D1G146-HQ03-10

EC centrifugal fan

forward curved, dual inlet

with housing (flange)

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Nominal data

Type	**D1G146-HQ03-10**
Motor	**M1G055-DF**

Phase		1~
Nominal voltage	VAC	230
Nominal voltage range	VAC	200 .. 240
Frequency	Hz	50/60
Type of data definition		fa
Speed (rpm)	min^{-1}	1680
Power input	W	165
Current draw	A	1.35
Min. back pressure	Pa	0
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	45

ml = Max. load · me = Max. efficiency · fa = Running at free air · cs = Customer specs · cu = Customer unit
Subject to alterations

Data according to ErP directive

		Actual	Request 2015
01 Overall efficiency η_{es}	%	47	32.3
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		58.7	44
05 Variable speed drive		Yes	

09 Power input P_{ed}	kW	0.14
09 Air flow q_v	m^3/h	450
09 Pressure increase p_{fs}	Pa	471
10 Speed (rpm) n	min^{-1}	2905
11 Specific ratio*		1.01

Data definition with optimum efficiency.
The ErP data is determined using a motor-impeller combination in a standardised measurement configuration.

* Specific ratio = 1 + p_{fs} / 100 000 Pa

LU-178207

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Technical features

Mass	2.4 kg
Size	146 mm
Material of impeller	Plastic PP, galvanised round sheet-metal plate
Housing material	PP plastic
Motor suspension	Motor mounted vibration-free on both sides
Direction of rotation	Counter-clockwise, seen on rotor
Type of protection	IP 20
Insulation class	"B"
Max. permissible ambient motor temp. (transp./ storage)	+ 80 °C
Min. permissible ambient motor temp. (transp./storage)	- 40 °C
Mounting position	Any
Condensate discharge holes	None, open rotor
Operation mode	S1
Motor bearing	Ball bearing
Technical features	- Motor current limit - Soft start - PWM control input - Control interface with SELV potential safely disconnected from the mains - Over-temperature protected motor
Touch current acc. IEC 60990 (measuring network Fig. 4, TN system)	<= 3.5 mA
Electrical leads	With plug
Motor protection	Thermal overload protector (TOP) wired internally
Protection class	Built-in component with basic insulation, safety classification after installation in accordance with intended use
Product conforming to standard	EN 60335-1; EN 60335-2-31; CE
Approval	VDE

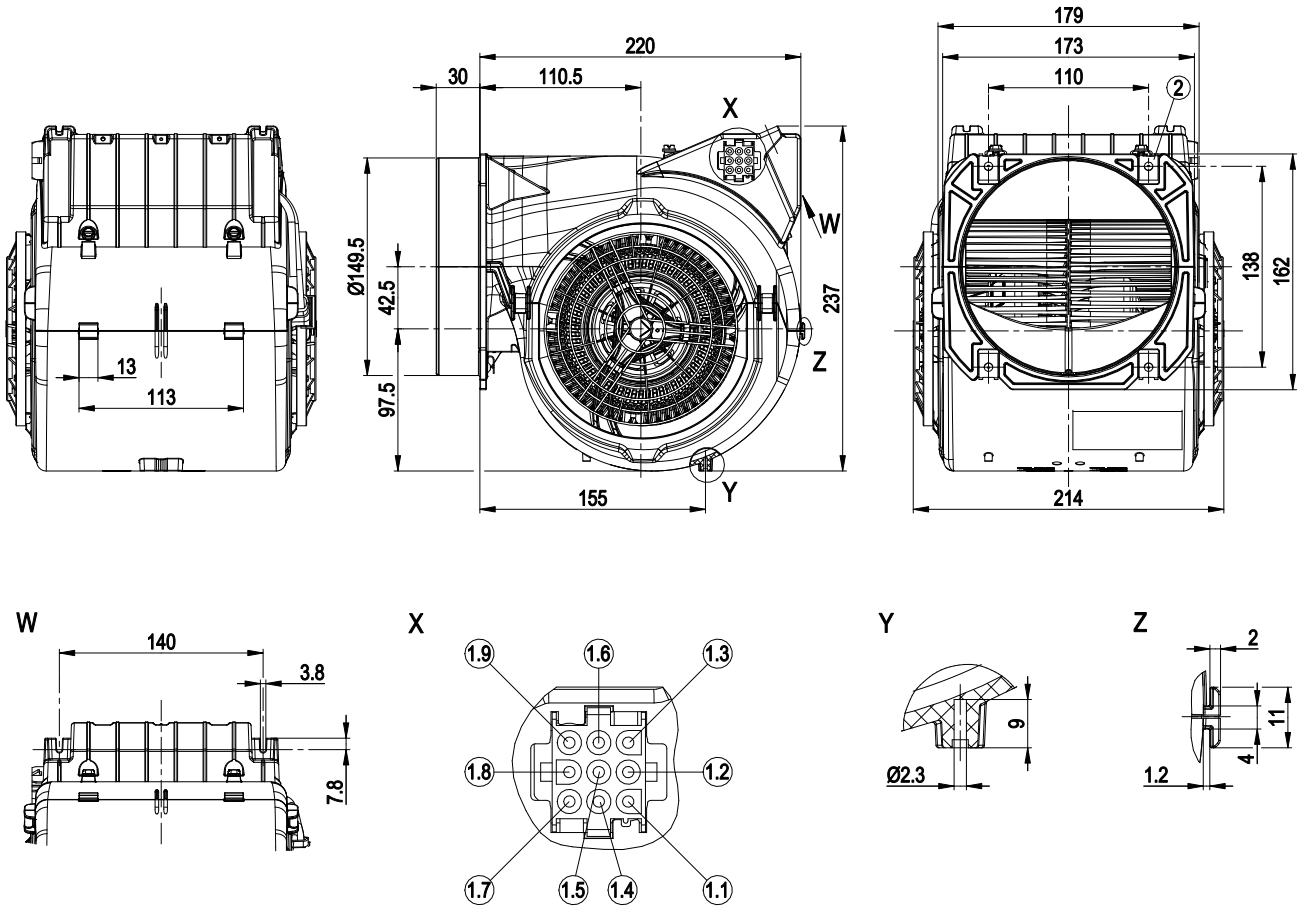
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Product drawing



