G1G170-AB31-51

EC centrifugal fan

backward-curved, single-intake

with housing (flange), Gas blower for condensing boilers



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Nominal data

Type	**G1G170-AB31-51**	
Motor	**M1G074-CF**	
Phase		1~
Nominal voltage	VAC	230
Frequency	Hz	50/60
Method of obtaining data		ml
Speed (rpm)	min^{-1}	6530
Power consumption	W	410
Current draw	A	1.8
Min. back pressure	Pa	2000
Min. back pressure	inH2O	8.03
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	55
Min. temp. of flow medium	°C	-25
Max. temp. of flow medium	°C	+80

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}	%	57.1	46.4
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		71.7	61
05 Variable speed drive		Yes	

09 Power consumption P_{ed}	kW	0.41
09 Air flow q_v	m^3/h	380
09 Pressure increase p_{fs}	Pa	2001
10 Speed (rpm) n	min^{-1}	6530
11 Specific ratio*		1.02

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-56469

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Technical description

Weight	4.7 kg
Fan size	170 mm
Rotor surface	Painted black
Cover material	Polyflam RPP 374-ND CS1 (UL 97-V0)
Impeller material	Sheet aluminum
Housing material	Die-cast aluminum
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP20
Insulation class	"B"
Moisture (F) / Environmental (H) protection class	H0 - dry environment
Max. permitted ambient temp. for motor (transport/storage)	+80 °C
Min. permitted ambient temp. for motor (transport/storage)	-40 °C
Installation position	Any
Cooling hole/opening	On rotor side
Premixing	If gas is premixed in the blower, then a special blower must be used.
Motor bearing	Ball bearing
Technical features	- Tach output - Motor current limitation - PFC, active - PWM control input - Thermal overload protection for motor
EMC immunity to interference	According to EN 61000-6-2
EMC circuit feedback	According to EN 61000-3-2/3
EMC interference emission	According to EN 61000-6-4 (industrial environment)
Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)	<= 3.5 mA
Electrical hookup	With plug
Motor protection	Thermal overload protector (TOP) internally connected
Conformity with standards	CE
Approval	CCC; UL 507; CSA C22.2 No. 113

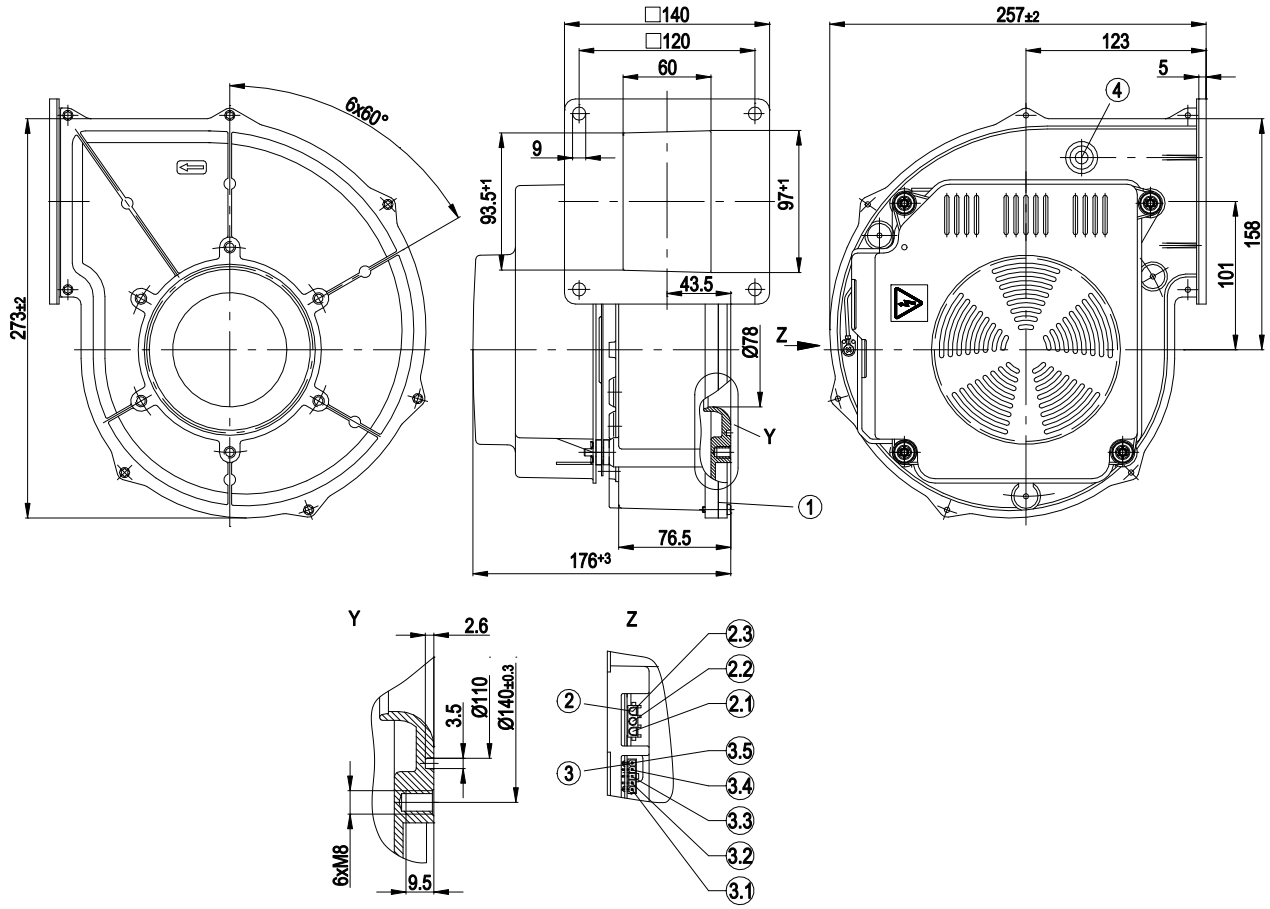
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Product drawing



