

G1G170-AB53-03

# EC centrifugal fan

backward curved, single inlet

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



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### Nominal data

Type	G1G170-AB53-03	
Motor	M1G074-CF	
Phase		1~
Nominal voltage	VAC	230
Frequency	Hz	50/60
Type of data definition		fa
Speed (rpm)	min <sup>-1</sup>	5830
Power input	W	360
Current draw	A	1.6
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 = Running at free air · cs = Customer specs · cu = Customer unit  
Subject to alterations

### Data according to ErP directive

		Actual	Request 2015
01 Overall efficiency $\eta_{es}$	%	58.8	45
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		74.8	61
05 Variable speed drive		Yes	

Data definition with optimum efficiency.  
The ErP data is determined using a motor-impeller combination in a standardised measurement configuration.

09 Power input $P_{ed}$	kW	0.3
09 Air flow $q_v$	m <sup>3</sup> /h	285
09 Pressure increase $p_{fs}$	Pa	2000
10 Speed (rpm) $n$	min <sup>-1</sup>	6220
11 Specific ratio*		1.02

\* Specific ratio =  $1 + p_{fs} / 100\,000\text{ Pa}$

LU-57509



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## Technical features

<b>Mass</b>	4.47 kg
<b>Size</b>	170 mm
<b>Surface of rotor</b>	Coated in black
<b>Material of protective cover</b>	Polyflam RPP 374-ND CS1 (UL 97-V0)
<b>Material of impeller</b>	Aluminum sheet
<b>Housing material</b>	Die-cast aluminium
<b>Direction of rotation</b>	Clockwise, seen on rotor
<b>Type of protection</b>	IP 20
<b>Insulation class</b>	"B"
<b>Max. permissible ambient motor temp. (transp./ storage)</b>	+80 °C
<b>Min. permissible ambient motor temp. (transp./storage)</b>	-40 °C
<b>Mounting position</b>	Any
<b>Cooling bore / aperture</b>	Rotor-side
<b>Operation mode</b>	S1
<b>Premix</b>	If gas is premixed in the blower, a special blower must be used. Contact us for details.
<b>Motor bearing</b>	Ball bearing
<b>Technical features</b>	<ul style="list-style-type: none"> <li>- PFC, active</li> <li>- PWM control input</li> <li>- Motor current limit</li> <li>- Tach output</li> <li>- Over-temperature protected motor</li> </ul>
<b>EMC interference immunity</b>	Acc. to EN 61000-6-2 (industrial environment)
<b>EMC harmonics</b>	Acc. to EN 61000-3-2/3
<b>EMC interference emission</b>	Acc. to EN 61000-6-3 (household environment)
<b>Touch current acc. IEC 60990 (measuring network Fig. 4, TN system)</b>	<= 3.5 mA
<b>Electrical leads</b>	With plug
<b>Motor protection</b>	Thermal overload protector (TOP) wired internally
<b>Approval</b>	CSA C22.2 No.113; UL 507

