



NEW PRODUCT SPEC SHEET

Model Number : V31G

- Recommend for Motherboard and Graphic Card Chipsets Application
- Active Cooler for Chassis Height 1U & Up

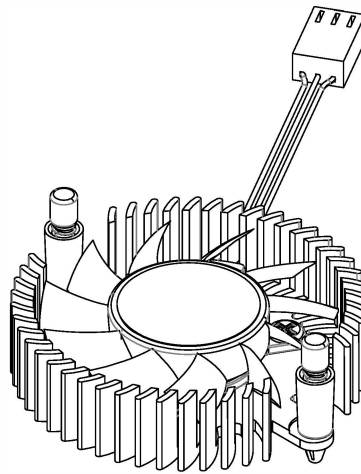
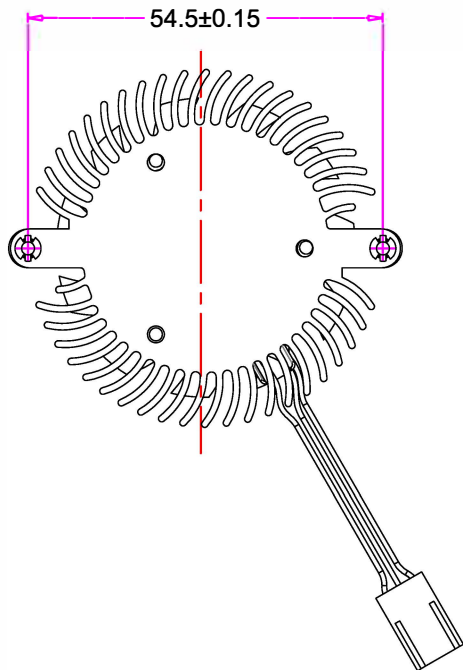
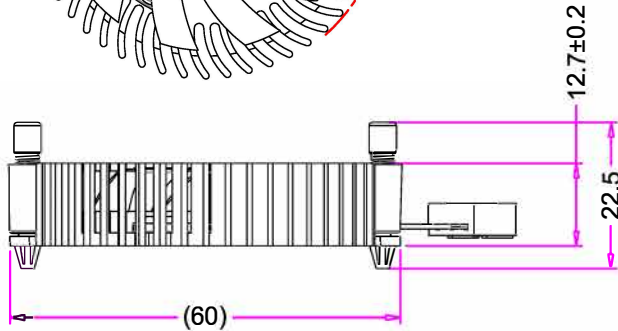
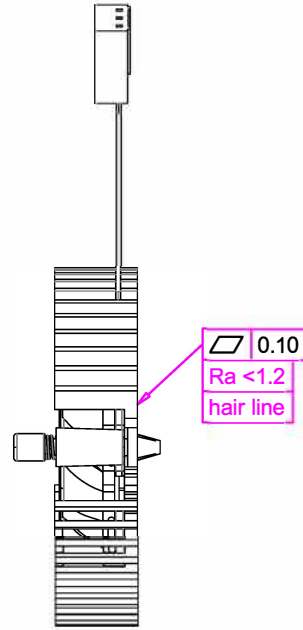
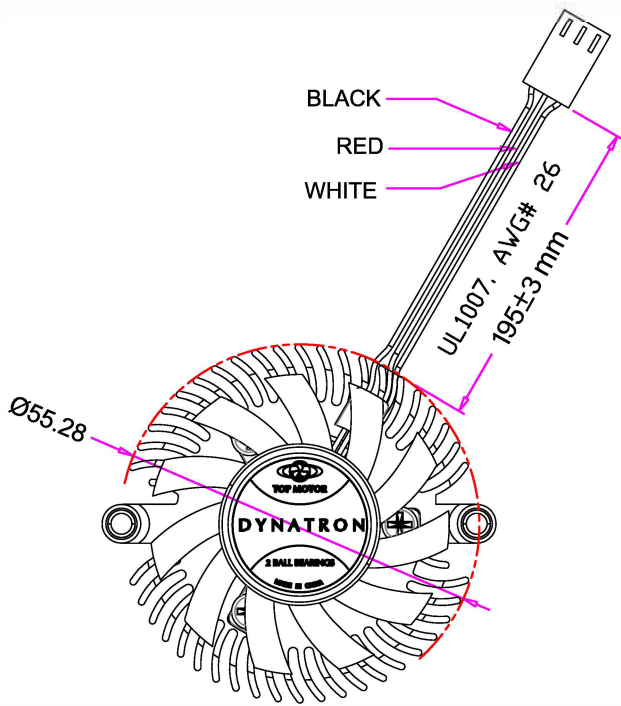
Overall Specification:

