

This specification provides a description for the TEAC FD-235HF, double sided, dual density, 3.5 inch floppy disk drive. This table shows the outline of the floppy disk drive as well as the factory default jumper settings.

Model Name	FD-235HF-62XX	
Safety standard on label	UL, CSA & IEC950 (CB)	
Operation modes	High density mode, Write and read	Normal density mode, Write and read
3.5" disk used	High density (2HD)	Normal density (2DD)
Unformatted data capacity	2M bytes	1M bytes
Data transfer rate	500k bits/sec	250 bits/sec
Disk rotational speed	300 rpm	
Track density	135tpi	
Track to track time	3msec	
Required power	+5v single (4.5 – 5.5V)	
Front bezel & flap		
Eject button		
LED indicator color	Green	
Signal output driver	Open collector TTL	
Input signal terminator	1kΩ+ 5%, unremovable	
Customer selectable strap	2 selections, refer to item 11.1	
Function setting at Delivery	<ol style="list-style-type: none"> 1. Strap setting <ol style="list-style-type: none"> 1.1 DS1: DRIVE SELECT 1 on pin 12 2. Other function setting <ol style="list-style-type: none"> 2.1 Automatic density setting by HD hole 2.2 LED turn-on condition: DRIVE SELECT 2.3 Motor rotating condition: MOTOR ON 2.4 Ready and seek-complete gate (full –mask) For INDEX and READ DATA output pulses 2.5 Disk Change on pin 34 2.6 Auto-chucking, auto-recalibration 2.7 FDD frame is electrically shorted on DC 0V. 	
Interface connector	34 pin right angle header connector and power connector	
Other optional function	Not equipped	

FDD name	Front color	Parts Nos.	
		Font bezel Ass'y	Button
FD-235HF-6240	PC/AT	17968300-03	16788039-03
FD-235HF-6291	PS/2	17967696-04	16788039-04

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Eject button	Black	
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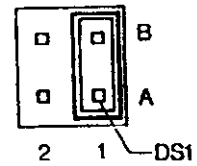
Jumper settings for models FD235HF-62XX & 64XX

Customer Selectable Straps

Function Summary of Straps

The FDD is equipped with the following selectable straps on the main PCBA. Insertion of a short bar onto the post pin is defined as the on-state of the strap.

Strap	Function
DS0	DRIVE SELECT 0 input on pin 10
DS1	DRIVE SELECT 1 input on pin 12



DS1: Drive Select 1

DS1 must be shorted.

DS0 and DS1 Straps

- (1) In the multiplex control, these straps designate the address of the FDD.
- (2) By the combination with the DRIVE SELECT 0 and 1 signals, two addresses, can be designated.

TURN ON CONDITION OF INDICATOR AND SPINDLE MOTOR

Front Bezel Indicator

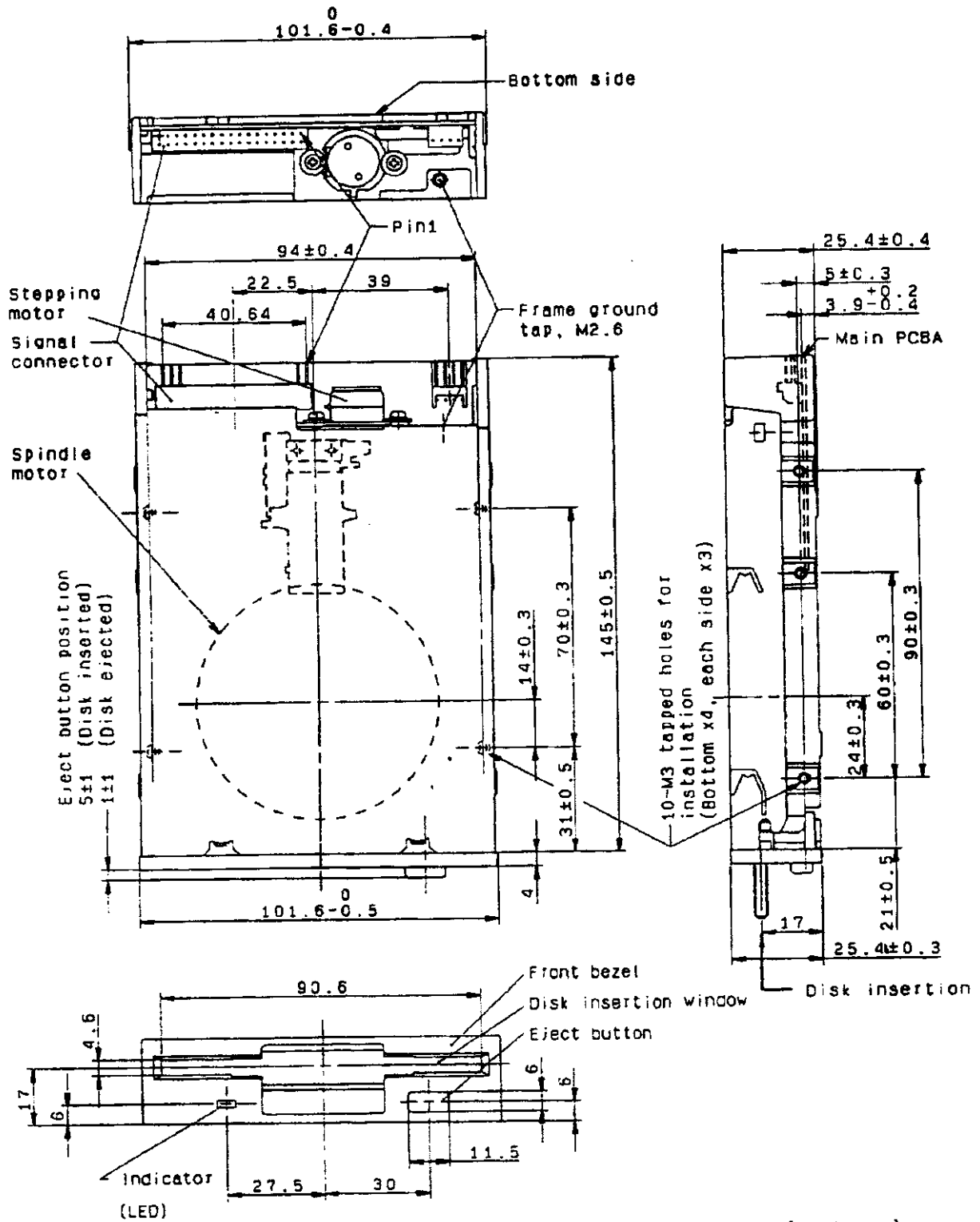
The indicator (LED) turns-on while the DRIVE SELECT signal is TRUE. However, the indicator keeps off until 3.1msec has passed after the DRIVE SELECTION to avoid the polling operation of the DRIVE SELECT signal.