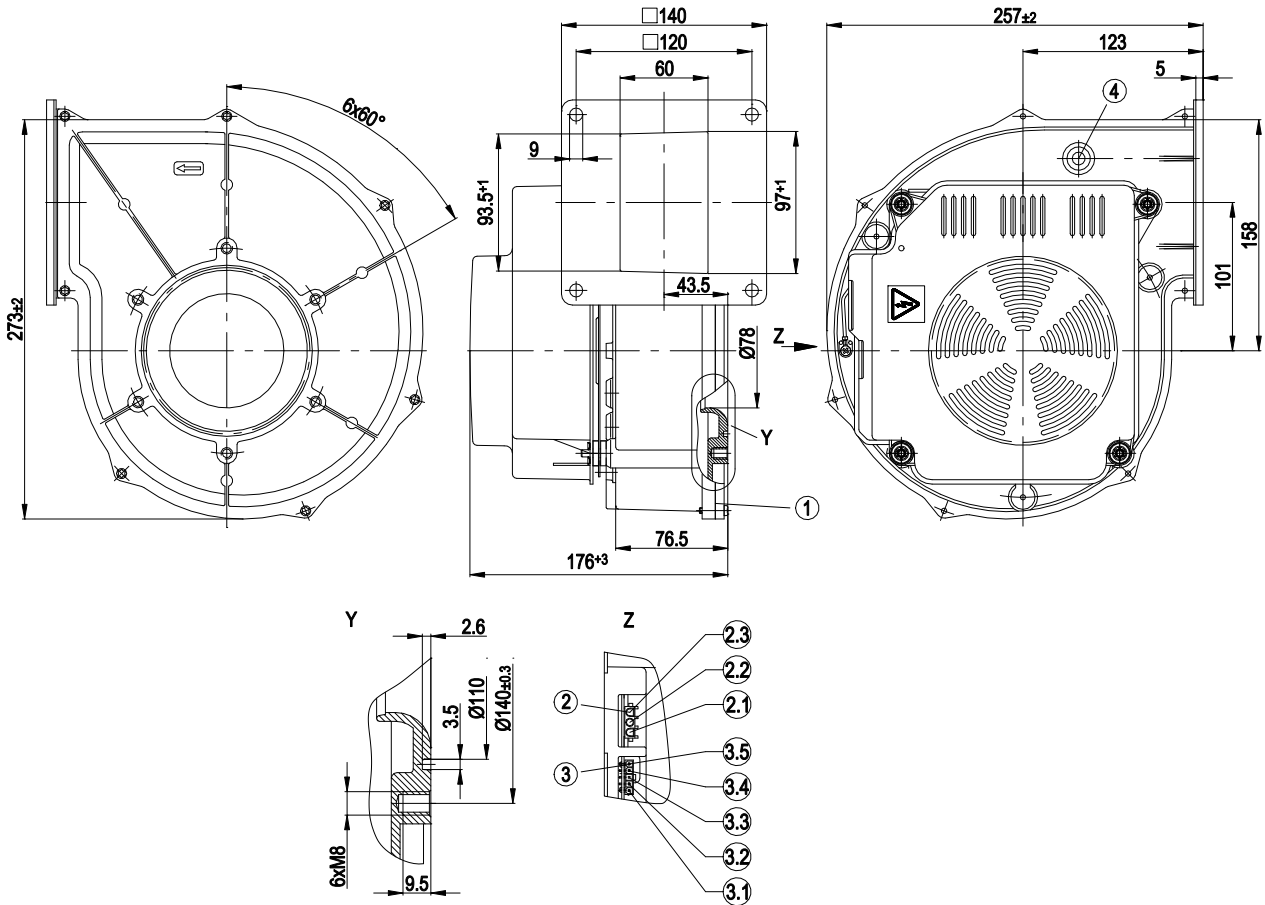


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## Product drawing



1	Housing side parts sealed with NBR round cord (pentane-resistant)
Z	View Z
2	3-pole strip; mating connector (not included in delivery): tyco No. 350 766-1; female connector: No. 926 884-1
2.1	L
2.2	N
2.3	PE
3	5-pole strip; mating connector (not included in delivery) Molex No. 39-01-4050, female connector 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

