

Overview

The D200 Series are designed to interface the highly reliable 40 column fast STAR dot matrix print mechanisms to parallel or serial inputs. Data is received while printing enabling the full speed of the mechanism to be achieved.

The speed and print quality of the MP300 Mechanism is particularly suited to EPoS applications. A cutter version of the mechanism enables receipts to be cut.

Paper is under stepper motor control and can be fed forward or backward. This can be particularly useful when label printing to obviate the necessity to have gaps between labels.

The D200 has Black mark sensor circuitry with commands to search forward or backward for a Black or White mark.

A 1000 character buffer is standard with 7000 character optional. A Date and Time option is available with the 1000 character buffer versions.

Code 39 barcodes can be easily printed. The height and position of the barcode can be set by command. The characters to be printed need only be sent. Dot addressable graphic printing allows 200 dots per line to be accessed. Printing can be inverted (Datamode) for panel mount applications.

Serial input formats can be either RS232C or 20mA current loop. Baud rates up to 9600 are selectable. Two protocols are available DTR mode

or XON/XOFF. The Centronics Parallel input accepts data from IBM PC's.

The STAR mechanisms plug directly into the D200 via 2 cables (ordered separately). The cutter versions have a flying cable which plugs directly into the D200. The PW300 rewind also plugs directly to the D200 via a flying cable. Installation is therefore very simple. +24VDC and +5VDC power supplies are required.

The D200 can be powered from the D203 mains power supply. A mains filter should be used.

A full IBM2 character set is available with country selections for UK, Germany and France. The block graphic characters allow continuous 'borders' to be printed as viewed on a typical IBM screen.

A peripheral driver with switch input can be used to drive cash drawers etc. from either 24VDC or 5VDC. An input/output line, IO, can be read or set high or low by software command. In serial mode only an 'ENQ' command initiates the D200 to output the status of several parameters including paper end, black mark sensor, peripheral switch and the IO input line.

A self test printout gives details of the D200 settings. The D200 FAIL-SAFE NEEDLE PROTECTION circuitry prevents damage to the print head in case of abnormal operation.

Features

- Drives STAR Fast MP300 40 Column Mechanisms
- Friction or Sprocket Feed and Cutter Versions
- Print Speed: 3.2 Lines/Second
- Input Formats:

Parallel:	Centronics
Serial:	RS232C, 20mA Loop
- 1K Character RAM Buffer
- Standard (7K Optional)
- Date and Time Option with 1K Buffer Version
- Code 39 Barcode Printing
- Dot Addressable Graphics Printing Capability
- Cash Drawer Driver, Rewind Driver
- Black Mark Sensor, Cutter Driver
- Paper Feed Forward or Backward
- IBM2 Character Set
- 24VDC, +5VDC Power Supplies
- High Reliability

Applications

- EPoS Systems
- Ticket Issuing Equipment
- Receipt Printing
- Production Control Equipment
- Audit Printing

Specifications

Character per Line:	40
No of Needles:	9
Print Speed:	3.2 Lines/Second
Paper Feed Speed:	18 Lines/Second Approx.
Paper Width:	76mm to 82.5mm
Print Area:	65.7mm
Characters per inch:	15.4cpi
Buffer Length:	1K (7K optional)
Data Transfer:	Modes: Centronics Parallel RS232C Serial 20mA Current Loop Serial
	Parallel: 7 or 8 Bits
	Serial: Baud Rate: 150, 300, 600, 1200, 2400, 4800, 9600 Parity: Even, odd or none Bit Number: 7 or 8 Stop Bits: 1 or more (2 if 7bits, no parity selected) Protocol: DTR or XON/XOFF
Character Set:	IBM2: UK, French & German character sets switch select.
Graphic Capability:	200 Addressable dots
Barcode:	Vertical Height: 2.8mm to 25.4mm Horizontal offset: 0 to 19 characters Type: Code 39 Max Number: 10 Characters
Date & Time Facility:	Format: Years, Months, Days, Hours, Minutes, Seconds Battery Backed: Yes Set Up: Via 2 external switch inputs
Rewind Driver:	Connection: Flying cable from PW300 Operation: Automatically via D200 program.
Paper End Facility:	External contacts must be closed, D200 can drive an LED to indicate paper end plus output to Centronics connector PEND state. In serial mode

