REF. NO. 20-0349

## PROPOSED SPECIFICATIONS FOR APPROVAL

CUSTOMER

Xin Wei International Trading Co. Ltd.

PART NAME

DC FAN MOTOR

MODEL

3110KL-05W-B89-BQ1

勝 特 力 材 料 886-3-5753170 胜特力电子(上海) 86-21-34970699 胜特力电子(深圳) 86-755-83298787 Http://www.100y.com.tw

DATE	2020/4/22	
COVER	<u>1</u>	Page
SPECIFICATIONS	4	Pages
ATTACHED SHEET	<u>0</u>	Pages
TOTAL	<u>5</u>	Pages

## **SIGNATURE**

This product does not use any of the ten (10) restricted substances (except RoHS exemptions) which are specified in directive 2011/65/EU, 2015/863 of the European Parliament

and of the council on RoHS regulations.

death or serious injury.

PLEASE RETURN 1 COPY OF THIS PROPOSED DRAWING WITH YOUR SIGNATURE.

For your use in safety

 $\triangle$ 

Carefully read the precautions before use and use the motor properly and safely. In "For your use in safety", the rank of safety precautions are being divided into "warning" and "cautions". warning: Due to mishandling, a dangerous condition might occur and there is a possibility of

Precautions: Due to mishandling, a dangerous condition might occur and ther is possibility of medium human disorder or material disorder. There might be cases where there are heavy damages.

Warning

- Do not use in an explosive atmosphere, flammable atmosphere and locations where water falls onto.
   It might cause a fire, injury or electric shock.
- Installation, wiring connection, inspection,etc. Should be done by a person with professional knowledge.
   You might get an electric shock or be injured.
- Do not move, wire or inspect the motor when applying current. You might get an electric shock or be injured.
   After turning switch off, kindly proceed your operations ensuring safety.
- Do not pull out or push in the lead wire when applying current. You might get an electric shock.
   And do not touch the connection terminals, etc. when applying current. You will get an electric shock.

Precautions

- Whenever the motor is used in any equipment that holds large social and public effects, kindly consider the measures for equipment protection at equipment side once the motor stops rotation.
- As you may get injured, do not put your fingers into the motor while rotation.
- Static electricity causes motor and equipment failures.

  Take appropriate measures against static electricity during installation of motor.

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- Do not hold the lead wire part. Might cause the motor to drop off.

  For your use strictly follow rated operating voltage additionally frequency.
- For your use, strictly follow rated operating voltage additionally frequency, in particular,
   AC motors as well as environment in use, such as temperature, humidity range.

	APD. BY	CHC. BY	DET. BY	
MinebeaMitsumi Inc.	Yawan	T. Fujimaki	Y. ARAI	

項目(Items) 諸元 (Description) モーターの種類 (Motor Type) DCブラシレスモーター (DC Brushless Motor) 定格(Rating) 定格時間(Duty) 連続 (Continuous) 定格電圧(Rating Voltage) [V] 24 使用電圧範囲(Operating Voltage)[V] 10.0 ~ 26.4 起動電圧(Starting Voltage)[V] 10.0 標準値 (Average) 4500 定格回転速度 ☆3☆4☆5 (Speed) [min<sup>-1</sup>] 最小値 (Minimum) 4300 標準値 (Average) 1.51 最大風量 ☆1☆4 (Max Air Flow) [m<sup>3</sup>/min] 最小値 (Minimum) 1.42 標準値 (Average) 79.9 最大静圧 ☆2☆4 (Max Static Pressure) [Pa] 最小値 (Minimum) 71.7 標準値(Average) 0.18 定格電流 ☆3☆4☆5 (Current) [A] 最大値 (Maximum) 0.23 標準値 (Average) 4.32 定格入力 ☆3☆4☆5 (Input Power) [W] 最大値 (Maximum) 5.52 騒音 (Acoustical Noise) [dB] ☆3☆4 42.0 \*測定条件 (Measuring Conditions) 1.無響音室内で、かつ障害物のない大気中において測定する。 (Measurement with in anechoic test chamber under free air condition.) 2.測定機は、モーターの吸込側より1mの距離に位置する。 (Microphone is placed at a distance of 1m on the axis of air intake side.) 3.暗騒音は16dB以下のこと。 (Chamber back ground noise max 16dB.) 4.騒音は標準回転速度時。 (Acoustical noise at average speed.) Distance 1m Air Flow Microphone

特性曲線(Performance Curve) P-Q CURVE \_\_\_\_\_ SPEED CURVE 5000 8 4000 80 min  $\Box$ Ps Static Pressure Speed N 09 4 回転速度 静圧 1000 20 0 1.0 2.0 風量 Air Flow Q [ m<sup>3</sup>/min ]

\* NOTE

☆1 静圧"0"の時 (At 0 static pressure)

☆2 風量"0"の時(At 0 air flow)

☆3 フリーエアー時 (At free air)

☆4 室温25℃において定格電圧印加時 (At rating voltage, at 25℃)

☆5 工場出荷検査時(At factory shipping inspection)

