D3G146-AL02-10

EC centrifugal fan

forward-curved, dual-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	**D3G146-AL02-10**	
Motor	**M3G074-CF**	
Nominal voltage	VDC	380
Nominal voltage range	VDC	370 .. 390
Method of obtaining data		ml
Speed (rpm)	min^{-1}	1600
Power consumption	W	175
Current draw	A	0.8 (230V)
Min. back pressure	Pa	0
Min. back pressure	in. wg	0
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	50

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

		Actual	Req. 2015
01 Overall efficiency η_{es}	%	43.8	32.8
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		55	44
05 Variable speed drive		Yes	

09 Power consumption P_e	kW	0.17
09 Air flow q_v	m^3/h	605
09 Pressure increase p_{fs}	Pa	397
10 Speed (rpm) n	min^{-1}	2550
11 Specific ratio*		1.00

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-158655

EC centrifugal fan

forward-curved, dual-intake

with housing (flange)

Technical description

Weight	3.4 kg
Size	146 mm
Motor size	74
Rotor surface	Thick-film passivated
Impeller material	Sheet steel, galvanized
Housing material	Sheet steel, painted black
Motor suspension	Motor vibration-damped on both sides
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	Any
Condensation drainage holes	None, open rotor
Mode	S1
Motor mounting	Ball bearing
Technical features	- Output 10 VDC, max. 10 mA - Fault output (open collector) - 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
Motor protection	Electronic motor protection
With cable	Variable
Protection class	I (with customer connection of protective earth)
Conformity with standards	EN 60335-1; CE

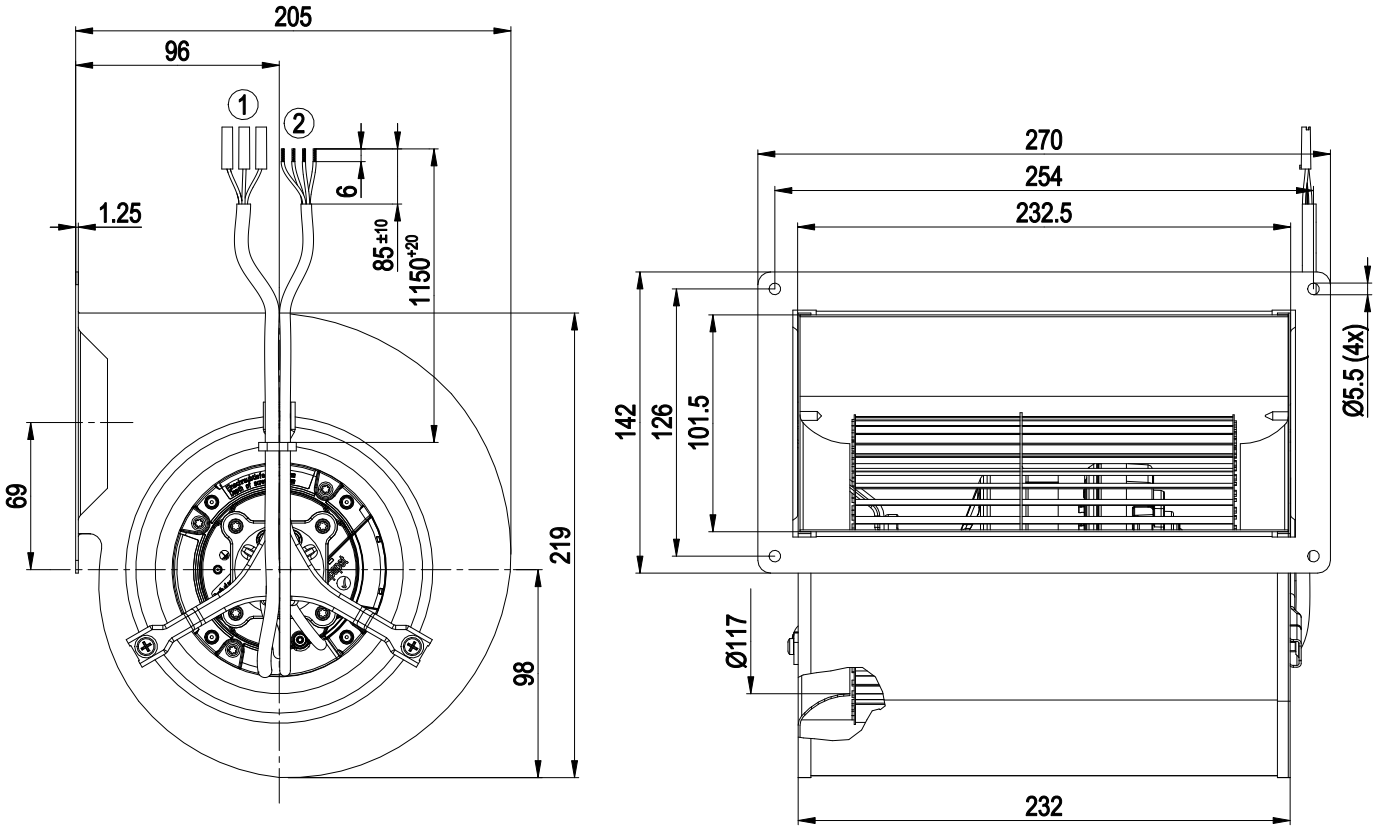
ebm-papst Mulfingen GmbH & Co. KG · Bachmühle 2 · D-74673 Mulfingen · Phone +49 (0) 7938 81-0 · Fax +49 (0) 7938 81-110 · info1@de.ebmpapst.com · www.ebmpapst.com

