D1G146-HS01-04

EC centrifugal fan

forward-curved, dual-intake

with housing (flange)

D1G146-HS01-04 ebmpapst Datasheet
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Nominal data

Type	**D1G146-HS01-04**
Motor	**M1G055-CF**

Phase		1~
Nominal voltage	VAC	230
Nominal voltage range	VAC	200 .. 240
Frequency	Hz	50/60
Method of obtaining data		fa
Speed (rpm)	min^{-1}	1410
Power consumption	W	100
Current draw	A	0.8
Min. back pressure	Pa	0
Min. back pressure	inH2O	0
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	50

ml = Max. load · me = Max. efficiency · fa = Free air · cs = Customer specification · ce = Customer equipment
Subject to change

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Technical description

Weight	1.8 kg
Fan size	146 mm
Impeller material	PP plastic
Housing material	PP plastic
Motor suspension	Motor vibration-damped on both sides
Direction of rotation	Counterclockwise, viewed toward rotor
Degree of protection	IP20
Insulation class	"B"
Max. permitted ambient temp. for motor (transport/storage)	+ 80 °C
Min. permitted ambient temp. for motor (transport/storage)	- 40 °C
Installation position	Any
Condensation drainage holes	None, open rotor
Mode	S1
Motor bearing	Ball bearing
Technical features	- Motor current limitation - Soft start - PWM control input - Control interface with SELV potential safely disconnected from supply - Thermal overload protection for motor
EMC immunity to interference	According to EN 61000-6-2 (industrial environment)
EMC circuit feedback	According to EN 61000-3-2/3
EMC interference emission	According to EN 61000-6-3 (household environment)
Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)	<= 3.5 mA
Electrical hookup	With plug
Motor protection	Thermal overload protector (TOP) internally connected
Protection class	Built-in component with basic insulation, protection class results from installation according to intended use
Conformity with standards	EN 60335-1; EN 60335-2-31; CE
Approval	VDE

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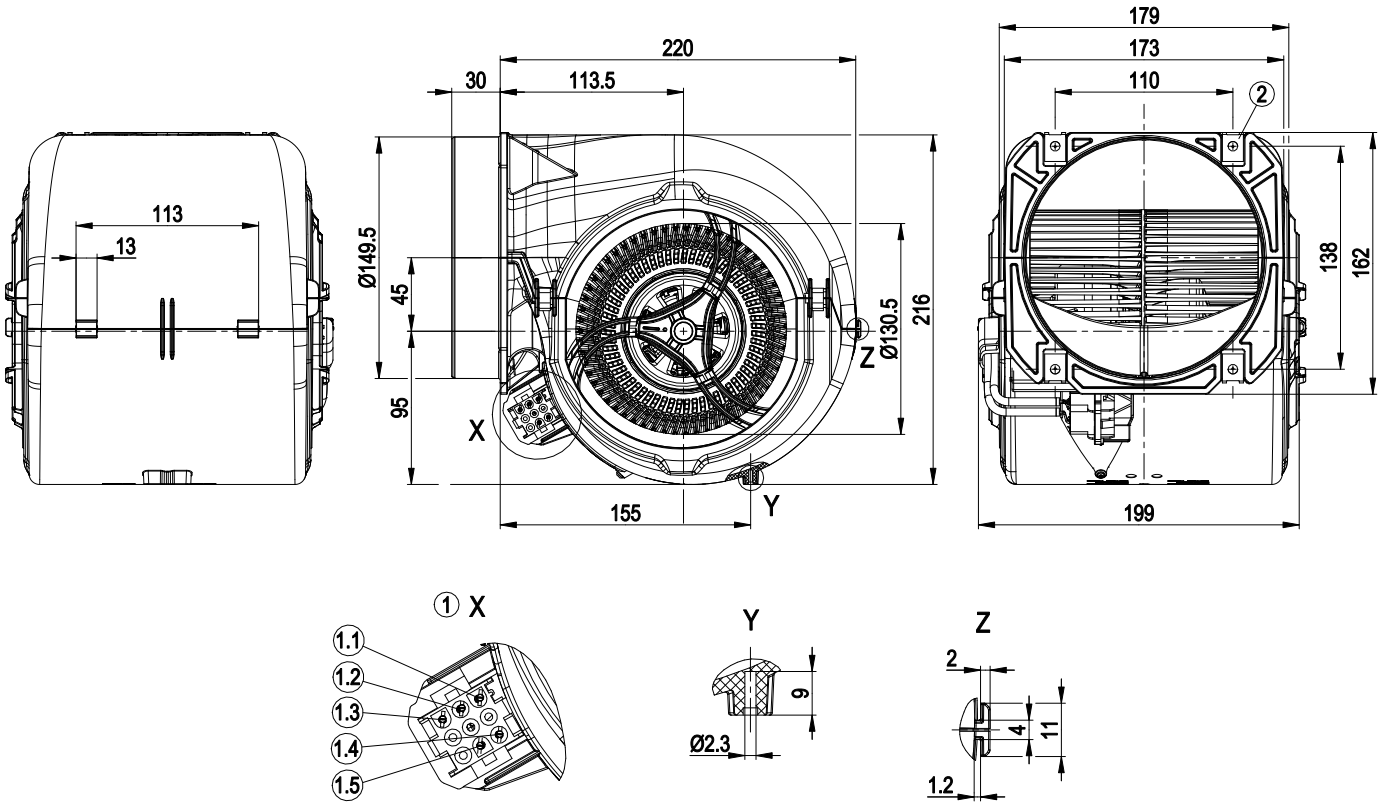
Product drawing



