G3G250-GN44-01

EC centrifugal fan

backward-curved, single-intake

with housing (flange), Gas blower for condensing boilers



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ErP2015 EXCEEDS THE NORM

Nominal data

Type	**G3G250-GN44-01**
Motor	**M3G084-FA**

Phase		1~
Nominal voltage	VAC	230
Nominal voltage range	VAC	208 .. 240
Frequency	Hz	50/60
Method of obtaining data		ml
Speed	min^{-1}	4500
Power consumption	W	860
Current draw	A	4.8 (208V)
Min. ambient temperature	°C	-20
Max. ambient temperature	°C	60
Min. temp. of flow medium	°C	0
Max. temp. of flow medium	°C	60

ml = Max. load · me = Max. efficiency · fa = Free air · cs = Customer specification · ce = Customer equipment
Subject to change

Data according to ErP Directive

		Actual	Req. 2015
01 Overall efficiency η_{es}	%	61.7	49.5
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		73.2	61
05 Variable speed drive		Yes	

09 Power consumption P_{ed}	kW	0.81
09 Air flow q_v	m^3/h	795
09 Pressure increase p_{fs}	Pa	2101
10 Speed n	min^{-1}	4530
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-106095

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Technical description

Weight	13.2 kg
Fan size	250 mm
Rotor surface	Painted black
Cover material	Polyflam RPP 374-ND CS1 (UL 97-V0)
Impeller material	Sheet aluminum
Housing material	Die-cast aluminum
Number of blades	7
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP20
Insulation class	"B"
Max. permitted ambient temp. for motor (transport/storage)	+80 °C
Min. permitted ambient temp. for motor (transport/storage)	-40 °C
Installation position	Any
Condensation drainage holes	On rotor side
Mode	S1
Motor bearing	Ball bearing
Technical features	- Tach output - Thermal overload protection for electronics/motor - PFC, active - Motor current limitation - Undervoltage / phase failure detection - PWM control input - Control input 0-10 V
EMC immunity to interference	According to EN 61000-6-2 (industrial environment)
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	Locked-rotor protection
Protection class	I (with customer connection of protective earth)
Conformity with standards	CE
Approval	CCC; EAC; UL 507; CSA C22.2 No. 113

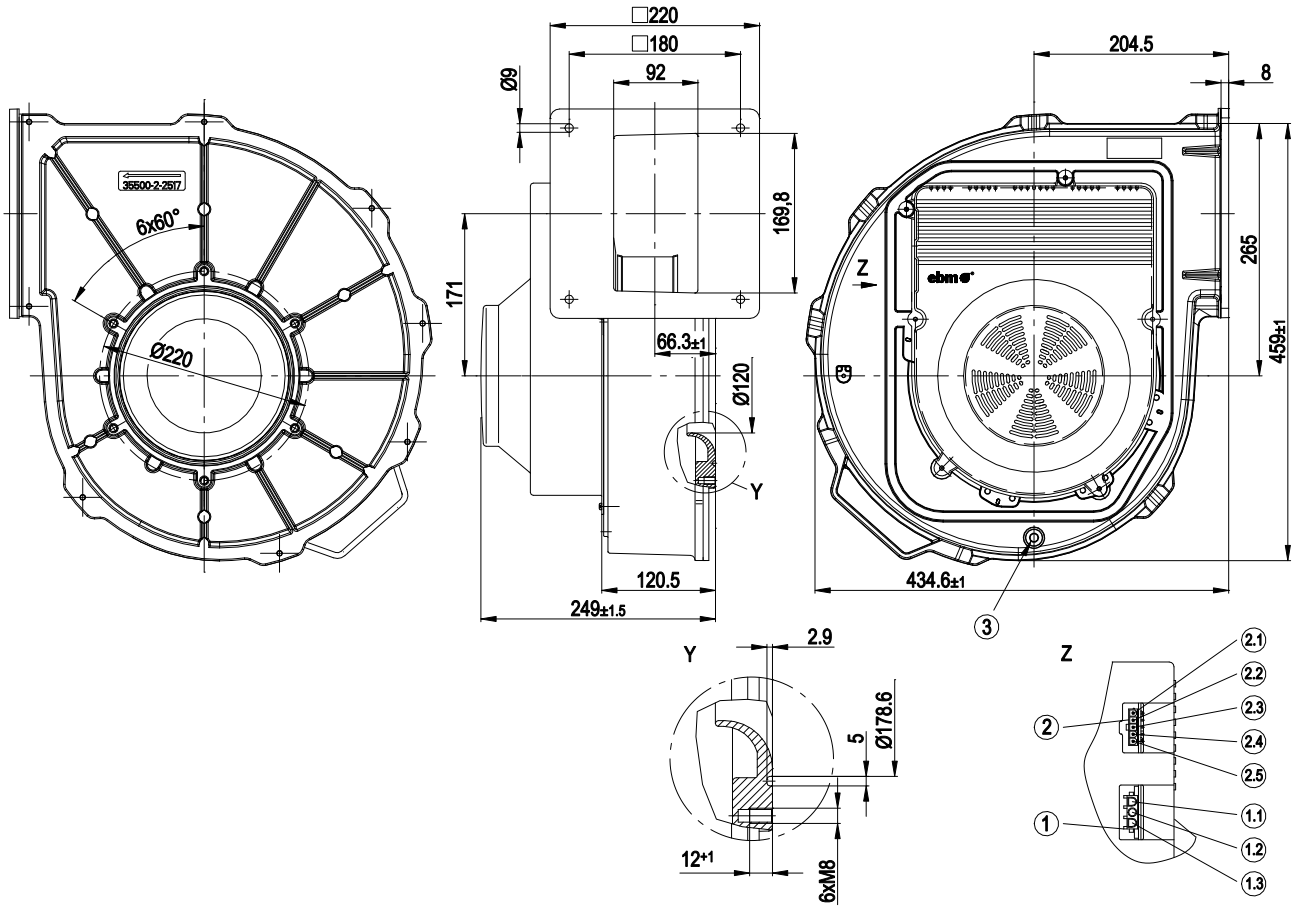
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Product drawing



