D3G146-AM02-10

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-AM02-10**
Motor	**M3G074-CF**

Phase		1~
Nominal voltage	VAC	230
Nominal voltage range	VAC	200 .. 240
Frequency	Hz	50/60
Method of obtaining data		ml
Speed (rpm)	min^{-1}	1800
Power consumption	W	162
Current draw	A	1.32
Min. back pressure	Pa	0
Min. back pressure	in. wg	0
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	55

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}	%	46.4	32.4
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		58	44
05 Variable speed drive		Yes	

09 Power consumption P_{ed}	kW	0.14
09 Air flow q_v	m^3/h	550
09 Pressure increase p_{fs}	Pa	389
10 Speed (rpm) n	min^{-1}	2560
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-169601

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, galvanized
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 bearing	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
Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)	<= 0.25 mA
Motor protection	Electronic motor protection
With cable	Variable
Protection class	I (with customer connection of protective earth)
Conformity with standards	CE
Approval	UL 1004-7 + 60730-1; CSA C22.2 No. 77 + CAN/CSA-E60730-1

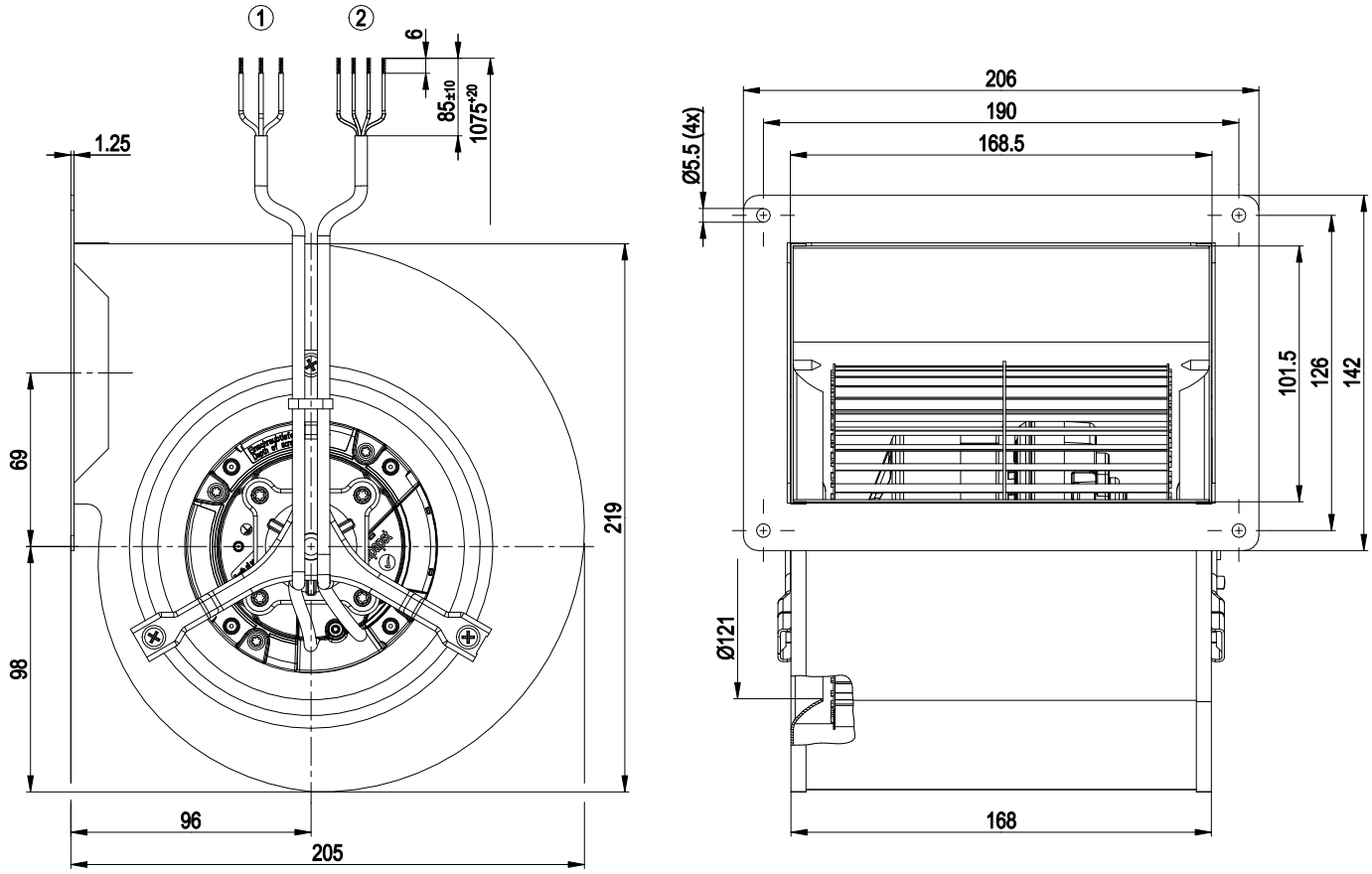
ebm-papst Mulfingen GmbH & Co. KG · Bachmühle 2 · D-74673 Mulfingen · Phone +49 (0) 7938 81-0 · Fax +49 (0) 7938 81-110 · info1@de.ebmpapst.com · www.ebmpapst.com

