G3G146-HK13-23

EC centrifugal fan

forward-curved, single-intake

with housing (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	**G3G146-HK13-23**	
Motor	**M3G055-DF**	
Nominal voltage	VDC	380
Nominal voltage range	VDC	370 .. 390
Method of obtaining data		fa
Speed (rpm)	min^{-1}	2330
Power consumption	W	175
Current draw	A	0.8
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	40

ml = Max. load · me = Max. efficiency · fa = Free air · cs = Customer specification · ce = Customer equipment
Subject to change

EC centrifugal fan

forward-curved, single-intake

with housing (flange)

Technical description

Weight	2.85 kg
Size	146 mm
Motor size	55
Rotor surface	Thick-film passivated
Terminal box material	Die-cast aluminum
Impeller material	Sheet steel, galvanized
Housing material	Sheet steel, galvanized
Direction of rotation	Counterclockwise, 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	Any
Condensation drainage holes	None, open rotor
Mode	S1
Motor bearing	Hybrid bearing
Technical features	- Output 10 VDC, max. 10 mA - Tach output - Power limiter - Motor current limitation - Soft start - Control input 0-10 VDC / PWM - Control interface with SELV potential safely disconnected from the mains - Overvoltage detection - Thermal overload protection for electronics/motor - Line undervoltage detection
Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)	<= 3.5 mA
Motor protection	Electronic motor protection
With cable	Variable
Protection class	I (with customer connection of protective earth)
Conformity with standards	EN 60335-1; CE

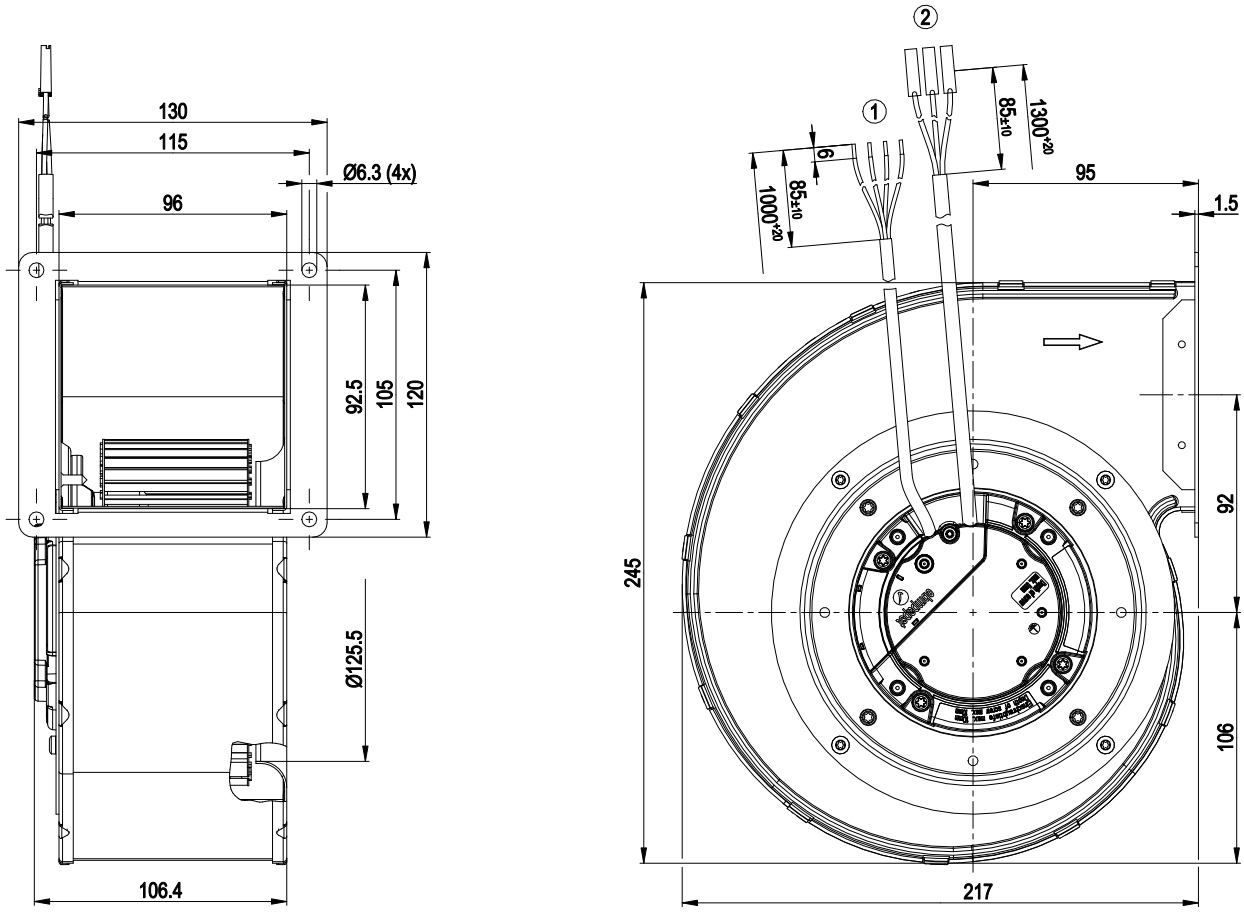
ebm-papst Mulfingen GmbH & Co. KG · Bachmühle 2 · D-74673 Mulfingen · Phone +49 (0) 7938 81-0 · Fax +49 (0) 7938 81-110 · info1@de.ebmpapst.com · www.ebmpapst.com

