G3G250-KY13-C7

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-C7**
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	950
Current draw	A	1.6
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}	%	49.9	49.3
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		61.6	61
05 Variable speed drive		Yes	

09 Power consumption P_{ed}	kW	0.76
09 Air flow q_v	m^3/h	905
09 Pressure increase p_{fs}	Pa	1392
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-140700

EC centrifugal fan

backward-curved, single-intake

with housing (without flange)

Technical description

Weight	13.46 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 supply - 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
Motor protection	Thermal overload protector (TOP) internally connected
With cable	Variable
Protection class	I (with customer connection of protective earth)
Conformity with standards	EN 61800-5-1; CE
Approval	CCC; UL 1004-7 + 60730-1; CSA C22.2 No. 77 + CAN/CSA-E60730-1; EAC

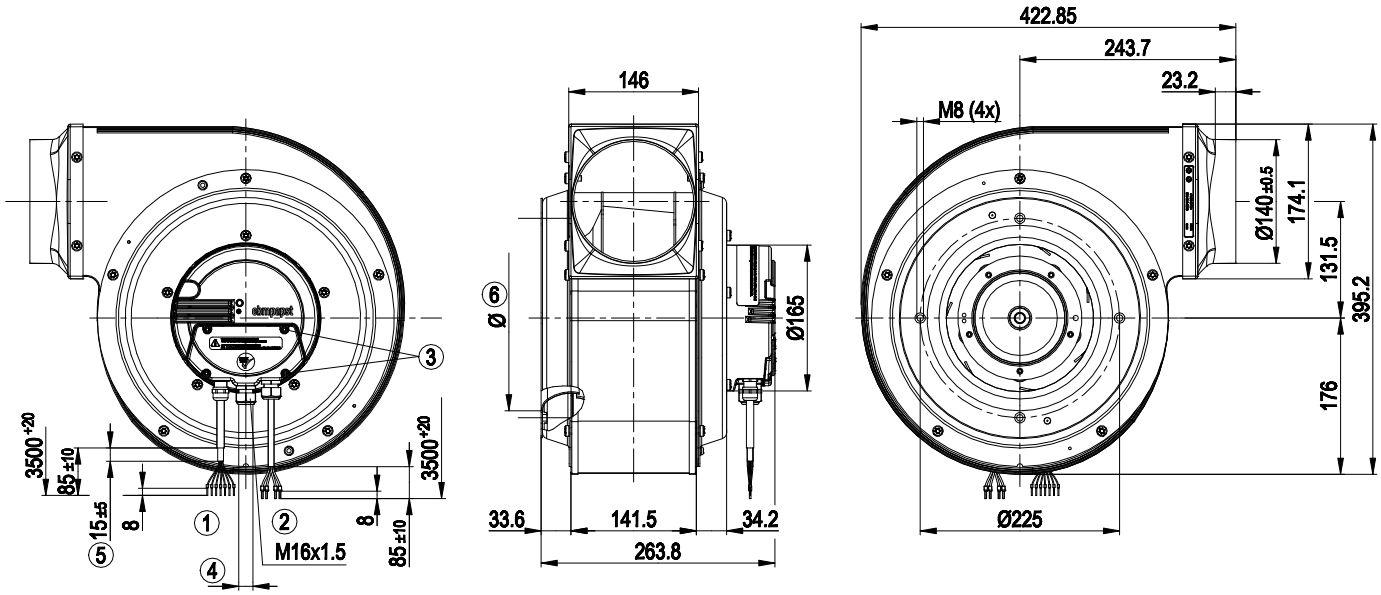
ebm-papst Mulfingen GmbH & Co. KG · Bachmühle 2 · D-74673 Mulfingen · Phone +49 (0) 7938 81-0 · Fax +49 (0) 7938 81-110 · info1@de.ebmpapst.com · www.ebmpapst.com

EC centrifugal fan

backward-curved, single-intake

with housing (without flange)

Product drawing



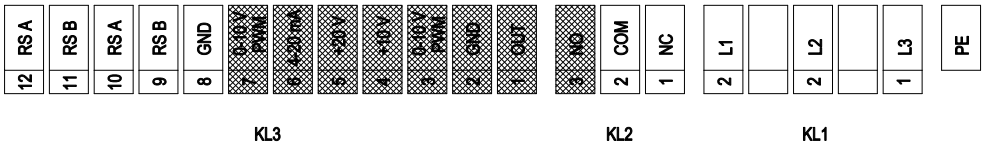
1	Cable shielded 7x AWG20, 7x crimped ferrules
2	Cable PVC AWG18, 4x crimped ferrules
3	Tightening torque 3.5 ± 0.5 Nm
4	Cable diameter min. 4 mm, max. 10 mm, tightening torque 2.5 ± 0.4 Nm
5	Free shielding (15 mm)
6	Inlet diameter on customer device 209 - 211 mm

