



產品規格 / 承認書

PRODUCT SPECIFICATION / APPROVAL SHEET

客戶

CUSTOMER:

億格萊股份有限公司

元山型號

Y.S. TECH MODEL NO.:

FD128020LB

(2F3)

客戶型號

CUSTOMER MODEL NO.:



本承認書內容若貴公司確認無誤，
懇請於下方承認欄內簽章寄回。

Please confirm your acceptance of this
approval sheet by return fax.

承認欄
CONFIRMATION SIGNATURE

元山科技工業股份有限公司
電子熱傳事業部 / Y.S.TECH

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PRODUCT SPECIFICATION / APPROVAL SHEET

A. 一般規格 (General Specification)

項目 (Item)		規格 / 條件 (Specification / Condition)	
01	型號 (Part No.)	FD128020LB (2F3)	
02	外型尺寸 (Outline Dimension)	80 X 80 X 20 mm	
03	額定電壓 (Rated Voltage)	DC 12.0 V	
04	電壓範圍 (Voltage Range)	DC 7.0 V ~ DC 13.2 V	
05	起動電壓 (Starting Voltage)	DC 7.0 V	
06	額定電流 (Rated Current)	0.06 A	+ 10%
07	額定功率 (Rated Power Consumption)	0.72 W	
08	轉速 (Speed)	2100 R.P.M.	± 10%
09	最大風量 (Max. Airflow)	25.0	CFM (ft3/min)
		0.708	m3/min
10	最大靜壓 (Max. Static Pressure)	0.059	in-H ₂ O
		1.5	mm-H ₂ O
11	音量位準 (Noise Level)	24.0	dB(A)
12	壽命 (Life Expentancy)	80000	/ hrs at 40°C
13	極數 (No. of Pole)	4	極 (Poles)
14	迴轉方向 (Rotating Direction)	逆時針 (Counter-Clockwise)	

B. 電氣規格 (Electrical Specification)

項目 (Item)		規格 / 條件 (Specification / Condition)	
01	扇葉鎖住保護 (Locked Rotor Protection)	○	安規條件。(Safety Condition)
		○	1.額定電壓鎖住1秒，自動斷電。 (Auto power off after locked at rated voltage for 1 sec.) 2.自動斷電後，2至6秒自動嘗試啓動。 (After auto power off,circuit attempt to restart in 2 to 6 sec.)
02	極性保護 (Polarity Protection)	○	Vcc與GND反接時，不導通。(Open circuit when Vcc & GND are exchanged)
		○	Vcc與GND反接時，5秒內迴路不燒燬(Circuit won't be burned within 5 seconds when Vcc & GND are exchanged)
03	絕緣阻抗 (Insulation Resistance)	10 MΩ/ 裸線與外框間測量，500 VDC/min(10 MΩ / b/w unshielded wire and frame at 500 VDC/min)	
04	絕緣耐壓 (Dielectric Strength)	5 mA Max. / 導線與外框間測量，500 VAC/min(5 mA Max. / Measured b/w lead wire (+) and frame at 500 VAC/min)	

C. 主要材料/零件規格 (Main Materials / Parts Specification)

材料/零件 (Materials / Parts)		規格 (Specification)
01	塑膠材料 / 扇葉、外框、絕緣套 (Plastic Material/Blade, Housing, Bobbin)	a. UL 94V-0 b. P.B.T. + 30% GF Black
02	軸承 (Bearing)	雙滾珠軸承(Two Ball Bearing)
03	導線 (Lead Wire) - G. P.	Red (+), Black (-): UL 1007 \ 24 AWG Yellow (FG): UL 1007 \ 24 AWG
04	端子 (Connector)	2510-3PIN

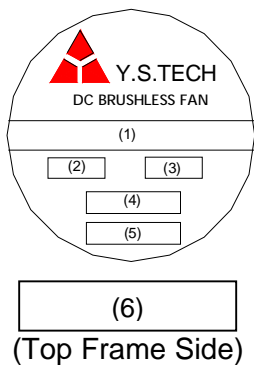
D. 安規規格 (Safety Approvals)