Spindle Motor

- (1) The spindle motor rotates while the MOTOR ON signal is TRUE. However, the spindle motor does not rotate at any condition while no disk is installed.
- (2) Auto-chucking operation is executed at each disk installation by rotating the spindle motor for 490msec, approx. (500msec, Max.).

PHYSICAL SPECIFICATION

Width	101.6mm [4.00 in], Nom.
Height	25.4mm [1.00 in], Nom.
Depth	145mm [5.71 in], Nom., excluding front bezel
Weight	345g [0.76lbs.], Nom., 360g [0.79 lbs.], Max.
External view	See fig. 1.
Cooling	Natural air cooling
Mounting	Mountings for the following directions are acceptable. (a) Front loading, mounted vertically. (b) Front loading, mounted horizontally with spindle motor down. (c) Mounting angle in items (a) and (b) should be less than 25° with front bezel up or down. Note: As to the other mounting directions than the above will be considered separately.
Installation	With installation holes on the frame of the FDD.
Material of frame	Aluminum die-cast
Material of front bezel	PPHOX (Complying with UL94-5V)



(Fig.1) FDD external view

ENVIRONMENTAL CONDITIONS

	Operating	Storage	Transportation
Ambient temperature	4~51.7°C [39~125 F]	-22~60°C [-8~140 F]	-40~65°C [-40~149 F]
Temperature gradient	20°C [36 F] or less per hour	30°C [54 F] or less per hour	30°C [54 F] or less per hour
Relative humidity	20~80% (no condensation) Max. wet bulb temperature shall be 29.4°C [85°F]	5~90% (no condensation) Max. wet bulb temperature shall be 40°C [104°F]	5~95% (no condensation) Max. wet bulb temperature shall be 45°C [113°F]
Vibration	14.7m/s [1.5G] or less (10~100hz, 1 octave/m sweep rate) 9.8m/s [1.0G] or less (100~200Hz, 1 octave/m sweep rate) 4.9m/s [0.5G] or less (200~600Hz, 1 octave/m sweep rate)	/	19.6m/s [2G] or less (10~100Hz, ¼ octave/m sweep rate)
Shock	Write & read: 49m/S [5G] (11ms, ½ sine wave) or less	/	686m/S [70G] (11ms, ½ sine wave) or less
	Read only: 98m/S [10G] (11ms, ½ sine wave) or less	/	
Altitude	-300m [-980feet]~5,000m[16,400feet]	/	/
Notes: The above requirements are applied for the FDD without shipping box. When a long period is required for transportation such as by ship, Storage environmental conditions should be applied.			

RELIABILITY

MTTF	30,000 power on hours or more (for typical operation duty)	
MTTR	When failure, the FDD should be replaced in unit of the drive and not repaired in unit of parts or assemblies.	
Design component life	5 Years	
Disk life	3 X 10 passes/track or more	
Disk insertion	1.5 X 10 times or more	
Seek operation	1 X 10 random seeks or more	
Preventive maintenance	Not required (for typical operation duty)	
Error rate	Soft error	1 or less per 10 bits read A soft (recoverable) error means that it can be recovered correctly within three retries.
	Hard error	1 or less per 10 bits read A hard (unrecoverable) error means that it cannot be recovered Correctly within tree retries. However, it is recommended to be Followed by a recalibration to track 00 and four additional retries.
	Seek error	1 or less per 10 seeks
	A seek error means that it can seek to a target track within one Retry including a recalibration to track 00.	
Safety standard	Approved by UL, CSA and TUV	
Electro-static discharge test	15kV (150pF, 330)or more No hard error and/or no component damage occur when the test is applied to the operator access area. (front bezel area).	