G3G180-BA05-H3

EC centrifugal fan

forward curved, single inlet

with housing (flange)

Limited partnership · Headquarters Mulfingen
County court Stuttgart · HRA 590344

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

Nominal data

Type	**G3G180-BA05-H3**
Motor	**M3G084-DF**

Phase		1~
Nominal voltage	VAC	230
Nominal voltage range	VAC	200 .. 277
Frequency	Hz	50/60
Type of data definition		ml
Speed (rpm)	min^{-1}	2360
Power input	W	500
Current draw	A	2.2
Min. back pressure	Pa	300
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

		Actual	Request 2015
01 Overall efficiency η_{es}	%	50	34.5
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		59.5	44
05 Variable speed drive		Yes	

09 Power input P_{ed}	kW	0.32
09 Air flow q_v	m^3/h	755
09 Pressure increase p_{fs}	Pa	686
10 Speed (rpm) n	min^{-1}	2645
11 Specific ratio*		1.01

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-155530

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Technical features

Mass	6.7 kg
Size	180 mm
Surface of rotor	Coated in black
Material of electronics housing	Die-cast aluminium
Material of impeller	Sheet steel, galvanised
Housing material	Sheet steel, galvanised
Direction of rotation	Clockwise, seen on rotor
Type of protection	IP 55
Insulation class	"F"
Humidity (F)/environmental protection class (H)	F3-1
Note ambient temperature	Occasional start-up between -40°C and -25°C is permissible. For continuous operation at ambient temperatures below -25°C (e.g. refrigeration applications) we recommend our fan version with special low-temperature bearings.
Max. permissible ambient motor temp. (transp./ storage)	+80 °C
Min. permissible ambient motor temp. (transp./storage)	-40 °C
Mounting position	Shaft horizontal or rotor on top; rotor on bottom on request
Condensate discharge holes	None
Operation mode	S1
Motor bearing	Ball bearing
Technical features	- Output 10 VDC, max. 10 mA - Operation and alarm display - Tach output - Alarm relay - Integrated PID controller - Output limit - Motor current limit - PFC, active - RS485 MODBUS RTU - Soft start - Control input 0-10 VDC / PWM - Control interface with SELV potential safely disconnected from the mains - Over-temperature protected electronics / motor - Line undervoltage / phase failure detection
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	EN 61800-5-1; EN 60335-1; CE
Approval	UL 1004-7 + 60730; EAC; C22.2 Nr.77 + CAN/CSA-E60730-1

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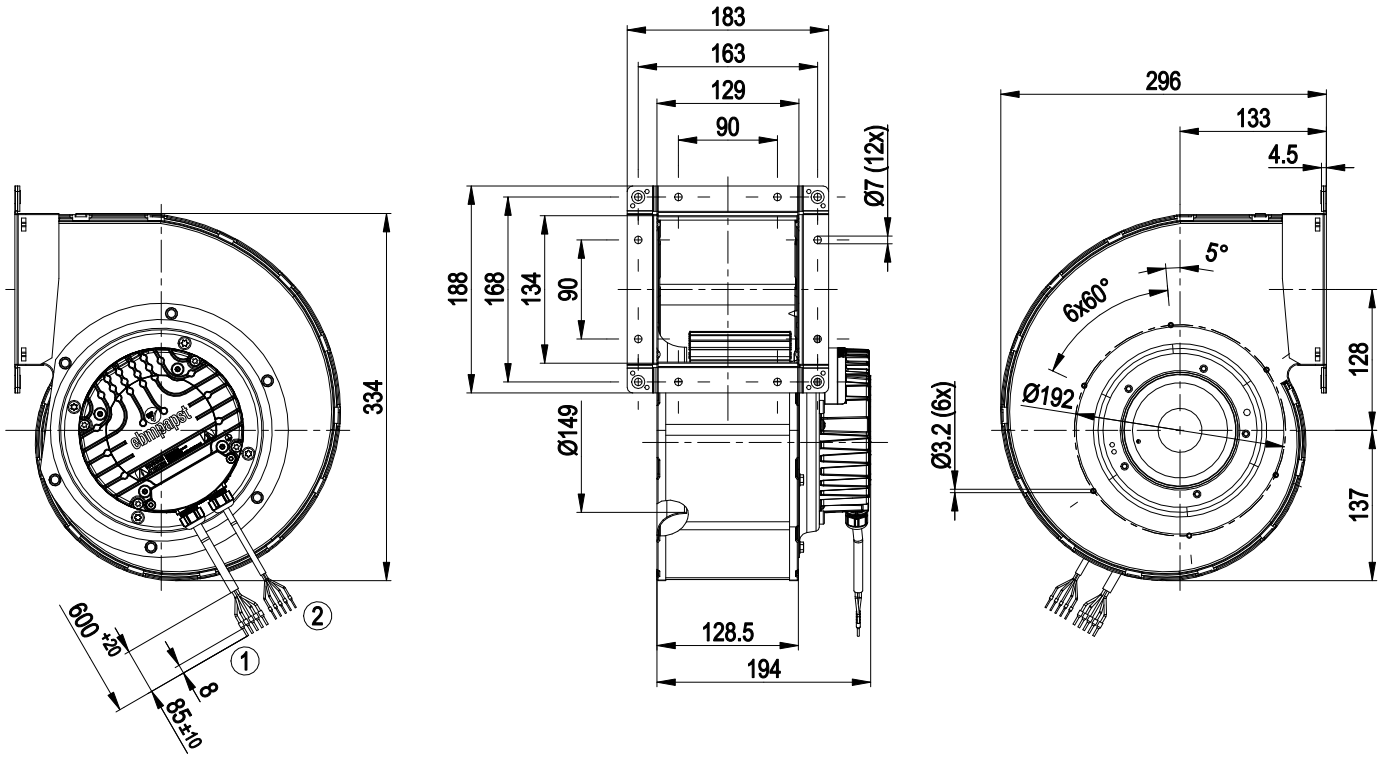
Product drawing



