G3G250-KY13-C1

EC centrifugal fan

backward-curved, single-intake

with housing (without flange)

ebm-papst Mulfingen GmbH & Co. KG
Bachmühle 2 · D-74673 Mulfingen
Phone +49 7938 81-0
Fax +49 7938 81-110
info1@de.ebmpapst.com
www.ebmpapst.com

Limited partnership · Headquarters Mulfingen
Amtsgericht (court of registration) Stuttgart · HRA 590344

General partner Elektrobau Mulfingen GmbH · Headquarters Mulfingen
Amtsgericht (court of registration) Stuttgart · HRB 590142

Nominal data

Type	**G3G250-KY13-C1**
Motor	**M3G084-GF**

Phase		3~
Nominal voltage	VAC	400
Nominal voltage range	VAC	380 .. 480
Frequency	Hz	50/60
Method of obtaining data		ml
Speed (rpm)	min^{-1}	4000
Power consumption	W	1000
Current draw	A	1.8
Min. back pressure	Pa	760
Min. back pressure	in. wg	3.05
Min. ambient temperature	°C	-25
Max. ambient temperature	°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 (EN 17166)

		Actual	Req. 2015
01 Overall efficiency η_{es}	%	51.9	48.9
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		64	61
05 Variable speed drive		Yes	

09 Power consumption P_{ed}	kW	0.7
09 Air flow q_v	m^3/h	805
09 Pressure increase p_{fs}	Pa	1485
10 Speed (rpm) n	min^{-1}	4030
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-140703

EC centrifugal fan

backward-curved, single-intake

with housing (without flange)

Technical description

Weight	13.0 kg
Size	250 mm
Motor size	84
Rotor surface	Painted black
Impeller material	Sheet aluminum
Housing material	Sheet steel, galvanized
Number of blades	7
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP54
Insulation class	"B"
Moisture (F) / Environmental (H) protection class	H1
Max. permitted ambient temp. for motor (transport/storage)	+80 °C
Min. permitted ambient temp. for motor (transport/storage)	-40 °C
Installation position	Shaft horizontal or rotor on bottom; rotor on top on request
Condensation drainage holes	On rotor side
Mode	S1
Motor bearing	Ball bearing
Technical features	- Output 10 VDC, max. 10 mA - Output 20 VDC, max. 50 mA - Output for slave 0-10 V - Input for sensor 0-10 V or 4-20 mA - External 24 V input (parameter setting) - Alarm relay - Power limiter - Motor current limitation - RS-485 MODBUS-RTU - Soft start - Control input 0-10 VDC / PWM - Control interface with SELV potential safely disconnected from the mains - Thermal overload protection for electronics/motor - Line undervoltage / phase failure detection
Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)	<= 3.5 mA
Electrical hookup	Terminal box
Motor protection	Thermal overload protector (TOP) internally connected
Protection class	I (with customer connection of protective earth)
Conformity with standards	EN 61800-5-1; CE
Approval	CSA C22.2 No. 77 + CAN/CSA-E60730-1; EAC; UL 1004-7 + 60730-1

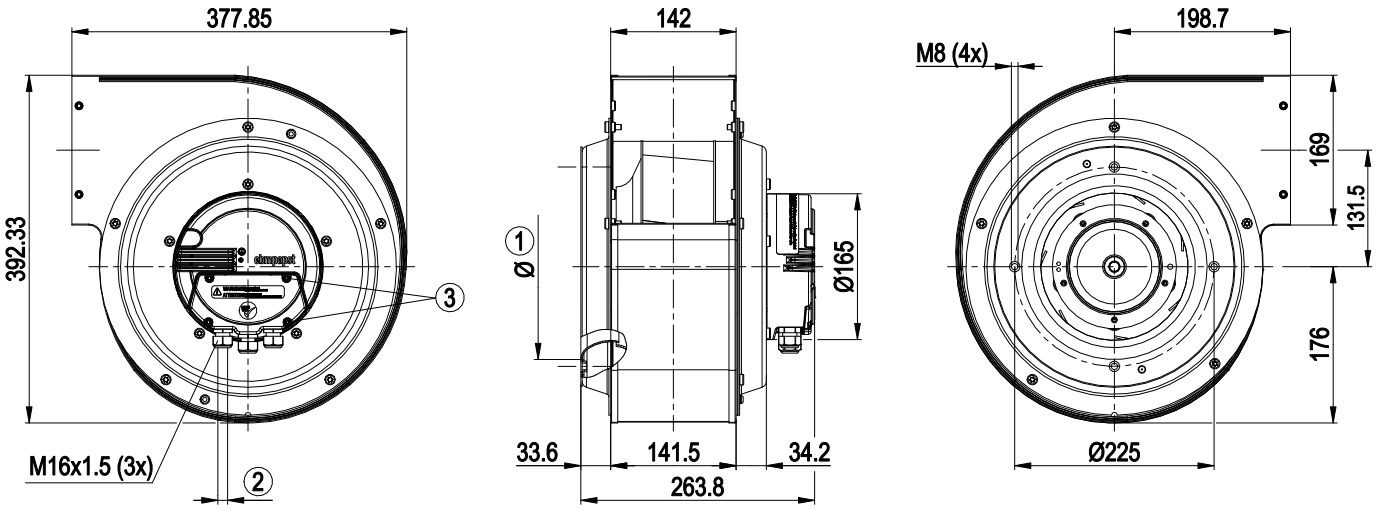
ebm-papst Mulfingen GmbH & Co. KG · Bachmühle 2 · D-74673 Mulfingen · Phone +49 (0) 7938 81-0 · Fax +49 (0) 7938 81-110 · info1@de.ebmpapst.com · www.ebmpapst.com