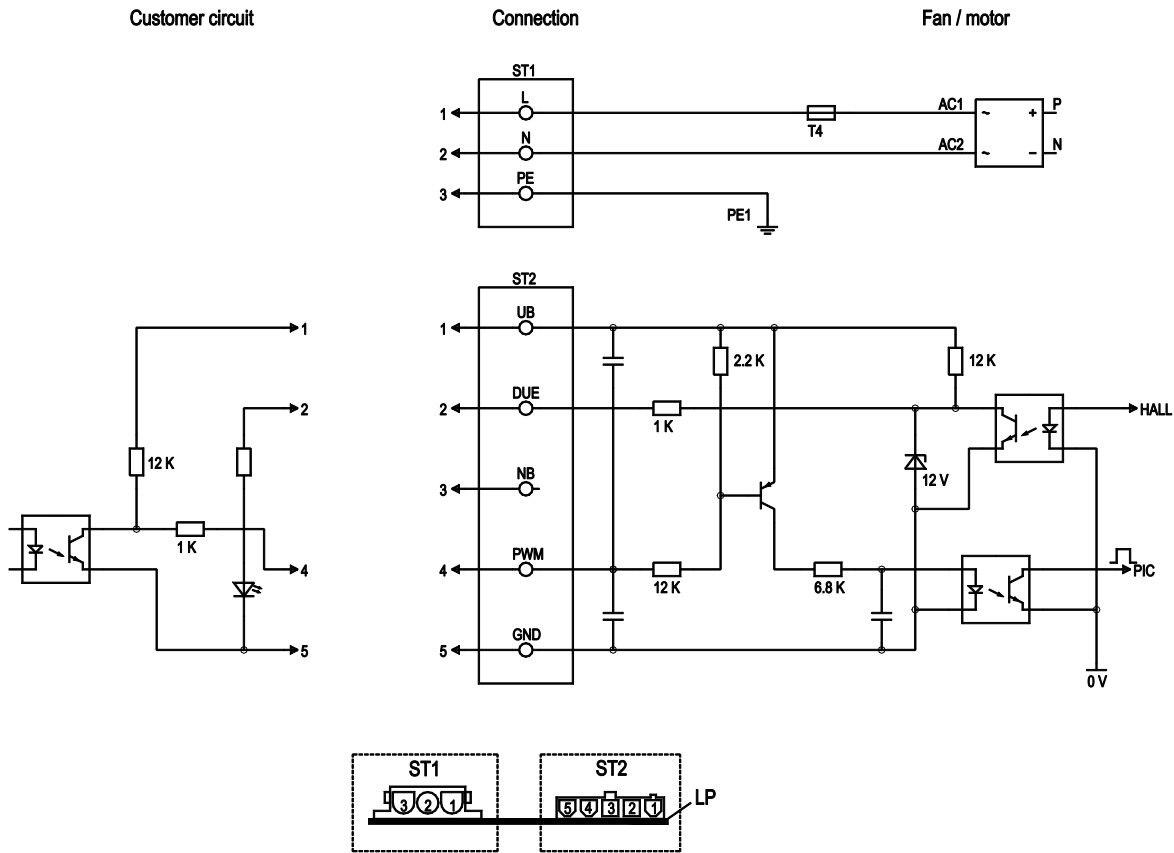


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## Connection screen



No.	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 18-43 VDC
ST2	2	Tach	Speed monitoring output connection, monitoring circuit output, 3 pulses per revolution, current source 2 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

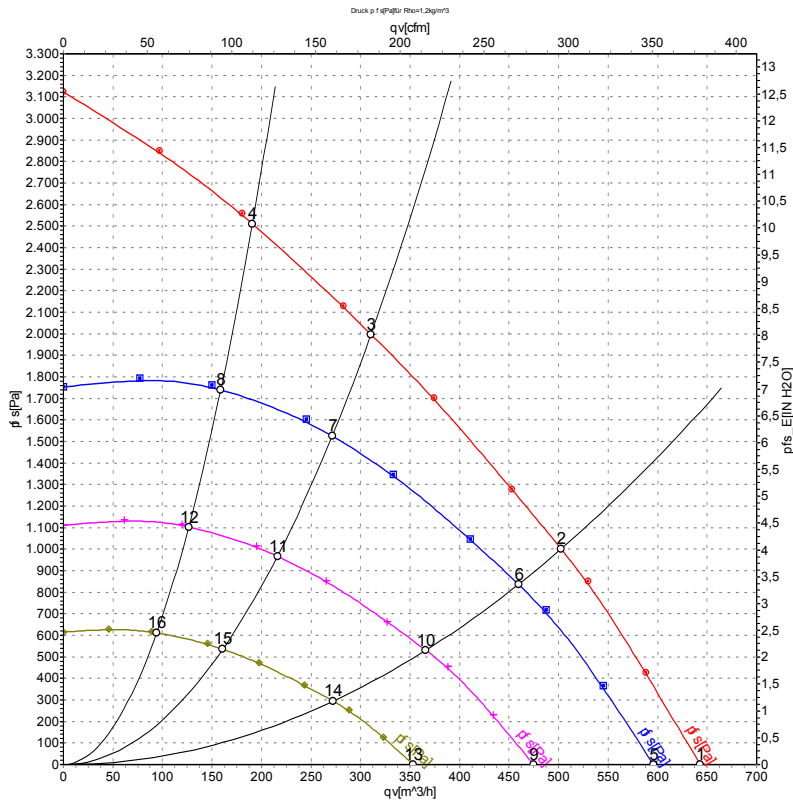


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## Charts: Air flow 50 Hz



Measurement: LU-57509-1

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: L<sub>wA</sub> measured as per ISO 13347 / L<sub>pA</sub> 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 <sub>ed</sub>	I	qv	p <sub>fs</sub>	qv	p <sub>fs</sub>
	V	Hz	min <sup>-1</sup>	W	A	m <sup>3</sup> /h	Pa	CFM	inH <sub>2</sub> O
1	230	50	5830	360	1.60	645	0	380	0.00
2	230	50	5905	346	1.52	505	1000	295	4.01
3	230	50	6175	308	1.35	310	2000	185	8.03
4	230	50	6480	268	1.18	190	2500	110	10.04
5	230	50	5400	287	1.26	595	0	350	0.00
6	230	50	5400	265	1.16	460	838	270	3.36
7	230	50	5400	206	0.91	270	1527	160	6.13
8	230	50	5400	156	0.68	160	1747	95	7.01
9	230	50	4300	145	0.63	475	0	280	0.00
10	230	50	4300	134	0.59	365	531	215	2.13
11	230	50	4300	104	0.46	215	968	125	3.89
12	230	50	4300	79	0.34	125	1108	75	4.45
13	230	50	3200	60	0.26	355	0	210	0.00
14	230	50	3200	55	0.24	270	294	160	1.18
15	230	50	3200	43	0.19	160	536	95	2.15
16	230	50	3200	32	0.14	95	614	55	2.46

U = Supply voltage · f = Frequency · n = Speed (rpm) · P<sub>ed</sub> = Power input · I = Current draw · qv = Air flow · p<sub>fs</sub> = Pressure increase

