D3G146-AH50-01

EC centrifugal fan

forward curved, dual inlet

with housing (without flange)

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ErP2015 EXCEEDS THE NORM

Nominal data

Type	**D3G146-AH50-01**
Motor	**M3G074-CF**

Phase		1~
Nominal voltage	VAC	230
Nominal voltage range	VAC	200 .. 277
Frequency	Hz	50
Type of data definition		fa
Speed	min^{-1}	1700
Power input	W	165
Current draw	A	1.2
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	60

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

Installation category	A
Efficiency category	Static
Variable speed drive	Yes
Specific ratio*	1.00

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

		Actual	Request 2013	Request 2015
Overall efficiency η_{es}		43.4	25.6	32.6
Efficiency grade N		54.8	37	44
Power input P_{ed}	kW	0.16		
Air flow q_v	m^3/h	645		
Pressure increase p_{fs}	Pa	350		
Speed n	min^{-1}	2400		

Data established at point of optimum efficiency

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Technical features

Mass	3.9 kg
Size	146 mm
Surface of rotor	Galvanised
Material of impeller	Sheet steel, hot-galvanised
Direction of rotation	Clockwise, seen on rotor
Type of protection	IP 44; Depending on installation and position
Insulation class	"B"
Humidity class	F3-1
Max. permissible ambient motor temp. (transp./ storage)	+ 80 °C
Min. permissible ambient motor temp. (transp./storage)	- 40 °C
Mounting position	Shaft horizontal; rotor on top or rotor on bottom on request
Condensate discharge holes	None
Operation mode	S1
Motor bearing	Ball bearing
Technical features	- Output 10 VDC, max. 1.1 mA - Tach output - Motor current limit - Soft start - Control input 0-10 VDC / PWM - Over-temperature protected electronics / motor
EMC interference immunity	Acc. to EN 61000-6-2 (industrial environment)
EMC harmonics	Acc. to EN 61000-3-2/3
EMC interference emission	Acc. to EN 61000-6-3 (household environment)
Touch current acc. IEC 60990 (measuring network Fig. 4, TN system)	<= 3.5 mA
Motor protection	Thermal overload protector (TOP) wired internally
Cable exit	Variable
Protection class	I (if protective earth is connected by customer)
Product conforming to standard	CE
Approval	CCC; UL 2111; CSA C22.2 Nr.77

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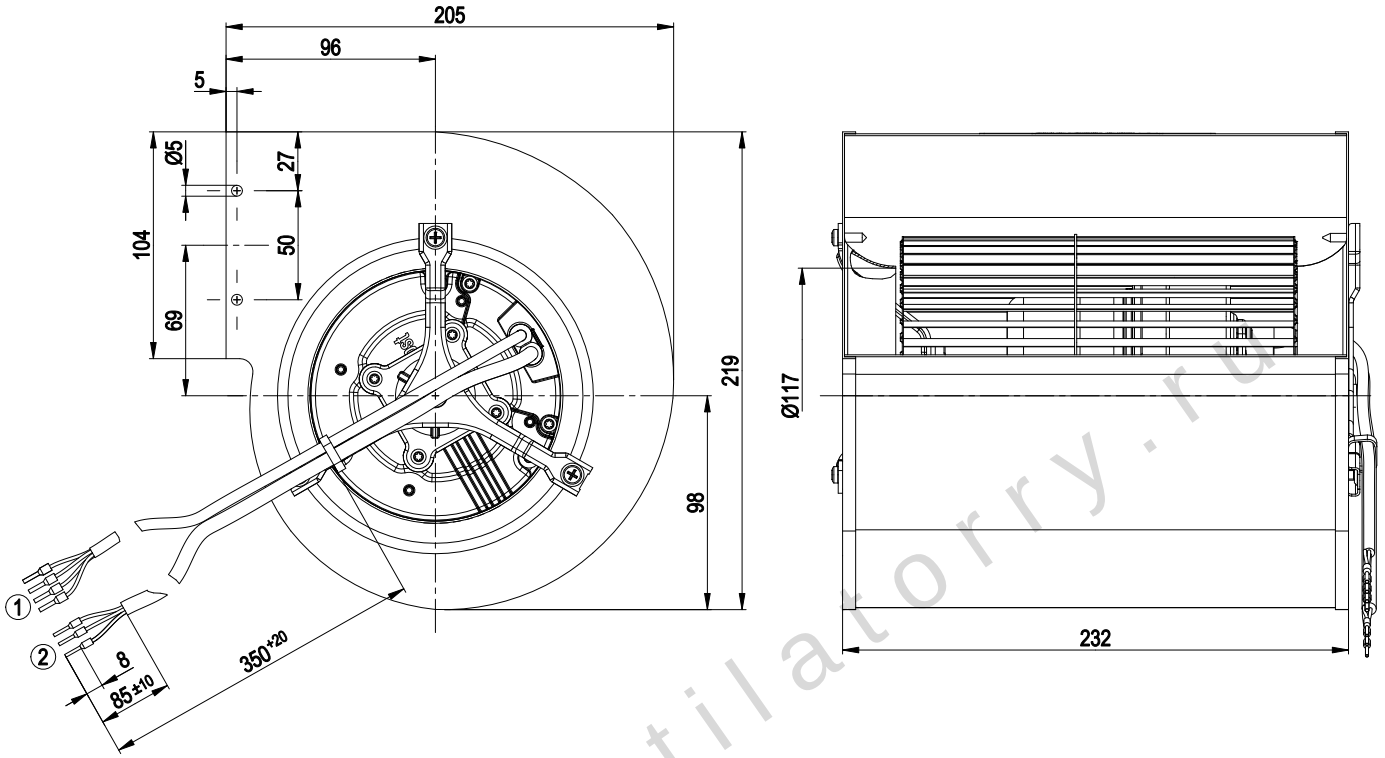
Product drawing



