

Features

- Well proven Dot Matrix Print Heads
- 7 Vertical Needles
- Print Speed 100 Characters/Sec
- Needle Stroke is 0.5mm
- 12VDC or 24VDC Versions
- MTBF of 40 Million Characters
- Up to 4 Part Set Printing
- High Reliability



Introduction

The DP820 series of dot matrix 7 needle print heads are designed and tested to high engineering standards for OEM printing applications of all types. They are used in the highly reliable DP822 and DP824 printer mechanisms.

The DP820-12 operates on a 12VDC supply whereas the DP820-24 requires 24VDC.

The impact force is sufficient to print on 4 part sets.

The heads can be used with impact papers obviating the need for inking.

The flying cable and 2 screws holding the head enables print heads to be easily replaced.

Operation

Each of the 7 vertical needles is operated by its own solenoid to move the needle forward by 0.5mm. Characters are built up by firing the needles whilst moving the head across the surface to be printed.

This type of head is normally used to produce characters on a 7 x 5 matrix with two dot spaces between characters. The needles in this head operate at a maximum speed of 700 Hz, thus giving a printing speed of 100 characters/second.

The print heads should not be overtightened as the solenoid needles may become distorted. The 2 fixing screws should be tightened to approximately 0.15NM (15CNM) and then glued in position.

Applications

- Banking Applications
- Ticket Issuing
- Label Printing
- Multi-Set Printing
- Car Park Receipts
- Mobile Applications

SPECIFICATION

Printing Method: Impact Needle

Format: 7 Vertical Needles

Character Height: 3.1mm

Printing Speed: 700HZ (maximum)
100 Characters per second
(7 x 5 matrix with 2 dot spaces between characters)

Multiple Copies: Original + 3 copies

Needle Stroke: 0.5mm

Needle Solenoids: **DP820-12**
Voltage: 12 ± 10% VDC
Resistance: 3.98 ± 0.427
Pulse Width: 730 + 20-10 Secs
Peak Current: 2.5 A/Solenoid

DP820-24
Voltage: 24 ± 10% VDC
Resistance: 4.9 ± 0.4
Pulse Width: 400 ± 20 Secs
Peak Current: 3.2 A/Solenoid

Connector: 14 pin socket (Mating supplied)

Cable Length: 380mm

Weight: 130 grams

Operating Temp: 5° to 40°C

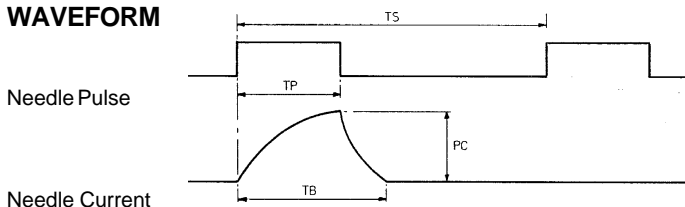
Storage Temp: -40 to + 70°C

Operating Humidity: 95% Non-condensing

Ribbon: Material: Nylon 40 denier
Ink: Dye type

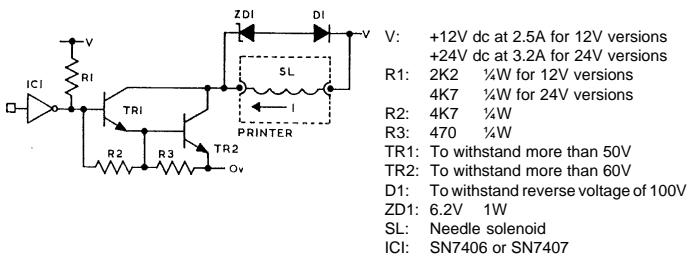
Reliability: 40 Million Characters

WAVEFORM



	12V	24V	
TP	730	400	µS
TB	1200	950	µS
TS	1.52	1.52	mS
PC	2.5	3.2	A/Sol

TYPICAL NEEDLE SOLENOID DRIVE CIRCUIT



ORDER CODE

DP820-12: 7 Needle Print Head, 12VDC, mating connector
DP820-24: 7 Needle Print Head, 24VDC, mating connector

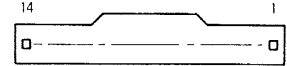
ACCESSORIES

Ribbon: Purple: Stock no: 553-020
Black: Stock no: 553-021

CONNECTIONS

Solenoid 1 is top needle

Solenoid	Pins
1	13 and 14
2	11 and 12
3	9 and 10
4	7 and 8
5	5 and 6
6	3 and 4
7	1 and 2

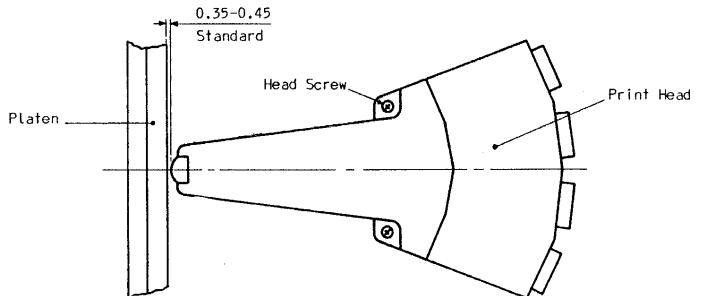


NEEDLE HEAD ADJUSTMENT

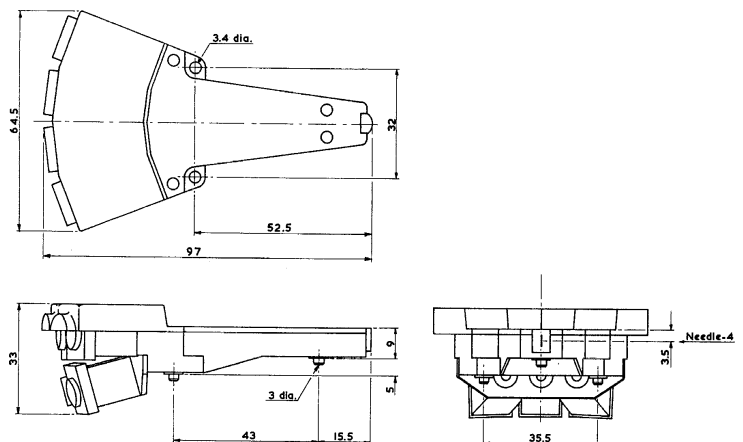
The clearance between the platen and the needle head face is typically 0.35 - 0.45mm, which will give the best print quality on the suggested paper thickness of 0.1mm. To obtain the best print quality on papers of different thickness, particularly where 2 ply is used, it will be necessary to re-adjust the gap.

Adjustment is carried out by:

- Loosen the 2 needle head mounting screws.
- Move the head slowly, closer or further from the platen to obtain ideal clearance, e.g. 0.35mm for 0.1mm paper, 0.41mm for 0.16mm paper.
- Tighten mounting screws. Do not tighten more than 1.5NM otherwise the printing head may become distorted.



PHYSICAL DIMENSIONS (mm)



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Specifications are subject to change without notice



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