G3G250-MW50-12

EC centrifugal fan

forward curved, single inlet

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

G3G250-MW50-12 ebmpapst Datasheet
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Limited partnership · Headquarters Mulfingen
County court Stuttgart · HRA 590344

General partner Elektrobau Mulfingen GmbH · Headquarters Mulfingen
County court Stuttgart · HRB 590142

Nominal data

Type	**G3G250-MW50-12**
Motor	**M3G112-EA**

Phase		3~
Nominal voltage	VAC	400
Nominal voltage range	VAC	380 .. 480
Frequency	Hz	50/60
Type of data definition		ml
Speed (rpm)	min^{-1}	6100
Power input	W	2400
Current draw	A	4.0
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	50
Min. temp. of flow medium	°C	-25
Max. temp. of flow medium	°C	+50

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}	%	59.8	54.3
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		66.5	61
05 Variable speed drive		Yes	

09 Power input P_{ed}	kW	2.29
09 Air flow q_v	m^3/h	1165
09 Pressure increase p_{fs}	Pa	4000
10 Speed (rpm) n	min^{-1}	6495
11 Specific ratio*		1.04

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-130108

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Technical features

Mass	23 kg
Size	250 mm
Surface of rotor	Coated in black
Material of electronics housing	Die-cast aluminium
Material of impeller	Aluminium sheet
Housing material	Die-cast aluminium
Material of distancing profiles	Aluminium
Direction of rotation	Clockwise, seen on rotor
Type of protection	IP 20
Insulation class	"B"
Humidity (F)/environmental protection class (H)	H0 - dry environment
Max. permissible ambient motor temp. (transp./ storage)	+80 °C
Min. permissible ambient motor temp. (transp./storage)	-40 °C
Mounting position	Any
Cooling bore / aperture	Rotor-side
Operation mode	S1
Motor bearing	Ball bearing
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)

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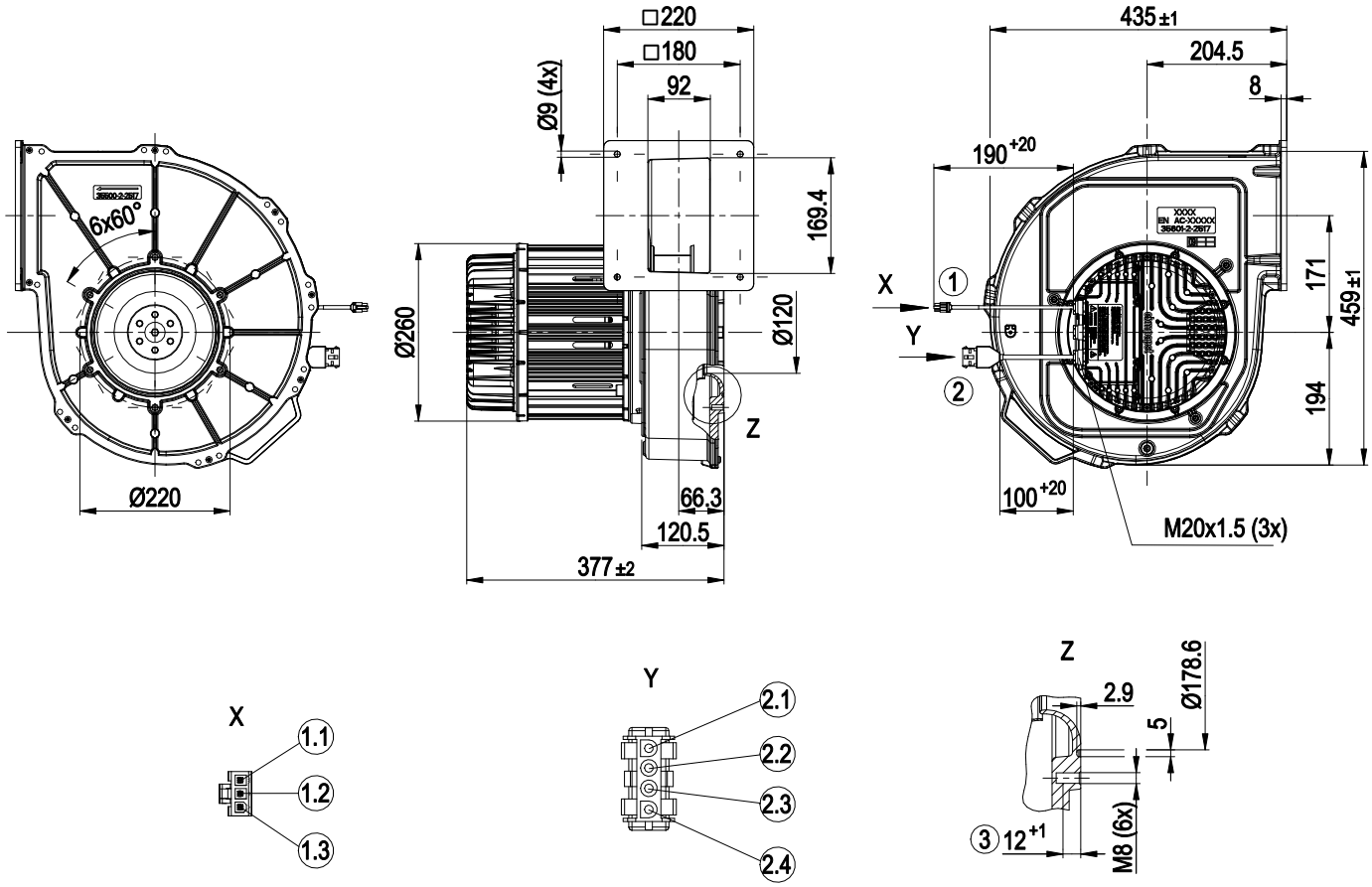
Product drawing