EC centrifugal fan

forward-curved, dual-intake

with housing (flange)

Product drawing



1	Cable PVC AWG20, 3x crimped splices
2	Cable PVC AWG22, 4x crimped splices

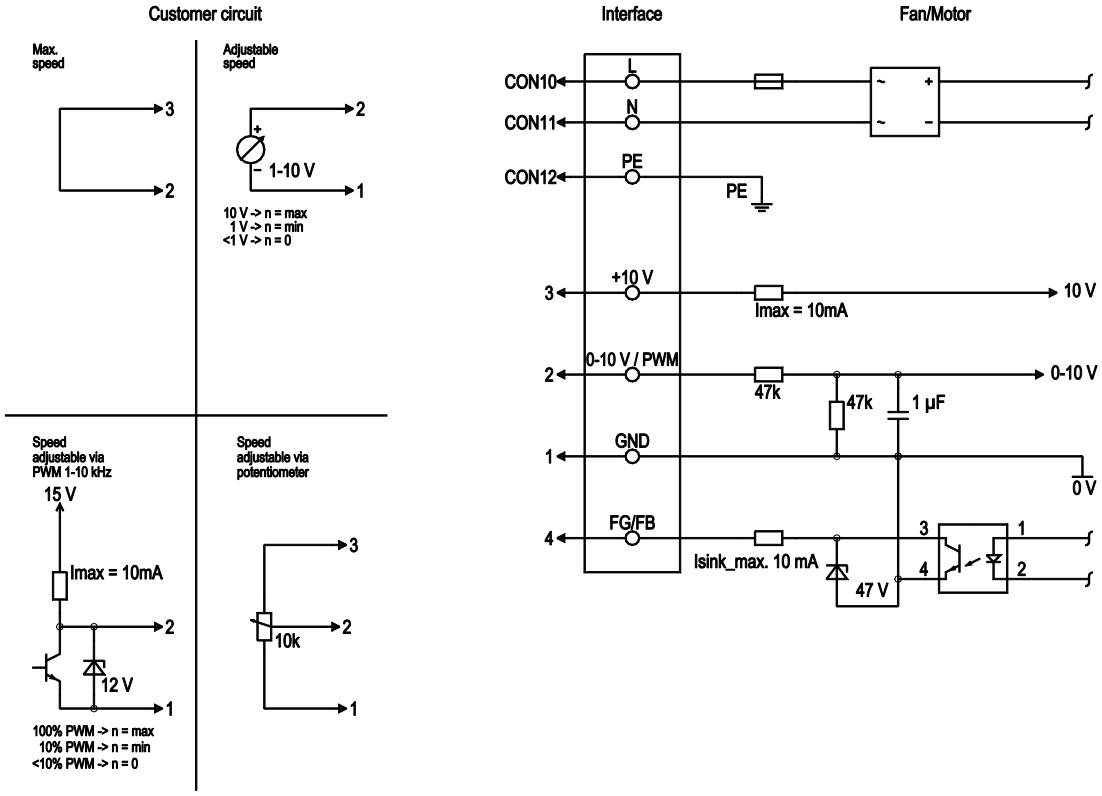
ebm-papst Mulfingen GmbH & Co. KG · Bachmühle 2 · D-74673 Mulfingen · Phone +49 (0) 7938 81-0 · Fax +49 (0) 7938 81-110 · info1@de.ebmpapst.com · www.ebmpapst.com

EC centrifugal fan

forward-curved, dual-intake

with housing (flange)