安規 (Safety Approvals)	安規編號 (File No.)	安規 (Safety Approvals)	安規編號 (File No.)
UL	R9753976	VDE	
CUL	R9753976	T MARK	
TUV	R50027591		
安規承認電流 0.10A + 10% (Approved current 0.10A with tolernace of 10%)			

E. 環境測試 (Environmental Specification)

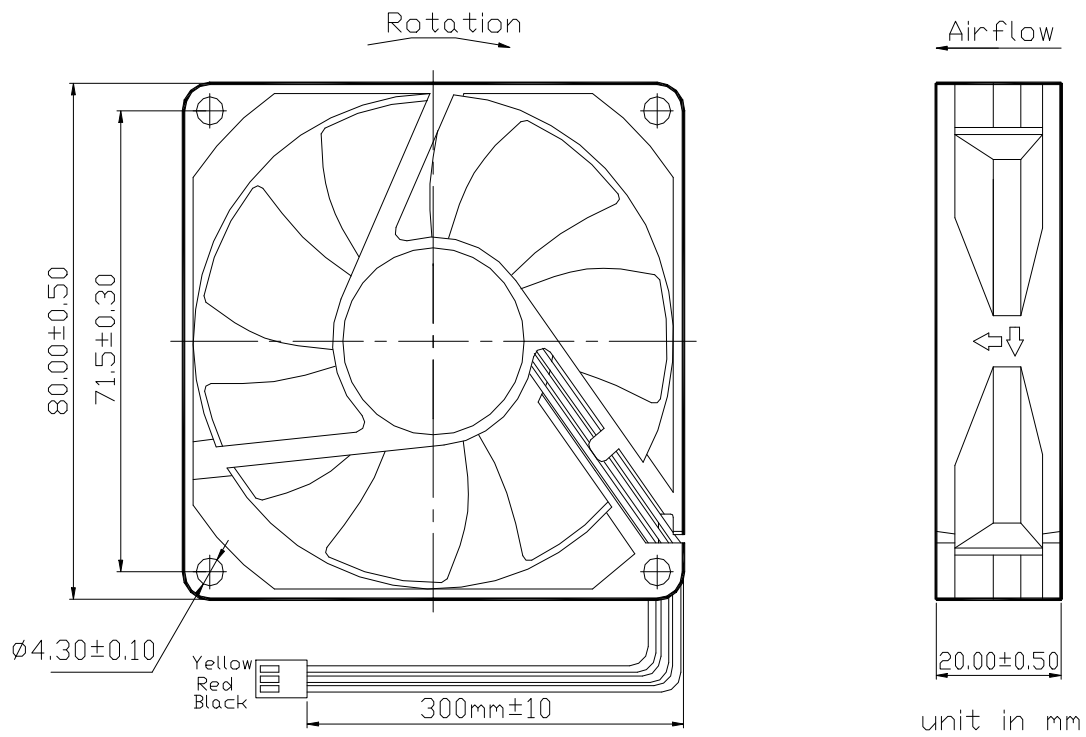
項目 (Item)	規格/條件 (Specification / Condition)
01 運轉溫/溼度範圍 (Operating Temp. Range)	溫度 / Temperature : -10 °C - 70 °C
	溼度 / Humidity : 35 % - 85 % RH
02 保存溫/溼度範圍 (Storage Temp. Range)	溫度 / Temperature : -10 °C - 70 °C
	溼度 / Humidity : 35 % - 80 % RH

F. 商標 (Label Marking)



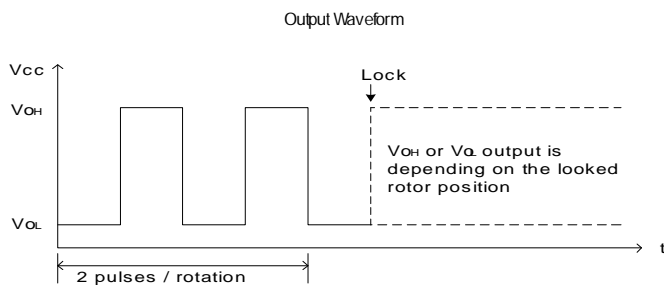
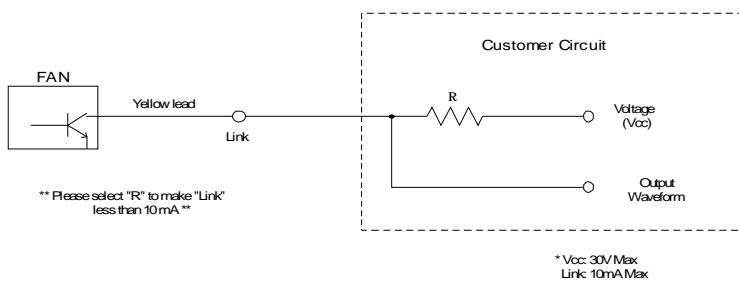
(1)	型號 (Model No.)
(2)	額定電壓 (Rated Voltage)
(3)	電流 (Current)
(4)	安規 (Safety Approvals)
(5)	產地 (Location)
(6)	附碼 (Appendix Code)