1	Connection line PVC AWG22 with 3-pole connector housing Stocko EH705-003-003GWT, 3x plug contact Stocko RBB8230.020
1.1	PWM (red)
1.2	Tach (white)
1.3	GND (brown)
2	Connection line Ölflex Tray II 4G 1.5 mm² with 4-pole connector housing Stocko EH702-004-003-960, 4x plug contact Stocko RTB8211.140
2.1	L1 (black 1)
2.2	L2 (black 2)
2.3	L3 (black 3)
2.4	PE (green/yellow)
3	Thread reach 10-12 mm, tightening torque 20±3 Nm

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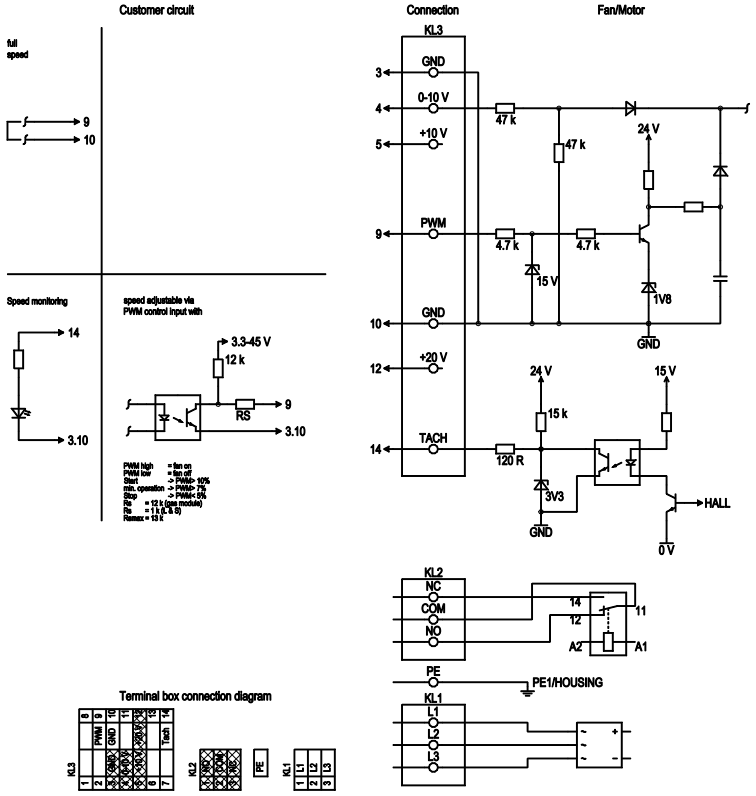
Connection screen