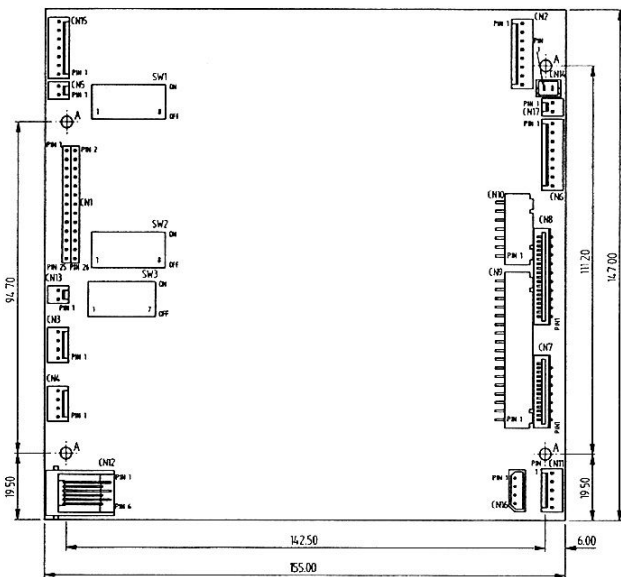
Peripheral Driver:	Mating Connector: 6 Pin Modular Jack Connector Molex: 90075-0007 Connector + Cable: Length: 2 metres Order Code: 933-001
	VDC: 24VDC Imax: 1Amp Cycle: Software selectable Default: 200mSON, 200mSOFF ON Time: 10mS to 2.5 seconds OFF Time: 10mS to 2.5 seconds Open collector transistor driver
	Output: Compulsion Switch Input: Voltage free contact required Status Output in 'ENQ' Command (serial only)
Black Mark Sensor:	Opto: Reflective or Slotted Type Adjustment: Diode current adjustable typically 3 to 30mA Reflective Opto: 'Black' status, no reflection. Slotted Opto: 'Black' status, light beam cut. Commands: Feed until 'Black' forward & backward. Feed until 'White' forward & backward.
IO Line:	Commands: Status read by 'ENQ' command. Output set by software command.
Cutter:	Connection: Flying cable from MP342 mechanism. Operation: Perforate or attached-full cut by software.
Power Supplies:	Vp: 24VDC ± 1.2VDC Drives MP300 mechanism, cutter and peripheral driver (1.7Amps or larger power supply capacity with 4700µF 35V reservoir capacitor recommended.) VL: 5VDC ± 0.25VDC D200: 250mA typical D200 + MP300: 460mA typical 500mA typical if Black Mark Sensor Used.
Temperature:	Operating: +5°C to 40°C Storage: -20°C to +70°C
Relative Humidity:	Operating: 40 to 80% Storage: 95% (at 40°C) non condensing
Weight:	180 grams

Summary of Commands

CONTROL CODE	HEX CODE	FUNCTION
<ENQ>	05	Enquiry
<LF>	0A	Print and line feed
<FF>	0C	Page feed (form feed)
<RF>	0D	Print and line feed
<O>	0E	Set double width printing
<I>	0F	Select inverted (Datamode) printing
<LE>	10	Select non inverted (Textmode) printing
<C4>	14	Cancel double width printing
<SYN>	16	Time:Hrs:Mins
<TB>	17	Time:Hrs:Mins:Secs
<AN>	18	Clears RAM buffer
<M>	19	Date:Month;Day;Year
<S>	1C	Operates peripheral driver
<S>	1D	Barcode set command
<S>	1E	Start of barcode data
<S>	1F	End of barcode data
<ESC><BEL>n1n2	1B 07 n1 n2	Set drive pulse for peripheral unit

CONTROL CODE	HEX CODE	FUNCTION
<ESC>@	1B 40	Initialise printer
<ESC> "0"	1B 2D 30	Cancel underline mode
<ESC> " "1"	1B 2D 31	Select underline mode
<ESC> "C"n	1B 43 n	Set page length n lines
<ESC> "E"	1B 45	Select emphasized print mode
<ESC> "F"	1B 46	Cancel emphasized print mode
<ESC> "L"n1n2	1B 4C n1n2	8 dot bit image mode
<ESC> "W"0"	1B 57 30	Feed forward until black mark
<ESC> "W"1"	1B 57 31	Feed forward until white mark
<ESC> "W"2"	1B 57 32	Feed backward until black mark
<ESC> "W"3"	1B 57 33	Feed backward until white mark
<ESC> "a"n	1B 61 n	Feed forward n lines
<ESC> "b"n	1B 62 n	Feed backward n lines
<ESC> "d"0"	1B 64 30	Attached full cut
<ESC> "d"1"	1B 64 31	Partial cut
<ESC> "e"0"	1B 65 30	IO output line to logic low
<ESC> "e"1"	1B 65 31	IO output line to logic high

Dimensional Drawing



The 4 fixing holes have clearance for M3 screws.

Order Codes

D200-01-A431-B	MP300 interface, rewind, cutter, peripheral drivers, Black mark sensor, paper end 2KRAM (1000 character buffer) KRAM (7000 character buffer) Date and time (1000 character buffer) RS232C serial Centronics parallel 20mA current loop serial
A= 0	
1	
2	
B= 1	
2	
7	

(Connectors and Crimps supplied except the parallel mating connector and cables to mechanism 937-098 and 937-099)

ACCESSORIES

Cables connecting MP300 to D200:	14 way cable:	Order code: 937-098
	19 way cable:	Order code: 937-099
Screened Peripheral drive cable with switch line:		Order code: 933-001
PW300-24 Rewind:		Order code: 542-324
Mechanisms:	MP312F-24 (40 col, friction feed)	Order code: 542-854
	MP322S-24 (40 col, sprocket feed)	Order code: 542-851
	MP342F-24 (40 col, friction feed, Cutter)	Order code: 542-852
Power Supply:	D203-02 (230VAC input):	Order code: 999-203
Ink cassette:	Purple:	Order code: 553-300
	Black:	Order code: 553-301
Paper Rolls:	Single ply: 76mm width, 76mm dia:	Order code: 552-077
	82.5mm width, 86mm dia:	Order code: 552-083
	Dual ply: 76mm width, 76mm dia:	Order code: 552-078
	76mm width, 82.5mm dia:	Order code: 552-084
Note:	The MP300 mechanisms have adjustments for accepting either width paper. The printing width is the same in each case.	
Paper roll holder:	(for 76mm width paper only)	
	No paper end detector (80mm max dia):	Order code: D175-076-12
	With paper end detector (68mm max dia):	Order code: DRH-2605-PE



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