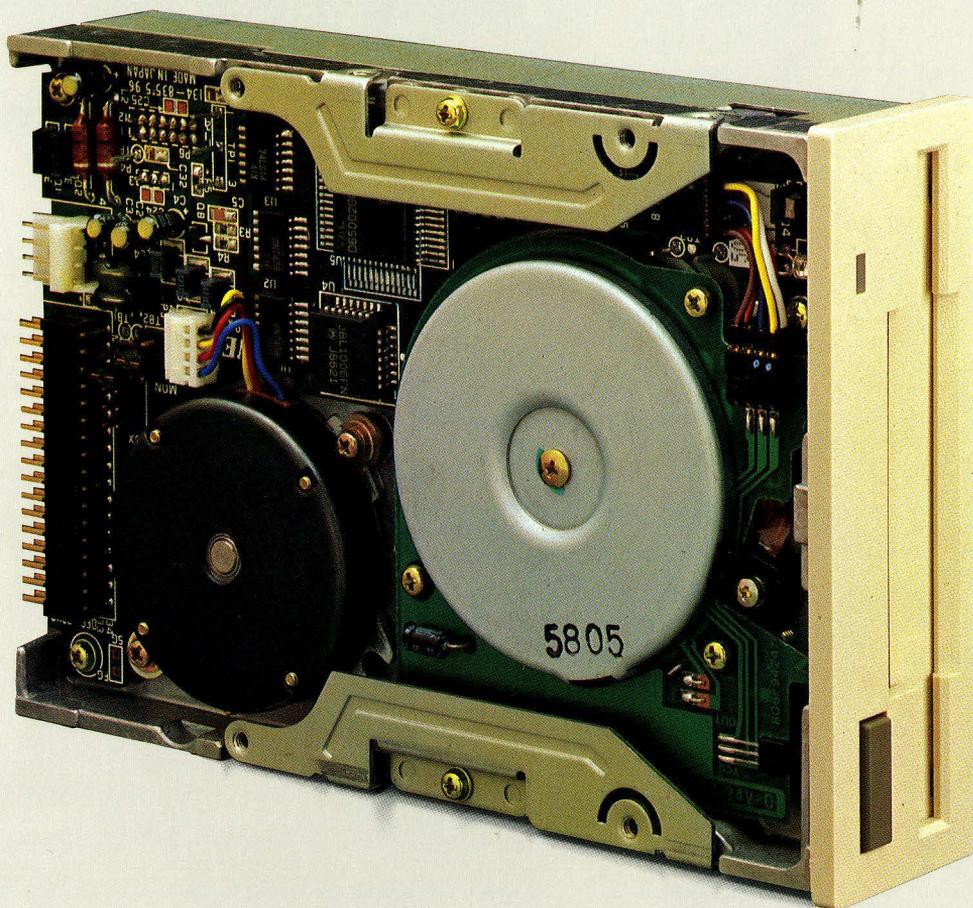


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NEC Model FD1036A 3½-Inch Microfloppy Disk Drive

NEC



Features

- Compact design — 1.18-inch height
- Unformatted storage capacity of 1 MB
- Low power dissipation of only 2.1 watts
- Auto shutter to protect media
- Direct drive, brushless DC motor — no AC requirements
- Fast head positioning time — only 3 ms track-to-track

General Description

The NEC FD1036A is the latest in NEC's line of compact, 3½-inch disk drives for use in portable computer systems. The NEC FD1036A is highly reliable, with a MTBF of 12,000 power-on hours (POH) and a MTTR of only 15 minutes. The device life is 5 years, or 15,000 hours, and no scheduled maintenance is required. The FD1036A uses a standard minifloppy interface, so you can easily double your storage

capacity with two FD1036A drives in the place of one conventional minifloppy, all at minimal cost.

The FD1036A uses a direct drive, brushless DC motor, and has a power dissipation of only 2.1 watts. This allows you to use an inexpensive power source, enhancing the FD1036A's application in portable computer systems.

Another cost-saving feature is the auto shutter, which helps extend the lifetime of the 3½-inch media. The auto shutter opens upon insertion of the diskette, and closes when it is removed to protect the drive from dust.

Small in size, this disk drive is the type of quality product that you've come to associate with the name NEC. The FD1036A reflects NEC's commitment to expand, develop, and improve its line of reliable and versatile disk drives.

FD1036A Specifications

FEATURE	SPECIFICATION
Capacity	MFM FM
Unformatted	1 MB 0.5 MB
Formatted	640 KB 320 KB
(16 sectors, 256 bytes/sector)	
Maximum Bit Density	8717 bpi 4359 bpi
Data Transfer Rate (kbit/sec)	250 125
Average Rotational Speed	300 rpm \pm 1%
Access Time	
Seek Time (track-to-track)	3 ms
Motor Start Time	500 ms
Seek Settling Time	15 ms
Recording	
Track Density	135 tpi
Recording Method	FM/MFM
Power Requirements	
DC	12 V \pm 5%, 5 V \pm 5%
Startup Current	0.1 mA, 60 mA
Drive in Ready State Current	90 mA, 200 mA
Power Dissipation	2.1 W
Physical Dimensions	
Height	1.18 in. (30 mm)
Width	4 in. (101.6 mm)
Length	5.75 in. (146 mm)
Weight	1.2 lb (0.56 kg)
Reliability	
MTBF	12,000 POH
MTTR	15 minutes
Device Life	15,000 POH or 5 years
Data Reliability	
Soft Error Rate	1 in 10^9 bits read
Hard Error Rate	1 in 10^{12} 12 bits read
Seek Error Rate	1 in 10^6 seeks
Media	
3 1/2 -inch media	Single or double sided diskette specified by NEC
Media Life	3.0×10^6 passes
Environmental	
Temperature	
Operating	39°F to 115°F (4°F to 46°C)
Storage	-4°F to 122°F (-20°C to 50°C)
Transportation	-40°F to 140°F (-40°C to 60°C)
Humidity	
Operating	20% to 80% relative humidity
Storage	10% to 90% relative humidity
Transportation	5% to 95% relative humidity
Maximum Wet Bulb Temperature	
Operating	84°F (29°C)
Storage	104°F (40°C)
Transportation	113°F (45°C)
Maximum Temperature Gradient	
Operating	36°F/hr (20°C/hr)
Storage	54°F/hr (30°C/hr)
Transportation	54°F/hr (30°C/hr)

Interface

SIGNAL INTERFACE

PIN		SIGNAL NAME	
GROUND	SIGNAL		
	1	2	Motor On 1
	3	4	In Use
	5	6	Drive Select 3
	7	8	Index
	9	10	Drive Select 0
	11	12	Drive Select 1
	13	14	Drive Select 2/ Motor On 1
	15	16	Motor On
	17	18	Direction Select
	19	20	Step
	21	22	Write Data
	23	24	Write Gate
	25	26	Track 00
	27	28	Write Protect
	29	30	Read Data
	31	32	Side Select
	33	34	Ready

INTERFACE FOR POWER SUPPLY

PIN	POWER SUPPLY
1	DC + 5 V
2	DC + 5 V Return
3	DC + 12 V Return
4	DC + 12 V



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