1	Connection line PVC AWG22, 4x crimped core-end sleeves
2	Connection line PVC AWG18, 3x crimped core-end sleeves

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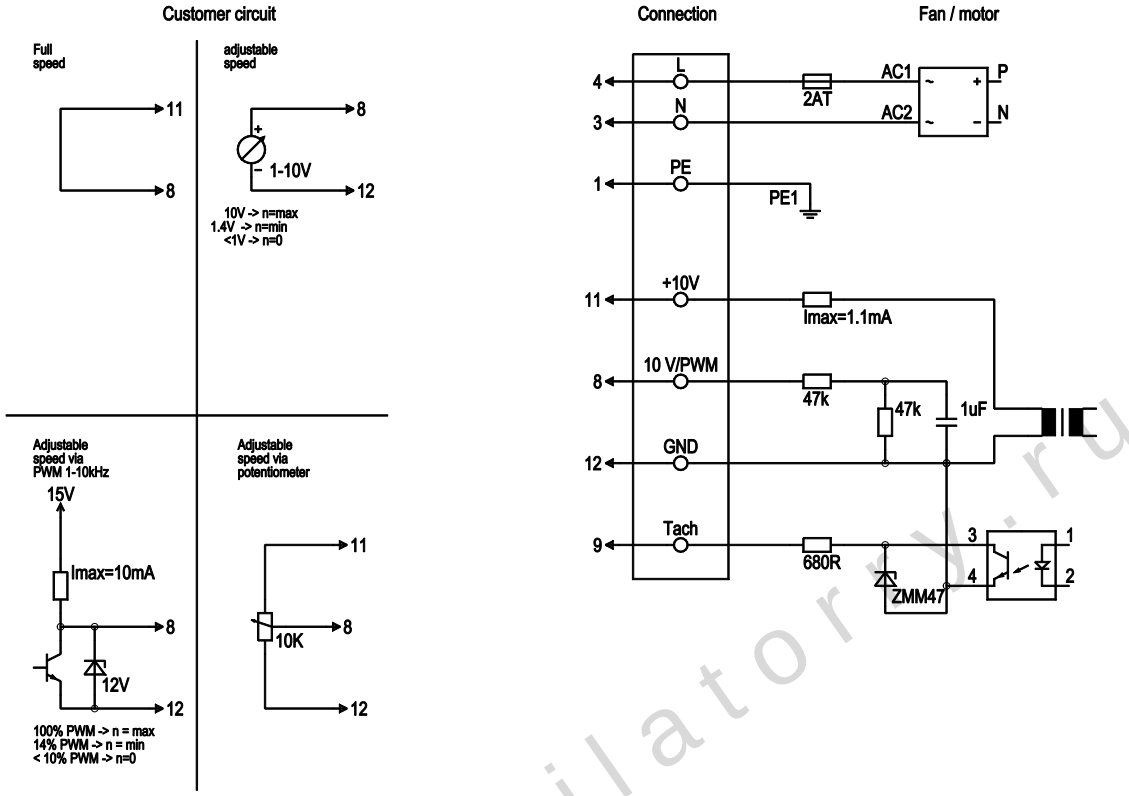
Connection screen



