARE VERSION

ASCII	D	G		2	CR

HEX	44	47	20	32	0D

Reply (ASCII)

(	C	)		2	0	0	2		G	I	G	A
-	T	M	S		D	T	-	1	0	5	X	
V	E	R	S	I	O	N		1	.	1	0	CR

6. EPSON ENABLE AUTOMATIC STATUS BACK

ASCII	GS	a	FF

HEX	1D	61	FF

Reply (HEX)

14	00	00	0F	Cash drawer close
10	00	00	0F	Cash drawer open

7. It is also sending the status string on every open/close change of the drawer automatically.

Reply (HEX) :

10	00	00	0F	Cash drawer open	**or**	14	00	00	0F	Cash drawer close

DT105U & DT105R Signal Control and Status

	PIN4 DTR RS232/TTL	PIN7 RTS RS232 / TTL	RED LED	GREEN LED	BUZZER LED	STATUS
CONTROL	+12V / L	+12V / L	OFF	OFF	OFF	X
	+12V / L	-12V / H	OFF	ON	OFF	READY
	-12V / H	+12V / L	ON	OFF	ON	OPEN
	-12V / H	-12V / H	OFF	OFF	OFF	X

	PIN8 CTS RS232/TTL	STATUS
STATUS	+12V / L	Cash drawer open
	-12V / H	Cash drawer close

Application Note

1. POS System For Standard Connect

POS — POS PRINTER — CASH DRAWER
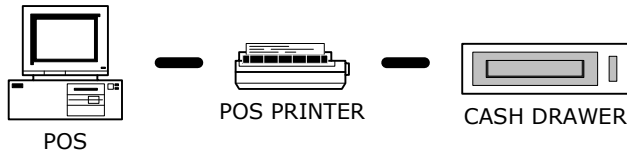
2. POS System For Standard Connect Plus PB105

POS — POS PRINTER — PB105 — CASH DRAWER

3. POS System Replace POS Printer By DT-105U/R
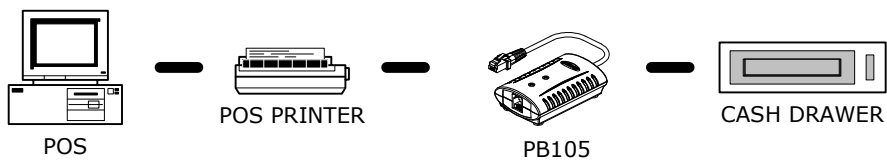
POS — DT105U / DT105R — CASH DRAWER
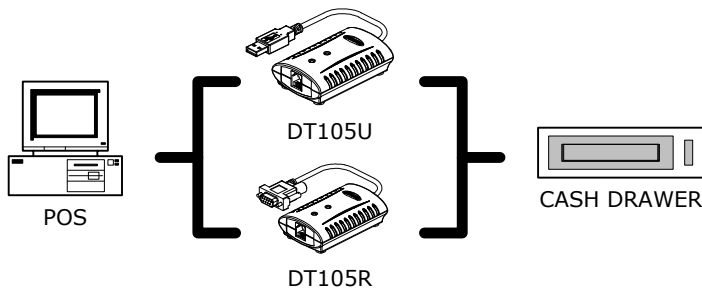
4. POS System Replace POS Printer By DT-105U/R Plus PB105

POS — DT105U / DT105R — PB105 — CASH DRAWER
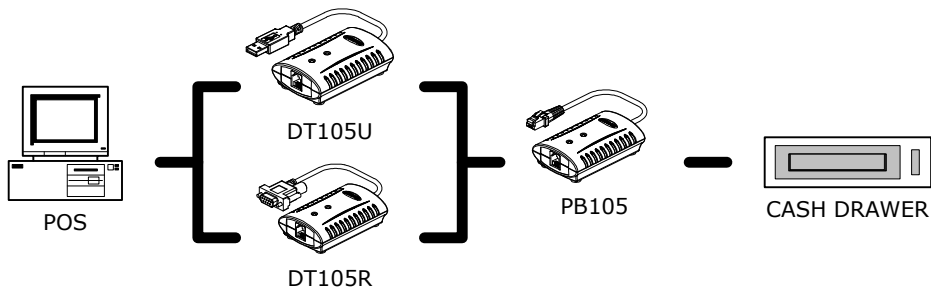
5. POS System Replace POS Printer By DT-105U/R Plus Two PB105

POS — DT105U / DT105R — PB105 — PB105 — CASH DRAWER