G. 外觀尺寸圖 (Outline Dimension)



H: 訊號控制系統(Sensor Circuit System)

Speed Sensor / Tachometer (FG/F)





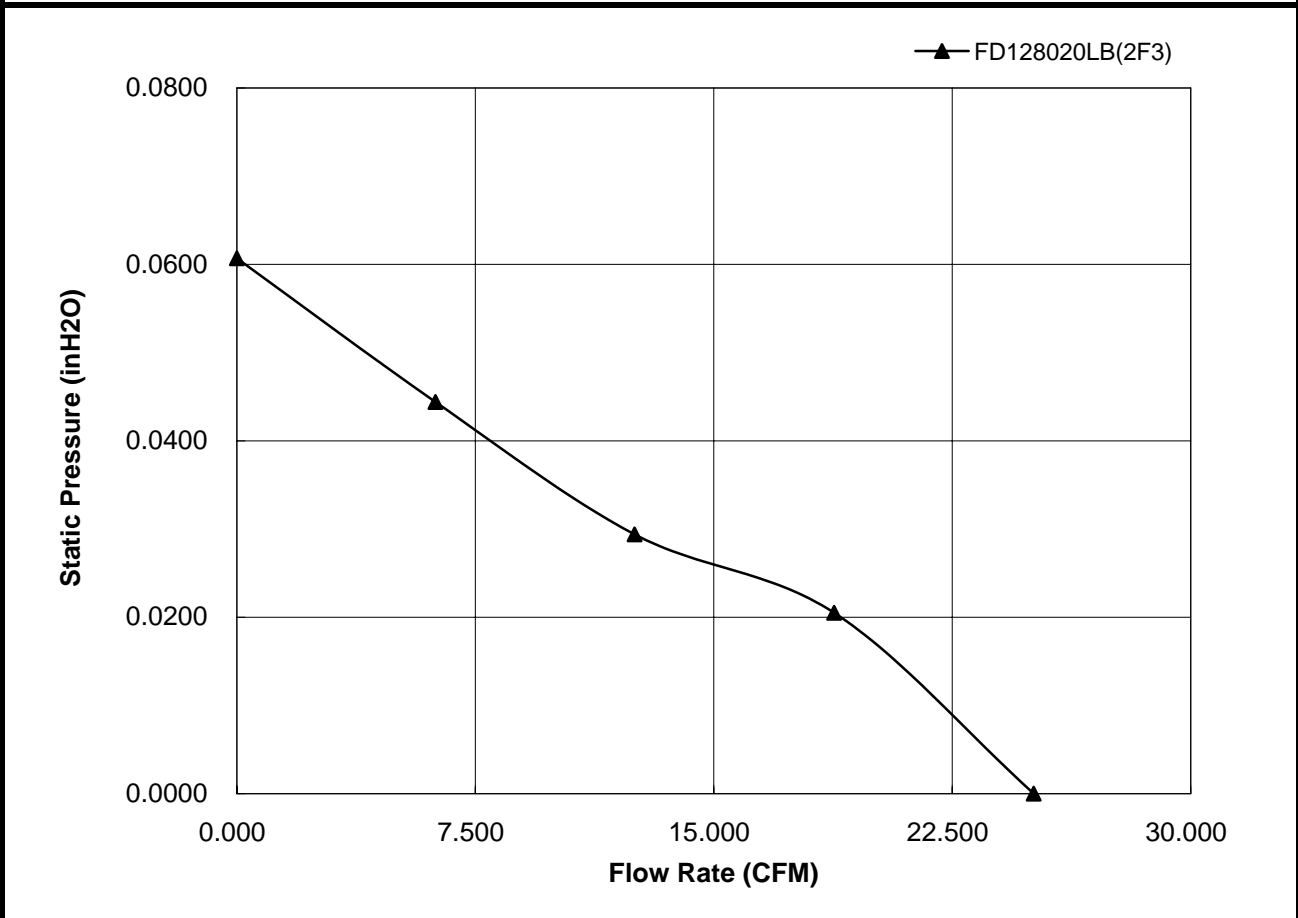
Yen Sun Technology Corp.