EC centrifugal fan

backward-curved, single-intake

with housing (without flange)

Product drawing



1	Inlet diameter on customer device 209 - 211 mm
2	Cable diameter min. 4 mm, max. 10 mm, tightening torque 2.5 ± 0.4 Nm
3	Tightening torque 3.5 ± 0.5 Nm

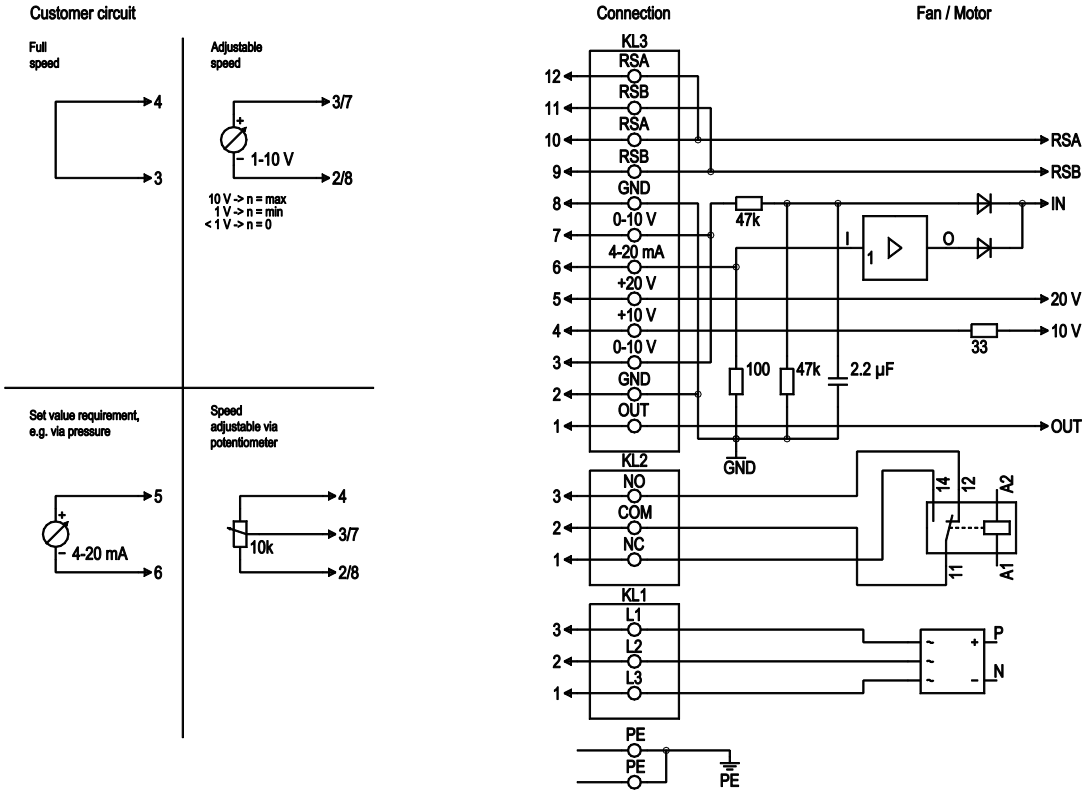
ebm-papst Mulfingen GmbH & Co. KG · Bachmühle 2 · D-74673 Mulfingen · Phone +49 (0) 7938 81-0 · Fax +49 (0) 7938 81-110 · info1@de.ebmpapst.com · www.ebmpapst.com

EC centrifugal fan

backward-curved, single-intake

with housing (without flange)

