

# Impact Dot Matrix Printer Mechanisms

Despite the growth in demand for thermal printers, dot impact printers are still most appropriate for many applications and worldwide demand remains strong. Particularly well-suited to plain paper and high-speed printing, they are indispensable for check and validation and other such applications. As in its thermal printer development, Citizen Systems makes the most of its precision equipment technologies in the development of dot impact printers, drawing on its formidable strengths in this area to offer products that satisfy customers' dot impact printing needs fully and accurately.



## MD-910 / 911



- 58mm paper width
- 5V operation
- 2.5 lines/sec printing speed
- Ultra compact design

### Specifications

| Model                  | MD-910   | MD-911   |
|------------------------|--|--|
| Printing method        | Serial impact dot matrix   |  |
| Printing direction     | One-way printing   |  |
| Printing speed         | Approx. 2.5 lines/sec  | Approx. 1.8 lines/sec  |
| Number of columns      | 24 columns: 144 dots/line  | 40 columns: 180 dots/line                                    |
| Font                   | 5 × 7 matrix   | 4 × 7 matrix   |
| Number of wires        | 8 pins (4 pins × 2 heads)  |  |
| Character size (W × H) | Approx. 1.7 × 2.4mm  | Approx. 1.1 × 2.4mm  |
| Character pitch        | 1.98mm (Interval of columns)<br>3.52mm (Interval of lines)               | 1.17mm (Interval of columns)<br>/ 3.52mm (Interval of lines) |
| Motor                  | Voltage: 5.0V DC / Peak current: Approx. 1A / Average current: 0.3A max. |  |
| Dot pulse sensor       | Photo interrupter  |  |
| Home pulse sensor      | Leaf switch  |  |
| Printing sensor        | Voltage: 5.0 V DC / Resistance: 1.7 ±0.3Ω (25°C)                         |  |
| Paper feeding solenoid | Voltage: 5.0 V DC / Resistance: 9 ±2Ω (25°C)                             |  |
| Connecting method      | Copper foil patterns at 2.54mm pitch.                                    |  |
| Driving voltage        | 3.5 ~ 5.5V DC  |  |
| Printing paper         | 57.5 ±0.5mm  |  |
| Copy                   | Original print + 1 copy  |  |
| Ink ribbon cartridge   | Single color (Black)   |  |
| Paper feeding speed    | Approx. 5 lines/sec  | Approx. 3.6 lines/sec  |
| External dimensions    | 90 × 45.5 × 16mm (W × D × H)   |  |
| Weight                 | 105g ±10%  |  |
| Operating temperature  | 0 ~ 50°C   |  |
| Storage temp. range    | -25 ~ 70°C   |  |
| Reliability            | MCBF: 1.5 million lines  | MCBF: 1.0 million lines                                      |

### Accessories

#### Ink ribbon cartridge



IR-91B

#### Paper winder

(not supported by CBM-909)



AW-5

### Type Classification

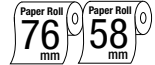
MD-910-SS

1) 2)

1) Type  
910: 24 columns  
911: 40 columns

2) Knob  
SS: No knob  
HS: Horizontal knob  
VS: Vertical knob

# DP-320 / 330



- 58/76mm paper width
- Logic seeking control
- 24V operation
- 2 color printing
- 5.6/4.3 lines/sec high-speed printing



## Accessories

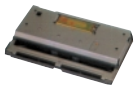
### Control board



BD1-3000

|                    |  |
|--------------------|--|
| Interface          | Parallel, Serial and USB   |
| Number of columns  | DP-320: 30 DP-330: 42  |
| Font               | 7 × 9  |
| Command set        | ESC/POS  |
| Barcode            | —  |
| Firmware location  | Flash memory   |
| Buffer             | 4K bytes   |
| Supporting devices | Auto cutter, Auto winder, Paper end sensor, Paper near end sensor, LED's (Power/Error/On-line), Switches (L/F/On-line) |
| Dimensions         | 132 × 126mm  |
| Source voltage     | 4V +0.7/-1.0V  |

### Auto cutter



ACS-236

### Ink ribbon cartridge

\*Six sensor positions are available. Please contact dealer.