1	Coded plug system: 9-pole connector housing tyco 927231-7, 5x plug pin tyco 926887-1
	Mating connector (not included in scope of delivery): 9-pole connector housing tyco 1-1863003-2, socket tyco 926884-1
1.1	L (brown)
1.2	N (blue)
1.3	FE (green/yellow)
1.4	PWM (yellow)
1.5	GND (blue)
2	4x sheet metal nut for thread EN ISO 1478-ST4.8 (min. screw length 14.5 mm plus material thickness of mounting)

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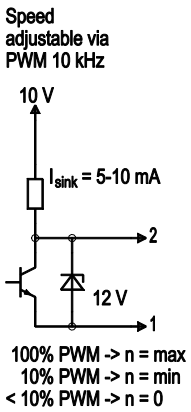
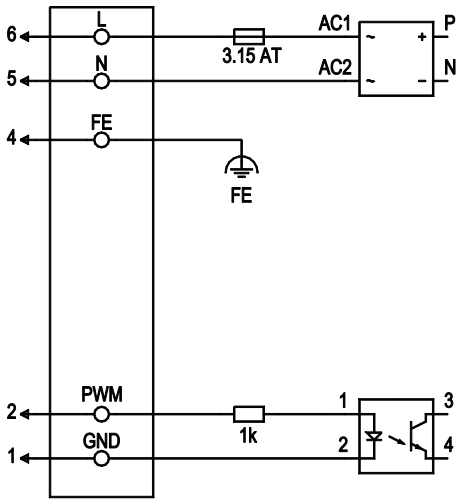
Connection diagram

