

# EC centrifugal fan

forward curved, dual inlet

with housing (flange)

D3G250-HH03-03 ebmpapst Datasheet

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## Nominal data

Type	D3G250-HH03-03	
Motor	M3G084-GF	
Phase		1~
Nominal voltage	VAC	230
Nominal voltage range	VAC	200 .. 277
Frequency	Hz	50/60
Type of data definition		ml
Speed (rpm)	min <sup>-1</sup>	1310
Power input	W	750
Current draw	A	3.3
Min. back pressure	Pa	200
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	40
Starting current	A	3.9

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 $\eta_{es}$	%	51.4	36.2	09 Power input $P_{ed}$	kW
02 Measurement category		A		09 Air flow $q_v$	m <sup>3</sup> /h
03 Efficiency category		Static		09 Pressure increase $p_{fs}$	Pa
04 Efficiency grade N		59.2	44	10 Speed (rpm) n	min <sup>-1</sup>
05 Variable speed drive		Yes		11 Specific ratio*	
					1.01

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

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

LU-170210



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## Technical features

Mass	12.2 kg
Size	250 mm
Surface of rotor	Coated in black
Material of impeller	Sheet steel, galvanised
Housing material	Sheet steel, galvanised
Motor suspension	Motor anti-vibration mounted on one side via brackets
Direction of rotation	Counter-clockwise, seen on rotor
Type of protection	IP 54
Insulation class	"F"
Humidity (F)/environmental protection class (H)	H1
Max. permissible ambient motor temp. (transp./ storage)	+85 °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
Operation mode	S1
Motor bearing	Ball bearing
Technical features	<ul style="list-style-type: none"> <li>- Output 10 VDC, max. 10 mA</li> <li>- Operation and alarm display</li> <li>- Tach output</li> <li>- Alarm relay</li> <li>- Integrated PID controller</li> <li>- Output limit</li> <li>- Motor current limit</li> <li>- PFC, active</li> <li>- RS485 MODBUS RTU</li> <li>- Soft start</li> <li>- Control input 0-10 VDC / PWM</li> <li>- Control interface with SELV potential safely disconnected from the mains</li> <li>- Over-temperature protected electronics / motor</li> <li>- Line undervoltage / phase failure detection</li> </ul>
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
Cable exit	Variable
Degree of soiling	2
Protection class	I (if protective earth is connected by customer)
Product conforming to standard	CE
Remark	Norm conformity as per EN 61800-5-1 and EN 60335-1 in preparation

