D3G146-AM02-10

EC centrifugal fan

forward curved, dual inlet

with housing (flange)

ebm-papst Mulfingen GmbH & Co. KG
Bachmühle 2 · D-74673 Mulfingen
Phone +49 7938 81-0
Fax +49 7938 81-110
info1@de.ebmpapst.com
www.ebmpapst.com

Limited partnership · Headquarters Mulfingen
County court Stuttgart · HRA 590344

General partner Elektrobau Mulfingen GmbH · Headquarters Mulfingen
County court Stuttgart · HRB 590142

Nominal data

Type	**D3G146-AM02-10**
Motor	**M3G074-CF**

Phase		1~
Nominal voltage	VAC	230
Nominal voltage range	VAC	200 .. 240
Frequency	Hz	50/60
Type of data definition		ml
Speed (rpm)	min^{-1}	1800
Power input	W	162
Current draw	A	1.32
Min. back pressure	Pa	0
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	55

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}	%	46.5	32.3
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		58.2	44
05 Variable speed drive		Yes	

09 Power input P_{ed}	kW	0.14
09 Air flow q_v	m^3/h	550
09 Pressure increase p_{fs}	Pa	389
10 Speed (rpm) n	min^{-1}	2560
11 Specific ratio*		1.00

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-169601

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Technical features

Mass	3.4 kg
Size	146 mm
Surface of rotor	Thick layer passivated
Material of impeller	Sheet steel, galvanised
Housing material	Sheet steel, galvanised
Motor suspension	Motor mounted anti-vibration on both sides
Direction of rotation	Clockwise, seen on rotor
Type of protection	IP 54
Insulation class	"B"
Humidity (F)/environmental protection class (H)	F3-1
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	- Output 10 VDC, max. 10 mA - Fault output (open collector) - Output limit - Motor current limit - Soft start - Control input 0-10 VDC / PWM - Control interface with SELV potential safely disconnected from the mains - Overvoltage detection - Over-temperature protected electronics / motor - Line undervoltage detection
Touch current acc. IEC 60990 (measuring network Fig. 4, TN system)	<= 0.25 mA
Motor protection	PTC resistor
Cable exit	Variable
Protection class	I (if protective earth is connected by customer)
Product conforming to standard	CE
Approval	CSA C22.2 No.77; UL 2111

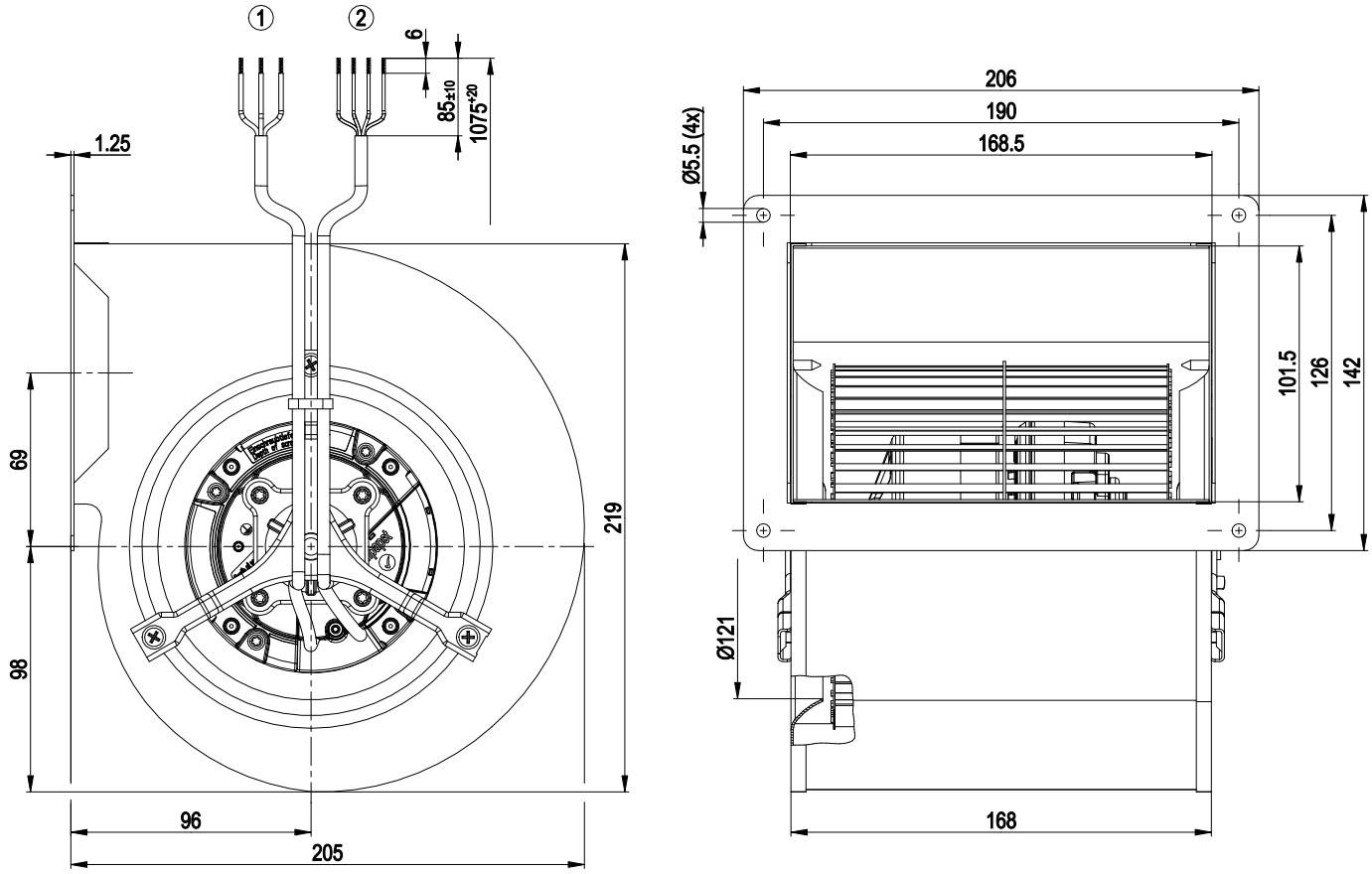
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Product drawing