Connection diagram



No.	Conn.	Designation	Color	Function/assignment
	CON10	L	black	Supply connection, power supply, phase, see nameplate for voltage range
	CON11	N	blue	Supply connection, power supply, neutral conductor, see nameplate for voltage range
	CON12	PE	green/yellow	Ground connection
	2	0- 10V PWM	yellow	0-10 V / PWM control input, Ri=100 kΩ, SELV
	3	+10 V	red	Fixed voltage output 10 VDC +/-3 %, Imax. 10 mA, short-circuit-proof, power supply for ext. devices (e.g. pot), SELV
	1	GND	blue	Reference ground for control interface, SELV
	4	FG/FB	white	Fan good / fan bad: open collector, fan good = high, electrically isolated, Isink max = 10 mA

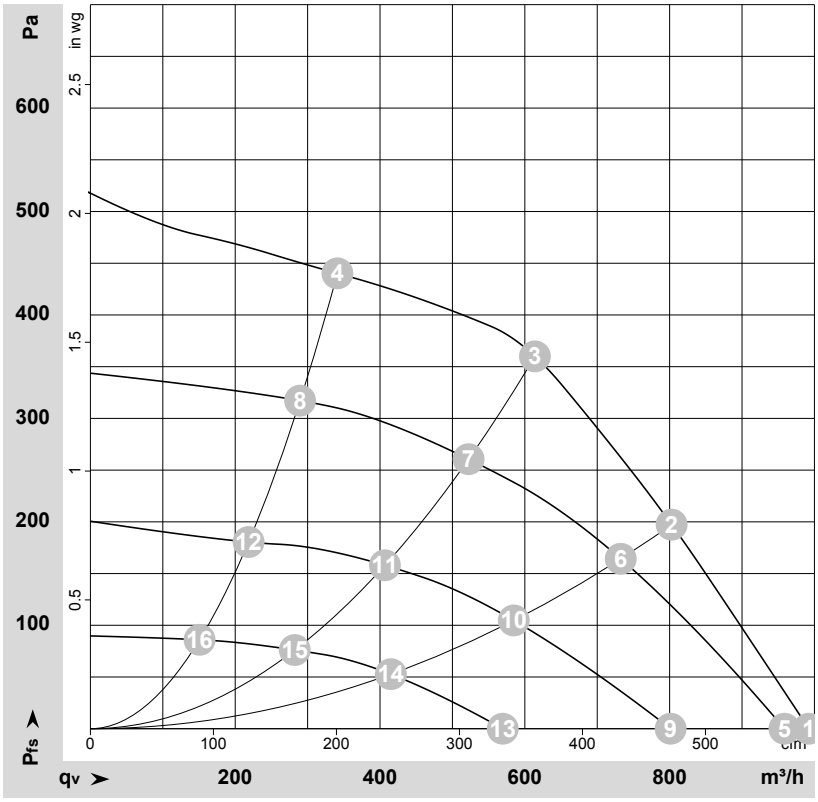
ebm-papst Mulfingen GmbH & Co. KG · Bachmühle 2 · D-74673 Mulfingen · Phone +49 (0) 7938 81-0 · Fax +49 (0) 7938 81-110 · info1@de.ebmpapst.com · www.ebmpapst.com

EC centrifugal fan

forward-curved, dual-intake

with housing (flange)

Curves: Air performance 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-168144-1
Measurement: LU-168320-1
Measurement: LU-168322-1
Measurement: LU-168324-1

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	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	230	50	1800	162	1.32	65	77	990	0	585	0.00
2	230	50	2145	162	1.32	62	74	805	200	475	0.80
3	230	50	2495	158	1.29	62	73	615	360	360	1.45
4	230	50	2745	114	0.96	63	74	340	440	200	1.77
5	230	50	1735	158	1.34	65	76	960	0	565	0.00
6	230	50	1995	130	1.15	60	72	730	183	430	0.73
7	230	50	2150	98	0.89	58	69	520	261	305	1.05
8	230	50	2315	66	0.61	59	69	290	318	170	1.28
9	230	50	1450	91	0.82	60	72	800	0	470	0.00
10	230	50	1580	63	0.60	54	66	585	117	345	0.47
11	230	50	1675	46	0.44	52	63	405	159	240	0.64
12	230	50	1755	31	0.31	52	62	220	180	130	0.72
13	230	50	1030	34	0.33	52	63	570	0	335	0.00
14	230	50	1110	23	0.24	47	57	415	61	245	0.24
15	230	50	1160	17	0.18	45	55	280	76	165	0.31
16	230	50	1200	13	0.14	44	53	150	86	90	0.35

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