IR-31B, RB

## Specifications

| Model                          | DP-320   | DP-330                                   |
|--------------------------------|--|--|
| Printing method                | Serial impact dot matrix   |  |
| Printing direction             | Bi-directional (Logic seeking control)                           |  |
| Printing speed                 | Approx. 5.6 lines/sec (58mm paper width)                         | Approx. 4.3 lines/sec (76mm paper width) |
| Number of columns              | Approx. 30 columns (58mm paper width)                            | Approx. 42 columns (76mm paper width)    |
| Total no. of dot               | 210 dots (420 positions)   |  |
| Font                           | 7 × 9 matrix   |  |
| Number of wires                | 9 pins   |  |
| Character size (W × H)         | 1.25 × 3.12mm (7 × 9 dots) / 1.25 × 2.42mm (7 × 7 dots)          |  |
| Character pitch                | 1.59mm   |  |
| Line spacing                   | Minimum 0.176mm (1/144 inch)                                     |  |
| Home position sensor           | Photo interrupter  |  |
| Paper end sensor               | Photo interrupter  |  |
| Motor                          | Stepping motor Voltage: 24V ±5% V DC / Resistance: 20Ω (25°C)    |  |
| Carriage                       | Stepping motor Voltage: 24V ±5% V DC / Resistance: 20Ω (25°C)    |  |
| Paper feeding                  | —  |  |
| Printing paper                 | 58 × ø83mm   | 76 × ø83mm                               |
| Copy capability                | Original + 1 copy  |  |
| Ink ribbon cartridge           | Two colors (Red and Black), Single color (Black)                 |  |
| Paper feeding speed            | Approx. 34 lines/sec   |  |
| External dimensions(W × D × H) | 126.7 × 97.5 × 52.7mm  |  |
| Weight                         | 485g (Included ribbon cassette)                                  |  |
| Operating temp. range          | 0 ~ 50°C   |  |
| Storage temp. range            | -20 ~ 70°C   |  |
| Reliability                    | Mechanism: MCBF 5.0 million lines / Head: 100 million characters |  |

# DP-420 / 430

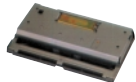


- 76mm paper width
- 3.0 lines/sec speed printing
- 24V operation
- 2 color printing



## Accessories

### Auto cutter



ACS-234

|                        |                        |               |
|------------------------|------------------------|---------------|
| Cutting method         | Slide cutting          |               |
| Paper width            | 50 — 89mm              |               |
| Paper thickness        | 0.06 — 0.15mm          |               |
| Max. cutting frequency | 20 cuts/min            |               |
| Voltage                | 24V ±10%               |               |
| Current (peak)         | 0.8A                   |               |
| Operating temperature  | 0 — 45°C               |               |
| Size                   | 102 × 55.7 × 15mm      |               |
| Weight                 | 180g                   |               |
| Reliability            | 500,000 cuts           |               |
| Number of tab left     | Full cut blade type    | None          |
|                        | Partial cut blade type | None or 1 tab |

### Paper winder

AW-2FA

### Ink ribbon cartridge



IR-41B, RB

## Specifications

| Model                           | DP-420  | DP-430       |
|---------------------------------|---|--------------|
| Printing method                 | Serial impact dot matrix  |              |
| Printing direction              | Bi-directional  |              |
| Printing speed                  | Approx. 3.0 lines/sec   |              |
| Number of columns               | 42 columns, 189 dots/line   |              |
| Font                            | 7 × 7 matrix  | 7 × 9 matrix |
| Number of wires                 | 7 pins  |              |
| Character size (W × H)          | 1.31 × 2.4mm  |              |
| Character pitch                 | 1.52mm  |              |
| Line spacing                    | 4.23 or 2.82mm (1/6 or 1/9 inch) / Minimum 1.41mm (1/18 inch)             |              |
| Motor                           | Voltage: 24V ±5% V DC / Current: Peak Approx. 1A / Average less than 0.2A |              |
| Reset pulse sensor              | Photo interrupter   |              |
| Dot pulse sensor                | Photo interrupter   |              |
| Home position sensor            | Photo interrupter   |              |
| Paper out sensor                | Photo interrupter   |              |
| Black mark sensor (option)      | Photo interrupter   |              |
| Printing solenoid               | Voltage: 24V ±5% V DC / Resistance: 17Ω (25°C)                            |              |
| Printing feed solenoid          | Voltage: 24V ±5% V DC / Resistance: 34Ω (25°C)                            |              |
| Color change solenoid           | Voltage: 24V ±5% V DC / Resistance: 34Ω (25°C)                            |              |
| Connecting method               | FFC or FPC cable  |              |
| Paper feeding                   | Friction feed or sprocket feed  |              |
| Printing paper                  | Friction feed: 76 ±0.5 × ø83mm  |              |
| Copy                            | Friction feed: original + 1 copy  |              |
| Ink ribbon cartridge            | Two colors (Red and Black), Single color (Black)                          |              |
| Paper feeding speed             | Approx. 28 lines/sec  |              |
| External dimensions (W × D × H) | 120 × 90 × 45mm   |              |
| Weight                          | Approx. 470g  |              |
| Operating temp. range           | 0 ~ 50°C  |              |
| Storage temp. range             | -20 ~ 70°C  |              |
| Reliability                     | Mechanism: MCBF 2.5 million lines / Head: 80 million characters           |              |

