D3G146-AI58-14

EC centrifugal fan

forward curved, dual inlet

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
County court Stuttgart · HRA 590344

General partner Elektrobau Mulfingen GmbH · Headquarters Mulfingen
County court Stuttgart · HRB 590142

ErP2015 EXCEEDS THE NORM

Nominal data

Type	**D3G146-AI58-14**	
Motor	**M3G074-CF**	
Phase		1~
Nominal voltage	VAC	230
Nominal voltage range	VAC	200 .. 277
Frequency	Hz	50
Type of data definition		ml
Speed	min^{-1}	1800
Power input	W	170
Current draw	A	1.24
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	60

ml = max. load · me = max. efficiency · fa = running at free air · cs = customer specs · cu = customer unit
Subject to alterations

Data according to ErP directive

Installation category	A
Efficiency category	Static
Variable speed drive	Yes
Specific ratio*	1.00

* Specific ratio = 1 + p_{fs} / 100 000 Pa

		Actual	Request 2013	Request 2015
Overall efficiency η_{es}		42.5	25.1	32.1
Efficiency grade N		54.4	37	44
Power input P_{ed}	kW	0.13		
Air flow q_v	m^3/h	560		
Pressure increase p_{fs}	Pa	325		
Speed n	min^{-1}	2325		

Data established at point of optimum efficiency

ebmpapst

EC centrifugal fan

forward curved, dual inlet

with housing (flange)

Technical features

Mass	3.2 kg
Size	146 mm
Surface of rotor	Galvanised
Material of impeller	Sheet steel, hot-galvanised
Housing material	PP-T20 plastic
Motor suspension	Motor anti-vibration mounted on both sides
Direction of rotation	Counter-clockwise, seen on rotor
Type of protection	IP 44; Depending on installation and position
Insulation class	"B"
Humidity class	F3-1
Max. permissible ambient motor temp. (transp./ storage)	+ 80 °C
Min. permissible ambient motor temp. (transp./storage)	- 40 °C
Mounting position	Any
Condensate discharge holes	None
Operation mode	S1
Motor bearing	Ball bearing
Technical features	- Output 10 VDC, max. 1.1 mA - Tach output - Motor current limit - Soft start - Control input 0-10 VDC / PWM - Over-temperature protected motor
EMC interference immunity	Acc. to EN 61000-6-2 (industrial environment)
EMC harmonics	Acc. to EN 61000-3-2/3
EMC interference emission	Acc. to EN 61000-6-3 (household environment)
Touch current acc. IEC 60990 (measuring network Fig. 4, TN system)	<= 3.5 mA
Motor protection	Thermal overload protector (TOP) wired internally
Cable exit	Variable
Protection class	I (if protective earth is connected by customer)
Product conforming to standard	EN 60335-1; CE

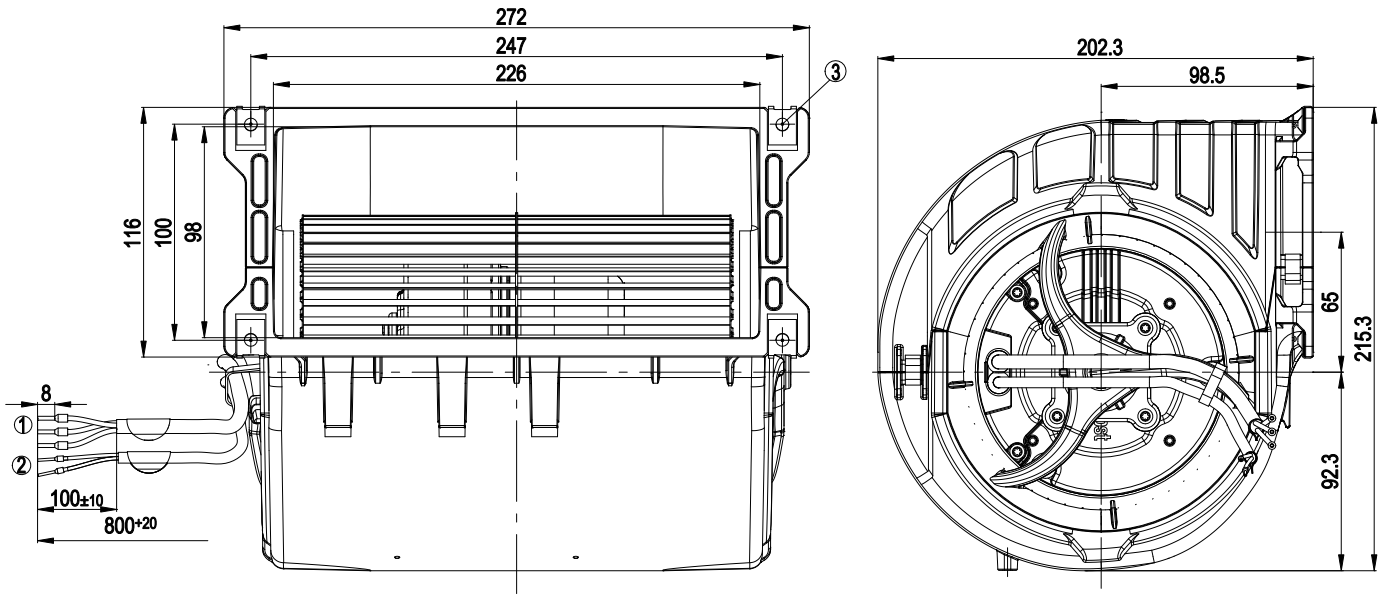
ebm-papst Mulfingen GmbH & Co. KG · Bachmühle 2 · D-74673 Mulfingen · Phone +49 (0) 7938 81-0 · Fax +49 (0) 7938 81-110 · info1@de.ebmpapst.com · www.ebmpapst.com