1	Housing side parts sealed with NBR round cord (pentane-resistant)
2	3-pole header, mating connector (not included in scope of delivery): tyco no. 350 766-1, socket: tyco no. 926 884-1
2.1	L
2.2	N
2.3	PE
3	5-pole header; mating connector (not included in scope of delivery): Molex no. 39-01-4050; socket: Molex no. 39-00-0059
3.1	(+)
3.2	Speed monitoring
3.3	not used
3.4	PWM input
3.5	(-)
4	Pressure tap possible
Z	View Z

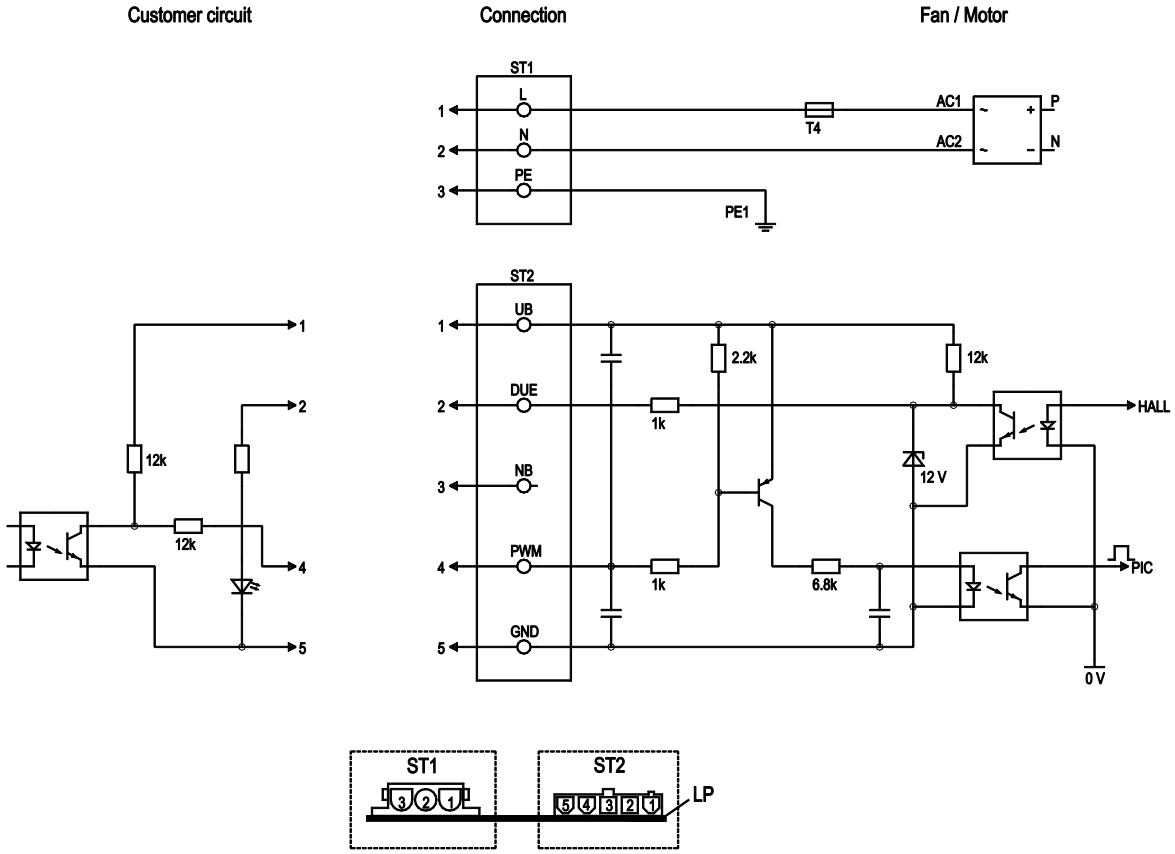
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Connection diagram



