G1G170-AB31-40

EC centrifugal fan

backward curved, single inlet

with housing (flange), Gas blower for gas-condensing heating

G1G170-AB31-40 ebmpapst Datasheet
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ErP2015 EXCEEDS THE NORM

Nominal data

Type	**G1G170-AB31-40**	
Motor	**M1G074-CF**	
Phase		1~
Nominal voltage	VAC	230
Frequency	Hz	50
Type of data definition		ml
Speed	min^{-1}	6530
Power input	W	410
Current draw	A	1.8
Min. back pressure	Pa	2000
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

Installation category	A
Efficiency category	Static
Variable speed drive	Yes
Specific ratio*	1.02

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

		Actual	Request 2013	Request 2015
Overall efficiency η_{es}		57.1	43.4	46.4
Efficiency grade N		71.7	58	61
Power input P_{ed}	kW	0.41		
Air flow q_v	m^3/h	380		
Pressure increase p_{fs}	Pa	2001		
Speed n	min^{-1}	6530		

Data established at point of optimum efficiency

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Technical features

Mass	4.5 kg
Size	170 mm
Surface of rotor	Coated in black
Material of protective cover	Polyflam RPP 374-ND CS1 (UL 97-V0)
Material of impeller	Aluminium sheet
Housing material	Die-cast aluminium
Direction of rotation	Clockwise, seen on rotor
Type of protection	IP 20
Insulation class	"B"
Max. permissible ambient motor temp. (transp./ storage)	+80 °C
Min. permissible ambient motor temp. (transp./storage)	-40 °C
Mounting position	Any
Condensate discharge holes	Rotor-side
Cooling bore / aperture	Rotor-side
Operation mode	S1
Motor bearing	Ball bearing
Technical features	- Tach output - Motor current limit - PWM control input - Over-temperature protected motor
EMC interference immunity	Acc. to EN 61000-6-2 (industrial environment)
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
Electrical leads	With plug
Motor protection	Thermal overload protector (TOP) wired internally
Approval	UL 507; CSA C22.2 Nr.113

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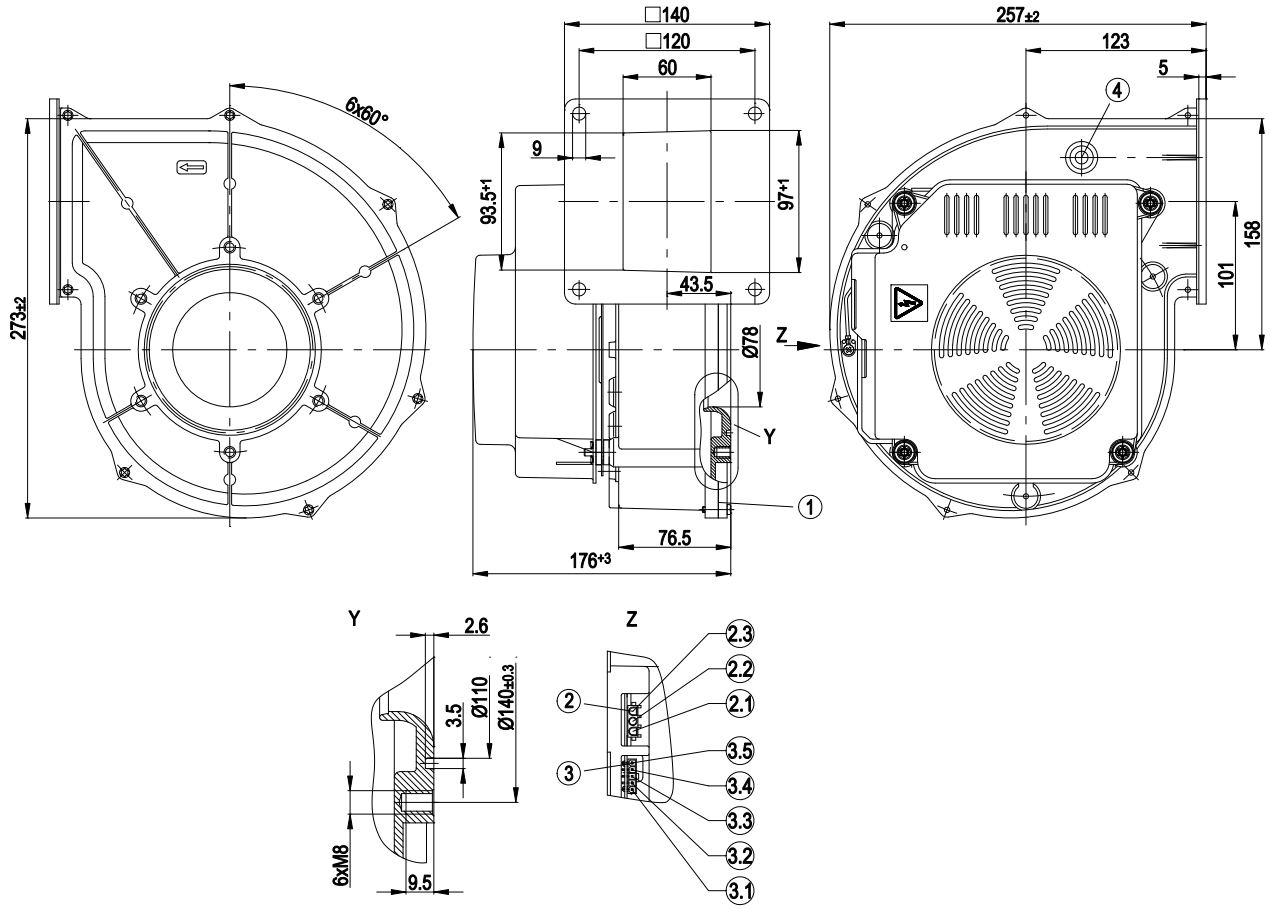
Product drawing