## Type Classification

DP-320 D F V \*

1) 2) 3) 4) 5)

### 1) Type

320: 58mm paper width  
330: 76mm paper width

### 2) Ribbon

D: 2 color  
M: 1 color

### 3) Paper feed method

F: Friction feed

### 4) Blackmark sensor volume

N: No volume

V: BM sensor volume

### 5) Blackmark sensor position

\*Six sensor positions are available. Please contact dealer.

DP-420-DF

1) 2) 3)

### 1) Type

420: 7 pin head  
430: 9 pin head

### 2) Ribbon

D: 2 color

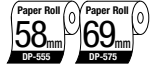
### 3) Paper feed method

F: Friction feed

# Impact Dot Matrix Printer Mechanisms



## DP-555 / 575



- 58/69mm paper width
- 1.9/1.2 lines speed printing
- 12/17V operation
- 2 color printing

### Specifications

| Model                           | DP-555  | DP-575                |
|---------------------------------|---|-----------------------|
| Printing method                 | Serial impact dot matrix  |                       |
| Printing direction              | L Series Left to right (Horizontal), R Series Right to left (Horizontal)  |                       |
| Printing speed                  | Approx. 1.9 lines/sec   | Approx. 1.2 lines/sec |
| Number of columns               | 24 columns  | 40 columns            |
| Font                            | 5 × 7 matrix  |                       |
| Character size (W × H)          | 1.7 × 2.75mm  | 1.25 × 2.75mm         |
| Character pitch                 | 2mm   | 1.5mm                 |
| Line spacing                    | 5.5mm   |                       |
| Motor                           | Voltage: 12V ±1V DC / Peak current: Approx. 2.5A (12V, 25°C)<br>Average current: Approx. 0.25A                            |                       |
| Dot pulse sensor                | Photo interrupter   |                       |
| Home switch                     | Voltage: 5V DC / Current: 100µA ~ 3mA (Resistance load)   |                       |
| Printing solenoid               | Voltage: 12V ±1V DC / Resistance: 4.9 ±0.5Ω (25°C)<br>Energized time: 2 dot pulses (700 ±50µs) / Peak current: Approx. 2A |                       |
| Main solenoid                   | Voltage: 12V ±1V DC / Resistance: 18.4 ±1Ω (25°C)<br>Energized time: 16ms±10% (Max. of 5 continuous seconds)              |                       |
| Color change solenoid           | Voltage: 12V ±1V DC / Resistance: 18.4 ±1Ω (25°C)<br>Energized time: 20 ±2ms (Max. of 5 continuous seconds)               |                       |
| Connecting method               | Flexible cable (SMCD 18 × 91 ES10)  |                       |
| Ink ribbon cartridge            | Two colors (Red and Black), Single color (Black)<br>Spool diameter: 30mm or 35mm, width: 13mm                             |                       |
| Paper feeding speed             | Approx. 8 lines/sec   |                       |
| Printing paper                  | 57.5 ± 0.5mm  | 69 + 1mm              |
| External dimensions (W × D × H) | 120.5 × 114 × 44.5mm  |                       |
| Weight                          | Approx. 450g  |                       |
| Operating temp. range           | 0 ~ 50°C  |                       |
| Paper feeding traction          | More than 100g (Citizen recommended paper)  |                       |
| Reliability                     | Printer mechanism MCBF: 1.5 million lines / Dot head 50 million characters  |                       |

