

**Answer ID**

784

**Products**EIDE Drives  
5400 RPM and older**Category**

Specifications &amp; Documents

**Last Updated**

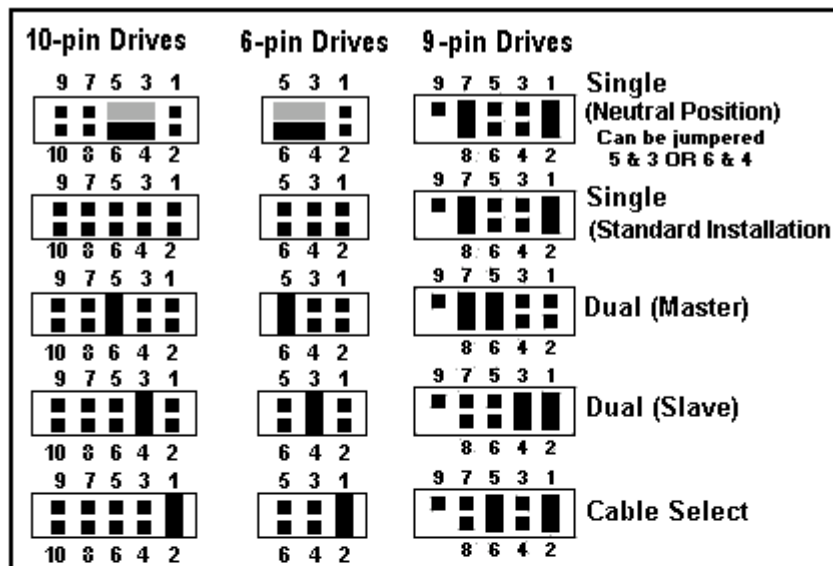
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**Specifications for the 6.4GB EIDE drive (model AC36400).****Question**

Specifications for the 6.4GB EIDE drive (model AC36400).

**Answer****Specifications for the WD Caviar AC36400****Recommended Setup Parameters**

Cylinders	13328
Heads	15
Sectors/Track	63
Landing Zone	13328
WPC	12868
Jumper Setting Information	Ten Pin Drive

40-pin IDE  
connectorJumper  
ShuntPower  
ConnectorJ8  
Jumper Block**Physical Specifications**

Formatted Capacity*	6448 MB
Interface	40-pin EIDE
Actuator Type	Rotary Voice Coil
Number of Platters	3
Data Surfaces	6
Number of Heads	6
Bytes Per Sector	512
User Sectors Per Drive	12,594,960
Servo Type	Embedded
Recording Method	GCR 8,9 PRML

ECC	Reed Solomon
Head Park**	Automatic

\* Western Digital defines a megabyte (MB) as 1,000,000 bytes and a gigabyte (GB) as 1,000,000,000 bytes

\*\* Turning the system power off causes the WD Caviar to perform an automatic head park operation.

### Performance Specifications

Average Seek (Read)	9.5 ms
Average Seek (Write)	11.5 ms
Track to Track Seek	2.0 ms
Full Stroke Seek	19 ms typical
Index Pulse Period	11.11 ms
Average Latency	5.5 ms
Rotational Speed	5400 RPM
Controller Overhead	0.3 ms
Transfer Rate (Buffer to Host)	33.3 MB/s (Mode 2 Ultra ATA) 16.6 MB/s (Mode 4 PIO) 16.6 MB/s (Mode 2 multi-word DMA)
Transfer Rate (Buffer to Disk)	68 Mbits/s minimum 131 Mbits/s maximum
Interleave	1:1
Buffer Size	256 KB
Error Rate (Non-Recoverable)	<1 in 10 <sup>13</sup> bits read
Spindle Start Time	
- From Power-on to Drive Ready*	11 s typical, 18 s maximum
- From Power-on to Rotational Speed**	7 s typical, 15 s maximum
Spindle Stop Time	6 s typical
Contact Start/Stop Cycles (CSS)	40,000 minimum

\* Defined as the time from power-on to the setting of the Drive Ready and Seek Complete including calibration.

