D3G146-AH50-24

EC centrifugal fan

forward-curved, dual-intake

with housing (flange)

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Nominal data

Type	**D3G146-AH50-24**
Motor	**M3G074-CF**

Phase		1~
Nominal voltage	VAC	230
Nominal voltage range	VAC	200 .. 277
Frequency	Hz	50
Method of obtaining data		fa
Status		prelim.
Speed (rpm)	min^{-1}	1700
Power consumption	W	165
Current draw	A	1.2
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	60

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

		Actual	Req. 2015
01 Overall efficiency η_{es}	%	43.4	32.6
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		54.8	44
05 Variable speed drive		Yes	

09 Power consumption P_{ed}	kW	0.16
09 Air flow q_v	m^3/h	645
09 Pressure increase p_{fs}	Pa	350
10 Speed (rpm) n	min^{-1}	2400
11 Specific ratio*		1.00

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_{fs} / 100 000 Pa

LU-105178

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Technical description

Weight	4.1 kg
Size	146 mm
Motor size	74
Rotor surface	Painted black
Electronics housing material	Die-cast aluminum
Impeller material	Sheet steel, galvanized
Housing material	Sheet steel, galvanized
Motor suspension	Motor vibration-damped on both sides
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP44
Insulation class	"B"
Moisture (F) / Environmental (H) protection class	F3-1; H0+
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
Mode	S1
Motor bearing	Ball bearing
Technical features	- Fault output (open collector) - Power limiter - Motor current limitation - Soft start - Control input 10-0 VDC / PWM - Control interface with SELV potential safely disconnected from the mains - Thermal overload protection for motor
Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)	< 3.5 mA mA
Electrical hookup	Connector with cable
Motor protection	Thermal overload protector (TOP) internally connected
With cable	Variable
Protection class	I (with customer connection of protective earth)
Conformity with standards	EN 60335-1; CE
Approval	UL 1004-3 + 60730-1; CSA C22.2 No. 77 + CAN/CSA-E60730-1

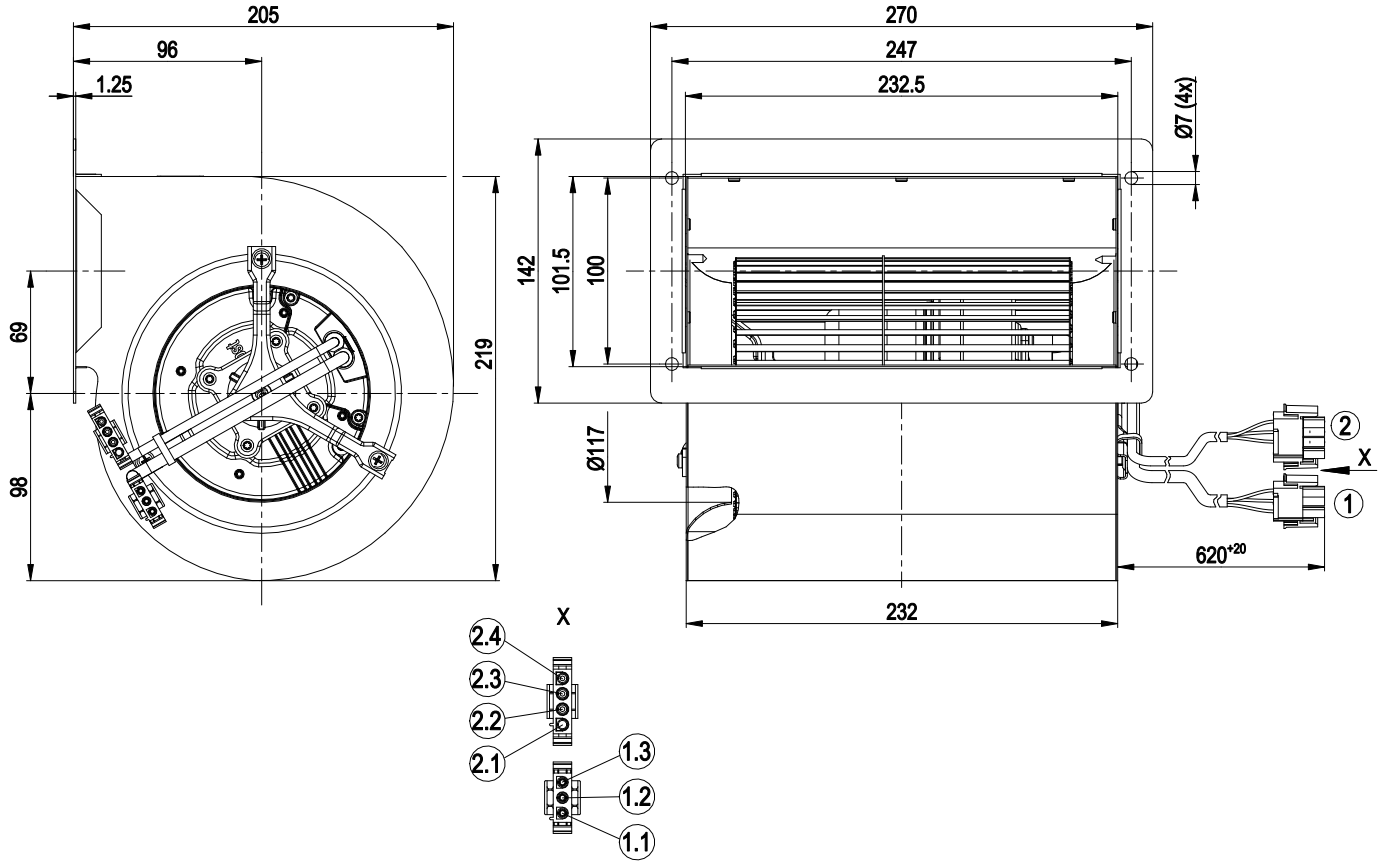
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Product drawing



