G1G170-AB31-08

EC centrifugal fan

backward 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

ErP2015 EXCEEDS THE NORM

Nominal data

Type	**G1G170-AB31-08**	
Motor	**M1G074-CF**	
Phase		1~
Nominal voltage	VAC	230
Nominal voltage range	VAC	197 .. 253
Frequency	Hz	50/60
Type of data definition		fa
Speed (rpm)	min^{-1}	5600
Power input	W	330
Current draw	A	2.3
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}	%	61.3	44.9
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		77.4	61
05 Variable speed drive		Yes	

09 Power input P_{ed}	kW	0.29
09 Air flow q_v	m^3/h	370
09 Pressure increase p_{fs}	Pa	1601
10 Speed (rpm) n	min^{-1}	5960
11 Specific ratio*		1.02

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-48240

ebmpapst

EC centrifugal fan

backward curved, single inlet

with housing (flange)

Technical features

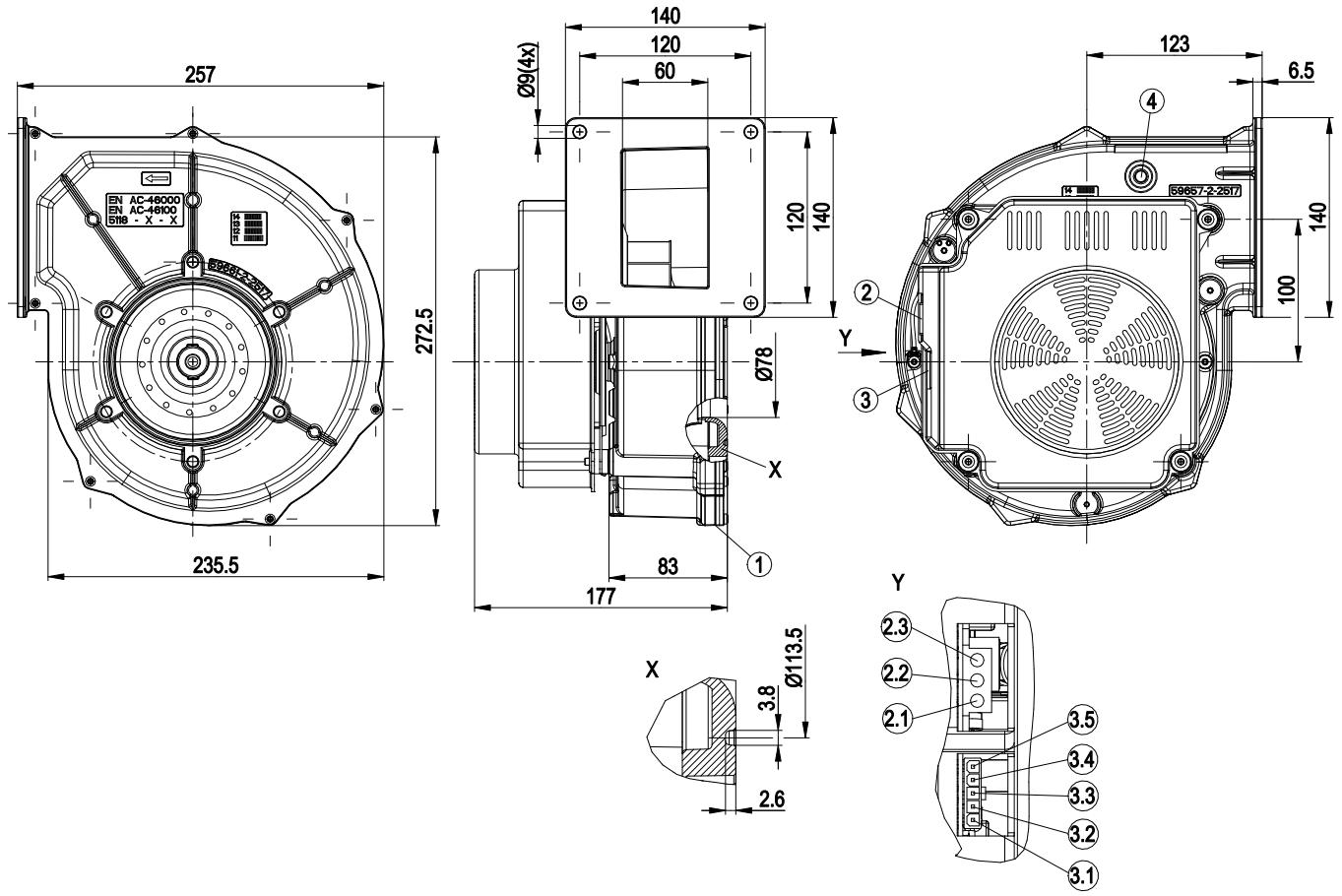
Mass	4.5 kg
Size	170 mm
Material of impeller	Aluminium sheet
Housing material	Die-cast aluminium
Motor suspension	Motor anti-vibration mounted on one side via mounting plate
Direction of rotation	Clockwise, seen on rotor
Type of protection	IP 20; Depending on installation and position
Insulation class	"B"
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 bottom; rotor on top on request
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 - Control interface with SELV potential safely disconnected from the mains - Over-temperature protected motor
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
Protection class	I (if protective earth is connected by customer)
Product conforming to standard	EN 60335-1; CE
Approval	CSA C22.2 No.113; UL 507; VDE