1	3-pole header, fits mating connector (not included in scope of delivery) tyco no. 350766-1, socket tyco no. 926884-1
1.1	L
1.2	N
1.3	PE
2	5-pole header, fits mating connector (not included in scope of delivery) Molex no. 39-01-4050, socket Molex no. 39-00-0059
2.1	+
2.2	Speed monitoring
2.3	0-10 VDC control input
2.4	PWM input
2.5	-
3	Pressure tap available as option
Y	Detail Y
Z	View Z / pin assignment

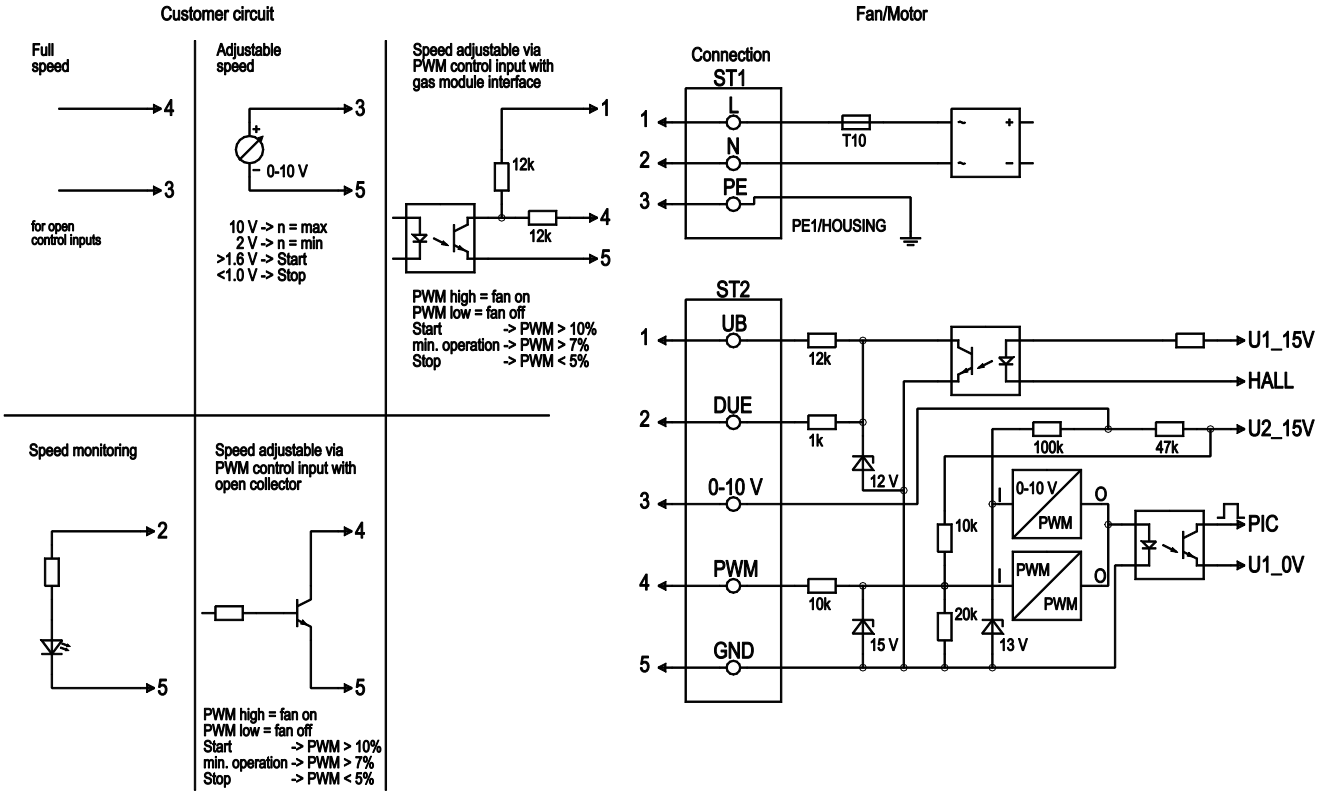
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Connection diagram