### Accessories

#### Auto cutter



AC-3 / 3F

|                        |   |
|------------------------|---|
| Cutting method         | Guillotine                                    |
| Paper width            | 76 ±0.5mm                                     |
| thickness              | 0.06 — 0.085mm                                |
| Max. cutting frequency | 20 cuts/min                                   |
| Voltage                | 12V ±10%                                      |
| Current (peak)         | 1.2A  |
| Operating temperature  | 0 — 40°C                                      |
| Size                   | 93 × 74 × 25mm                                |
| Weight                 | 200g  |
| Reliability            | 300,000 cuts                                  |
| Number of tab left     | Full cut blade type<br>Partial cut blade type |
|                        | None or 1 tab<br>2 or 3 tabs                  |

#### Paper winder



NW-58(DP-555)  
NW-69(DP-575)

#### Ink ribbon cartridge



IR-01B, R/B



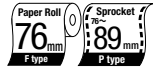
DP-61XF

DP-61XP

DP-61XH

(Without platen type)

## DP-61X SERIES



- 76mm paper width
- 2 color printing
- 24V operation
- Sprocket feeding model (P type)
- 3.0 lines/sec speed printing(DP-614)

### Specifications

| Model                           | DP-610  | DP-612                    | DP-614                    | DP-617                    |
|---------------------------------|---|---------------------------|---------------------------|---------------------------|
| Printing method                 | Serial impact dot matrix  |                           |                           |                           |
| Printing direction              | Bi-directional  |                           |                           |                           |
| Printing speed                  | Approx. 4.0 lines/sec   | Approx. 3.5 lines/sec     | Approx. 3.0 lines/sec     | Approx. 2.4 lines/sec     |
| Number of columns               | 23 columns, 230 dots/line   | 28 columns, 280 dots/line | 40 columns, 360 dots/line | 40 columns, 400 dots/line |
| Font                            | 7 × 9 matrix  |                           |                           |                           |
| Character size (W × H)          | 1.8 × 2.4mm   | 1.5 × 2.4mm               | 1.36 × 2.4mm              | 1.2 × 2.4mm               |
| Line spacing                    | 1/6 inch  |                           |                           | 1/9 inch (DP617DFC)       |
| Motor                           | Voltage: 24V DC V DC / Peak current: Max. 21A (12V, 25°C) / Average current: Approx. 0.2A or less   |                           |                           |                           |
| Dot pulse sensor                | Photo interrupter   |                           |                           |                           |
| Home position sensor            | Photo interrupter   |                           |                           |                           |
| Paper feeding motor             | Voltage: 24V DC V DC / Resistance: 48Ω (25°C) / Driving pulse width: 30 DP, Approx. 20ms  |                           |                           |                           |
| Printing solenoid               | Voltage: 24V ±1V DC / Resistance: 17Ω (24V DC, 25°C)  |                           |                           |                           |
| Color change solenoid           | Voltage: 24V DC V DC / Resistance: 48Ω (24V DC, 25°C)   |                           |                           |                           |
| Connector terminals             | Connector 1 (S16B-PH-K-S (16P): Counterpart PHR-16 (16P) manufactured by JST)<br>Connector 2 (S10B-PH-K-SC (10P): Counterpart PHR-10 (10P) manufactured by JST) |                           |                           |                           |
| Paper feeding                   | Friction feed or sprocket feed  |                           |                           |                           |
| Printing paper                  | Friction feed: 76mm Roll paper × φ83mm / Sprocket feed: 76 ~ 89mm fanfold paper   |                           |                           |                           |
| Copy                            | Friction feed: original + 1 copy / Sprocket feed: original + 2 copies   |                           |                           |                           |
| Paper feed power                | More than 100g (Citizen recommended paper)  |                           |                           |                           |
| Ink ribbon cartridge            | Two colors (Red and Black), Single color (Black)  |                           |                           |                           |
| Paper feeding speed             | Approx. 25 lines/sec  | Approx. 21 lines/sec      | Approx. 18 lines/sec      | Approx. 15 lines/sec      |
| External dimensions (W × D × H) | Two colors: 137 × 136 × 63.5mm / Single color: 134 × 136 × 63.5mm   |                           |                           |                           |
| Weight                          | Approx. 690g  |                           |                           |                           |
| Operating temp. range           | 0 ~ 50°C  |                           |                           |                           |
| Reliability                     | Printer: MCBF 4.0 million lines / Head: 80 million characters   |                           |                           |                           |