EC centrifugal fan

backward curved, single inlet

with housing (flange)

Product drawing



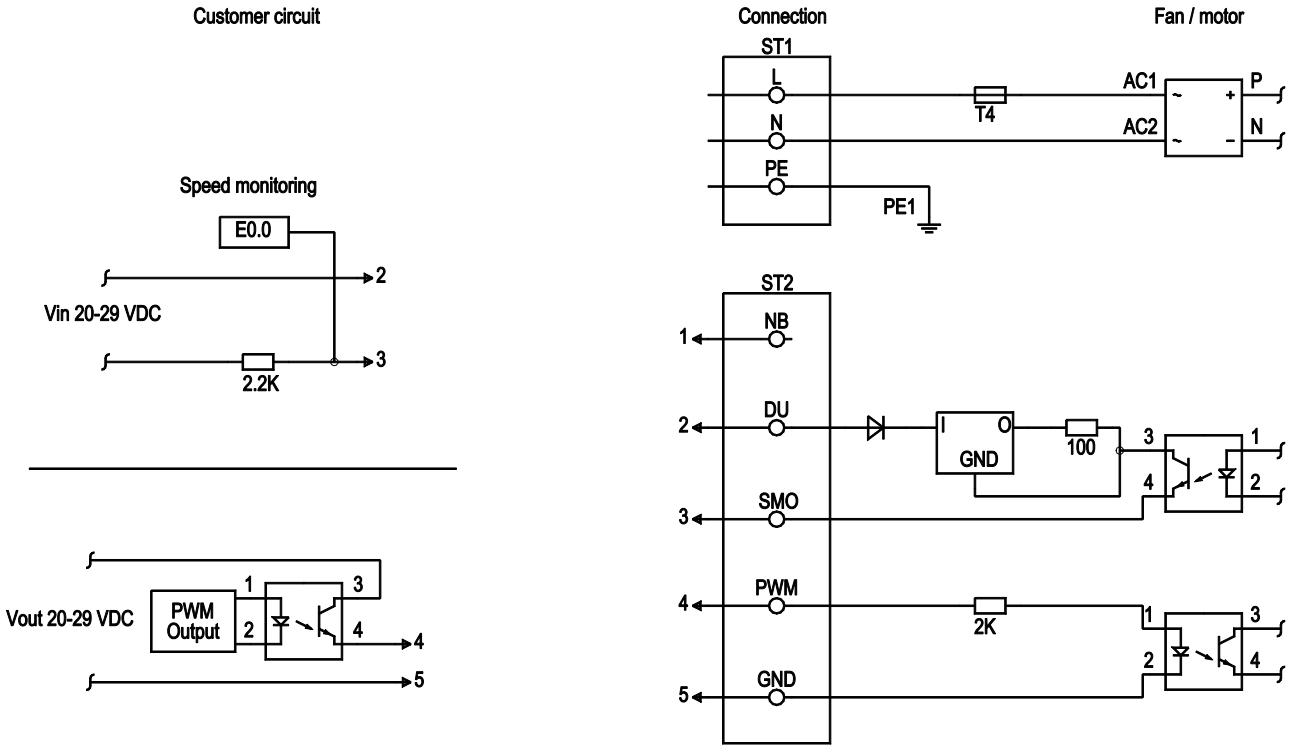
1	Housing side parts sealed with NBR round cord (pentane-resistant)
2	3-pole strip, mating connector (not included in standard scope of delivery): tyco No. 350 766-1; female terminal: tyco No. 926 884-1
2.1	L
2.2	N
2.3	PE
3	5-pole strip; mating connector (not included in standard scope of delivery) Molex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

