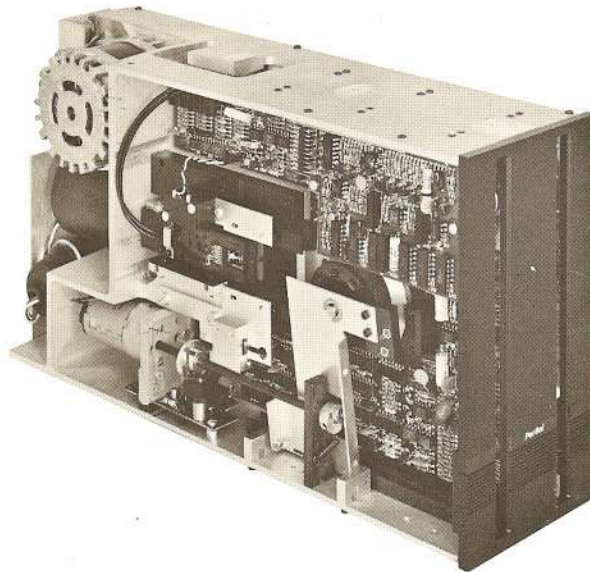


PerSci Model 299 Four-Headed Dual Diskette Drive

The PerSci Model 299 is a low cost, random access memory device which reads and writes on one or both sides of two 8" diskettes by means of four read/write/erase heads. When recording on four diskette surfaces in double density encoding, on-line data capacity can be as high as 3.2 Mbytes. Head positioning is accomplished by a high speed linear voice coil system. Thus, in capacity and speed the PerSci Model 299 approaches the performance of rigid disc drives, while still maintaining the low cost, convenience and small size of diskette drive technology.



Up to 3.2 Mbytes in Selectable Formats:

The unformatted data capacity of the Model 299, recording on both sides of two 8" diskettes, is 1.6 Mbytes in single density (FM) encoding and 3.2 Mbytes in double density (MFM or M²FM). When IBM 3740 compatible format is required, the 299 will read and write 1 Mbyte of data per drive. Expanded capacity, soft and hard sectored formats can also be employed. In system configurations, an option provides for multiplexing of up to 8 drives (16 diskettes) for a total system capacity as high as 25.6 Mbytes.

Double and Single Sided Diskettes:

The 299 accepts one or two IBM Diskette IID or equivalent diskettes for soft sectored, double sided, double density recording and IBM Diskette II for double sided applications in single density. Double sided, hard sectored media such as the Dysan 101/2 and 101/2D may also be used.

The unit will also accommodate single sided media, hard or soft sectored, optimized for either single or double density encoding. Two index sensors on the drive automatically distinguish single and double sided diskettes.

Average Seek Time of 33 MS:

PerSci's exclusive voice coil positioning system, a miniaturized version of the type used on large disc drives, makes possible a full-stroke 76 track seek in 100 ms. Track to track access is 10 ms and no settle time is required. A random average seek is 33 ms, five to seven times faster than stepper motor based diskette drives.

High Reliability:

The unique high performance characteristics of PerSci's 299 are achieved without sacrificing reliability. The soft error specification is 1 in 10⁹ and hard errors are 1 in 10¹². Data integrity is further assured by an optical write protect device. MTBF is 6000 hours and component life is 15,000 hours.

Ease of Operation:

A motorized autoloader diskette positioning and ejection device simplifies operation, increases precision and assures gentlest media handling. Drive options permit diskette unload and eject by software remote control. An in-use LED indicates diskette selected.

Compact, Interchangeable Size:

The PerSci Model 299 Four-Headed Dual Drive measures only 8.72" x 4.38" x 15.4" therefore, four drives can be mounted vertically or two horizontally in a 19" rack. The 299 is interchangeable with the PerSci Model 277 in mechanical mounting and electrical interface.



SYSTEMS

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PerSci Model 299 Four-Headed Dual Diskette Drive—Specifications

Capacity:

Unformatted Single Density
Per drive: 1.6 Mbytes
Per disk: .8 Mbytes
Per track: 5.2 Kbytes
3740 Type Format
Per drive: 1 Mbyte
Per diskette: .5 Mbyte
Per track: 3.3 Kbytes
Unformatted Double Density
Per drive: 3.2 Mbytes
Per diskette: 1.6 Mbytes
Per track: 10.4 Kbytes

Encoding Method:

Single density: FM
Double density: MFM or M²FM

Track Density:

48 tpi

Tracks:

77

Bit Density:

Single Density: 3268 bpi
Double Density: 6536 bpi

Rotational Speed:

360 RPM \pm 7 RPM

Transfer Rate:

Single Density: 250 Kbps
Double Density: 500 Kbps

Operating Times:

Track to track access: 10 ms
Settle: 0 ms
Random average seek: 33 ms
76 track seek: 100 ms
Head load time: 35 ms

Media Requirements:

Single sided, soft sectored
single density: IBM Diskette 1 or equivalent
double density: IBM Diskette 1 or equivalent
Single sided, hard sectored
single density: Good quality OEM type
diskette
double density: Good quality OEM type
double density diskette
Double sided, soft sectored
single density: IBM Diskette 2 or equivalent
double density: IBM Diskette 2D or
equivalent
Double sided, hard sectored
single density: Good quality OEM type
diskette
double density: Good quality OEM type
double density diskette

Physical Dimensions:

Height: 8.72"; width: 4.38"; depth: 15.4"
Weight: 22 lbs

Positioning Mechanism:

Linear voice coil motor

Operating Environment:

40° to 115°F

Power Requirements:

AC voltage:

50/60 Hz \pm 0.5 Hz
110/115 VAC installations —
90-127 V @ .4 A typical
200/230 VAC installations —
180-253 V @ .2 A typical

DC voltage:

+24 VDC \pm 5%, 5.0 A Avg., 8.5 peak
+ 5 VDC \pm 5%, 2.0 A max
- 5 VDC \pm 5%, 0.25 A typical

Reliability:

Read error (soft): less than 1 in 10⁹ bits
Read error (hard): less than 1 in 10¹² bits
Seek error: less than 1 in 10⁶ accesses
MTBF: More than 6000 hours.
MTTR: 30 min.
Component life: 15,000 hours

Consumer-Installable Options:

Addressing for 1 to 8 drives (2 to 16 diskettes)
Separated 8 or 16 sector I/O
Manual Eject Inhibit I/O
Remote Eject I/O
Write Protect Disable
Parallel Line Terminator



Peripherals a
Generation Ahead

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