- Dimension: $\varnothing 55.0 \times 17.0$ mm
- Weight: $28g \pm 2g$
- Material: Aluminum 6063-T5 Extruded Radial Fin Heat Sink
- 5010 Frameless Top-Down Blowing Fan
- Push-Pin Mounting

Fan Specification:

- Model Number : DF125010BH-3G
- Dimension: $\varnothing 50 \times 10$ mm
- Bearing: Ball, Dual
- Rated Voltage: 12V
- Rated Speed: $5000 \pm 10\%$ RPM
- Rated Input Power: 2.76 W
- Rated Airflow: 10.80 CFM
- Rated Static Pressure: 2.80 mm-H₂O
- Rated Acoustical Noise: 31.8 dBA
- Lead Wire Pin Out: Pin#1 - Black (-)
Pin#2 - Red (+)
Pin#3 - White (Tachometer / Signal output)

ITEM#	DESCRIPTION	CHECKER	DATE
1	Initial Release	LANG	07/25/12
2	Change Wire Color and Length to 195mm	LANG	12/17/13



5	Heatsink, Extrusion Fin	Aluminum 6061	1
4	Fan, DF125010BH-3G, Frameless, 5000rpm	Plastic	1
3	Push-Pin	Nylon	2
2	Spring	SUS	2
1	Screw, Fan Mounting	Steel	3
Item#	Description	Material	QTY.

	NAME	DATE
DRAWN BY	engr	12/17/2013
CHECKED BY	LANG	12/17/2013
ENG. APPROVED		
MFG. APPROVED	-	-
Q.A.	-	-



TOP MOTOR

DYNATRON CORPORATION

TITLE: **Active Cooler V31G**
BOM & Overall Dimension Drawing

VIEW	
UNITS	MM

DWG. No:

DYN-BD-V31G

REV. **01**

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DYNATRON CORPORATION

TOP MOTOR TECHNOLOGY (HUIZHOU) CO, LTD

Specification for Approval

Customer:		
Model Number:	Fan-V31G	
Part Number:	DF125010BH (50*50*10mm)	
Issued Date:	Tuesday, May 23, 2023	
Version:	D	
Customer Approval		
Approval:	Check:	
Corporate Headquarters Dynatron Corporation 33200 Western Avenue Union City, CA 94587 U.S.A. Tel: 510-498-8888 Fax: 510-498-8488	<i>Taipei Office</i> (Taiwan, R.O.C.) 8F, No. 35, Lane:221 Gang Cian. Road, Taipei, Taiwan, R.O.C. Tel: 886-2-27995799 (Rep.) Fax: 886-2-2799-9577	Manufactory TOP MOTOR TECHNOLOGY (HUI ZHOU)CO,LTD Baishi Village, QiuchangTown, Huiyang Dist, HuizhouCity, Guangdong Province, P.R.China Tel: 86-752-822-8000 (Rep.) Fax: 86-752-822-8999
Approval:	Check:	Handler:
Glen Kao	-	Clover Liu



DYNATRON CORPORATION

TOP MOTOR TECHNOLOGY (HUIZHOU) CO, LTD

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SCOPE

This specification defines the electrical and mechanical characteristics of the AC / DC Brush less(Liquid State / 2-Balls Bearing)axial flow fan, which is carefully designed and manufactured for your special needs by Dynatron Corporation.