EC centrifugal fan

backward curved, single inlet

with housing (flange)

Connection screen



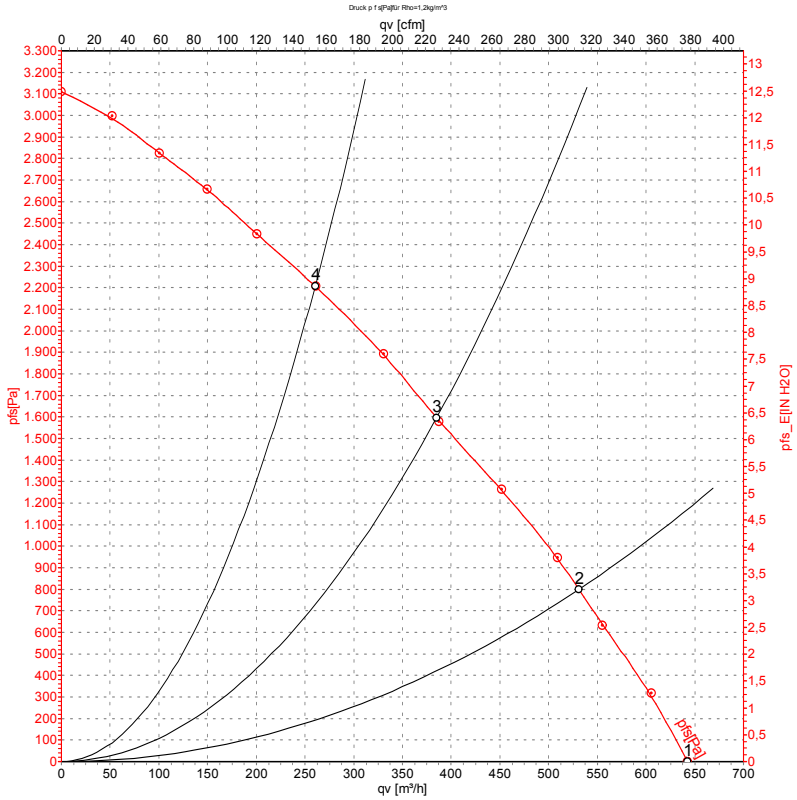
No.	Conn.	Designation	Function / assignment
ST1		L, N, PE	Power supply 230 VAC, 50-60Hz, voltage range see rating plate, neutral, protective earth
ST2	1	NB	Not assigned
ST2	2	DU	Input voltage 20 - 29 VDC
ST2	3	DZU	Speed monitoring output connection, monitoring circuit output, 3 pulses per revolution, Isink 10 mA
ST2	4	PWM	PWM - spec. DMT / min. PWM operation f = 1 +/± 0.2 kHz -> 10% PWM, f = +/4 ± 0.2 KHz -> 18% PWM, f = 6 +/± 0.2 KHz -> 25% PWM, PWM low = fan off, PWM high = fan on
ST2	5	GND	GND - Connection for control interface

EC centrifugal fan

backward curved, single inlet

with housing (flange)

Charts: Air flow 50 Hz



Measurement: LU-110151-1

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	qv	p_{fs}	qv	p_{fs}
	V	Hz	min^{-1}	W	A	m^3/h	Pa	CFM	inH2O
1	230	50	5600	330	2.30	645	0	380	0.00
2	230	50	5685	329	2.28	530	800	315	3.21
3	230	50	5920	318	2.22	385	1600	225	6.42
4	230	50	6215	292	2.01	260	2200	155	8.83

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