1	Connection line PVC AWG18, 5x crimped core-end sleeves
2	Connection line PVC AWG22, 6x crimped core-end sleeves

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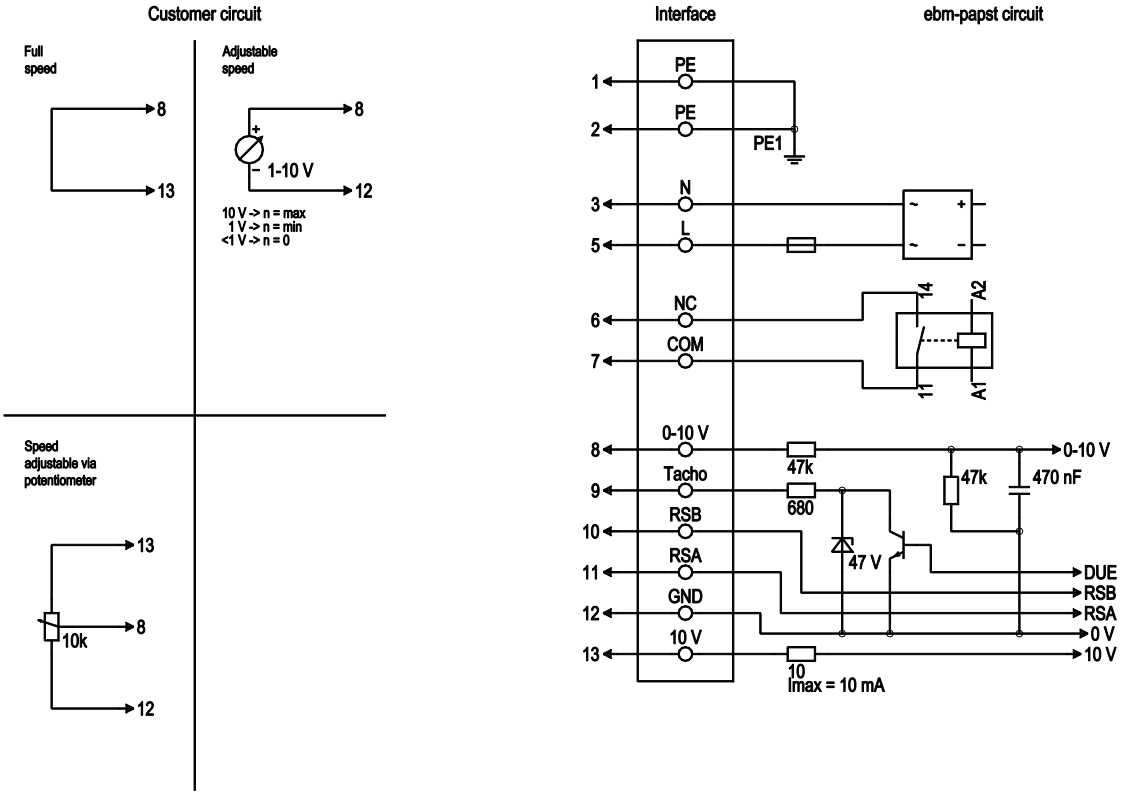
Connection screen