1. ELECTRICAL CHARACTERISTICS

Items		Description
1.	Rated Voltage	DC 12 V
2.	Start Voltage	DC 7V
3.	Operating Voltage	10.8V~13.2V
4.	Air Flow – At rated voltage zero static pressure (minimal value)	0.306m ³ / min (10.8CFM)
5.	Static Pressure – At rated voltage At zero air flow	2.80mm-H ₂ O (0.110inch-H ₂ O)
6.	Input Current	0.23A (Max)
7.	Input Power	2.76W (Max)
8.	Insulation Resistance – Between Frame and Terminal	10 M ohm at DC 500 V
9.	Dielectric Strength – Between Frame and Terminal	5 mA (Max.) @ AC 500 V 60 Hz 1 min.
10.	Speed	5000rpm ± 10 %
11.	MTBF – Continuous operating under normal temperature (25 °C or 77 °F)	50,000 hours
12.	Rotation	Anticlockwise Air Discharged
13.	Lead Wires	UL 1061, awg 26 or Equivalent “-”: Black; “+”: Red. ”s”: White
14.	Acoustical Noise	31.8dBA



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2. MECHANICAL CHARACTERISTICS

Items		Description
1.	Dimension	Display as Drawing
2.	Frame	PPS (Black GP)
3.	Impeller	PBT UL94V-0 (Black GP)
4.	Bearing System	Two Balls Bearing
5.	Weight	14±5grams

3. ENVIRONMENTAL

Items		Description
1.	Operating Temperature	- 10 °C ~ + 65 °C (65 %RH)
2.	Storage Temperature	- 30 °C ~ + 70 °C (65 %RH)
3.	Vibration Test	Motor withstands 1000 rpm vibrating with 2 mm amplitude for 30 minutes up and down, right and left, back and forth directions.
4.	Drop Test	Motor withstands one free body drop from 30 cm in high onto 10 mm thickness of wooden board for each of the three faces in minimum packing condition.
5.	Acoustic Noise	31.8dBA – Curve (Max32.2dBA) Measuring Condition – Under rated voltage in semi-anechoic chamber equipment sound level meter. (Figure A.)

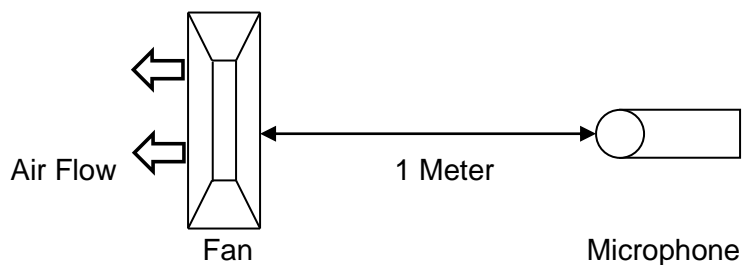


Figure A – Noise Level is measure at rated voltage in anechoic chamber in free air as above.



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5. PROTECTION

Items		Description
1.	Polarity Protection	For polarity error connection to power, the circuit withstands reversed connection between positive and negative leads.
2.	Locked Rotor Protection	Motor winding protects the motor from damage in 72 hours of locked rotor condition at rated voltage.

6. ATTACHMENTS

- 6.1. Product Dimension
- 6.2. Frequency Generator Output
- 6.3. TUV Certificate
- 6.4. UL Certificate