Customer circuit



Connection



Fan / Motor

No.	Conn.	Designation	Color	Function/assignment
	6	L	brown	Power supply 230 VAC, 50-60 Hz, see nameplate for voltage range
	5	N	blue	Neutral conductor
	4	FE	green/yellow	Functional ground 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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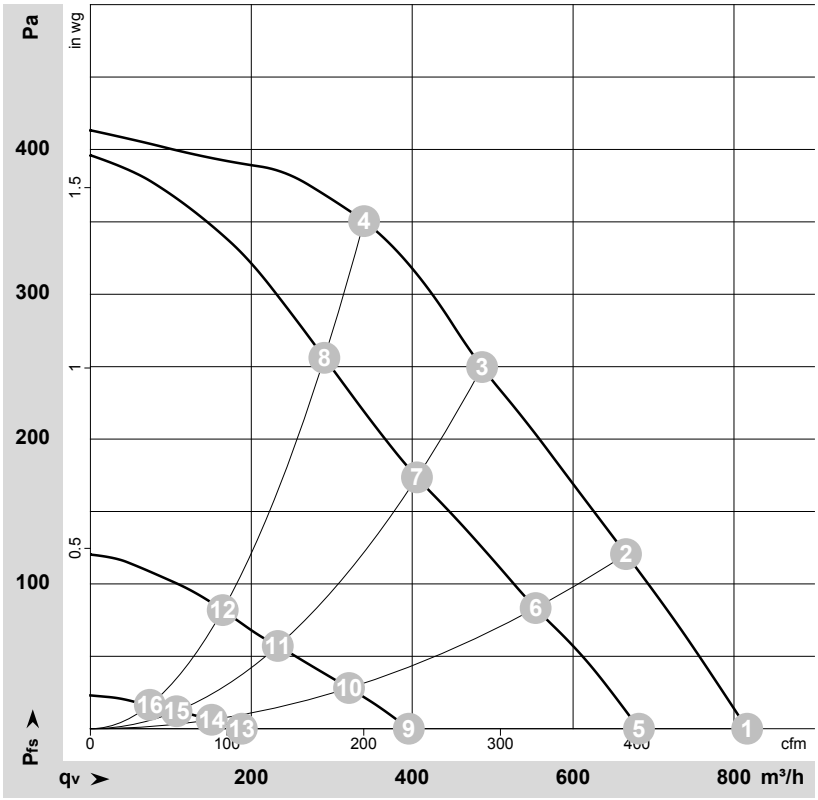
Curves: Air performance 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-159021-1

Air performance measured according to ISO 5801 installation category A. For detailed information on the measurement setup, contact ebm-papst. Intake sound level: Sound power level according to ISO 13347 / sound pressure level measured at 1 m distance from fan axis. The values given are valid under the specified measuring conditions and may vary due to conditions of installation. For deviations from the standard configuration, the parameters have to be checked on the installed unit.

Measured values

	U	f	n	P_{ed}	I	LpA_{in}	LwA_{in}	qv	p_{fs}	qv	p_{fs}
	V	Hz	min^{-1}	W	A	dB(A)	dB(A)	m^3/h	Pa	CFM	inH2O
1	230	50	1410	100	0.80	56	68	815	0	480	0.00
2	230	50	1735	100	0.80	55	66	665	120	390	0.48
3	230	50	2150	100	0.80	56	67	485	250	285	1.00
4	230	50	2445	92	0.72	59	70	340	350	200	1.41
5	230	50	1185	57	0.46			680	0	400	0.00
6	230	50	1450	56	0.46			555	83	325	0.33
7	230	50	1810	56	0.46			405	173	240	0.69
8	230	50	2120	57	0.46			290	256	170	1.03
9	230	50	725	13	0.12			395	0	235	0.00
10	230	50	870	13	0.12			320	28	190	0.11
11	230	50	1055	13	0.12			235	57	135	0.23
12	230	50	1230	13	0.12			165	82	95	0.33
13	230	50	375	3.00	0.05			190	0	110	0.00
14	230	50	435	3.00	0.05			150	6	90	0.02
15	230	50	510	3.00	0.05			105	12	65	0.05
16	230	50	580	3.00	0.05			75	17	45	0.07

U = Power supply · f = Frequency · n = Speed (rpm) · P_{ed} = Power consumption · I = Current draw · LpA_{in} = Sound pressure level intake side · LwA_{in} = Sound power level intake side
qv = Air flow · p_{fs} = Pressure increase