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



shaded gray => not brought out via leads

No.	Conn.	Designation	Color	Function/assignment
1	-	PE	green/yellow	Protective earth terminal
1	KL1	L1	black 1	Power supply, see nameplate for voltage range, 50/60 Hz
1	KL1	L2	black 2	Power supply, see nameplate for voltage range, 50/60 Hz
1	KL1	L3	black 3	Power supply, see nameplate for voltage range, 50/60 Hz
2	KL2	NC	black	Floating status contact, break for failure
2	KL2	COM	red	Status relay, floating status contact; changeover contact; common connection; contact rating 250 VAC / max. 2 A (AC1) / min. 10 mA
-	KL2	NO		Floating status contact, make for failure
-	KL3	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	GND		Reference ground for control interface, SELV
-	KL3	0-10 V PWM		Use control / current sensor value input 0-10 VDC, impedance 100 kΩ only as alternative to 4-20 mA input, SELV
-	KL3	+10 V		Voltage output 10 VDC (±3%), max. 10 mA, power supply for external devices (e.g. potentiometer), SELV
-	KL3	+20 V		Voltage output 20 VDC (+25%/-10%), max. 50 mA, power supply for external devices (e.g. sensors), SELV
-	KL3	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	0-10 V PWM		Use control / current sensor value input 0-10 VDC, impedance 100 kΩ only as alternative to 4-20 mA input, SELV
2	KL3	GND	blue	Reference ground for control interface, SELV
2	KL3	RSB	gray	RS485 interface for MODBUS, RSB
2	KL3	RSA	yellow	RS485 interface for MODBUS, RSA
2	KL3	RSB	brown	RS485 interface for MODBUS, RSB

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

No.	Conn.	Designation	Color	Function/assignment
2	KL3	RSA	white	RS485 interface for MODBUS, RSA

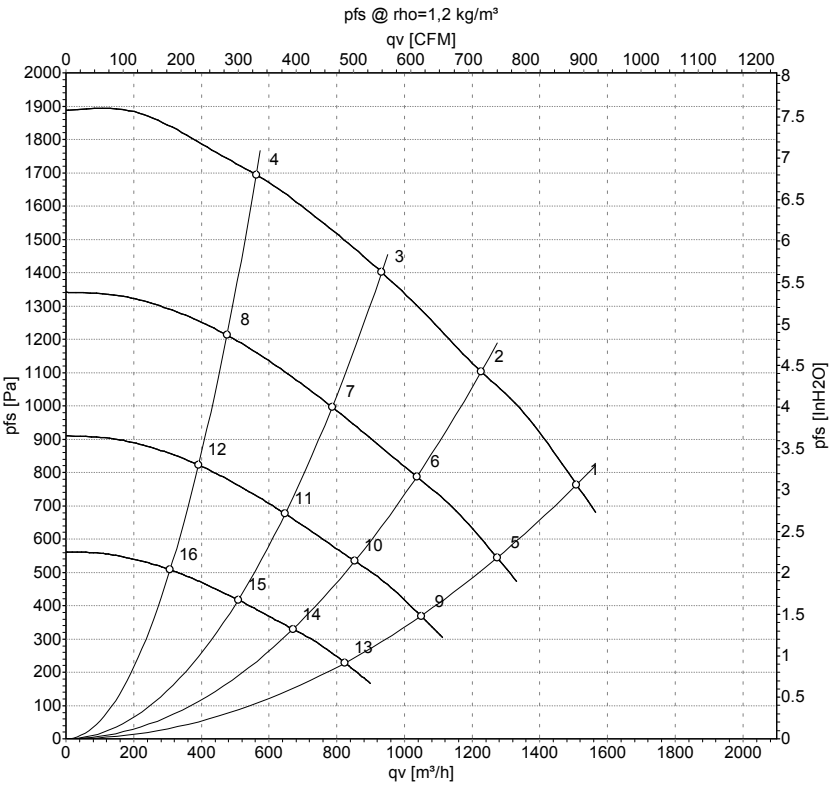
ebm-papst Mulfingen GmbH & Co. KG · Bachmühle 2 · D-74673 Mulfingen · Phone +49 (0) 7938 81-0 · Fax +49 (0) 7938 81-110 · info1@de.ebmpapst.com · www.ebmpapst.com

EC centrifugal fan

backward-curved, single-intake

with housing (without flange)

Curves: Air performance 50 Hz



Measurement: LU-140700-1

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	940	1.80	1510	760	890	3.05
2	400	50	4000	873	1.72	1225	1100	720	4.42
3	400	50	4000	778	1.55	935	1400	550	5.62
4	400	50	4000	635	1.30	560	1700	330	6.82
5	400	50	3400	570	1.11	1275	545	750	2.19
6	400	50	3400	527	1.04	1035	787	610	3.16
7	400	50	3400	466	0.93	785	997	465	4.00
8	400	50	3400	385	0.79	475	1213	280	4.87
9	400	50	2800	319	0.62	1050	370	615	1.49
10	400	50	2800	294	0.58	855	534	505	2.14
11	400	50	2800	260	0.52	650	676	380	2.71
12	400	50	2800	215	0.44	390	823	230	3.30
13	400	50	2200	154	0.30	825	228	485	0.92
14	400	50	2200	143	0.28	670	329	395	1.32
15	400	50	2200	126	0.25	510	417	300	1.67
16	400	50	2200	104	0.21	310	508	180	2.04

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