1	Housing side parts sealed with NBR round cord (pentane-resistant)
2	3-pole strip, mating connector: (not included in standard scope of delivery): tyco No. 350 766-1; female terminal: tyco No. 926 884-1
2.1	L
2.2	N
2.3	PE
3	5-pole strip; mating connector (not included in standard scope of delivery) Molex No. 39-01-4050, female terminal Molex No. 39-00-0059
3.1	(+)
3.2	Speed monitoring
3.3	Not assigned
3.4	PWM input
3.5	(-)
4	Bleeder connection for pressure relief possible

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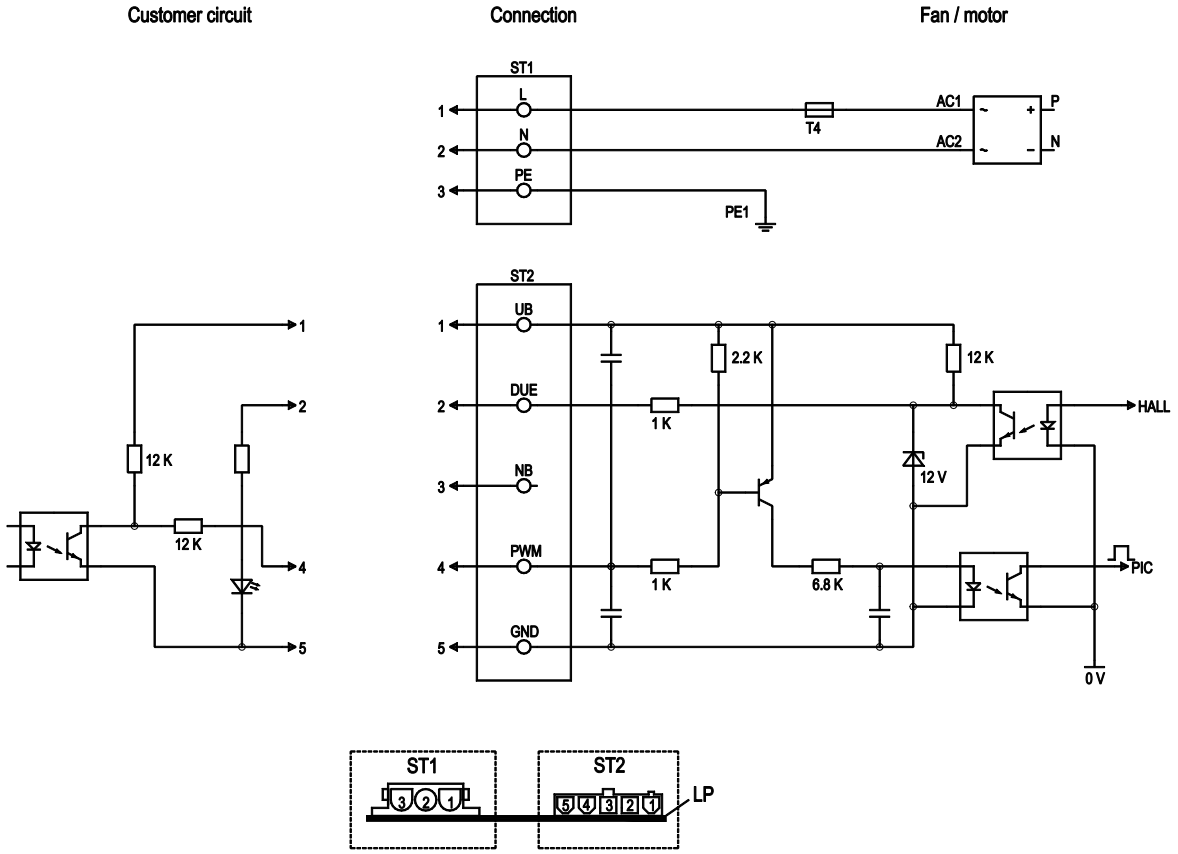
Connection screen