Connection diagram



No.	Conn.	Designation	Function/assignment
PE		PE	Protective earth terminal
KL1	1, 2, 3	L1, L2, L3	Power supply, voltage range (see nameplate), 50/60 Hz
KL2	1	NC	Floating status contact, break for failure
KL2	2	COM	floating status contact, changeover contact, common connection (2 A, max. 250 VAC, min. 10 mA, AC1)
KL2	3	NO	Floating status contact, make for failure
KL3	1	OUT	Analog output, 0-10 VDC, max. 3 mA, SELV, output of current motor modulation level: 1 V corresponds to 10% modulation level. 10 V corresponds to 100% modulation level.
KL3	2, 8	GND	Reference ground for control interface, SELV
KL3	3, 7	0-10 V	Use control / current sensor value input 0-10 VDC, impedance 100 kΩ only as alternative to 4-20 mA input, SELV
KL3	4	+10 V	Voltage output 10 VDC (±3%), max. 10 mA, power supply for external devices (e.g. potentiometer), SELV
KL3	5	+20 V	Voltage output 20 VDC (+25%/-10%), max. 50 mA, power supply for external devices (e.g. sensors), SELV
KL3	6	4-20 mA	Use control / current sensor value input 4-20 mA, impedance 100 Ω only as alternative to 0-10 V input, SELV
KL3	9, 11	RSB	RS485 interface for MODBUS, RSB
KL3	10, 12	RSA	RS485 interface for MODBUS, RSA

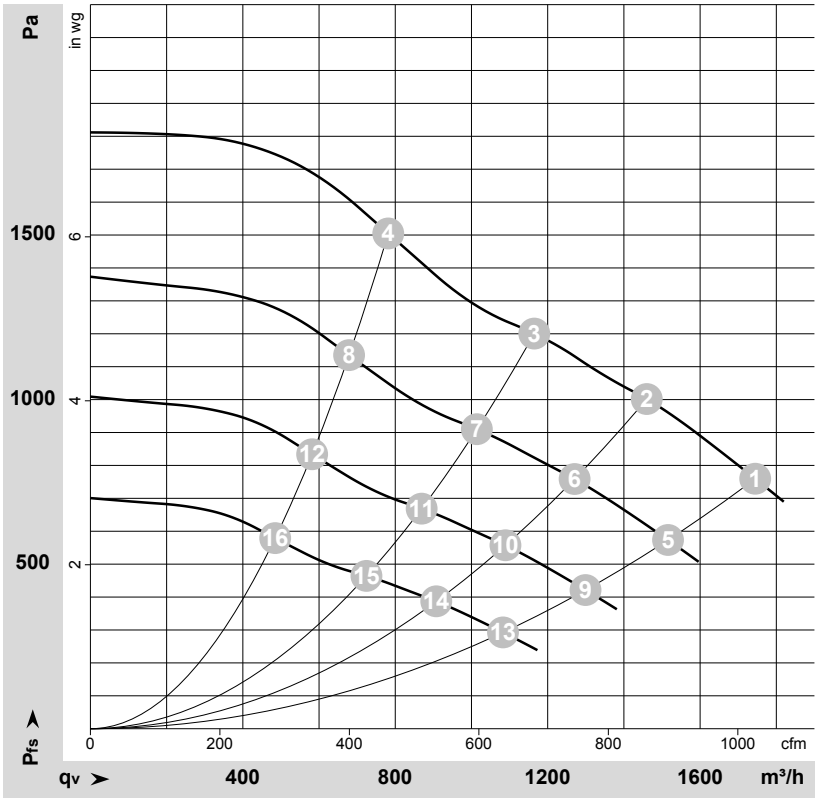
ebm-papst Mulfingen GmbH & Co. KG · Bachmühle 2 · D-74673 Mulfingen · Phone +49 (0) 7938 81-0 · Fax +49 (0) 7938 81-110 · info1@de.ebmpapst.com · www.ebmpapst.com

EC centrifugal fan

backward-curved, single-intake

with housing (without flange)

Curves: Air performance 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-140703-1

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	q_V	p_{fs}	q_V	p_{fs}
	V	Hz	min^{-1}	W	A	m^3/h	Pa	cfm	in. wg
1	400	50	4000	1000	1.80	1745	760	1025	3.05
2	400	50	4000	926	1.75	1460	1000	860	4.01
3	400	50	4000	847	1.61	1165	1200	685	4.82
4	400	50	4000	693	1.39	780	1500	460	6.02
5	400	50	3500	645	1.20	1515	574	890	2.30
6	400	50	3500	610	1.15	1270	760	750	3.05
7	400	50	3500	559	1.06	1015	911	595	3.66
8	400	50	3500	454	0.91	680	1135	400	4.56
9	400	50	3000	406	0.75	1300	422	765	1.69
10	400	50	3000	384	0.73	1090	558	640	2.24
11	400	50	3000	352	0.67	870	670	510	2.69
12	400	50	3000	286	0.58	580	834	345	3.35
13	400	50	2500	235	0.44	1085	293	635	1.18
14	400	50	2500	222	0.42	910	388	535	1.56
15	400	50	2500	204	0.39	725	465	425	1.87
16	400	50	2500	165	0.33	485	579	285	2.32

U = Voltage · f = Frequency · n = Speed (rpm) · P_{ed} = Power consumption · I = Current draw · q_V = Air flow · p_{fs} = Pressure increase

ebm-papst Mulfingen GmbH & Co. KG · Bachmühle 2 · D-74673 Mulfingen · Phone +49 (0) 7938 81-0 · Fax +49 (0) 7938 81-110 · info1@de.ebmpapst.com · www.ebmpapst.com