

EC centrifugal fan

forward-curved, dual-intake
with housing (flange)

D3G146-HW19-11 ebmpapst Datasheet
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Nominal data

Type	D3G146-HW19-11	
Motor	M3G055-DF	
Phase		1~
Nominal voltage	VAC	115
Nominal voltage range	VAC	100 .. 130
Frequency	Hz	50/60
Method of obtaining data		ml
Speed (rpm)	min ⁻¹	2100
Power consumption	W	170
Current draw	A	2.4
Min. back pressure	Pa	230
Min. back pressure	in. wg	0.92
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	45

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

Data according to Commission Regulation (EU) 327/2011 (EN 17166)

		Actual	Req. 2015			
01 Overall efficiency η_{es}	%	50.1	32.8	09 Power consumption P_{ed}	kW	0.16
02 Measurement category		A		09 Air flow q_v	m³/h	565
03 Efficiency category		Static		09 Pressure increase p_{fs}	Pa	472
04 Efficiency grade N		61.3	44	10 Speed (rpm) n	min ⁻¹	2675
05 Variable speed drive		Yes		11 Specific ratio*		1.01

Data obtained at optimum efficiency level.
The ErP data is determined using a motor-impeller combination in a standardized measurement setup.

* Specific ratio = $1 + p_s / 100\,000\text{ Pa}$

LU-186492



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Technical description

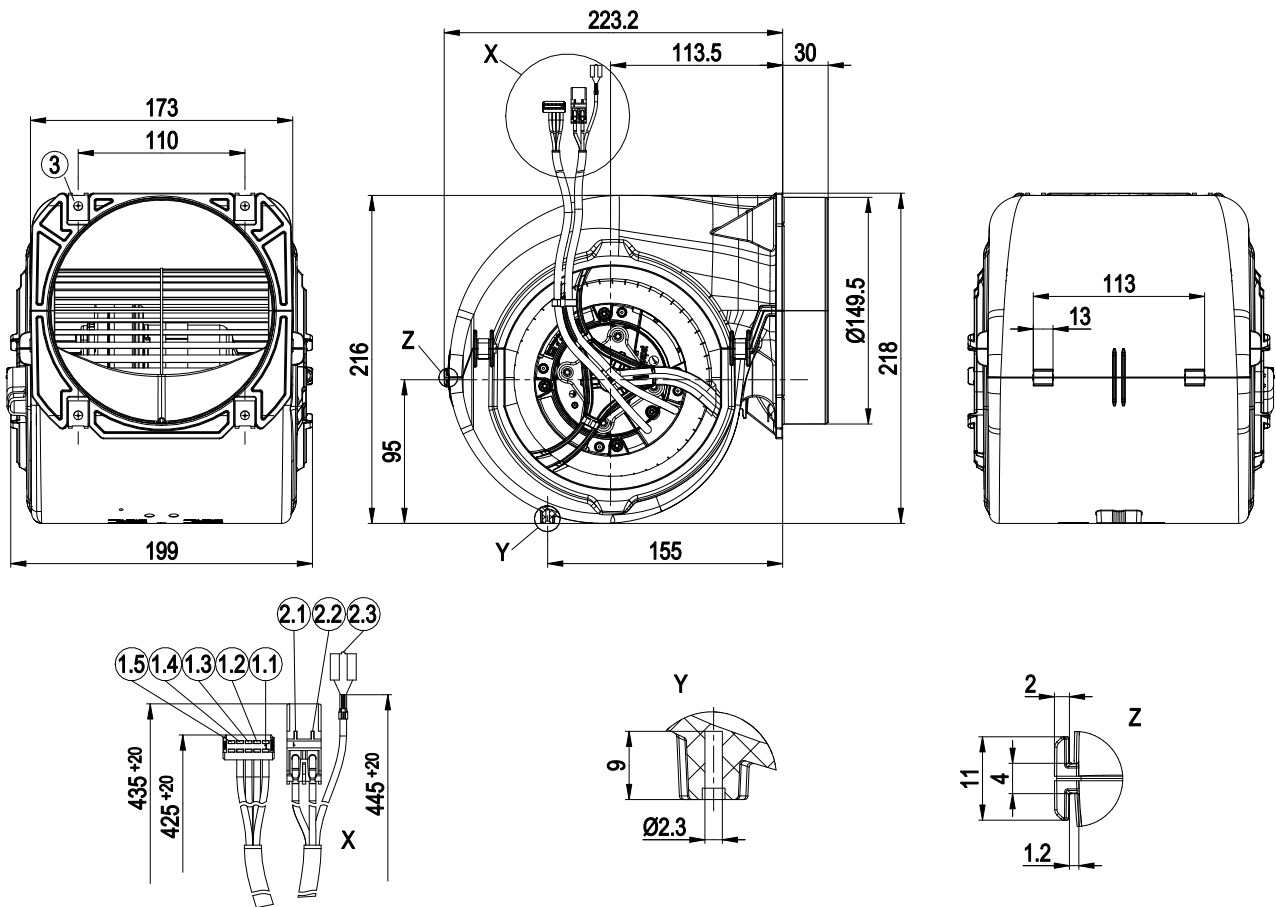
Weight	2.8 kg
Size	146 mm
Motor size	55
Rotor surface	Thick-film passivated
Impeller material	Sheet steel, galvanized
Housing material	PP plastic
Motor suspension	Motor vibration-damped on both sides
Direction of rotation	Counterclockwise, viewed toward rotor
Degree of protection	IP54
Insulation class	"B"
Moisture (F) / Environmental (H) protection class	H1
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	- Output 10 VDC, max. 10 mA - Power limiter - Motor current limitation - Soft start - Control input 0-10 VDC / PWM - Control interface with SELV potential safely disconnected from the mains - Overvoltage detection - Thermal overload protection for electronics/motor - Line undervoltage detection
Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)	<= 3.5 mA
Electrical hookup	Connector with cable
Motor protection	Electronic motor protection; Locked-rotor protection
Protection class	I (with customer connection of protective earth)
Conformity with standards	EN 60034-1; EN 60204-1; EN 60335-1; CE
Approval	CSA C22.2 No. 77 + CAN/CSA-E60730-1; UL 1004-7 + 60730-1