No.	Pin	Signal	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	Speed monitoring output connection, monitoring circuit output, 3 pulses per revolution, current source 1 mA
ST2	3	N.C.	Not assigned
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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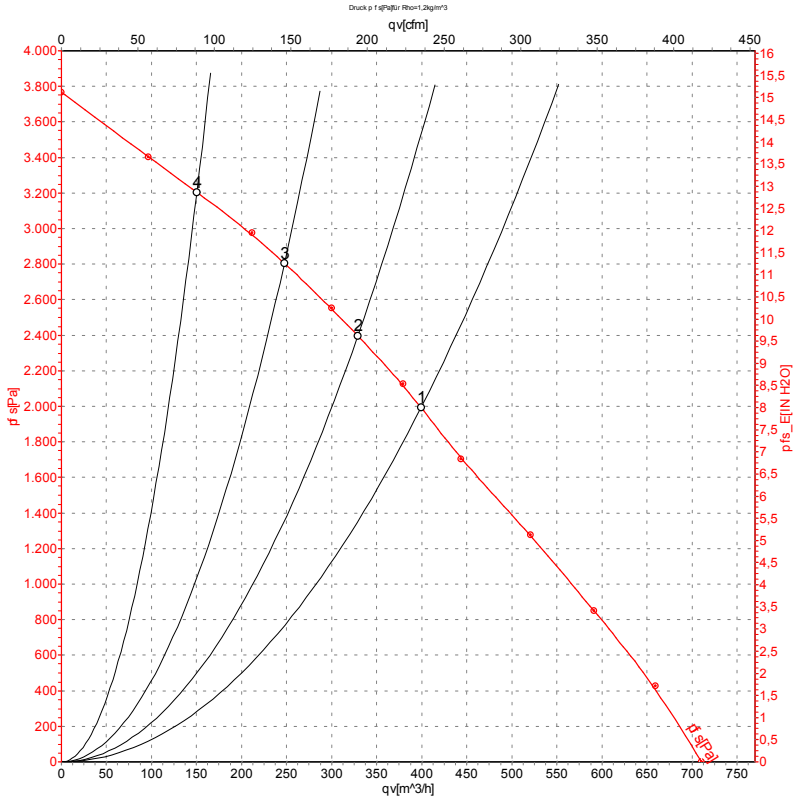
Charts: Air flow 50 Hz



Measurement: LU-56469

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	6530	410	1.80	380	2000
2	230	50	6665	400	1.75	330	2400
3	230	50	6915	370	1.62	250	2800
4	230	50	7250	326	1.44	150	3200

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