Specification

Flat Fan R1238Y12BPLB2a-7

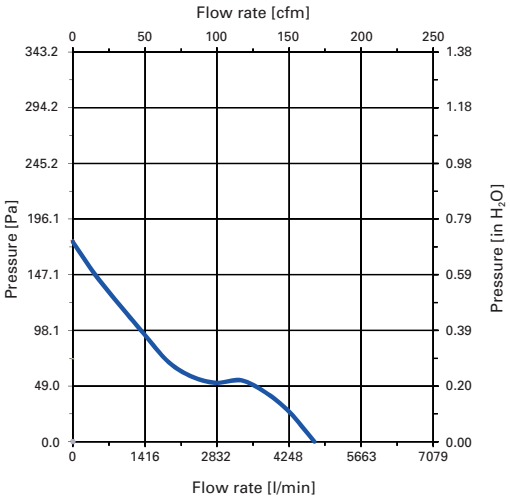
General Information

Item	
Product type	Flat fan with integrated electronic motor driver
Part no.	R1238Y12BPLB2a-7
Customer	N/A
Project no.	N/A
Modification	Standard product

Features

- Static pressure 177 Pa, freeflow 4 750 l/min
- 12 V_{DC} brushless DC-motor
- Frequency Generator
- Auto-Restart

Performance



E208866

Technical Data

Material	Value
Frame	Thermoplastic PBT (GF 30%), class UL94-V0
Impeller	Thermoplastic PBT (GF 15%), class UL94-V0
Lead wire	UL1007, AWG 24, 240±10mm, red (+), black (-), yellow (FG)

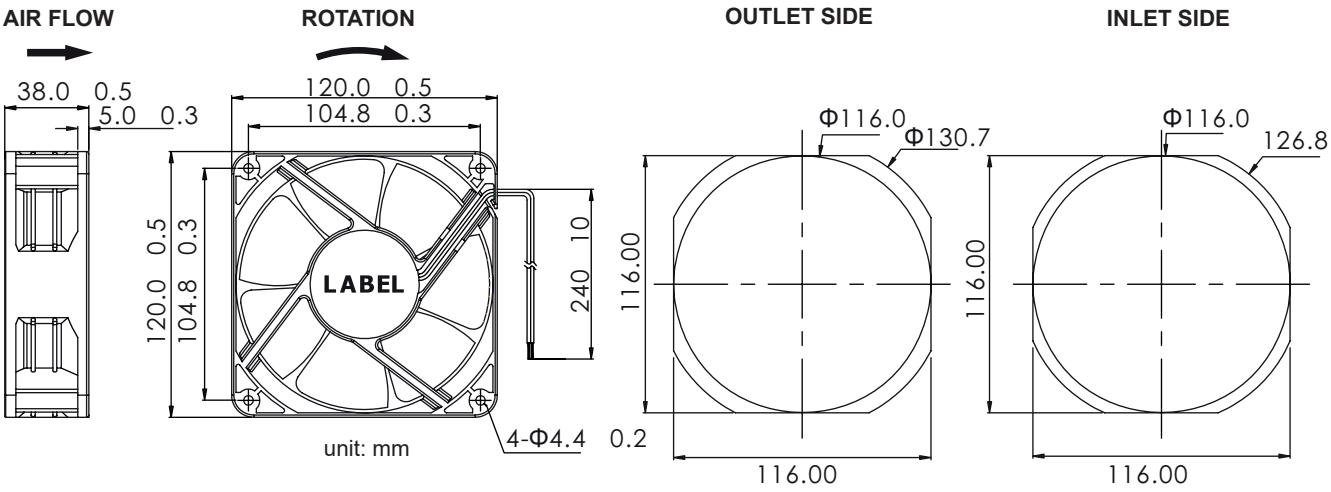
Item	Value	Test Condition
Rated voltage	12 V_{DC}	Measured by multi-meter with +/- 1 % error
Operating voltage	7-14 V_{DC}	Measured by multi-meter with +/- 1 % error
Rated speed	4 200 rpm	Average reading, 5 minutes after power up (+/- 10 %)
Input current	1.267 A	At rated voltage and free flow
Input power	15.20 W	At rated voltage and free flow
Free flow	4 750 l/min (167.66 CFM)	At rated voltage and zero static pressure (+/- 10 %)
Static pressure	177 Pa (0.71 in-H_2O)	At rated voltage and zero air flow
Operating temperature	-10 to 70 °C	At 45-65 % humidity
Storage temperature	-40 to 90 °C	After 100 h storage keep for 24 h at 23-25 °C The product must maintain original specifications
Insulation resistance	> 10 MΩ	At 500 V_{DC} between frame and (+/-) terminals
Dielectric strength	600 V_{AC}	
Acoustical noise	53 dB(A) Weighted (B&K equipment)	At rated voltage, in free air; Background noise 17 dB(A) Measured at 1 meter from the fan and perpendicular to the direction of the airflow.
Bearing system	2 ball bearings	
Weight	315 g	