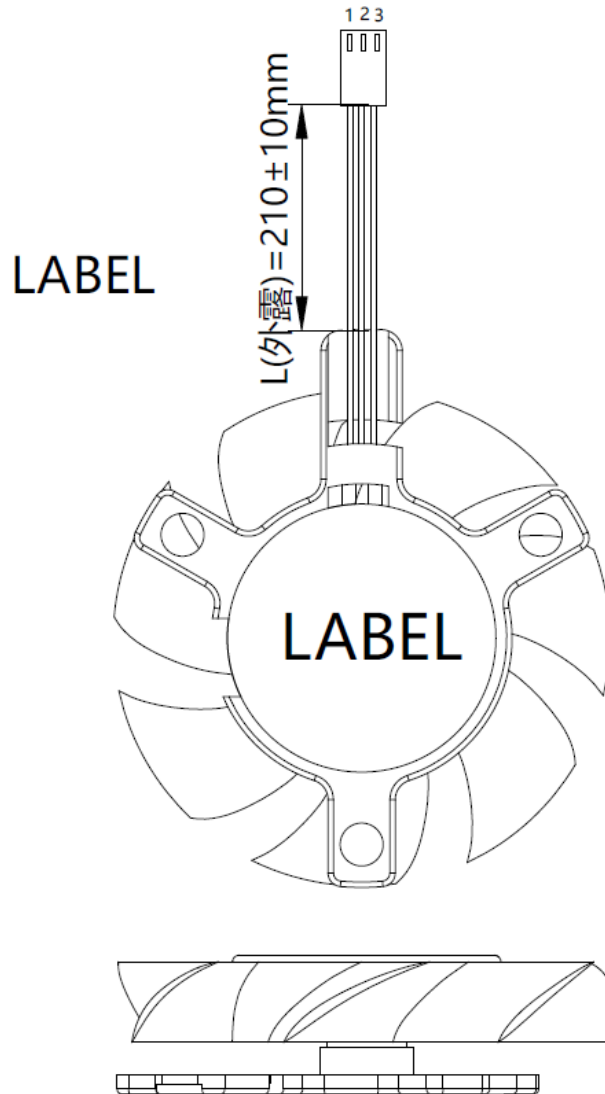


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6.1. Product Dimension:

DIMENSION



Note:

1. Lead Wire: 1061#26AWG 80°C 300V UL,CSA APPROVAL
PIN 1: Black Wire ----- Ground
PIN 2: Red Wire ----- Power
PIN 3: white Wire ----- Signal
2. Connector: White of 2.54-3P or Equivalent



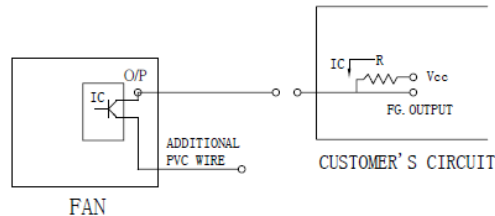
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6.2. Frequency Generator Output

FREQUENCY GENERATOR O/P:

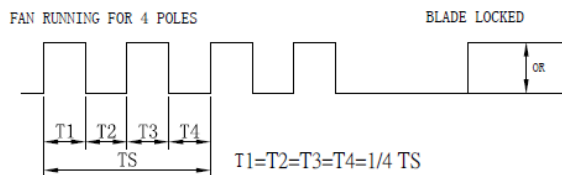
Frequency generator function is activated by an internal IC for customer's application.
Electrical schematic:



CUSTOMER'S CIRCUIT

V_{cc} = From +5 To +28 VDC (Generally using +12 or +24 VDC)
 I_c = 5 mA max.
 $R = V/I$ (Output "R" value calculation)

• SUPPLY A WAVEFORM:



N = R.P.M. (Rotation speed will be different for various models
 L/M/H/HH/VH/SH)

$TS = 60/N$ (Sec)

* Voltage level after blade locked

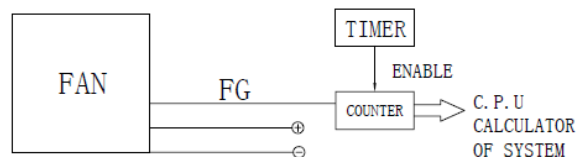
• OUTPUT LEVEL:

High = V_{cc} 10%

Low = 0~0.5V

I_c = 5 mA max.

• APPLICATION:



• FUNCTIONS:

. By means of waveform & customer's design, schematic can reach alarm function, either in the form of buzzing or LED flashing.
 Adjust rotation speed.

. When power supply output voltage level decreases, it will result in the lowering of fan rotation speed. The irregular situation will be controlled by using FG. O/P through P/S circuit to increase the output voltage and result in a stable rotation speed.



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6.3. TUV Certificate

Industrial Services, Mobility and Transport,
Product Safety and Quality, Education and
Consulting, IT Services and Innovation



Dynaeon Industrial Co., Ltd.
Melody Ko

Date : 21.04.2023
Our ref. : RK ZTW1
Your ref.: P01007213

8F, No. 35, 37, Lane 221
Gang Cian Rd.
Neihu, Taipei 114
Taiwan, R.O.C.

Ref : R TÜV-Mark Approval

Type of Equipment : DC Fan
Model Designation : See Certificate
Certificate No. : R 50064443 0023
Report No. : 10013649 018

Dear Melody Ko,

The above specified equipment has been tested and found to be in accordance with the relevant requirements.