1	Connection line PVC AWG20, 3x lead tips crimped
2	Connection line PVC AWG22, 4x lead tips crimped

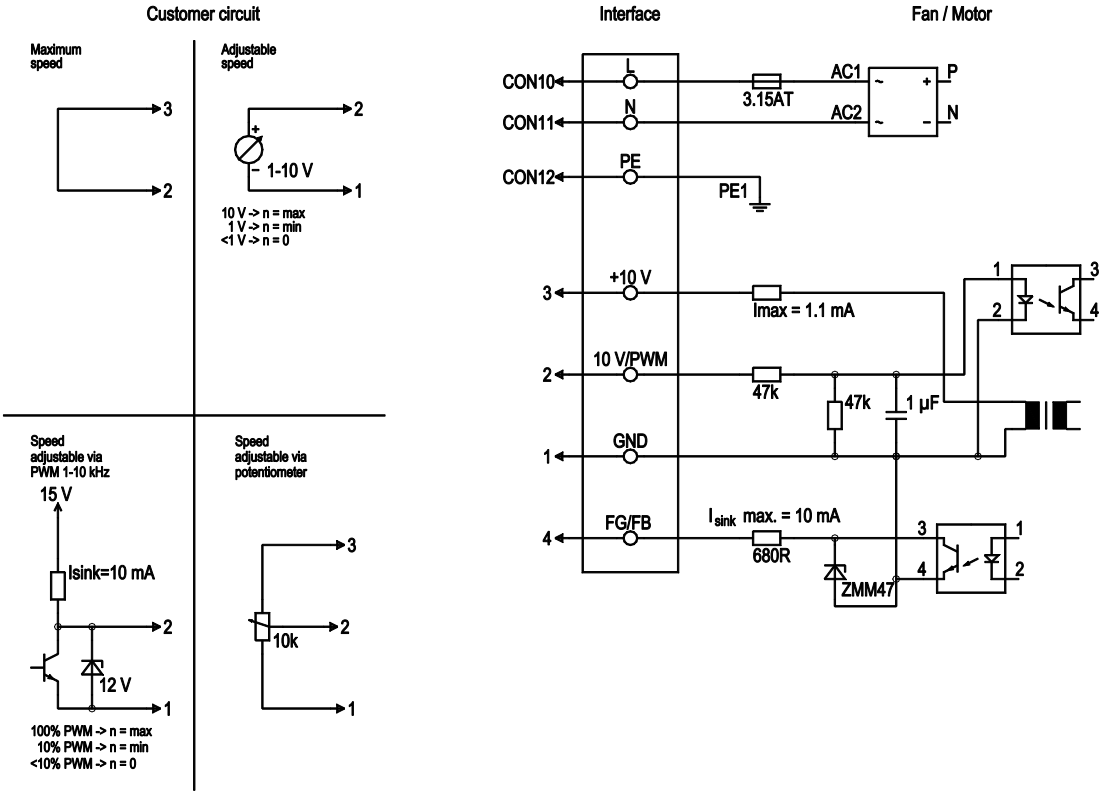
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Connection screen