Particular Tests	
Vibration test	In minimum packaging condition, fan motor withstands 0.2 mm movement of 55 Hz vibration for 30 minutes each towards: Up-down, right-left and back-forth.
Drop test	In minimum packaging condition, motor withstands each one-drop of three faces from 30 cm distance high onto wooden board of 10 mm thickness.
Life expectancy	Minimum 100 000 h at 30 °C @ 4 200 rpm The life is defined as the time duration until the fan motor speed is decreased more than 30 % compared to its initial speed.

Protection

Product Features	
Locked rotor protection	Fan will automatically re-start in about 5 seconds after motor is released from locked condition.
Maximum current under locked rotor	A. Typical inrush current when the motor is trying to re-start under locked rotor conditions is 2~4 times the normal running current reoccurring and for 16~20% of the restarting cycle period. B. If the CL function is used this restarting inrush current is about the same as the normal running current.
Polarity protection	No damage if positive and negative leads are reversed under maximum operating voltage conditions.
Weather proofing	Stator, PCB and coils are varnished.

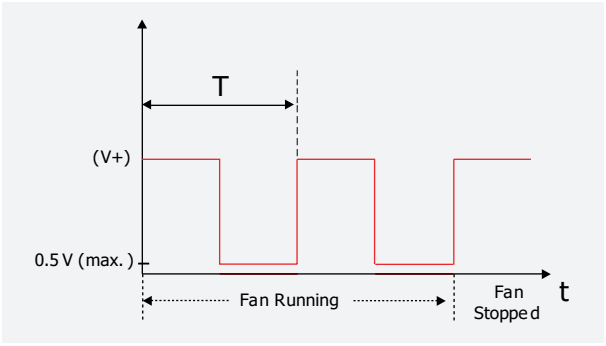
Drawings



Rotation

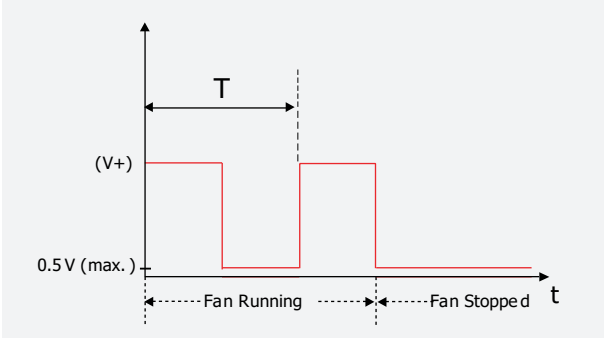
Orientations	
Direction of rotation	Clockwise (view on inlet)
Mounting position	Any direction

Electronic Functions



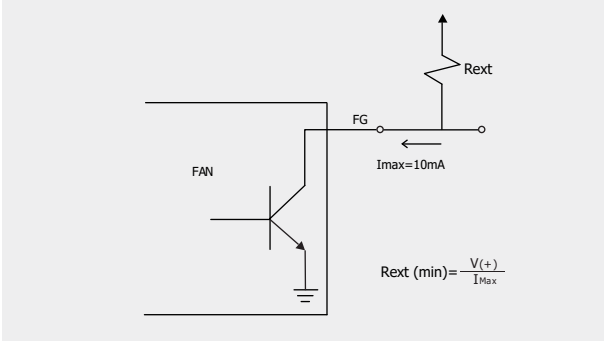
Open Collector Tachometer „FG“ output voltage waveforms

Function „FG“ Tachometer Output
YELLOW wire



Tacho Frequency RPM=60/2T=30 f
(f=frequency)

Electronic Functions



Open Collector

Fan Rated	48 V	24 V	12 V	5 V
V (+) max.	57 V	27 V	14 V	6 V

Identification

Label

Design

Identification number (Micronel)
- Fan type (R)
- Construction size (4 digits)

Nominal voltage

Serial number

Handle in power-off conditions only!
Read operating manual!

Please see separate accessories list or contact Micronel Sales for a full list of options and accessories.

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