EC centrifugal fan

forward curved, dual inlet

with housing (flange)

Product drawing



1	Connection line AWG18, 3 x crimped core-end sleeves
2	Control line AWG22, 2 x crimped core-end sleeves
3	4x sheet metal nut for thread EN ISO 1478-ST 4.8 (min. screw length 14.5 mm plus thickness of mounting material)

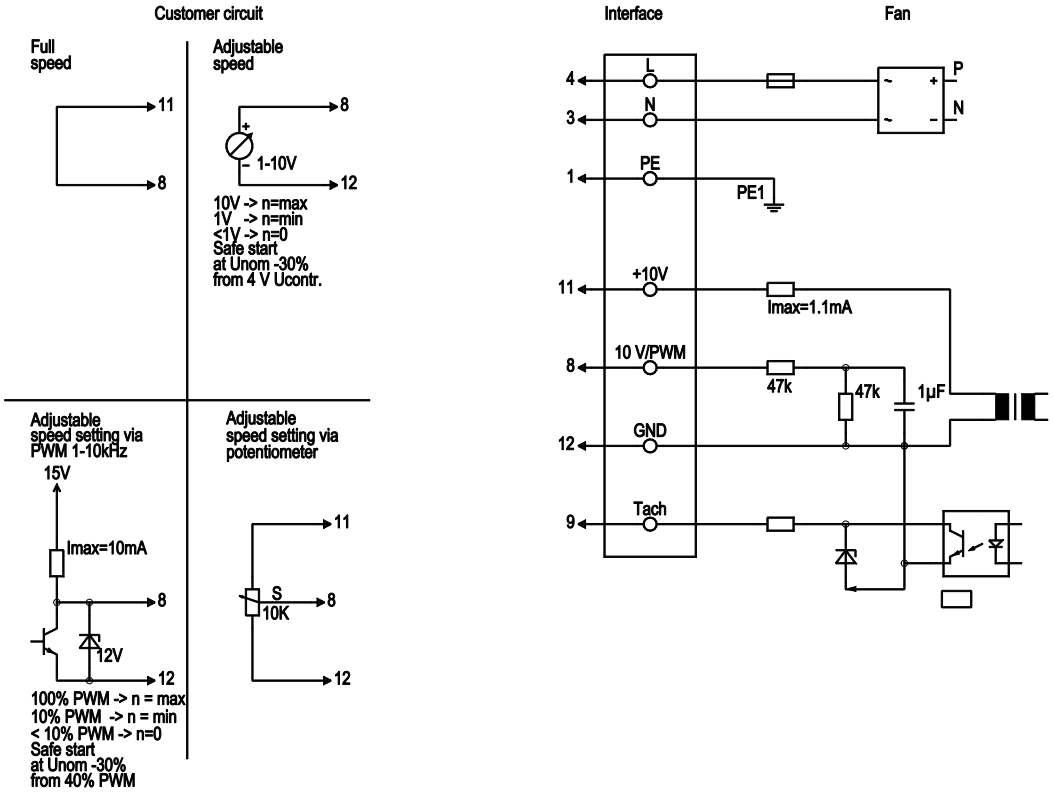
ebm-papst Mulfingen GmbH & Co. KG · Bachmühle 2 · D-74673 Mulfingen · Phone +49 (0) 7938 81-0 · Fax +49 (0) 7938 81-110 · info1@de.ebmpapst.com · www.ebmpapst.com