1	Coded plug system: Connector housing 9-pole tyco 927231-7, 5x plug pin tyco 926887-1
	Mating connector (not included in scope of delivery): Connector housing 9-pole tyco 1-1863003-2, female connector tyco 926884-1
1.1	L (brown)
1.2	N (blue)
1.3	FE (green/yellow)
1.4	not used
1.5	not used
1.6	not used
1.7	PWM (yellow)
1.8	GND (blue)
1.9	not used
2	4x sheet metal nut for EN ISO 1478-ST4.8 thread

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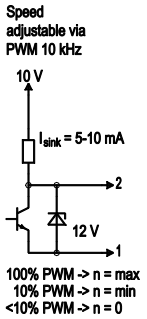
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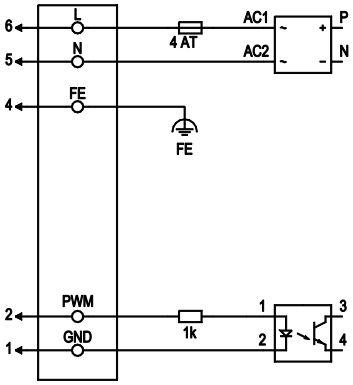
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Connection screen

Customer circuit



Connection



Fan / Motor

No.	Conn.	Designation	Colour	Function / assignment
	6	L	brown	Power supply 230 VAC, 50-60 Hz, see type plate for voltage range
	5	N	blue	Neutral conductor
	4	FE	green/yellow	Functional earth conductor
	2	PWM	yellow	Control input PWM, electrically isolated, Isink = 5-10 mA
	1	GND	blue	GND connection for control interface

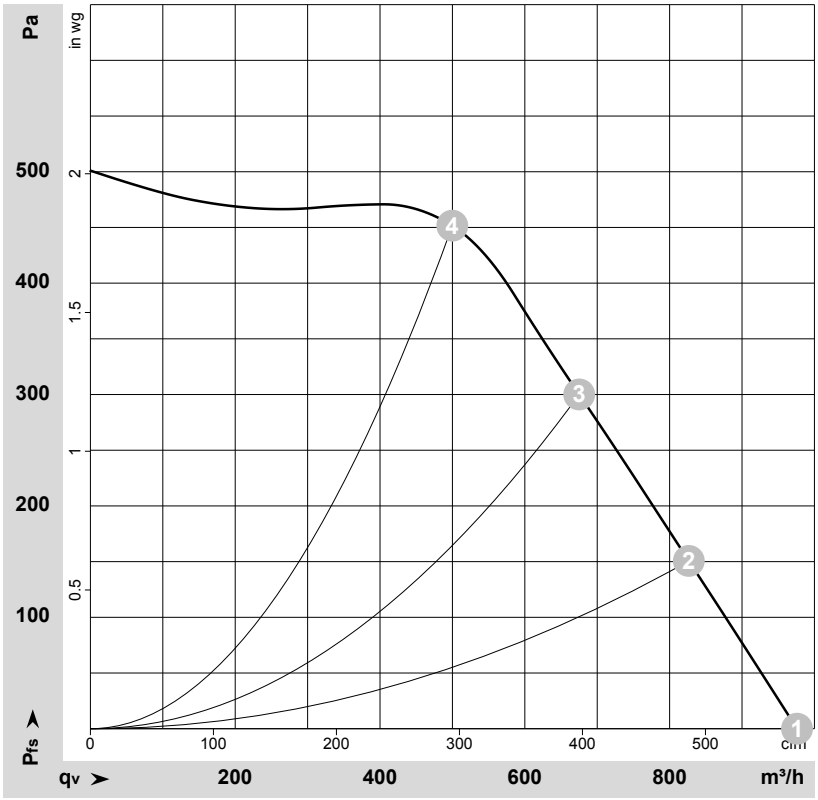
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Charts: Air flow 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-178207-1

Air performance measured as per ISO 5801 Installation category A. For detailed information on the measuring set-up, please contact ebm-papst. Suction-side noise levels: LwA measured as per ISO 13347 / LpA measured with 1m distance to fan axis. The values given are valid under the measuring conditions mentioned above and may vary according to the actual installation situation. With any deviation from the standard set-up, the specific values have to be checked and reviewed with the unit installed.

Measured values

	U	f	n	P_{ed}	I	q_V	p_{fs}	q_V	p_{fs}
	V	Hz	min^{-1}	W	A	m^3/h	Pa	cfm	inH2O
1	230	50	1680	165	1.35	975	0	575	0.00
2	230	50	2115	165	1.35	825	150	485	0.60
3	230	50	2485	165	1.35	675	300	395	1.20
4	230	50	2865	156	1.29	500	450	295	1.81

U = Supply voltage · f = Frequency · n = Speed (rpm) · P_{ed} = Power input · I = Current draw · q_V = Air flow · p_{fs} = Pressure increase

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