No.	Conn.	Designation	Function/assignment
ST1	1; 2; 3	L; N; PE	Power supply 230 VAC, 50-60 Hz, phase, neutral conductor, protective earth
St2	1	UB	external voltage 16-45 VDC, maximum ripple ±3.5%, SELV
ST2	2	Tach	Speed monitoring, 3 pulses per revolution, SELV
ST2	3	0 - 10 V	Control input 0-10 V, impedance 100k, SELV
ST2	4	PWM	Control input PWM, 1-6 kHz, SELV
ST2	5	GND	GND - Connection for control interface, SELV

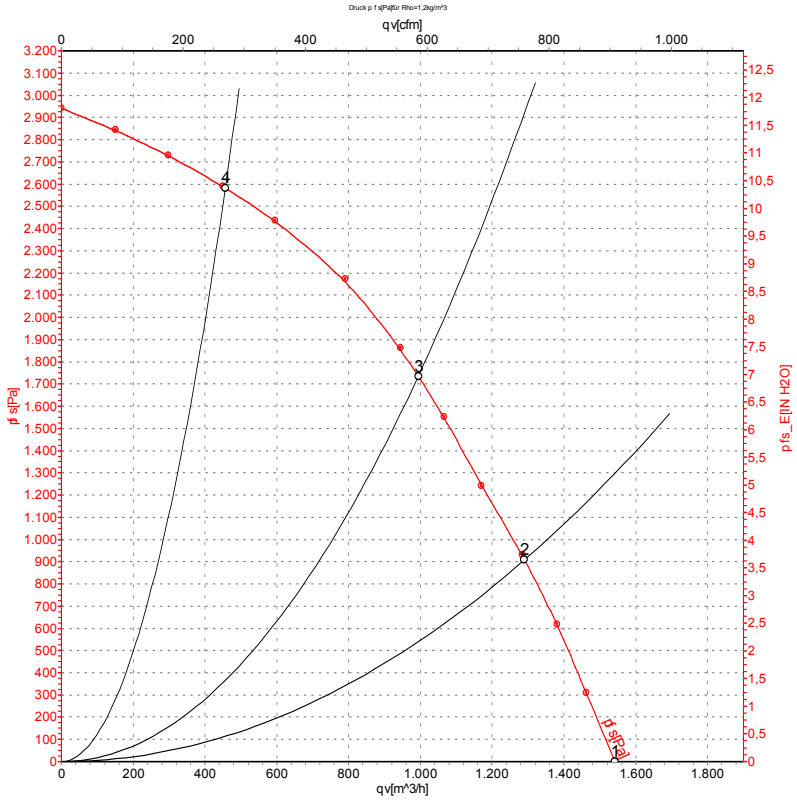
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Curves: Air performance 50 Hz



Measurement: LU-106095-1

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	LpA_{in}	qv	p_{fs}
	V	Hz	min^{-1}	W	A	dB(A)	m^3/h	Pa
1	230	50	4480	822	3.59	85	1540	0
2	230	50	4430	924	4.04	83	1290	915
3	230	50	4465	890	3.90	78	995	1736
4	230	50	4655	663	2.90	78	455	2583

U = Power supply · f = Frequency · n = Speed · P_{ed} = Power consumption · I = Current draw · LpA_{in} = Sound pressure level intake side · qv = Air flow · p_{fs} = Pressure increase

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