### Accessories

#### Ink ribbon cartridge



IR-61B, R/B

#### Paper winder

AW-2FA

#### Auto cutter

AC-2 / 2F



AC-134



|                        |                |                 |
|------------------------|----------------|-----------------|
| Cutting method         | Guillotine     | Guillotine      |
| Paper width            | 76 ±0.5mm      | 50 — 89mm       |
| thickness              | 0.06 — 0.085mm | 0.06 — 0.09mm   |
| Max. cutting frequency | 20 cuts/min    | 20 cuts/min     |
| Voltage                | 24V ±10%       | 24V ±10%        |
| Current (peak)         | 0.8A           | 0.8A            |
| Operating temperature  | 0 — 40°C       | 0 — 45°C        |
| Size                   | 99 × 74 × 30mm | 120 × 57 × 15mm |
| Weight                 | 200g           | 160g            |
| Reliability            | 300,000 cuts   | 300,000 cuts    |
| Number of tab left     | None or 1 tab  | None or 1 tab   |
| Full cut blade type    | None or 1 tab  | None or 1 tab   |
| Partial cut blade type | 2 or 3 tabs    | 2 or 3 tabs     |

### Type Classification

DP-575 L 12 A

1) 2) 3) 4)

#### 1) Type

555: 24 columns  
575: 40 columns

#### 2) Printing direction

L: Left to right  
R: Right to left

#### 3) Voltage

12: 12V  
17: 17V

#### 4) Special feature

None: Regular model  
A: Ribbon cartridge model

DP-614 D F C V

1) 2) 3) 4) 5)

#### 1) Type

610: 23 columns  
612: 28 columns  
614: 40 columns (360dots)  
617: 40 columns (400dots)

#### 2) Ribbon

D: 2 color  
M: 1 color

#### 3) Paper feeding method

F: Friction feeding  
P: Sprocket feeding

#### 4) Character / Graphic

C: Character only  
G: Graphic

#### 5) Validation sensor

None: No validation  
V: Equipped



DP-65XF



DP-65XP

## Accessories

## Ink ribbon cartridge



IR-61B, R/B

## Paper winder

AW-2FA

## Auto cutter

AC-2 / 2F

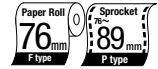


AC-134



|                        | AC-2 / 2F      | AC-134          |
|------------------------|----------------|-----------------|
| Cutting method         | Guillotine     | Guillotine      |
| Paper width            | 76±0.5mm Ma    | 50 — 89mm       |
| thickness              | 0.06 — 0.085mm | 0.06 — 0.09mm   |
| Max. cutting frequency | 20 cuts/min    | 20 cuts/min     |
| Voltage                | 24V ±10%       | 24V ±10%        |
| Current (peak)         | 0.8A           | 0.8A            |
| Operating temperature  | 0 — 40°C       | 0 — 45°C        |
| Size                   | 99 × 74 × 30mm | 120 × 57 × 15mm |
| Weight                 | 200g           | 160g            |
| Reliability            | 300,000 cuts   | 300,000 cuts    |
| Number of tab left     | None or 1 tab  | None or 1 tab   |
| Full cut blade type    | 2 or 3 tabs    | 2 or 3 tabs     |
| Partial cut blade type |                |                 |

## DP-654 / 657



- 76mm paper width
- 2 color printing
- 24V operation
- Sprocket feeding model (P type)
- 3.6 lines/sec speed printing (DP-654)