EC centrifugal fan

forward curved, dual inlet

with housing (flange)

Connection screen



Line	No.	Signal	Colour	Function / assignment
1	4	L	black	Power supply 230 VAC, 50 - 60 Hz, see type plate for voltage range
2	3	N	blue	Neutral conductor
3	1	PE	green/yellow	Protective earth
4	8	0- 10V PWM	yellow	Control input 0 - 10 V or PWM, electrically isolated
5	9	Tach	white	Tach output: Open collector, 1 pulse per revolution, electrically isolated
6	11	10V/ max. 1.1mA	red	Voltage output 10 V/ 1 mA, electrically isolated
7	12	GND	blue	GND - Connection for control interface

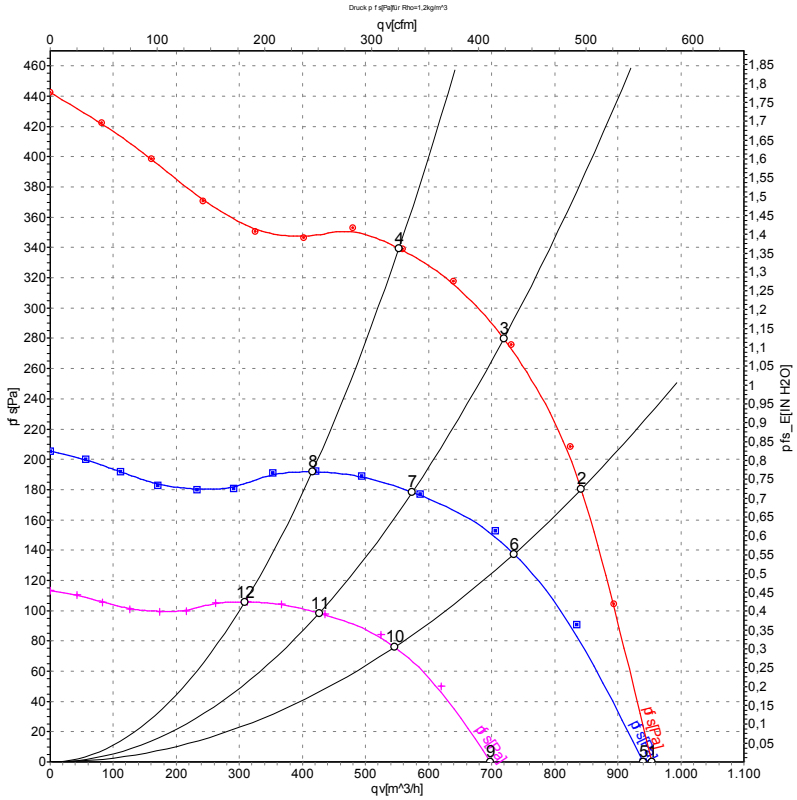
ebm-papst Mulfingen GmbH & Co. KG · Bachmühle 2 · D-74673 Mulfingen · Phone +49 (0) 7938 81-0 · Fax +49 (0) 7938 81-110 · info1@de.ebmpapst.com · www.ebmpapst.com

EC centrifugal fan

forward curved, dual inlet

with housing (flange)

Charts: Air flow 50 Hz



Measurement: LU-114507

Air performance measured as per ISO 5801 Installation category A. For detailed information on the measuring set-up, please contact ebm-papst. Suction-side noise levels: LwA measured as per ISO 13347 / LpA measured with 1m distance to fan axis. The values given are valid under the measuring conditions mentioned above and may vary according to the actual installation situation. With any deviation from the standard set-up, the specific values have to be checked and reviewed with the unit installed.

Measured values

	U	f	n	P_{ed}	I	qv	p_{fs}
	V	Hz	min^{-1}	W	A	m^3/h	Pa
1	230	50	1800	170	1.24	955	0
2	230	50	2000	166	1.20	840	180
3	230	50	2195	162	1.18	720	280
4	230	50	2330	135	0.98	555	340
5	230	50	1750	161	1.18	940	0
6	230	50	1750	111	0.80	735	139
7	230	50	1750	82	0.60	575	179
8	230	50	1750	57	0.42	415	192
9	230	50	1300	66	0.49	700	0
10	230	50	1300	46	0.33	545	76
11	230	50	1300	34	0.25	425	99
12	230	50	1300	24	0.17	310	106

U = Supply voltage · f = Frequency · n = Speed · P_{ed} = Power input · I = Current draw · qv = 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