EC centrifugal fan

forward-curved, single-intake

with housing (flange)

Product drawing



1	Cable halogen-silicone-free 4x 0.25 mm², 4x crimped splices
2	Cable halogen-silicone-free 3x 0.5 mm², 3x flat push-on receptacle Stocko RSB 8100.001 F2.8-1, 3x insulator Stocko EH 657.100-G

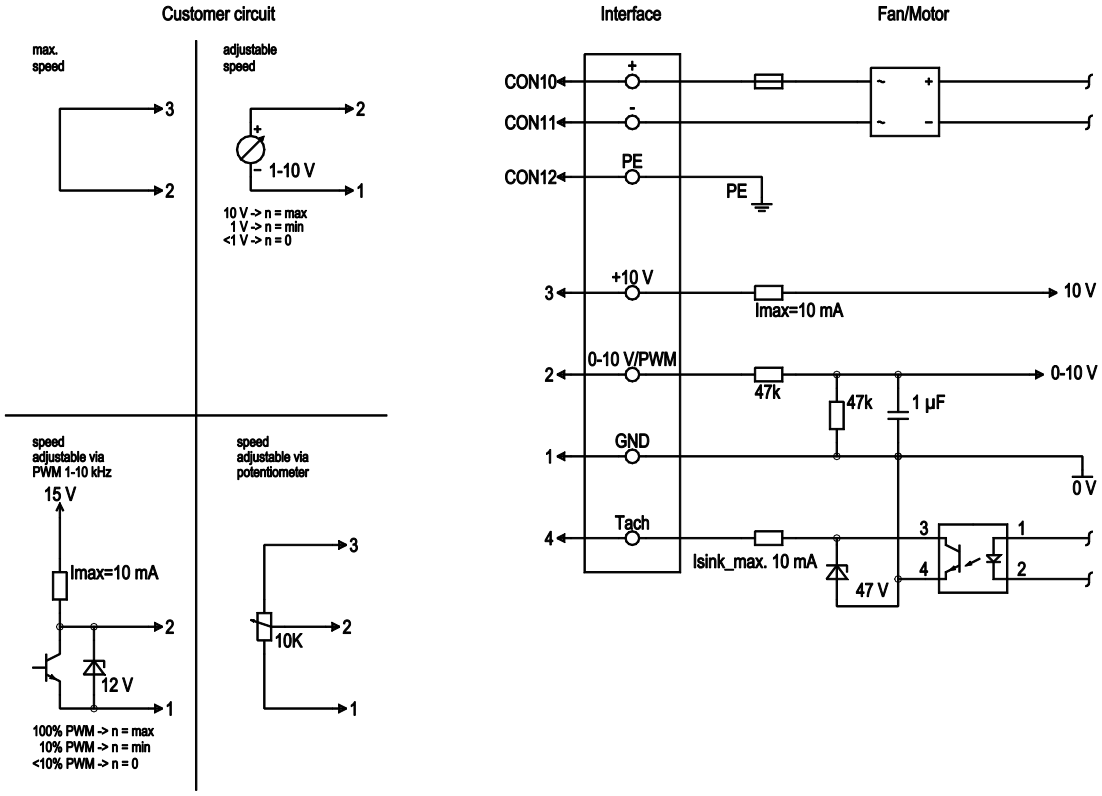
ebm-papst Mulfingen GmbH & Co. KG · Bachmühle 2 · D-74673 Mulfingen · Phone +49 (0) 7938 81-0 · Fax +49 (0) 7938 81-110 · info1@de.ebmpapst.com · www.ebmpapst.com

EC centrifugal fan

forward-curved, single-intake

with housing (flange)

Connection diagram



No.	Conn.	Designation	Color	Function/assignment
	CON10	+	brown	Supply connection, power supply +, voltage range see nameplate
	CON11	-	blue	Supply connection, power supply -, voltage range see nameplate
	CON12	PE	green/yellow	Ground connection
	3	+10 V	red	Fixed voltage output 10 VDC +/-3%, Imax. 10 mA, short-circuit-proof, power supply for ext. devices (e.g. potentiometers), SELV
	2	0- 10V PWM	yellow	0-10 V / PWM control input, Ri=100 kΩ, SELV
	1	GND	blue	Reference ground for control interface, SELV
	4	Tach	white	Tach output, open collector, 1 pulse per revolution, Isink max = 10 mA, SELV
				Attention: Device is only to be operated with control unit 61423-1-0173. This is not included in the scope of delivery.