No.	Conn.	Designation	Colour	Function / assignment
	CON10	L	black	Mains connection, power supply, phase, see type plate for voltage range
	CON11	N	blue	Mains connection, power supply, neutral conductor, see type plate for voltage range
	CON12	PE	green/yellow	Earth connection
	2	0- 10V PWM	yellow	0-10 V/PWM control input, Ri=100 kΩ, SELV
	3	+10 V	red	Fixed voltage output 10 VDC +/-3 %, Imax. 10 mA, short-circuit-proof, power supply for ext. devices (e.g. potentiometer), SELV
	1	GND	blue	Signal ground for control interface, SELV
	4	FG/FB	white	Fan good / fan bad: Open collector, fan good = high, electrically isolated, Isink max=10 mA

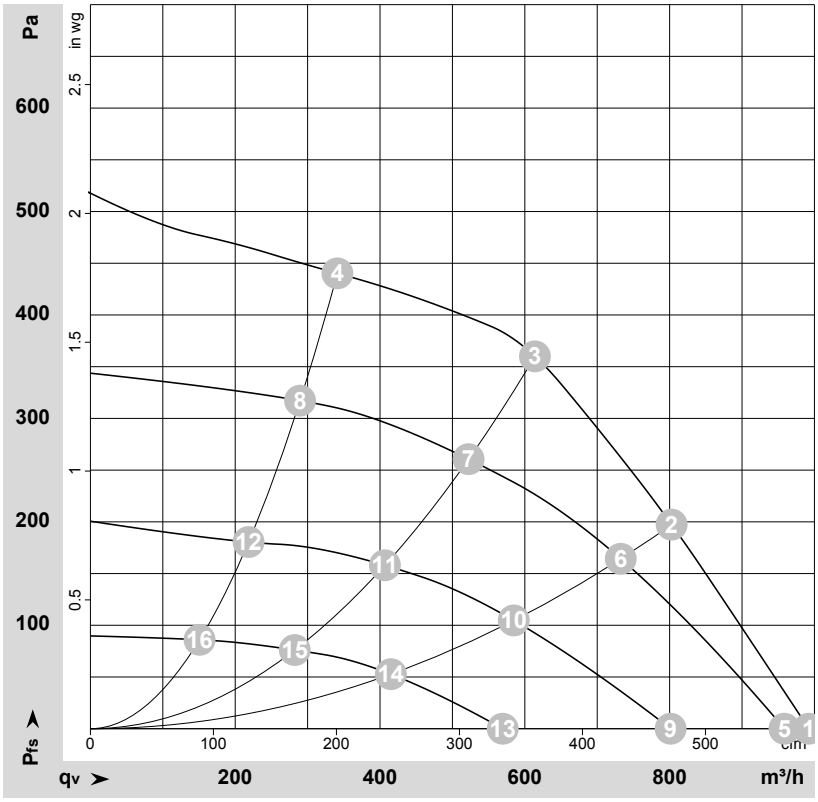
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Charts: Air flow 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-168144-1
Measurement: LU-168320-1
Measurement: LU-168322-1
Measurement: LU-168324-1

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	LpA_{in}	LwA_{in}	q_V	p_{fs}	q_V	p_{fs}
	V	Hz	min^{-1}	W	A	dB(A)	dB(A)	m^3/h	Pa	cfm	inH2O
1	230	50	1800	162	1.32	65	77	990	0	585	0.00
2	230	50	2145	162	1.32	62	74	805	200	475	0.80
3	230	50	2495	158	1.29	62	73	615	360	360	1.45
4	230	50	2745	114	0.96	63	74	340	440	200	1.77
5	230	50	1735	158	1.34	65	76	960	0	565	0.00
6	230	50	1995	130	1.15	60	72	730	183	430	0.73
7	230	50	2150	98	0.89	58	69	520	261	305	1.05
8	230	50	2315	66	0.61	59	69	290	318	170	1.28
9	230	50	1450	91	0.82	60	72	800	0	470	0.00
10	230	50	1580	63	0.60	54	66	585	117	345	0.47
11	230	50	1675	46	0.44	52	63	405	159	240	0.64
12	230	50	1755	31	0.31	52	62	220	180	130	0.72
13	230	50	1030	34	0.33	52	63	570	0	335	0.00
14	230	50	1110	23	0.24	47	57	415	61	245	0.24
15	230	50	1160	17	0.18	45	55	280	76	165	0.31
16	230	50	1200	13	0.14	44	53	150	86	90	0.35

U = Supply voltage · f = Frequency · n = Speed (rpm) · P_{ed} = Power input · I = Current draw · LpA_{in} = Sound pressure level inlet side · LwA_{in} = Sound power level inlet side · q_V = Air flow
p_{fs} = Pressure increase

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