

Overview

The D193 Series are designed to interface the industry standard M150, M160 and M180 range of miniature print mechanisms to parallel and serial inputs. By using a 1500 byte RAM buffer, data can be received for subsequent lines while one line is being printed. This enables the full speed of the print mechanism to be realised. The M180 range of 6 needle mechanisms print up to 1.7 lines per second.

The date and time version is battery backed in case of power failure. Data can be received from Centronics Parallel sources such as IBM PC or AT. Serial versions accept data up to 9600 Baud and in 2 modes DTR or XON/XOFF. All versions print dot addressable graphics and have a full IBM2 character set.

Print out can be inverted for panel mount applications. A wide range of plastic and metal housings are available for the printer mechanisms.

A pin to pin cable needs to be made by the user from the mechanism to the D193. The program automatically detects which

mechanism is connected. A self test printout gives details of the D193 setting including the serial format.

The D193 can be mounted on the rear of the D143 and D182 printer assemblies. Printing can be inverted by setting a DIL switch, useful for panel mount applications.

A line is printed once it is full or a print command is received. The graphic mode is entered by software command and is fully dot addressable. Data must be entered sufficiently fast to match print speed. In Serial mode 2400 Baud is required. Parallel data transfer is usually sufficiently fast.

When the RAM becomes full in Serial mode, DTR is set low or XOFF transmitted. In Parallel mode the BUSY signal is set.

Date or time is printed upon receipt of software commands. The clock can be set by software command or using 2 external switches.

A Paper End input can be used to set a signal on the Centronics Parallel Connector, stopping further data transfers. An external LED can be connected and lights when Paper End is detected.

Features

- Drives 16 to 42 Column Mechanisms
- Drives 4 needle and 6 Needle M150, M160, M180 Mechanisms
- Inputs: Parallel Centronics
Serial RS232C
20mA loop
TTL
- 1500 Character Buffer
- Fast Operation:
Prints While Receiving Data
- Date and Time Version
- Dot Addressable Graphics
- Small Size: 110mm x 100mm
- 5 Vdc Supply

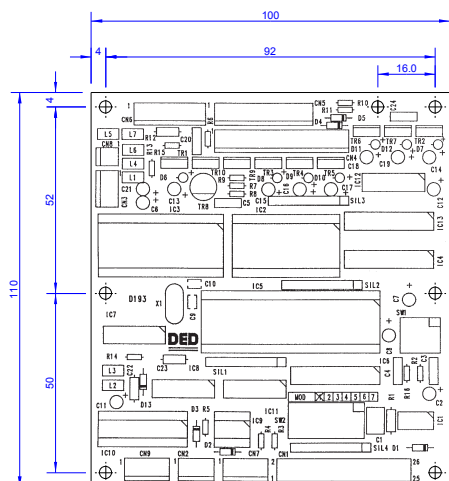
Applications

- Data Logging
- Production Control Equipment
- Time Keeping Systems
- Automatic Test Equipment
- Mobile Application
- Instrumentation
- Vending Machines
- Ticket Issuing Equipment
- IBM Compatible

Specifications

4 Needle:	Mechanism:	M150	M160	M163	M164	Graphics Capability:	Dot addressable. See dots/line above.		
	Characters/Line	16	24	32	40	Print Modes:	Invert, Double Width, Double Height		
	Print Speed/Sec	1.0	0.7	0.5	0.4	Date and Times:	Format:	Years, Months, Days, Hours, Minutes, Seconds	
	Graphics Dots/Line	96	144	192	240	Battery Backed:	Yes		
6 Needle:	Mechanism:	M180	M181	M182	M183	Set Up:	By software command or via 2 external switches		
	Characters/Line	24	30	36	42	Printout:	By software commands		
	Print Speed/Sec	1.7	1.3	1.1	0.9		Year 2000 Compatible		
	Graphics Dots/Line	144	180	216	252	Power Supply:	Print Mechanism:	+5Vdc +1.0V -0.5V	
Buffer Length:	1500 Characters					4 Needle:	Text only: 0.3A ave. 1.5A max 1.5A ave. 2.0A max		
Data Transfer:	Modes:	Centronics Parallel RS232C Serial 20mA Loop Serial TTL Serial			6 Needle:	Text only: 0.6A ave. 3.0A max 3.3A ave. 4.0A max			
Serial:	Baud:	150, 300, 600, 1200, 2400, 4800, 9600			Standby:	10mA			
	Parity:	Odd, Even, None			Logic Supply:	5Vdc ± 0.25Vdc 0.17A typical, 0.25A max			
	Bit Number:	7 or 8			Temperature:	Operating:	5°C to 40°C (20 to 80% humidity)		
	Protocol:	DTR or XON/XOFF			Storage:	-20°C to 70°C (95% humidity max)			
Character Set:	IBM2					Physical Size:	100mm(W) x 110mm(D) x 15mm(H)		
Countries:	UK Also available: Germany, France, International					Weight:	104 grams		

Physical Dimensions (mm)



7 Fixing Holes 3.2mm Diameter

Connections

- CN1** Centronics Parallel Connector
- CN2** 20mA Current Loop Connector
- CN3** Power Supply Connector
- CN4** 6 Needle Print Mechanism Connector
- CN5** 4 Needle Print Mechanism Connector
- CN6** Multi Purpose Connector (FEED/REWIND/LED/PEND/RESET)
- CN7** Guillotine/Date and Time Setup Connector
- CN8** Paper End Connector
- CN9** RS232C Serial and TTL Serial Connector

All Mating connectors and crimps are supplied
CN1 is a 26 way IDC socket for Parallel versions.

Associated Products

Mains Power Supply:	D167 Series
Plastic Housing + Mechanism + Paper Low	D240 Series
Plastic Housing + Mechanism + Low Cost:	D220 Series
3U High Plastic Housing + 4 needle Mechanism:	D211 Series
Metal Housing + 4 needle Mechanism:	D218 Series
3U High Metal Housing + Rewind + Mechanis + Paper Low:	D216 Series
DIN Cased 3U High Printer	D238 Series
DIN Cased 3U High Printer & Rewind	D239 Series
Paper Roll Holders:	D175 Series
Rewind Units:	DAF-220 Series

Order Codes

D193-06-CD

Drives all mechanisms. Complete with RAM and all mating connectors.

C=1	Without Clock
3	With Clock
D=1	RS232C Serial
4	Centronics Parallel +TTL Serial
7	20mA Loop Serial



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