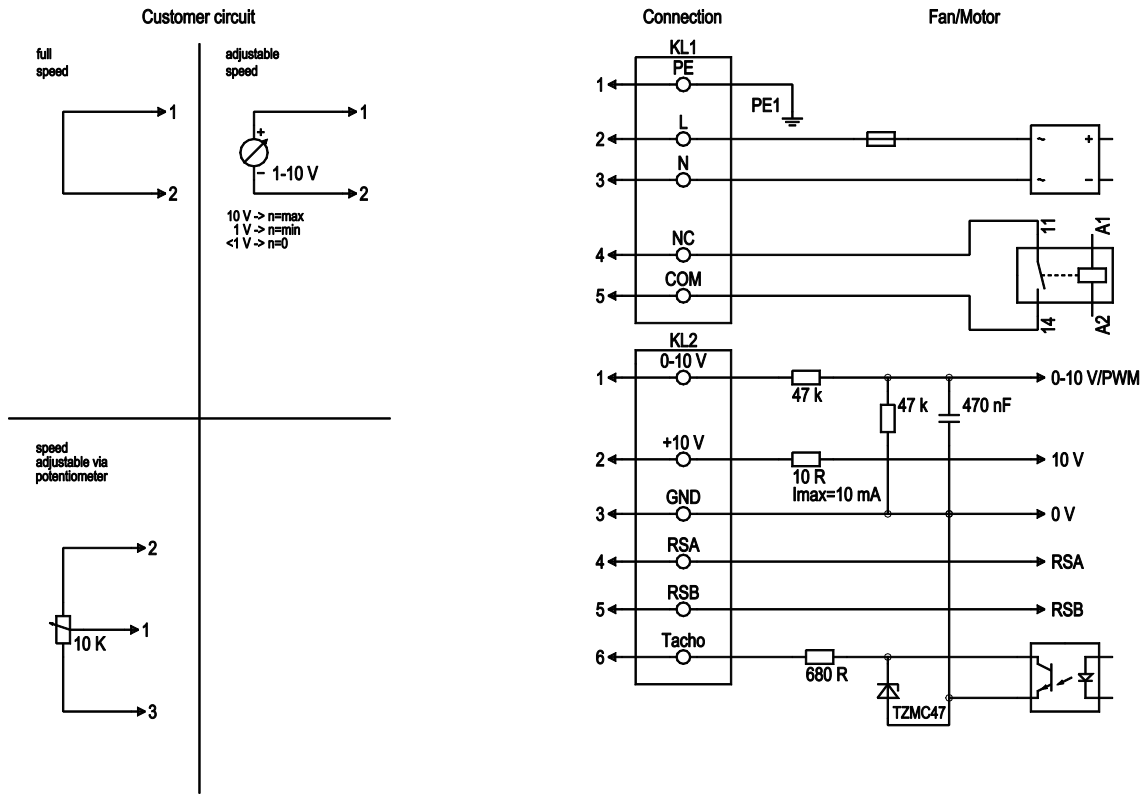




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## Connection screen



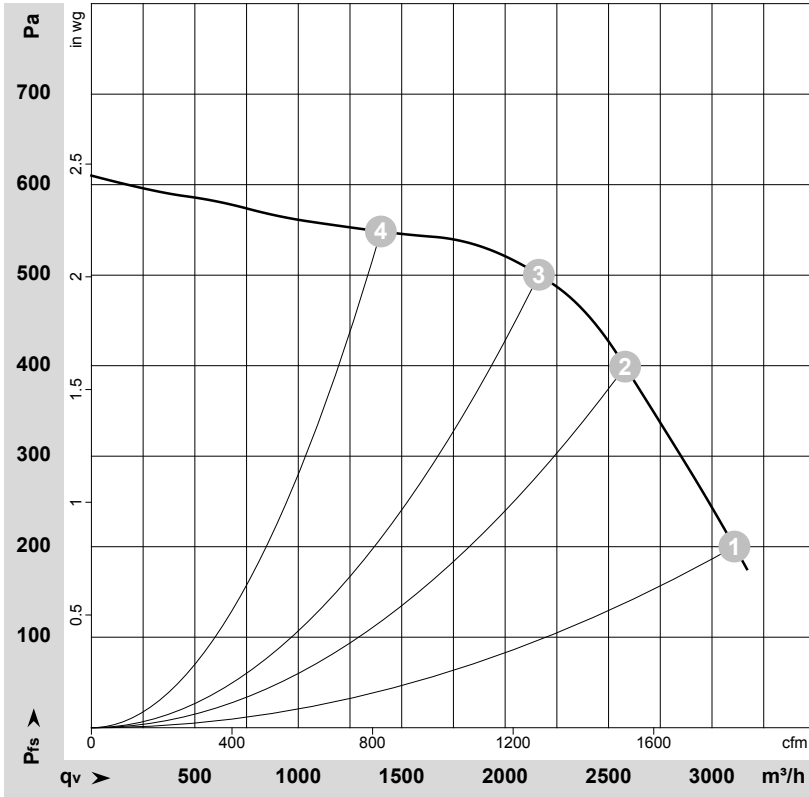
No.	Conn.	Designation	Function / assignment
KL1	1	PE	Protective earth
KL1	2	L	Power supply, phase, 50/60 Hz
KL1	3	N	Power supply, neutral conductor, 50/60 Hz
KL1	4	NC	Status relay, floating status contact, break for failure, contact rating 250 VAC/2 A (AC1) min. 10 mA, basic insulation on mains side and reinforced insulation on control interface side
KL1	5	COM	Status relay, floating status contact, common connection, contact rating 250 VAC / 2 A (AC1) / min. 10 mA, basic insulation on mains side and reinforced insulation on control interface side
KL2	1	0-10 V	Analogue input (set value), 0-10 V, R <sub>i</sub> =100 kΩ, parametrisable curve, SELV
KL2	2	+10 V	Fixed voltage output 10 VDC, SELV
KL2	3	GND	Signal ground for control interface, SELV
KL2	4	RSA	RS-485 interface for MODBUS, RSA; SELV
KL2	5	RSB	RS-485 interface for MODBUS, RSB; SELV
KL2	6	Tacho	Speed monitoring output, open collector, 1 pulse per revolution, I <sub>sink</sub> max = 10 mA, SELV



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## Charts: Air flow 50 Hz



$\rho = 1.15 \text{ kg/m}^3 \pm 2 \%$

Measurement: LU-170210-1

Air performance measured as per ISO 5801 Installation category A. For detailed information on the measuring set-up, please contact ebmpapst. 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 <sub>ed</sub>	I	LpA <sub>in</sub>	LwA <sub>in</sub>	q <sub>v</sub>	p <sub>fs</sub>	q <sub>v</sub>	p <sub>fs</sub>
	V	Hz	min <sup>-1</sup>	W	A	dB(A)	dB(A)	m <sup>3</sup> /h	Pa	cfm	inH <sub>2</sub> O
1	230	50	1310	750	3.30	66	81	3110	200	1830	0.80
2	230	50	1490	723	3.17	65	79	2580	400	1520	1.61
3	230	50	1595	664	2.91	65	79	2165	500	1275	2.01
4	230	50	1695	467	2.08	65	79	1400	550	825	2.21

U = Supply voltage · f = Frequency · n = Speed (rpm) · P<sub>ed</sub> = Power input · I = Current draw · LpA<sub>in</sub> = Sound pressure level inlet side · LwA<sub>in</sub> = Sound power level inlet side · q<sub>v</sub> = Air flow  
p<sub>fs</sub> = Pressure increase

