G3G250-GN17-01

EC centrifugal fan

backward-curved, single-intake

with housing (flange), Gas blower for condensing boilers



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Nominal data

Type	**G3G250-GN17-01**
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 (rpm)	min^{-1}	4800
Power consumption	W	1150
Current draw	A	5.7 (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 Commission Regulation (EU) 327/2011

		Actual	Req. 2015
01 Overall efficiency η_{es}	%	62.6	50.5
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		73.1	61
05 Variable speed drive		Yes	

09 Power consumption P_{ed}	kW	1.01
09 Air flow q_v	m^3/h	875
09 Pressure increase p_{fs}	Pa	2400
10 Speed (rpm) n	min^{-1}	4935
11 Specific ratio*		1.03

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-76445

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Technical description

Weight	13.2 kg
Size	250 mm
Motor size	84
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 mounting	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	Plug
Motor protection	Locked-rotor protection
Protection class	I (with customer connection of protective earth)
Approval	CCC; CSA C22.2 No. 113; EAC; UL 507

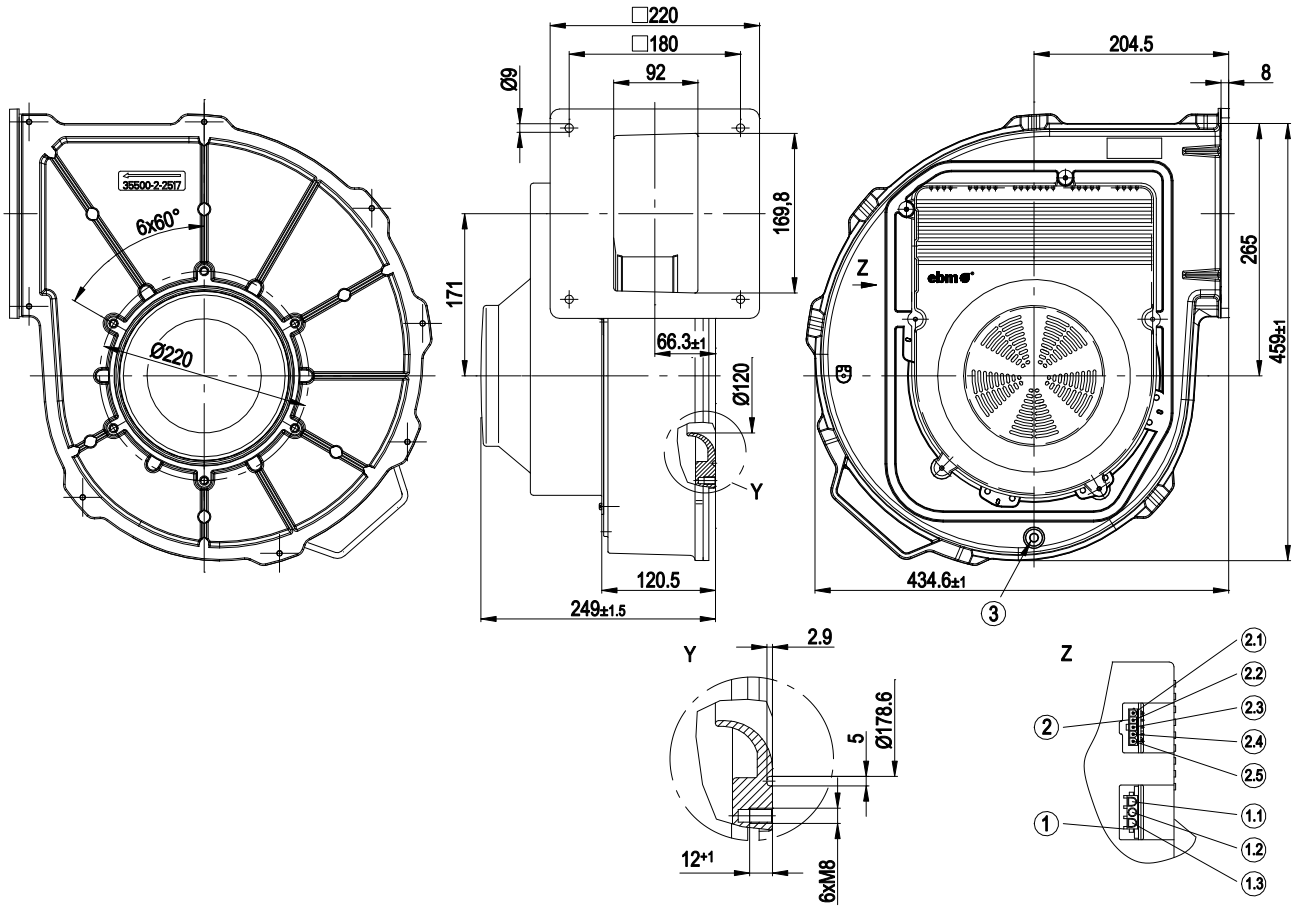
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Product drawing