Please find enclosed your certificate as specified above.

If cancellation of the certificate is submitted by 15 November in a given year, no fee will be charged for the following year.

The certificate is issued with the reservation that the license holder applies all information required in § 6 of the ProdsG related to name and address of the manufacturer or his authorized representative / importer, including their respective contact addresses on the product prior to marketing of the product in the European Economic Area. In case you have a change regarding your involved local representative for the certificate, please inform us in due time.

With kind regards,

Certification Body


Dipl.-Ing. (FH) A. Klinker

Enclosure

TÜV RHEINLAND TAIWAN LTD.

11F., No. 758, Sec. 4, Bade Rd.,
Songshan Dist., Taipei City 105,
Taiwan, R. O. C.
Tel. (02) 2172-7000
Fax (02) 2172-1322
<http://www.tuv.com>

NEW TAIPEI BRANCH:
No. 458-18 & 458-19,
Sec. 2, Fenliao Rd., Linkou Dist.,
New Taipei City 244,
Taiwan, R. O. C.
Tel. (02) 2172-1000
Fax (02) 2172-1322

TAICHUNG BRANCH:
3F., No. 497, Zhongming South Rd.,
West Dist., Taichung City 403,
Taiwan, R. O. C.
Tel. (02) 2172-7000
Fax (02) 2172-1322

KAOHSIUNG BRANCH:
27F.-3, No.80, Minzu 1st Rd.,
Sanmin Dist., Kaohsiung City 807,
Taiwan, R. O. C.
Tel. (07) 262-6000
Fax (07) 380-0577



DYNATRON CORPORATION

TOP MOTOR TECHNOLOGY (HUIZHOU) CO, LTD

Zertifikat *Certificate*



Zertifikat Nr. *Certificate No.*
R 50064443

Blatt *Page*
0023

Ihr Zeichen <i>Client Reference</i>	Unser Zeichen <i>Our Reference</i>	Ausstellungsdatum	<i>Date of Issue</i> (day/mo/yr)
P01007213	ZTW1-RK- 10013649 018	21.04.2023	

Genehmigungsinhaber *License Holder*
Dynaeon Industrial Co., Ltd.
8F, No. 35, 37, Lane 221
Gang Cian Rd.
Neihu, Taipei 114
Taiwan, R.O.C.

Fertigungsstätte *Manufacturing Plant*
Top Motor Technology (Huizhou)
Co., Ltd.
Baishi Village,
Qiuchang Town, Huiyang District
Huizhou City
Guangdong
P.R. China

Prüfzeichen *Test Mark*

Geprüft nach *Tested acc. to*
EN 62368-1:2014



Bauart geprüft
Sicherheit
Regelmäßige
Produktions-
überwachung
www.tuv.com
ID 2000000000

Zertifiziertes Produkt (Geräteidentifikation)
Certified Product (Product Identification)

Lizenzentgelte - Einheit
License Fee - Unit

Ventilator (DC Fan)

wie Blatt (as page) 01, Ergänzung (Addition)
Bezeichnung (Type Designation):
1) DF124028 (X) (Y) - (Z) - F, 2) DF125010 (X) (Y) - (Z) - F
3) DF126010 (X) (Y) - (Z) - F, 4) DF128015 (X) (Y) - (Z) - F
5) DF128025 (X) (Y) - (Z) - F, 6) DF129212 (X) (Y) - (Z) - F
7) DF129225 (X) (Y) - (Z) - F, 8) DF121030 (X) (Y) - (Z) - F
9) DF121225 (X) (Y) - (Z) - F (TOP MOTOR)
(X4) steht für : S, B, P, Q
(stands for)
(Y) steht für : H, M, U, L, E, X
(stands for)
(Z) steht für : A-Z, 0-9 oder (or)
(stands for) freibleibend (blank)
Nennspannung : DC 12V
(Rated Voltage)
Nennstrom : siehe Anlage
(Rated Current) (see appendix)

ANLAGE (Appendix): 1.4

Dem Zertifikat liegt unsere Prüf- und Zertifizierungsordnung zugrunde und es bestätigt die Konformität des Produktes mit den oben genannten Standards und Prüfgrundlagen. Zusätzliche Anforderungen in Ländern, in denen das Produkt in Verkehr gebracht werden soll, müssen zusätzlich betrachtet werden. Die Herstellung des zertifizierten Produktes wird überwacht.
This certificate is based on our Testing and Certification Regulation and states the conformity of the product with the standards and testing requirements as indicated above. Any additional requirements in countries where the product is going to be marketed have to be considered additionally. The manufacturing of the certified product is subject to surveillance.