No.	Conn.	Designation	Function/assignment
ST1	1, 2, 3	L, N, PE	Power supply 230 VAC, 50-60 Hz, neutral conductor, protective earth
ST2	1	UB	external voltage 24-45 VDC
ST2	2	Tach	DUE connection, monitoring output, 3 pulses per revolution, Isource 1mA
ST2	3	N.C.	not used
ST2	4	PWM	PWM - 2-6 kHz control input, PWM on n = 100%, PWM low n = 0%
ST2	5	GND	GND connection for control interface

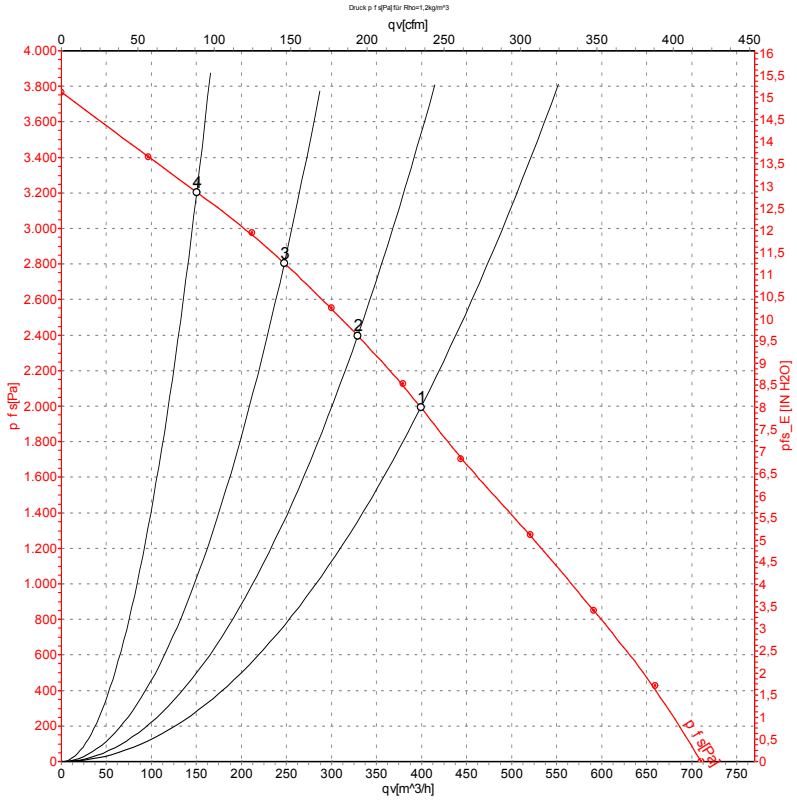
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Curves: Air performance 50 Hz



Measurement: LU-56469-1

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

	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	inH2O
1	230	50	6530	410	1.80	380	2000	225	8.03
2	230	50	6665	400	1.75	330	2400	195	9.64
3	230	50	6915	370	1.62	250	2800	145	11.24
4	230	50	7250	326	1.44	150	3200	90	12.85

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

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