## Specifications

| Model                           | DP-654  | DP-657                    |
|---------------------------------|---|---------------------------|
| Printing method                 | Serial impact dot matrix  |                           |
| Printing direction              | Bi-directional  |                           |
| Printing speed                  | 3.6LPS ±10%   | 3.0LPS ±10%               |
| Number of columns               | 40 columns, 360 dots/line   | 40 columns, 400 dots/line |
| Font                            | 7 × 7 or 7 × 9 (half-dot)   |                           |
| Character size (W × H)          | 1.36 × 2.4mm  | 1.2 × 2.4mm               |
| Line spacing                    | 1/9 inch (DR617DFG)   |                           |
| Motor                           | Voltage: 24V V DC / Peak current: Approx. 1.5A / Average less than 0.3A   |                           |
| Reset pulse sensor              | Mechanical leaf switch  |                           |
| Dot pulse sensor                | Photo interrupter   |                           |
| Home position sensor            | Photo interrupter   |                           |
| Printing solenoid               | Voltage: 24V ±1V DC / Resistance: 17Ω (24V DC, 25°C)  |                           |
| Paper feeding solenoid          | Voltage: 24V DC Resistance: 33Ω ±10%  |                           |
| Connector terminals             | Connector 1 (S16B-PH-K-S (16P): Counterpart PHR-16 (16P) manufactured by JST)<br>Connector 2 (S10B-PH-K-SC (8P): Counterpart PHR-10 (8P) manufactured by JST) |                           |
| Connecting method               | Pin connector   |                           |
| Paper feeding                   | Friction feeding or sprocket feeding  |                           |
| Ink ribbon cartridge            | Two colors (Red and Black), Single color (Black)  |                           |
| Paper feeding speed             | 18 lines/sec  |                           |
| Printing paper                  | Receipt and journal 37 ~ 38mm, Outer dia Max. φ83mm   |                           |
| External dimensions (W × D × H) | 137 × 138 × 63.5mm  |                           |
| Weight                          | Approx. 690g  |                           |
| Operating temp. range           | 0 ~ 50°C  |                           |
| Storage temp. range             | -25 ~ 70°C  |                           |
| Reliability                     | Mechanism: MCBF 4.0 million lines / Head: 80 million characters   |                           |

DP-62XMF  
(Friction feeding model)DP-62XMP  
(Sprocket feeding model)

## Accessories

## Ink ribbon cartridge



IR-61B

## Paper winder

AW-2FA

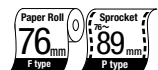
## Auto cutter



AC-134/134F

|                        |                 |
|------------------------|-----------------|
| Cutting method         | Guillotine      |
| Paper width            | 50 — 89mm       |
| thickness              | 0.06 — 0.09mm   |
| Max. cutting frequency | 20 cuts/min     |
| Voltage                | 24V ±10%        |
| Current (peak)         | 0.8A            |
| Operating temperature  | 0 — 40°C        |
| Size                   | 102 × 57 × 15mm |
| Weight                 | 160g            |
| Reliability            | 300,000 cuts    |
| Number of tab left     | None or 1 tab   |
| Full cut blade type    | 2 or 3 tabs     |
| Partial cut blade type |                 |