Zertifizierungsstelle

Dipl.-Ing. (FH) A. Klinker

TÜV Rheinland LGA Products GmbH - Tillystraße 2 - 90431 Nürnberg
Tel.: (+49/221)8 06 - 13 71 e-mail: cert-validity@de.tuv.com
Fax: (+49/221)8 06 - 39 35 <http://www.tuv.com/safety>



DYNATRON CORPORATION

TOP MOTOR TECHNOLOGY (HUIZHOU) CO, LTD

6.4. UL Certificate

CERTIFICATE OF COMPLIANCE

Certificate Number UL-US-2318931-0
Report Reference E157868-20230428
Date 4-May-2023

Issued to: DYNAEON INDUSTRIAL CO LTD
8TH FL 35 LANE 221 GANGCIAN RD
NEIHU DIST TAIPEI 114
Taiwan

This is to certify that GPWV2 - Fans, Electric - Component
representative samples of See Addendum Page for Product Designation(s).

Have been evaluated by UL in accordance with the component requirements in the Standard(s) indicated on this Certificate. UL Recognized components are incomplete in certain constructional features or restricted in performance capabilities and are intended for installation in complete equipment submitted for investigation to UL LLC.

Standard(s) for Safety: UL 507, Edition 10, Issue Date 2017-11-09, Revision Date 2022-06-22

Additional Information: See the UL Online Certifications Directory at <https://iq.ulprospector.com> for additional information

This Certificate of Compliance indicates that representative samples of the product described in the certification report have met the requirements for UL certification. It does not provide authorization to apply the UL Recognized Component Mark. Only the Authorization Page that references the Follow-Up Services Procedure for ongoing surveillance provides authorization to apply the UL Mark.

Only those products bearing the UL Recognized Component Mark should be considered as being UL Certified and covered under UL's Follow-Up Services.

Look for the UL Recognized Component Mark on the product.

Deborah Jennings-Conner
Deborah Jennings-Conner, VP Regulatory Services

UL LLC

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DYNATRON CORPORATION

TOP MOTOR TECHNOLOGY (HUIZHOU) CO, LTD

CERTIFICATE OF COMPLIANCE

Certificate Number UL-US-2318931-0
Report Reference E157868-20230428
Date 4-May-2023

This is to certify that representative samples of the product as specified on this certificate were tested according to the current UL requirements

Model	Category Description
DF121030(X)(Y)-(Z)-F, Where (X) may be S, B, P, Q (Y) may U · H · M · L · E · X , (Z) may be alphanumeric combination of four digits and/or alphabets, may be A through Z, 0 through 9 or blank.	Electric Fans - Component
DF121225(X)(Y)-(Z)-F, Where (X) may be S, B, P, Q (Y) may U · H · M · L · E · X , (Z) may be alphanumeric combination of four digits and/or alphabets, may be A through Z, 0 through 9 or blank.	Electric Fans - Component
DF124028(X)(Y)-(Z)-F, Where (X) may be S, B, P, Q (Y) may U · H · M · L · E · X , (Z) may be alphanumeric combination of four digits and/or alphabets, may be A through Z, 0 through 9 or blank.	Electric Fans - Component
DF125010(X)(Y)-(Z)-F, Where (X) may be S, B, P, Q (Y) may U · H · M · L · E · X , (Z) may be alphanumeric combination of four digits and/or alphabets, may be A through Z, 0 through 9 or blank.	Electric Fans - Component
DF126010(X)(Y)-(Z)-F, Where (X) may be S, B, P, Q (Y) may U · H · M · L · E · X , (Z) may be alphanumeric combination of four digits and/or alphabets, may be A through Z, 0 through 9 or blank.	Electric Fans - Component
DF128015(X)(Y)-(Z)-F, Where (X) may be S, B, P, Q (Y) may U · H · M · L · E · X , (Z) may be alphanumeric combination of four digits and/or alphabets, may be A through Z, 0 through 9 or blank.	Electric Fans - Component
DF128025(X)(Y)-(Z)-F, Where (X) may be S, B, P, Q (Y) may U · H · M · L · E · X	Electric Fans - Component