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

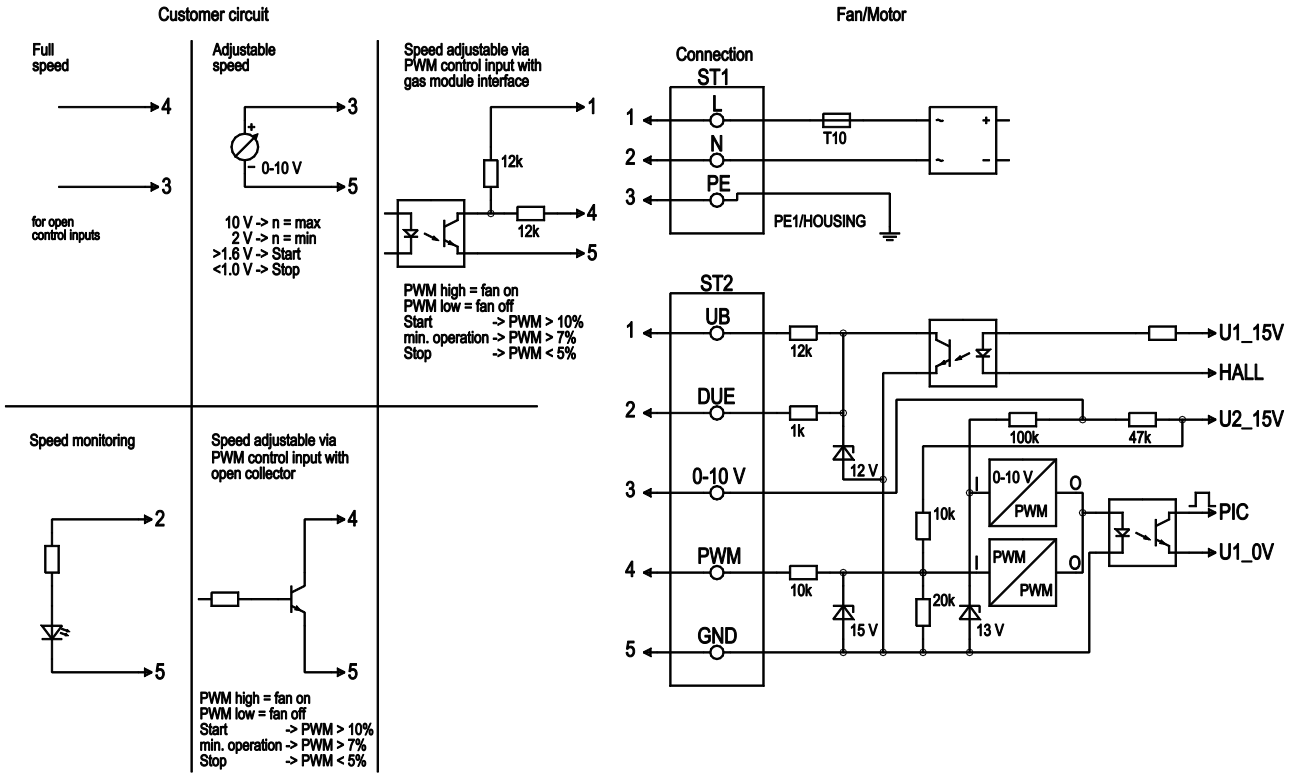
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Connection diagram



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

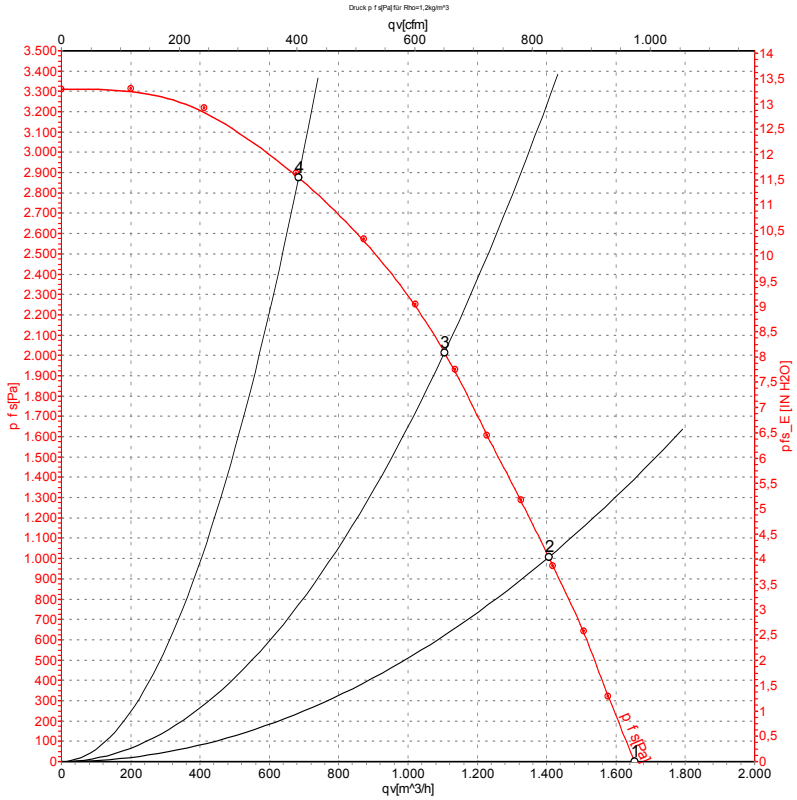
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Curves: Air performance 50 Hz



Measurement: LU-76445-1

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}	q_V	p_{fs}	q_V	p_{fs}
	V	Hz	min^{-1}	W	A	dB(A)	m^3/h	Pa	cfm	in. wg
1	230	50	4890	1022	4.47	91	1655	0	975	0.00
2	230	50	4800	1150	5.00	89	1405	1000	830	4.01
3	230	50	4850	1117	4.87	81	1105	2000	650	8.03
4	230	50	5005	920	4.01	79	685	2900	405	11.64

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

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