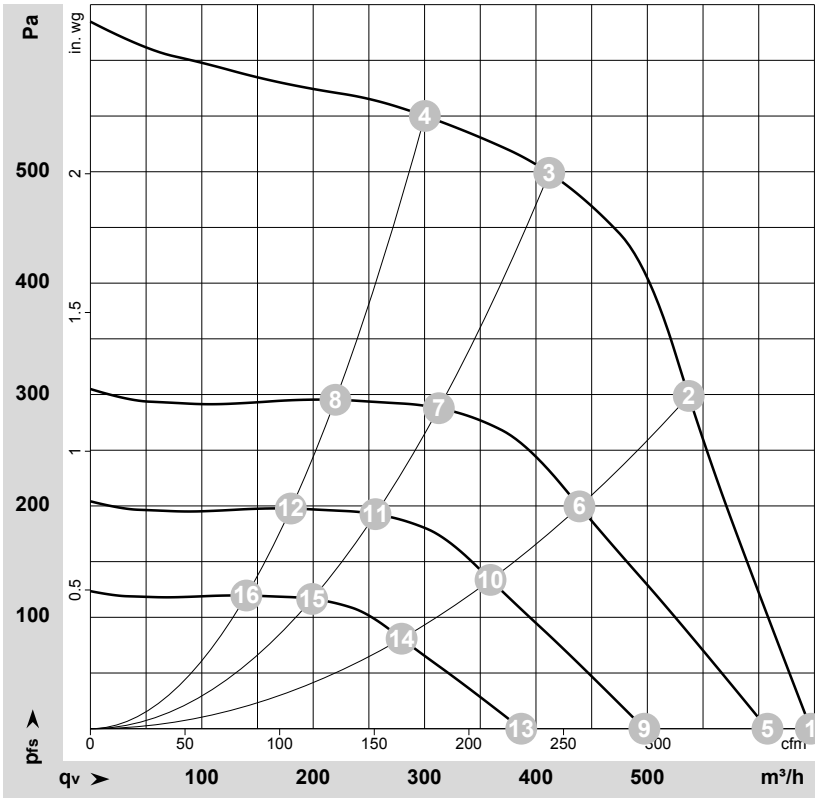
ebm-papst Mulfingen GmbH & Co. KG · Bachmühle 2 · D-74673 Mulfingen · Phone +49 (0) 7938 81-0 · Fax +49 (0) 7938 81-110 · info1@de.ebmpapst.com · www.ebmpapst.com

EC centrifugal fan

forward-curved, single-intake

with housing (flange)

Curves: Air performance 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-157063-1

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

	Wired	U	f	n	P_{ed}	I	LpA_{in}	LwA_{in}	q_V	p_{fs}	q_V	p_{fs}
		V	Hz	min^{-1}	W	A	dB(A)	dB(A)	m^3/h	Pa	cfm	in. wg
1	1~	230	50	2330	175	0.80	70	76	645	0	380	0.00
2	1~	230	50	2690	175	0.80	68	74	535	300	315	1.20
3	1~	230	50	2895	148	0.65	67	73	410	500	240	2.01
4	1~	230	50	3000	116	0.51	67	73	300	550	175	2.21
5	1~	230	50	2200	144	0.63	68	75	610	0	360	0.00
6	1~	230	50	2200	95	0.42	65	71	440	199	260	0.80
7	1~	230	50	2200	65	0.28	63	69	315	288	185	1.16
8	1~	230	50	2200	45	0.20	61	68	220	296	130	1.19
9	1~	230	50	1800	79	0.35	63	70	495	0	295	0.00
10	1~	230	50	1800	52	0.23	60	66	360	133	210	0.53
11	1~	230	50	1800	36	0.16	57	64	255	193	150	0.77
12	1~	230	50	1800	25	0.11	56	63	180	198	105	0.79
13	1~	230	50	1400	37	0.16	57	63	385	0	230	0.00
14	1~	230	50	1400	24	0.11	53	59	280	81	165	0.33
15	1~	230	50	1400	17	0.07	51	57	200	117	115	0.47
16	1~	230	50	1400	12	0.05	50	56	140	120	80	0.48

Wired = Wiring · U = Voltage · f = Frequency · n = Speed (rpm) · P_{ed} = Power consumption · I = Current draw · LpA_{in} = Sound pressure level intake side · LwA_{in} = Sound power level intake side
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