 Deborah Jennings-Conner, VP Regulatory Services

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TOP MOTOR TECHNOLOGY (HUIZHOU) CO, LTD

CERTIFICATE OF COMPLIANCE

Certificate Number UL-CA-2316500-0
Report Reference E157868-20230428
Date 4-May-2023

Issued to: DYNAEON INDUSTRIAL CO LTD
8TH FL 35 LANE 221 GANGCIAN RD
NEIHU DIST TAIPEI 114
Taiwan

This is to certify that representative samples of

GPWV8 - Fans, Electric Certified for Canada - Component
See Addendum Page for Product Designation(s).

Have been evaluated by UL in accordance with the component requirements in the Standard(s) indicated on this Certificate. UL Recognized components are incomplete in certain constructional features or restricted in performance capabilities and are intended for installation in complete equipment submitted for investigation to UL LLC.

Standard(s) for Safety: CSA C22.2 NO. 113-18 - 11 th Ed. - Issue Date: 2018-10-01

Additional Information: See the UL Online Certifications Directory at <https://iq.ulprospector.com> for additional information

This Certificate of Compliance indicates that representative samples of the product described in the certification report have met the requirements for UL certification. It does not provide authorization to apply the UL Recognized Component Mark. Only the Authorization Page that references the Follow-Up Services Procedure for ongoing surveillance provides authorization to apply the UL Mark.

Only those products bearing the UL Recognized Component Mark should be considered as being UL Certified and covered under UL's Follow-Up Services.

Look for the UL Recognized Component Mark on the product.


Deborah Jennings-Conner, VP Regulatory Services

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TOP MOTOR TECHNOLOGY (HUIZHOU) CO, LTD

CERTIFICATE OF COMPLIANCE

Certificate Number UL-CA-2316500-0
Report Reference E157868-20230428
Date 4-May-2023

This is to certify that representative samples of the product as specified on this certificate were tested according to the current UL requirements

Model	Category Description
DF121030(X)(Y)-(Z)-F, Where (X) may be S, B, P, Q (Y) may U · H · M · L · E · X , (Z) may be alphanumeric combination of four digits and/or alphabets, may be A through Z, 0 through 9 or blank.	Electric Fans - Component
DF121225(X)(Y)-(Z)-F, Where (X) may be S, B, P, Q (Y) may U · H · M · L · E · X , (Z) may be alphanumeric combination of four digits and/or alphabets, may be A through Z, 0 through 9 or blank.	Electric Fans - Component
DF124028(X)(Y)-(Z)-F, Where (X) may be S, B, P, Q (Y) may U · H · M · L · E · X , (Z) may be alphanumeric combination of four digits and/or alphabets, may be A through Z, 0 through 9 or blank.	Electric Fans - Component
DF125010(X)(Y)-(Z)-F, Where (X) may be S, B, P, Q (Y) may U · H · M · L · E · X , (Z) may be alphanumeric combination of four digits and/or alphabets, may be A through Z, 0 through 9 or blank.	Electric Fans - Component
DF126010(X)(Y)-(Z)-F, Where (X) may be S, B, P, Q (Y) may U · H · M · L · E · X , (Z) may be alphanumeric combination of four digits and/or alphabets, may be A through Z, 0 through 9 or blank.	Electric Fans - Component
DF128015(X)(Y)-(Z)-F, Where (X) may be S, B, P, Q (Y) may U · H · M · L · E · X , (Z) may be alphanumeric combination of four digits and/or alphabets, may be A through Z, 0 through 9 or blank.	Electric Fans - Component
DF128025(X)(Y)-(Z)-F, Where (X) may be S, B, P, Q (Y) may U · H · M · L · E · X	Electric Fans - Component


 Deborah Jennings-Conner, VP Regulatory Services

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