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L							MinebeaMitsumi Inc.		MineheaMitsumi Inc						–
L									寸法 公差				DC BRUSHLESS FAN		
							APPROVED	CHECKED	DRAWN	船		±0.1 ±0.2		品番 PART No. (MODEL No.)	葉番 SHEET
I										公全	16 <l≦63 td="" ±<=""><td>±0.3</td><td></td><td>3110KL-05W-B89-B0</td><td></td></l≦63>	±0.3		3110KL-05W-B89-B0	
ſ	符号	個数	日 付	変更理由 /	担当	承認	KWI	YSHR	YSTM		63 <l≦250 ±<br="">250<l≦1000 td="" ±<=""><td></td><td></td><td>図番 DRAWING No.</td><td>改訂 REV.</td></l≦1000></l≦250>			図番 DRAWING No.	改訂 REV.
	ΔSYM	No.	DATE	REASON ECN No.	ENGINEER	APPROVED				JOL		± 0.5		3110KL-05W-B89-B0	01 B

項目 (Items)	諸元 (Description)
規格 (Standard)	
絶縁抵抗 (Insulation Resistance)	DC 500V メガーにて10MΩ以上 (min 10MΩ by DC 500V Megger) フレームとリード線間 (Between Frame and (+) Terminal)
絶縁耐圧 (Dielectric Withstand Voltage)	AC 700V 1s ☆6 フレームとリード線間 (Between Frame and (+) Terminal)
期待できる寿命 (故障率10%) (Life Expectation (L10 Life))	25℃にて100,000時間 (100,000h at 25℃) 寿命とは、定格電圧印加時の電流値及び回転速度の どちらかが、以下の様になった状態とする。 電流値 : 初期値 +15%以上 回転速度: 初期値 −15%以下 (The motor life is decided as follows Current: more than +15% of initial value Speed: less than −15% of initial value)
許容環境温度範囲 (Allowable Ambient Temperature)	-10℃~+60℃ (Operating) -40℃~+70℃ (Storage) ☆7 実用上さしつかえない状態で結露無きこと。 (No dew formation at operating and storage condition)
質量 (Mass)	95 g
保護方式 (Protection)	自動復帰方式 (Auto Restart) 逆接続防止 (Polarity Protection) ☆8
耐振動 (JIS C 60068-2-6 に準拠) (Vibration Test)	全振幅 (Peak-to-Peak value of a vibration) : 1.5mm 周波数 (Frequency) : 10~55Hz X, Y, Z 3方向各1時間 (1h in 3 Directions, "X, Y, Z" Each)
耐衝撃 (JIS C 60068-2-27 に準拠) (Shock Test)	加速度 (Acceleration of Gravity) : 1000m/s <sup>2</sup> 作用時間 (Time) : 6ms X, Y, Z 3方向各1回 (1 time in 3 Directions, "X, Y, Z" Each)
絶縁階級 (Insulation Class)	E種 (UL : Class A)
回転方向 (Rotation)	銘板側から見て時計方向 (CW Viewed From Name Plate Side)
風吹き出し方向 (Air Flow Direction)	銘板側 (Name Plate Side)
cULus File No.	E89936
VDE File No.	1507300
生産国 (Producing Country)	JAPAN, CHINA

\* NOTE

☆6 AC 500V、1分を保証 (Guarantee AC 500V 1min)

☆7 但し100時間保存の24時間常温放置にて実用上問題無きこと。

(To be free of defects on practical use after 100 hours of stored at −40°C ~+70°C and 24 hours to ambient humidity.)

☆8 使用電圧範囲内において(+)線および、(-)線を逆接続されても異常なきこと。 (Motor withstands reverse connection for positive and negative leads.)

## \*特記事項(Additional Notice)

- (1) 本仕様書に記載されていない項目で特に決める必要のある項目は事前に御連絡ください。 (Any modification to these specifications requested by customer shall be negotiated between the manufacturer and the customer.)
- (2) 当仕様書満足範囲において性能向上の為、部品等一部変更する場合が有ります。 (The manufacturer reserves the right to change design, parts or manufacturing processes in order to improve the performance of the fan motor.)
- 保管はできるだけ6ヶ月以内とし、高温多湿の場所は避けてください。 (Storage area should not be in high temperature, high humidity environment, and storage term shall be within 6 months as much as possible.
- (4) 定格電圧において72時間拘束されても焼損しません。 (In case of locked rotor condition, the current shutdown feature of the fan motor protects the motor for 72 hours at the rated voltage.)
- (5) 納入品単体の故障により誘発される損害はご容赦いただきます。

(We shall be free from compensation for any damage induced due to failure of fan motor.)