## DP-62X SERIES



- 76mm paper width
- Sprocket feeding model (P type)
- 24V operation

## Specifications

| Model                           | DP-622  | DP-624                    | DP-627                    |
|---------------------------------|---|---------------------------|---------------------------|
| Printing method                 | Serial impact dot matrix  |                           |                           |
| Printing direction              | Bi-directional  |                           |                           |
| Printing speed                  | Approx. 4.2 lines/sec   | Approx. 3.6 lines/sec     | Approx. 3.0 lines/sec     |
| Number of columns               | 28 columns, 280 dots/line   | 40 columns, 360 dots/line | 40 columns, 400 dots/line |
| Font                            | 7 × 9 matrix  |                           |                           |
| Character size (W × H)          | 1.5 × 2.4mm   | 1.36 × 2.4mm              | 1.2 × 2.4mm               |
| Line spacing                    | Min. 1/144 inch   |                           |                           |
| Motor                           | Voltage: 24V DC V DC / Peak current: Max. 1.5A<br>Average current: Approx. 0.3A or less   |                           |                           |
| Dot pulse sensor                | Photo interrupter   |                           |                           |
| Home position sensor            | Photo interrupter   |                           |                           |
| Paper feeding motor             | 4 phase 48 poles permanent magnet type stepping motor<br>24V DC ±10% (Drive voltage) / 5V DC ±15% (Hold voltage)<br>Mean current: Approx. 300mA / Hold current: Approx. 150mA<br>Voltage: 24 ±1V DC / Resistance: 17Ω (24V DC, 25°C)                          |                           |                           |
| Printing solenoid               | Voltage: 24 ±1V DC / Resistance: 17Ω (24V DC, 25°C)   |                           |                           |
| Connector terminals             | Connector 1 (S3156-1710 (17P): Counter part 51049-1700 (17P) manufactured by Molex)<br>Connector 2 (S3015-0610 (6P): Counter part 51004-0600 (6P) manufactured by Molex)<br>Connector 3 (S1004-0600 (6P): Counter part 57014-0610 (6P) manufactured by Molex) |                           |                           |
| Paper feeding                   | Friction feeding or sprocket feeding  |                           |                           |
| Printing paper                  | Friction feeding: 76mm roll paper × ø83mm / Sprocket feeding: 76-89mm fanfold paper   |                           |                           |
| Copy                            | Friction feeding: original + 1 copy / Sprocket feeding: original + 2 copies   |                           |                           |
| Paper feeding power             | More than 100g (Citizen recommended paper)  |                           |                           |
| Ink ribbon cartridge            | Single color (Black)  |                           |                           |
| Paper feeding speed             | Approx. 25 lines/sec  |                           |                           |
| External dimensions (W × D × H) | 140.9 × 153.2 × 63.5mm  |                           |                           |
| Weight                          | Approx. 730g  |                           |                           |
| Operating temp. range           | 0 ~ 50°C  |                           |                           |
| Reliability                     | Printer: MCBF 5.0 million lines / Head: 80 million characters   |                           |                           |

## Type Classification

DP-654DFCV

1) 2) 3) 4) 5)

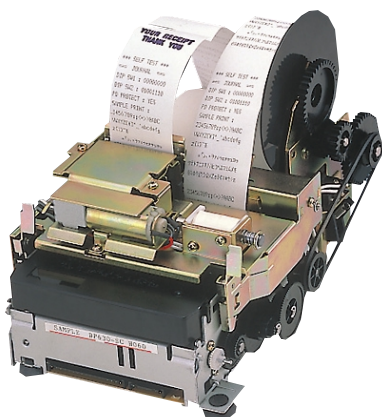
- 1) Type  
654: 40 columns (360dots)  
657: 40 columns (400dots)
- 2) Ribbon  
D: 2 color  
M: 1 color
- 3) Paper feeding method  
F: Friction feeding  
P: Sprocket feeding
- 4) Paper path  
C: Character only  
G: Graphic
- 5) Paper pressure  
None: No validation  
V: Equipped

DP-624MPCS

1) 2) 3) 4) 5)

- 1) Type  
622: 28 columns  
624: 40 columns (360 dots)  
627: 40 columns (400 dots)
- 2) Ribbon  
M: 1 color
- 3) Paper feeding method  
F: Friction feeding  
P: Sprocket feeding
- 4) Copy capability  
None: Standard  
C: 4 copies
- 5) Auto loading sensor  
None: No sensor  
S: with sensor

# Impact Dot Matrix Printer Mechanisms



## Options

- Validation sensor
- Paper winder
- Mark sensor
- Auto cutter
- Paper near end sensor
- Stamp

## Accessories

### Paper winder

PW-2

### Ink ribbon cartridge



IR-61B

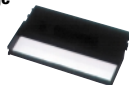


## Options

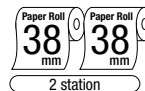
- Validation sensor
- Paper winder
- Mark sensor
- Auto cutter
- Paper near end sensor
- Stamp