Fan Performance Test Report

Fan Model : FD128020LB(2F3) Key Point : FD128020LB(2F3) Blade No. : 7 Motor Poles : 4 Rating Voltage(V) : 12 VDC Rating Current(A) : 0.06 Rating Speed(rpm) : 2100 Test Voltage(V) : 12 VDC Max. Flow rate(CFM) : 25.060 Max. Flow rate(m ³ /min) : 0.709 Max. Pressure(in-H ₂ O) : 0.061 Max. Pressure(mm-H ₂ O) : 1.542	Test Date : 2001/05/14 Order No. : 8020-14 Test No. : YS Method : Constant Voltage Tunnel Setup : Inlet Chamber Type Temperature() : 27 R.H.(%) : 86 Barometric Pressure(mmHg) : 756.6 Acoustic (dB(A)/1M):24.0dB(A) Mea. Distance(M): 1 Background Noise:10.0dB(A) Vibration Level (mm/sec ²): N / A Remark:
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Curve	Pts	Flowrate		Static Pressure		Voltage	Current	Power	Speed
		CFM	m3/min	in-H ₂ O	mm-H ₂ O	V	A	W	rpm
1	1	25.060	0.7094	0.0000	0.000	12.00	0.054	0.65	2029
	2	18.786	0.5318	0.0205	0.521	12.00	0.055	0.66	1940
	3	12.510	0.3542	0.0294	0.747	12.00	0.054	0.65	1999
	4	6.248	0.1769	0.0444	1.128	12.00	0.056	0.67	1833
	5	0.000	0.0000	0.0607	1.542	12.00	0.057	0.69	1703

Fan Performance Curve



Approver:	劉智光	Examiner:	許志聰	Tester:	張馥怡
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REMARKS

1. Y.S. Tech will not assume responsibility for the performance of the products if the application condition falls outside the parameters stated forth in the specification.
2. A written request should be submitted to Y.S. Tech prior to approval if abnormality and deviation from this specification is required.
3. Please be cautious when fan is being exercised or handled. Applying pressure to the impeller, handling the fan by lead wire, or dropping the fans to the production platform is resulting in damage.
4. The correct polarity, Positive(+) and Negative(-), has to be clearly identified before connecting the fan to the power. Be aware of the connection with reverse polarity may lead to damage since no effective protection can be introduced against such errors.
5. The above conditions are examples of extreme application. However they are very important and should receive top priority.
6. With exception of suitability of some particular designs, any failure and problems regarding safety of the product caused by the introduction of powder, droplets of water or encroachment of insert in the hub are not guaranteed.
7. Y.S. Tech fans are not well suited for corrosive environments. This includes liquids, gases, or matters.
8. Except for the feature of the Lock Rotor Protection specifically stated, this feature is not applied to all fans. Y.S. Tech highly suggests not to stop the impellers of the working fans such interruption will cause adverse effect.
9. Fans are to be stored in a dry/cool place. High levels of humidity are harmful to products.
10. Please be cautious when mounting the fan. Y.S. Tech is not responsible for any excess resonance, vibration and subsequent noise caused by incorrect mounting of fans.
11. Take necessary precaution handling fans when in operation. Fingre guards are recommended to prevent personal injury.
12. All test environment are conducted under the condition of relative(ambient) temperature and humidity at 25°C, 65%. The test result stated above is effective only for unique fan performance.
13. To avoid any unstable power, an “over 4.7 μ F” capacitor has definitely be connected to the fan externally whatever multiple fans are applied in parallel.