(6) 本製品は、極めて高度の信頼性を要する用途(医療装置等、多大な人的・物的損害 を及ぼす恐れのある用途)に対応する仕様にはなっておりません。 そのような場合には、予め弊社営業窓口までご相談下さい。 All these products do not have specifications that can handle applications that require extremely high levels of reliability such as medical equipment

or other applications whose failure can be reasonably expected to result in serious physical and/or material damage. Consult with your NMB/Minebea representative nearest you before using

any NMB/Minebea products described or contained herein in such applications. (7) セット実装での不安全確認を実施して頂き、ヒューズ・保護回路等の安全装置を設置し、

安全確保対策をお願いいたします。 Safety confirmation test with system is recommended, for testing, consider adding

protection on device such as a fuse, in order to protect circuit or other device to the motor. (8) 爆発性雰囲気、引火性ガス雰囲気や水のかかる場所では使用しないで下さい。 火災、けが及び感電のおそれがあります。

Do not use in an explosive atmosphere.flammable atmosphere and locations where falls onto. It might cause a fire, injury or electric shock.

(9) PCB ASS'Yには、樹脂コーティングによる防湿処理を施しております。 PCB ASS'Y has performed prevention of moisture processing by resin coating.

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F									MinebeaMitsumi Inc.		1 1		1 1						1		1 1																[\		R度 SCALE		表面相互	SURF. ROUGH	品名 DESCRIPTION AUTO RESTART TYPE		YPE
Į											┢			公差 ±0.1 熱处理 HEAT TREAT		DC BRUSHLESS FAN 品番 PART No. (MODEL No.) 業番		AN 葉番 SHE																											
ł									APPROVED	CHECKED	DRAWN	般公	4 <l≦ 4<l≦ 16<l≦< td=""><td></td><td>.2</td><td>LAT THEAT</td><td></td><td>5W-B89-BQ1</td><td>2 /</td></l≦<></l≦ </l≦ 		.2	LAT THEAT		5W-B89-BQ1	2 /																										
Ī	符号 △SYM	個数 No.	日 付 DATE	変更理由 REASON	/	ECN No.	担当 ENGINEER	承認 APPROVED	KWI	YSHR	YSTM	左 TOL		1000 ±0		FINISH	図番 DRAWING No 3110KL-05	5. 5W-B89-BQ1	改訂 REV																										

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## ロック信号(LOCK SIGNAL)

出力回路:オープンコレクタ(OUTPUT CIRCUIT:OPEN COLLECTOR) 仕様(SPECIFICATION)

絶対最大定格 Ta=25℃

Absolute Maximum Ratings at Ta=25°C

V<sub>CF</sub> max: +30V

Ic max :  $5mA [V_{CF}(sat)max = 0.5V]$ 

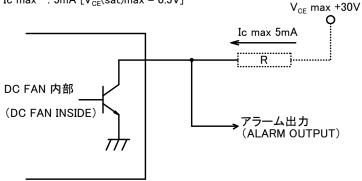


図1 アラーム信号回路 (ALARM SIGNAL CIRCUIT)

誤接続防止:信号出力線を誤接続しますと、FAN MOTOR内部駆動用IC内の トランジスタを破壊する事が有りますので、十分注意して下さい。

WARNING: Improper connection of the sensor lead may cause damage to the motor driver IC.

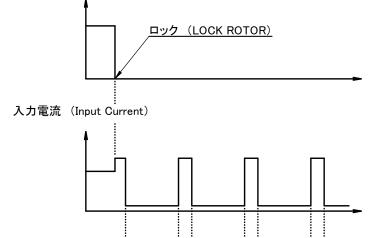
万一、誤接続により不都合が発生じた場合、当社では責任を負い兼ねます。 誤接続には十分ご注意下さい。

We shall be free from compensation, if it occurs trouble due to insertion of opposite direction.

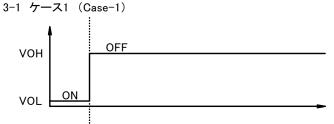
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3. 出力波形 (OUTPUT WAVEFORM): 定格電圧時 (AT RATED VOLTAGE)

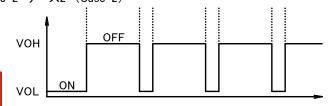
回転速度 (Speed)



出力信号電圧 (Output Signal Voltage)



3-2 ケース2 (Case-2)



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								NMB MinebeaMitsumi Inc.		المط		単位 UNIT 材質 MATERIAL MM Rg SCALE 表面相 SURF. ROUGH		作成日 DATE 2016 / 09 品名 DESCRIPTION AUTO RESTART TO DC BRUSHLESS	YPE	
								APPROVED	CHECKED	DRAWN	一般公	寸法 L≦4 4 <l≦16< td=""><td>±0.2</td><td>熟<del>処理 HE</del>AT TREAT</td><td>品番 PART No. (MODEL No.) 3110KL-05W-B89-BQ1</td><td>葉番 SHEET</td></l≦16<>	±0.2	熟 <del>処理 HE</del> AT TREAT	品番 PART No. (MODEL No.) 3110KL-05W-B89-BQ1	葉番 SHEET
符号 △SYM	個数 No.	日 付 DATE	変更理由 REASON	/	ECN No.	担当 ENGINEER	承認 APPROVED	KWI	YSHR	YSTM	差		0.8	表面处理 FINISH	図番 DRAWING No. 3110KL-05W-B89-BQ1	改訂 REV.