\*\* Defined as the time from power-on to when the full spindle rotational speed is reached.

### Physical Dimensions

Height	English: 1.00 inch (±0.02 inch)
	Metric: 25.4 mm (±0.51 mm)
Length	English: 5.75 inches (±0.02 inch)
	Metric: 146.05 mm (±0.51 mm)
Width	English: 4.00 inches (±0.02 inch)
	Metric: 101.6 mm (±0.51 mm)
Weight (min)	English: 1.1 pounds (±0.11 pounds)
	Metric: .500 kg (±0.050 kg)

### Electrical Specifications

Operating Mode	Current Requirements and Power Dissipation		
	RMS Current*		Power, Typical*
	12 VDC	5 VDC	
Spinup	1.8 A max	530 mA	24.3 W max
Read/Write/Idle	240 mA	660 mA	5.35 W
Seek	580 mA	600 mA	8.62 W
Power Management Commands			

Operating Mode	RMS Current*		Power, Typical*
	12 VDC	5 VDC	
Idle (E1H)	240 mA	660 mA	6.18 W
Standby (E0H)	30 mA	192 mA	1.5 W
Sleep (E6H)	30 mA	96 mA	1.0 W
Input Voltage Requirements			
+5.0V (±5%) and 12.0V (±8%)			
Ripple			
+12 VDC		+5 VDC	
Maximum Frequency	200 mV (double amplitude)		100 mV (double amplitude)
	0-20 MHz		0-20 MHz
Power Connectors and Cables			
Power Connector	4-pin AMP (P/N 84069-1 or equivalent)		
Mating Connector	Body (AMP 1-480424-0 or equivalent)		
	Pins (AMP 60619-4 or equivalent)		
Power Cable Wire Gauge	18 AWG (or heavier)		

\* All values are typical (25°C, 5.0V, and 12V input) except where specified as maximum.

Note: Current measurements cut off frequency at 1 kHz.

### Environmental Specifications

Shock:*	Operating
	10 G
	Non-operating
	150 G
Vibration	Operating
	5-20 Hz, 0.037 inches (double amplitude) 20-300 Hz, 0.75 G (0 to peak)
	Non-operating
	5-20 Hz, 0.195 inches (double amplitude) 20-500 Hz, 4.0 G (0 to peak)
Drive Generated Vibration	Sweep Rate
	One-octave/minute maximum
Rotational Shock (non-operating)	.10G maximum with the drive in an unconstrained condition
	Amplitude
	12K rad/sec <sup>2</sup>
Operating Temperature and Humidity	Duration
	2 ms
	Temperature
	5° C to 55° C (41°F to 131°F)
	Humidity
	5-85% RH non-condensing 33°C (maximum wet bulb)
	Thermal Gradient
	20°C/hour (maximum)
	Humidity Gradient
	20%/hour (maximum)
Non-Operating Temperature and Humidity	Temperature
	-40° C to 60° C (-40°F to 140°F)
	Humidity
	5-95% RH non-condensing 33°C (maximum wet bulb)
	Thermal Gradient
	30°C/hour (maximum)
	Humidity Gradient
	20%/hour (maximum)
Altitude	Operating
	-1,000 feet to 10,000 feet (-305M to 3,050M)
	Non-Operating
	-1,000 feet to 40,000 feet (-305M to 12,200M)

Acoustics	Idle Mode**
	37 dBA (typical)
	Seek Mode***
	37 dBA (typical)
Reliability	AFR
	<1.2 %
	MTBF
	350,000 Hours
	MTTR
	10 minutes (typical)
	Component Design Life
	5 years
	Warranty Period
	<a href="#">Warranty Status</a>

\* Half sine wave, measured without shock isolation and without non-recoverable errors.

\*\* No audible pure tones.

\*\*\* Random seek at a rate of 26 seeks per second.