EC centrifugal fan

forward-curved, dual-intake

with housing (flange)

Product drawing



1	Cable halogen-free, 3G 0.5 mm², 3x flat push-on receptacle Stocko RSB 8100 F2.8-1, 3x insulator Stocko EH 657.100
2	Cable halogen-free, 4x 0.25 mm², 4x crimped splices

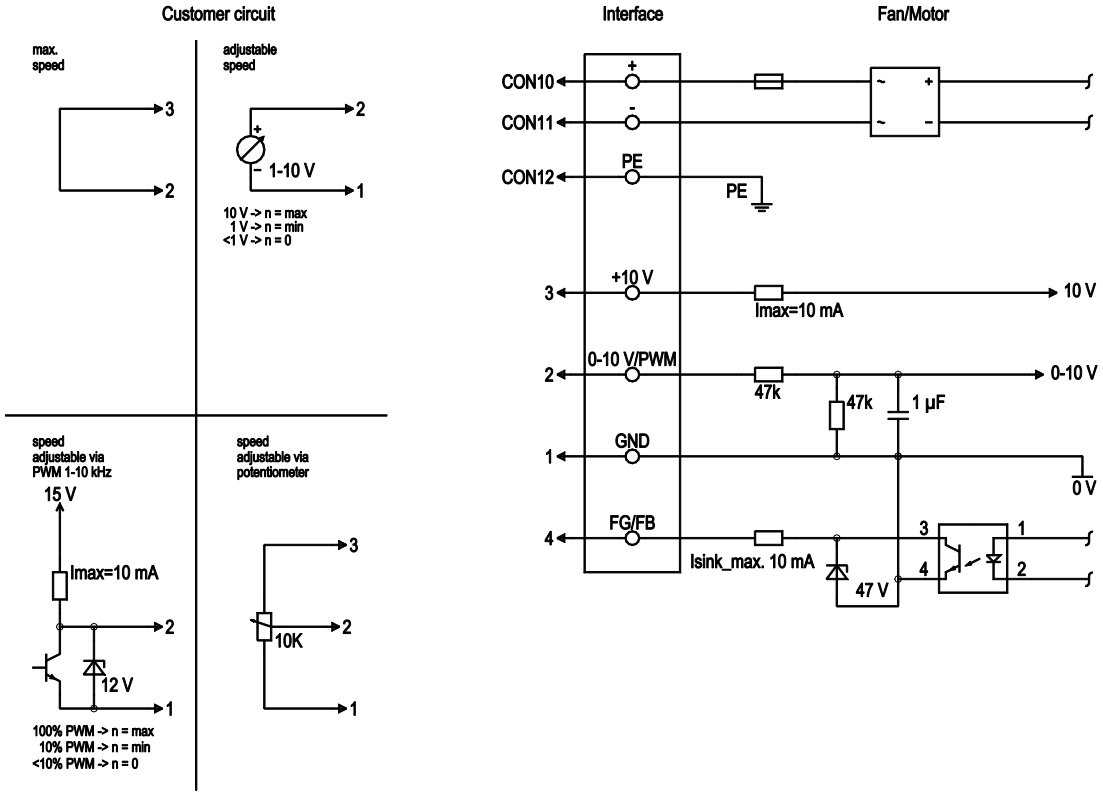
ebm-papst Mulfingen GmbH & Co. KG · Bachmühle 2 · D-74673 Mulfingen · Phone +49 (0) 7938 81-0 · Fax +49 (0) 7938 81-110 · info1@de.ebmpapst.com · www.ebmpapst.com

EC centrifugal fan

forward-curved, dual-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	FG/FB	white	Fan good / fan bad: open collector, fan good = low, electrically isolated, 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.