1	Cable PVC AWG20, 3-pole connector housing tyco 1241809-2, 3x plug pin tyco 350218-1
1.1	PE (green/yellow)
1.2	N (blue)
1.3	L (black)
2	Cable PVC AWG22, 4-pole connector housing tyco 350779-5, 3x plug pin tyco 926885-1
2.1	not used
2.2	GND (blue)
2.3	0-10 V PWM (yellow)
2.4	Tach (white)

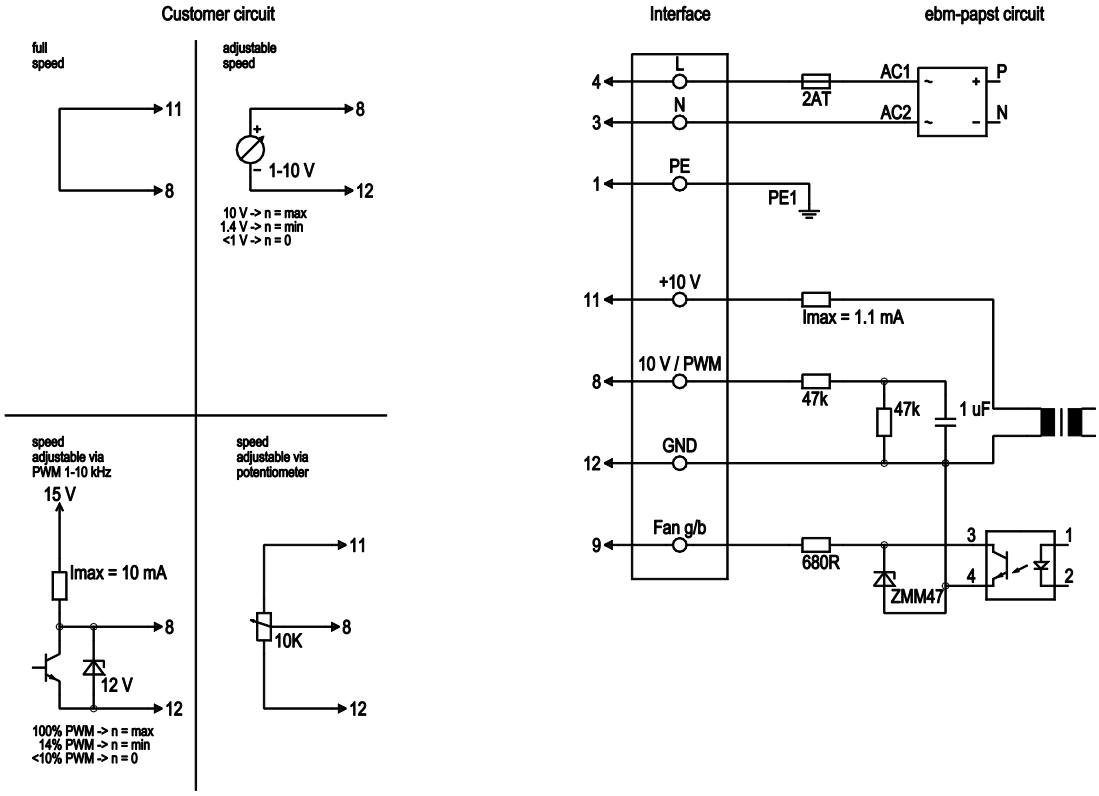
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Connection diagram