No.	Conn.	Designation	Colour	Function / assignment
1	1, 2	PE	green/yellow	Protective earth
1	3	N	blue	Power supply, neutral conductor, 50/60 Hz
1	5	L	black	Power supply, phase, 50/60 Hz
1	6	NC	white 1	Status relay, floating status contact, break for failure, contact rating 250 VAC / 2 A (AC1) min. 10 mA, basic insulation on mains side and reinforced insulation on control interface side
1	7	COM	white 2	Status relay, floating status contact, break for failure, contact rating 250 VAC / 2 A (AC1) min. 10 mA, basic insulation on mains side and reinforced insulation on control interface side
2	8	0-10 V	yellow	Analogue input (set value) SELV, 0-10 V, Ri=100kΩ, parametrisable curve
2	9	Tacho	grey	Tach output: Open collector, 1 pulse per revolution, Isink max = 10 mA; SELV
2	10	RSB	brown	RS-485 interface for MODBUS, RSB; SELV
2	11	RSA	white	RS-485 interface for MODBUS, RSA; SELV
2	12	GND	blue	Signal ground for control interface, SELV
2	13	+10 V	red	Fixed voltage output 10 VDC, +10 V ±3%, max. 10 mA, short-circuit-proof, power supply for external devices (e.g. potentiometers); SELV

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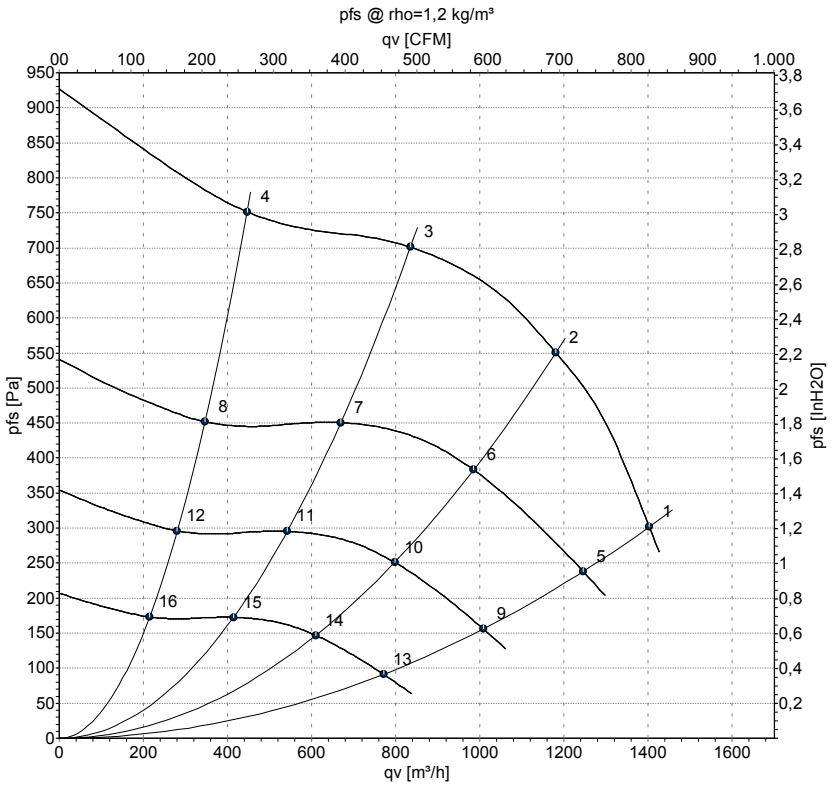
Charts: Air flow 50 Hz



Measurement: LU-155530-1

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	2360	500	2.20	76	81	1400	300	825	1.20
2	230	50	2515	468	2.06	74	80	1180	550	695	2.21
3	230	50	2620	353	1.56	72	78	835	700	490	2.81
4	230	50	2710	226	1.02	71	77	445	750	265	3.01
5	230	50	2100	359	1.58	73	78	1245	239	735	0.96
6	230	50	2100	272	1.20	70	75	985	385	580	1.55
7	230	50	2100	182	0.81	67	72	670	451	395	1.81
8	230	50	2100	105	0.48	65	71	345	449	205	1.80
9	230	50	1700	191	0.84	68	73	1010	157	595	0.63
10	230	50	1700	145	0.64	64	70	795	252	470	1.01
11	230	50	1700	97	0.43	61	67	540	295	320	1.18
12	230	50	1700	56	0.25	60	65	280	294	165	1.18
13	230	50	1300	85	0.37	61	66	770	92	455	0.37
14	230	50	1300	65	0.28	58	63	610	147	360	0.59
15	230	50	1300	43	0.19	54	60	415	173	245	0.69
16	230	50	1300	25	0.11	53	59	215	172	125	0.69

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