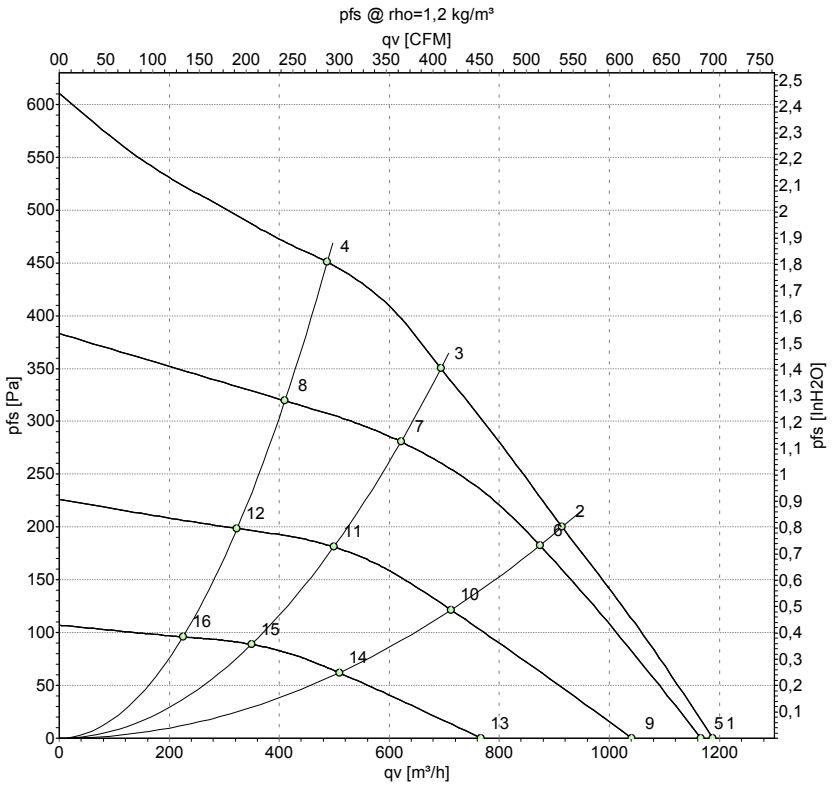
ebm-papst Mulfingen GmbH & Co. KG · Bachmühle 2 · D-74673 Mulfingen · Phone +49 (0) 7938 81-0 · Fax +49 (0) 7938 81-110 · info1@de.ebmpapst.com · www.ebmpapst.com

EC centrifugal fan

forward-curved, dual-intake

with housing (flange)

Curves: Air performance 50 Hz



Measurement: LU-158655-1
Measurement: LU-159508-1
Measurement: LU-159514-1
Measurement: LU-159516-1

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	n	P_{ed}	I	LpA_{in}	LwA_{in}	q_V	p_{fs}	q_V	p_{fs}
	V	min^{-1}	W	A	dB(A)	dB(A)	m^3/h	Pa	cfm	in. wg
1	380	1600	175	0.80	62	74	1190	0	700	0.00
2	380	2005	175	0.80	59	71	915	200	540	0.80
3	380	2370	175	0.80	60	71	695	350	410	1.41
4	380	2685	165	0.75	63	74	485	450	285	1.81
5	380	1575	165	0.72	62	74	1165	0	685	0.00
6	380	1960	154	0.68	58	70	875	196	515	0.79
7	380	2130	118	0.52	57	68	620	287	365	1.15
8	380	2275	94	0.42	58	70	410	319	240	1.28
9	380	1405	116	0.52	58	71	1040	0	615	0.00
10	380	1570	83	0.38	53	65	715	125	420	0.50
11	380	1710	66	0.29	51	63	500	186	295	0.75
12	380	1785	48	0.21	52	63	325	198	190	0.79
13	380	1035	48	0.20	51	63	765	0	450	0.00
14	380	1135	30	0.13	45	56	510	64	300	0.26
15	380	1215	24	0.10	42	53	350	91	205	0.37
16	380	1250	17	0.07	42	54	225	96	130	0.39

U = Power supply · 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