No.	Conn.	Designation	Color	Function/assignment
	4	L	black	Power supply 230 VAC, 50-60 Hz; see nameplate for voltage range
	3	N	blue	Neutral conductor
	1	PE	green/yellow	Protective earth
	8	0-10V PWM	yellow	Control input 0-10 V or PWM, electrically isolated
	9	Fan good/ Fan bad	white	Fan good / fan bad output, fan good = high, connection for alarm, electrically isolated
	12	GND	blue	GND connection of control interface

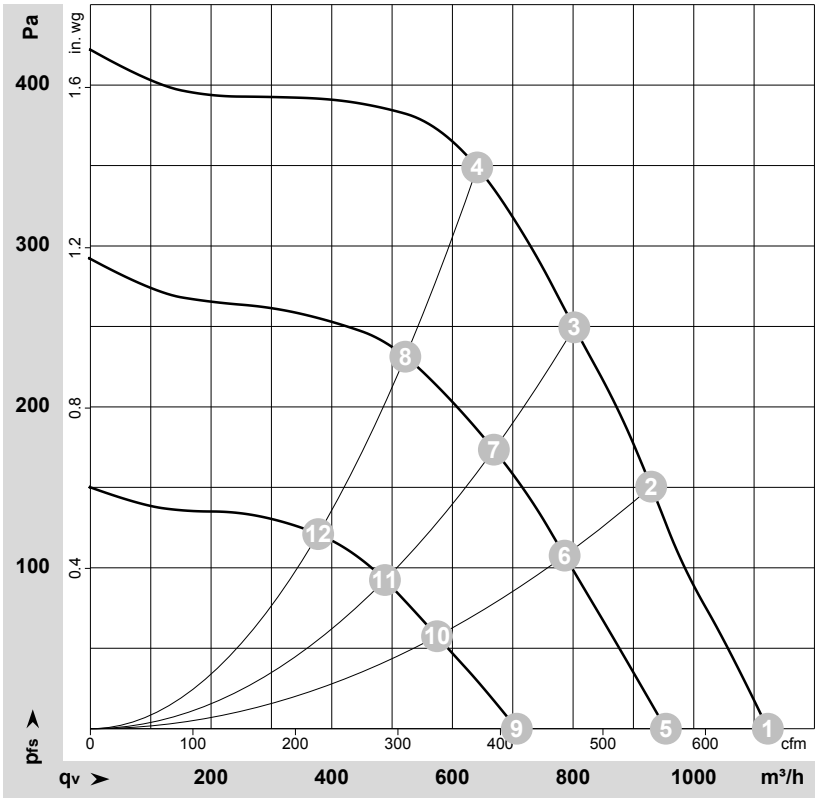
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Curves: Air performance 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-105178-1
Measurement: LU-71195-1
Measurement: LU-71197-1

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~	230	50	1700	165	1.20	1125	0	660	0.00
2	1~	230	50	1945	165	1.20	930	150	545	0.60
3	1~	230	50	2135	165	1.20	800	250	470	1.00
4	1~	230	50	2400	165	1.20	640	350	375	1.41
5	1~	230	50	1460	103	0.74	955	0	560	0.00
6	1~	230	50	1670	103	0.75	785	108	465	0.43
7	1~	230	50	1845	104	0.76	670	173	395	0.69
8	1~	230	50	2035	101	0.74	520	232	305	0.93
9	1~	230	50	1090	47	0.35	705	0	415	0.00
10	1~	230	50	1235	46	0.35	575	57	340	0.23
11	1~	230	50	1345	46	0.35	490	93	285	0.37
12	1~	230	50	1490	45	0.34	380	121	220	0.49

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

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