grey shaded => not brought out via leads

No.	Conn.	Designation	Function / assignment
KL1	1, 2, 3	L1, L2, L3	Power supply
PE	PE	PE	Earth connection, PE connection
KL2	1	NO	Status relay, floating status contact, make for failure
KL2	2	COM	Status relay, floating status contact, changeover contact, common connection, contact rating, max. 250 VAC/2 A (AC1)/min. 10 mA
KL2	3	NC	Status relay, floating status contact, break for failure
KL3	3	GND	Signal ground for control interface, SELV
KL3	4	0-10 V	Analogue input 1 (set value); 0-10 V; Ri = 100 kOhm; parametrizable curve; only for use as alternative to PWM input; SELV; Attention: Jumper PWM and GND for correct function.
KL3	5	+10 V	Fixed voltage output 10 VDC, +10 V +/-3 %, max. 10 mA, short-circuit-proof, power supply for ext. devices (e.g. potentiometer); SELV
KL3	9	PWM	Preset target value via PWM; 3.3 V - 45 V high level; 1-10 kHz; only for use as alternative to 0-10 V input; SELV
KL3	10	GND	Signal ground for control interface, SELV
KL3	12	+20 V	Fixed voltage output 20 VDC, +20 V +25/-10%, max. 50 mA, short-circuit-proof power supply for external devices (e.g. sensors); SELV Alternatively: +24 V DC input for parametrisation via MODBUS without mains power
KL3	14	Tach	Speed monitoring; 3.3 VDC, ±10%, max. 10 mA; impedance 1 kΩ; 4 pulses per revolution; SELV

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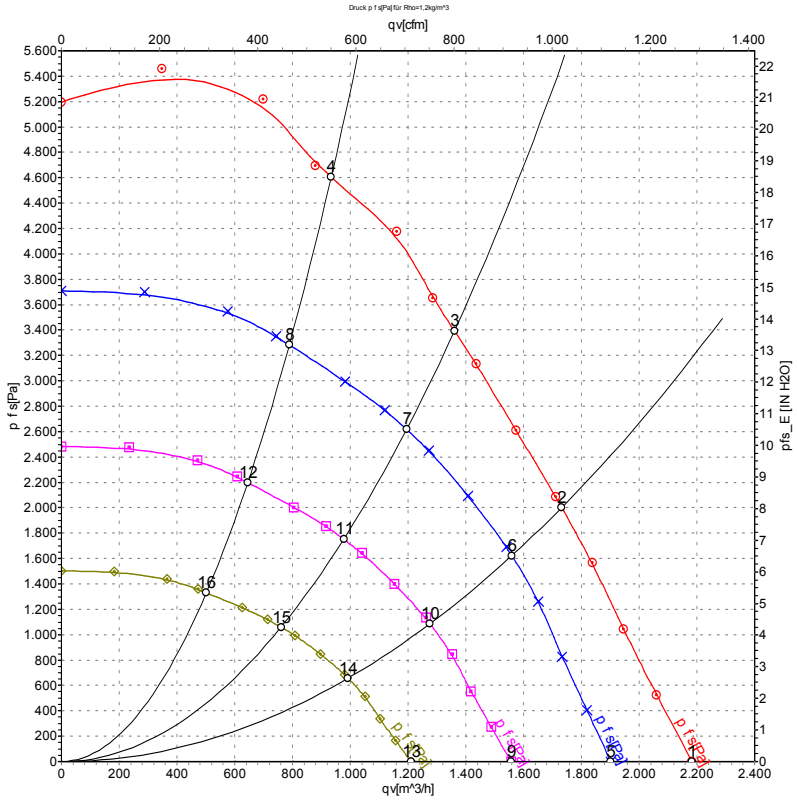
Charts: Air flow 50 Hz



Measurement: LU-130108-1

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	LwA_{in}	q_V	p_{fs}	q_V	p_{fs}
	V	Hz	min^{-1}	W	A	dB(A)	m^3/h	Pa	cfm	inH2O
1	400	50	6315	2301	3.75	100	2185	0	1285	0.00
2	400	50	6100	2400	4.00	96	1730	2000	1020	8.03
3	400	50	6260	2343	3.80	94	1360	3400	800	13.65
4	400	50	6505	2063	3.40	92	935	4600	550	18.47
5	400	50	5500	1522	2.32		1900	0	1120	0.00
6	400	50	5500	1755	2.67		1560	1628	920	6.54
7	400	50	5500	1588	2.38		1195	2617	705	10.51
8	400	50	5500	1247	1.89		790	3286	465	13.19
9	400	50	4500	834	1.27		1555	0	915	0.00
10	400	50	4500	961	1.46		1275	1090	750	4.38
11	400	50	4500	870	1.30		980	1752	575	7.03
12	400	50	4500	683	1.04		645	2200	380	8.83
13	400	50	3500	392	0.60		1210	0	710	0.00
14	400	50	3500	452	0.69		990	659	585	2.65
15	400	50	3500	409	0.61		760	1060	445	4.26
16	400	50	3500	321	0.49		500	1331	295	5.34

U = Supply voltage · f = Frequency · n = Speed (rpm) · P_{ed} = Power input · I = Current draw · LwA_{in} = Sound power level inlet side · q_V = Air flow · p_{fs} = Pressure increase