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Product drawing

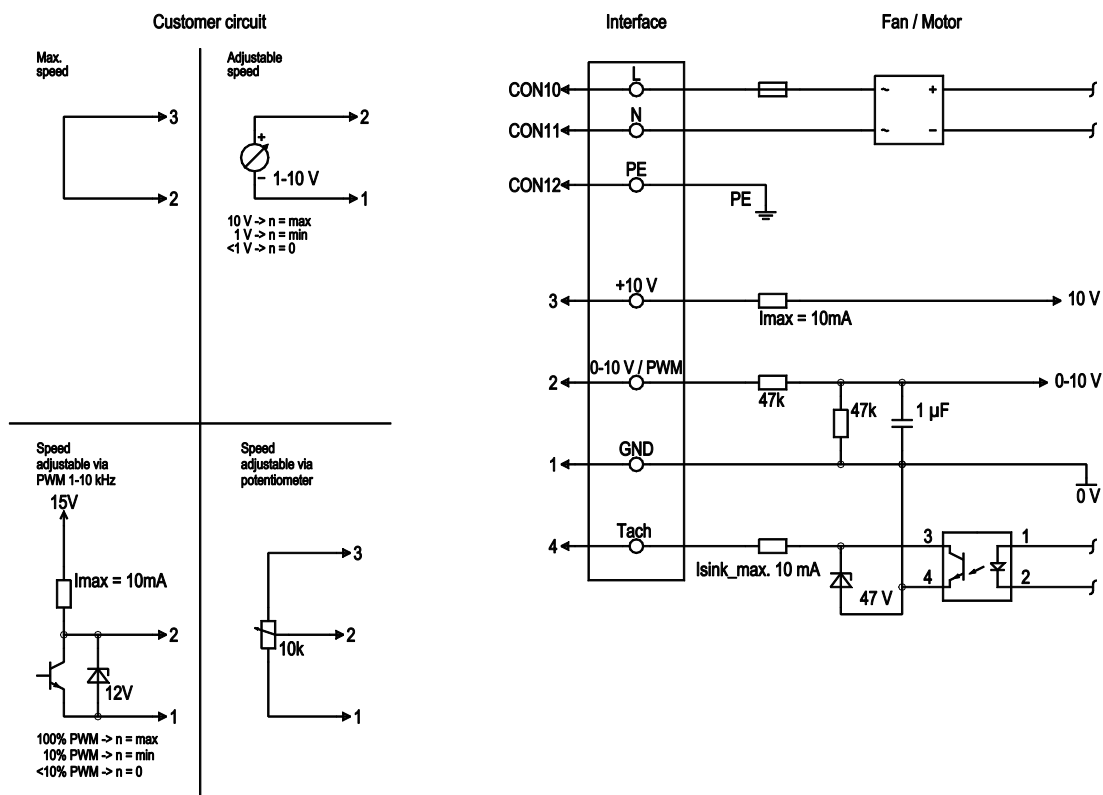


1	Cable PVC AWG22
	5-pole connector housing Stocko MFMP 7238-005-060-960-000-00-G
1.1	Tach (white)
1.2	GND (blue)
1.3	+10 V (red)
1.4	0-10 V PWM (yellow)
1.5	not used
2	Cable PVC AWG20
	2-pole connector housing Stocko MFMP 9590-02-BB01-000-960-000-00-G
2.1	N (blue)
2.2	L (black)
2.3	PE (green/yellow), flat push-on receptacle 6.3 x 1.0
3	4x sheet metal nut for thread EN ISO 1478-ST4.8

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Connection diagram

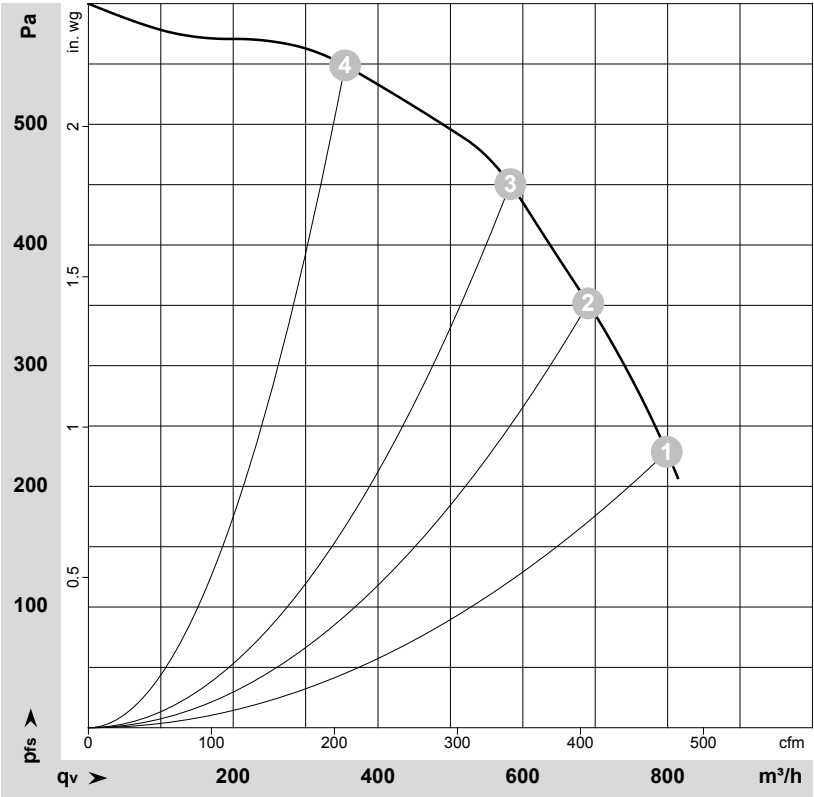


No.	Conn.	Designation	Color	Function/assignment
	CON10	L	black	Supply connection, power supply, phase, see nameplate for voltage range
	CON11	N	blue	Supply connection, power supply, neutral conductor, see nameplate for voltage range
	CON12	PE	green/yellow	Ground connection
	2	0- 10V PWM	yellow	0-10 V / PWM control input, R _i =100 kΩ, SELV
	4	Tach	white	Tach output, open collector, 1 pulse per revolution, I _{sink} max = 10 mA, SELV
	3	+10 V	red	Fixed voltage output 10 VDC ±3 %, I _{max} . 10 mA, short-circuit-proof, power supply for ext. devices (e.g. pot), SELV
	1	GND	blue	Reference ground for control interface, SELV

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Curves: Air performance 50 Hz



$\rho = 1.15 \text{ kg/m}^3 \pm 2 \%$

Measurement: LU-186492-1

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

	Wired	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	in. wg
1	1~	115	50	2100	170	2.40	800	230	470	0.92
2	1~	115	50	2365	170	2.40	690	350	405	1.41
3	1~	115	50	2625	170	2.40	585	450	345	1.81
4	1~	115	50	2950	150	2.16	355	550	210	2.21

Wired = Wiring · U = Voltage · f = Frequency · n = Speed (rpm) · P_{ed} = Power consumption · I = Current draw · q_v = Air flow · p_{fs} = Pressure increase