Line	No.	Signal	Colour	Function / assignment
	4	L	black	Power supply 230 VAC, 50-60 Hz, see type plate for voltage range
	3	N	blue	Neutral conductor
	1	PE	green/yellow	Protective earth
	8	0-10 V PWM	yellow	Control input 0 - 10 V or PWM, electrically isolated
	9	Tach	white	Tach output: open collector, 1 pulse per revolution, electrically isolated
	11	10V / max 1.1 mA	red	Voltage output 10 V / max. 1.1 mA, electrically isolated
	12	GND	blue	GND - Connection for control interface

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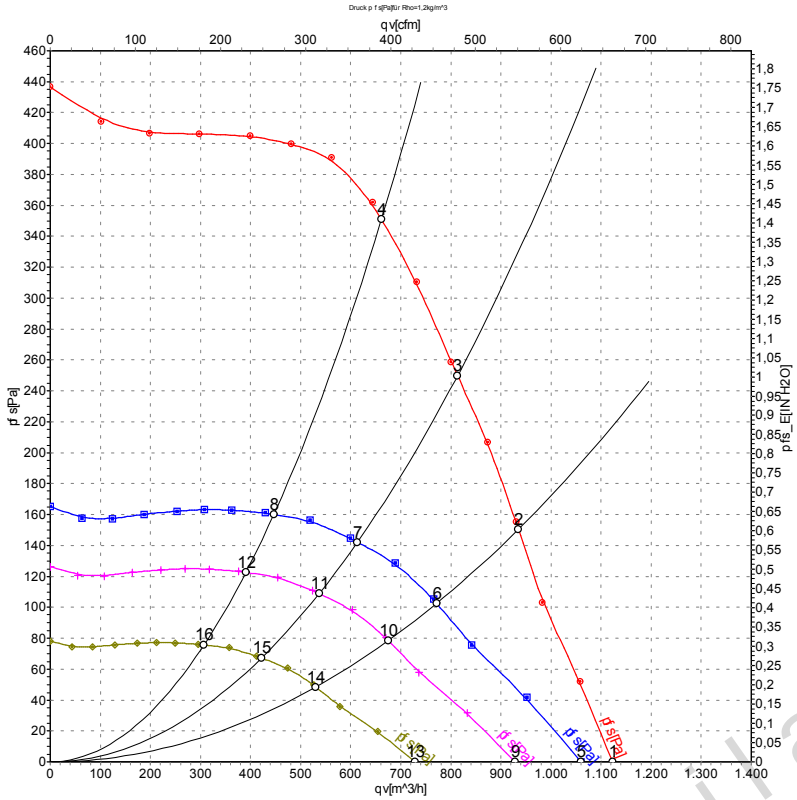
Charts: Air flow 50 Hz



Measurement: LU-105178

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	qv	p_{fs}
	V	Hz	min^{-1}	W	A	m^3/h	Pa
1	230	50	1700	165	1.20	1125	0
2	230	50	1935	165	1.21	935	150
3	230	50	2120	166	1.22	815	250
4	230	50	2370	165	1.22	660	350
5	230	50	1600	139	1.00	1060	0
6	230	50	1600	93	0.68	770	103
7	230	50	1600	71	0.53	615	142
8	230	50	1600	51	0.38	445	160
9	230	50	1400	93	0.67	930	0
10	230	50	1400	62	0.45	675	79
11	230	50	1400	48	0.35	535	109
12	230	50	1400	34	0.25	390	123
13	230	50	1100	45	0.33	730	0
14	230	50	1100	30	0.22	530	49
15	230	50	1100	23	0.17	420	67
16	230	50	1100	17	0.12	305	76

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

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