## Accessories

### Ink ribbon cartridge



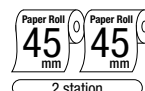
IR-71B



## DP-630

- 2 station printing
- 3.0 lines/sec speed printing
- 38+38mm paper width
- Validation printing (option)
- 24V operation

| Specifications                      |   |
|-------------------------------------|---|
| Model                               | DP-630  |
| Printing method                     | Serial impact dot matrix  |
| Printing direction                  | Bi-directional  |
| Font                                | 7 × 9 matrix  |
| Number of columns (validation)      | 18 columns × 2 (40 columns)   |
| Number of total dot/line (half dot) | 180 (360) dots  |
| Number of wires                     | 9 pins (dot pitch 0.353mm)  |
| Printing speed                      | Approx. 3.0 lines/sec   |
| Character size (W × H)              | 1.36 × 2.4mm  |
| Line spacing                        | 5.08mm  |
| Character pitch                     | Character = 1.59mm  |
| Ink ribbon cartridge                | Single color (Black)  |
| Motor                               | Voltage: 24V +1/-2V DC / Current: Peak Approx. 1A<br>Average less than 0.2A |
| Reset pulse sensor                  | Mechanical leaf switch  |
| Dot pulse sensor                    | Photo interrupter   |
| Home position sensor                | Photo interrupter   |
| Printing solenoid                   | Voltage: 24V ±1V DC / Resistance: 17Ω                                       |
| Paper feeding solenoid              | Voltage: 24V +1/-2V DC / Resistance: 32Ω ±10%                               |
| Connecting method                   | Pin connector   |
| Paper feeding                       | Friction feed   |
| Printing paper Receipt and journal  | 37 — 38mm / Outer dia Max. φ83mm  |
| Paper feeding speed                 | 18 lines/sec  |
| External dimensions (W × D × H)     | 134 × 136 × 63.5mm  |
| Weight                              | Approx. 690g  |
| Operating temp. range               | 0 ~ 50°C  |
| Storage temp. range                 | -25 ~ 70°C  |
| Reliability                         | Mechanism MCBF 2.5 million lines<br>Head 50 million characters              |



## DP-730

- 2 station printing
- 3.0 lines/sec speed printing
- 45+45mm paper width
- Validation printing (option)
- 24V operation

| Specifications                      |   |
|-------------------------------------|---|
| Model                               | DP-730  |
| Printing method                     | Serial impact dot matrix  |
| Printing direction                  | Bi-directional  |
| Font                                | 7 × 9 matrix  |
| Number of columns (validation)      | 24 columns × 2 (55 columns)   |
| Number of total dot/line (half dot) | 248 (495) dots  |
| Number of wires                     | 9 pins (dot pitch 0.353mm)  |
| Printing speed                      | Approx. 3.0 lines/sec   |
| Character size (W × H)              | 1.36 × 2.4mm or 1.36 × 3.1mm  |
| Line spacing                        | 4.23mm (1/6 inch)   |
| Character pitch                     | Character = 1.59mm  |
| Ink ribbon cartridge                | Single color (Black)  |
| Motor                               | Voltage: 24V ±10% / Current: Peak Approx. 2.5A<br>Average less than 0.45A |
| Reset pulse sensor                  | Mechanical leaf switch  |
| Dot pulse sensor                    | Photo interrupter   |
| Home position sensor                | Photo interrupter   |
| Printing solenoid                   | Voltage: 24V ±10% / Resistance: 10.5Ω ±10%                                |
| Paper feeding solenoid              | Voltage: 24V ±10% / Resistance: 34Ω ±10%                                  |
| Connecting method                   | Pin connector   |
| Paper feeding                       | Friction feed   |
| Printing paper Receipt and journal  | 44.5 ±0.5mm / Outer dia Max. φ83mm  |
| Validation                          | 135 — 210 (W) × 70 (H) mm   |
| Paper feeding speed                 | 30 lines/sec  |
| External dimensions (W × D × H)     | 151 × 234.6 × 123.7mm   |
| Weight                              | Approx. 1,250g  |
| Operating temp. range               | 0 ~ 50°C  |
| Storage temp. range                 | -25 ~ 70°C  |
| Reliability                         | Mechanism Head<br>MCBF 4 million lines 100 million characters             |

## Type Classification

DP-630 V-S C

1) 2) 3)

- 1) Validation sensor  
V: Equipped  
None: No validation sensor
- 2) Stamp  
S: Equipped  
None: No stamp
- 3) Cutter  
C: Equipped  
None: No cutter

DP-730 F R C B

1) 2) 3)

- 1) Validation sensor  
R: No validation sensor  
M: Multi-line validation sensor  
P: 1 line L/R sensor  
None: 1 line right sensor
- 2) Cutter  
C: Equipped  
None: No cutter
- 3) Winder  
C: Equipped  
None: No cutter