D3G146-HQ13-41

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-HQ13-41**
Motor	**M3G055-DF**

Phase		1~	1~
Nominal voltage	VAC	230	230
Nominal voltage range	VAC	200 .. 240	200 .. 240
Frequency	Hz	50/60	50/60
Method of obtaining data		fa	ml
Speed (rpm)	min^{-1}	1740	1740
Power consumption	W	175	175
Current draw	A	1.2	1.2
Min. back pressure	Pa	0	0
Min. back pressure	inH2O	0	0
Min. ambient temperature	°C	-25	-25
Max. ambient temperature	°C	50	60

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

EC centrifugal fan

forward-curved, dual-intake

with housing (flange)

Technical description

Weight	2.5 kg
Fan size	146 mm
Rotor surface	Galvanized
Impeller material	PP plastic
Housing material	PP plastic
Motor suspension	Motor vibration-damped on both sides
Direction of rotation	Counterclockwise, viewed toward rotor
Degree of protection	IP20
Insulation class	"F"
Ambient temperature note	At 60°C ambient temperature operation is permissible up to a maximum back pressure of 50 Pa
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	- Power limiter - Motor current limitation - Soft start - Control input 0-10 VDC / PWM - Control interface with SELV potential safely disconnected from the mains - Thermal overload protection for motor
EMC immunity to interference	According to EN 61000-6-2 (industrial environment)
EMC circuit feedback	According to EN 61000-3-2/3
EMC interference emission	According to EN 61000-6-3 (household environment)
Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)	<= 3.5 mA
Electrical hookup	With plug; Via terminal box
Motor protection	Thermal overload protector (TOP) internally connected
With cable	Variable
Protection class	I (with customer connection of protective earth)
Conformity with standards	EN 60335-1; CE

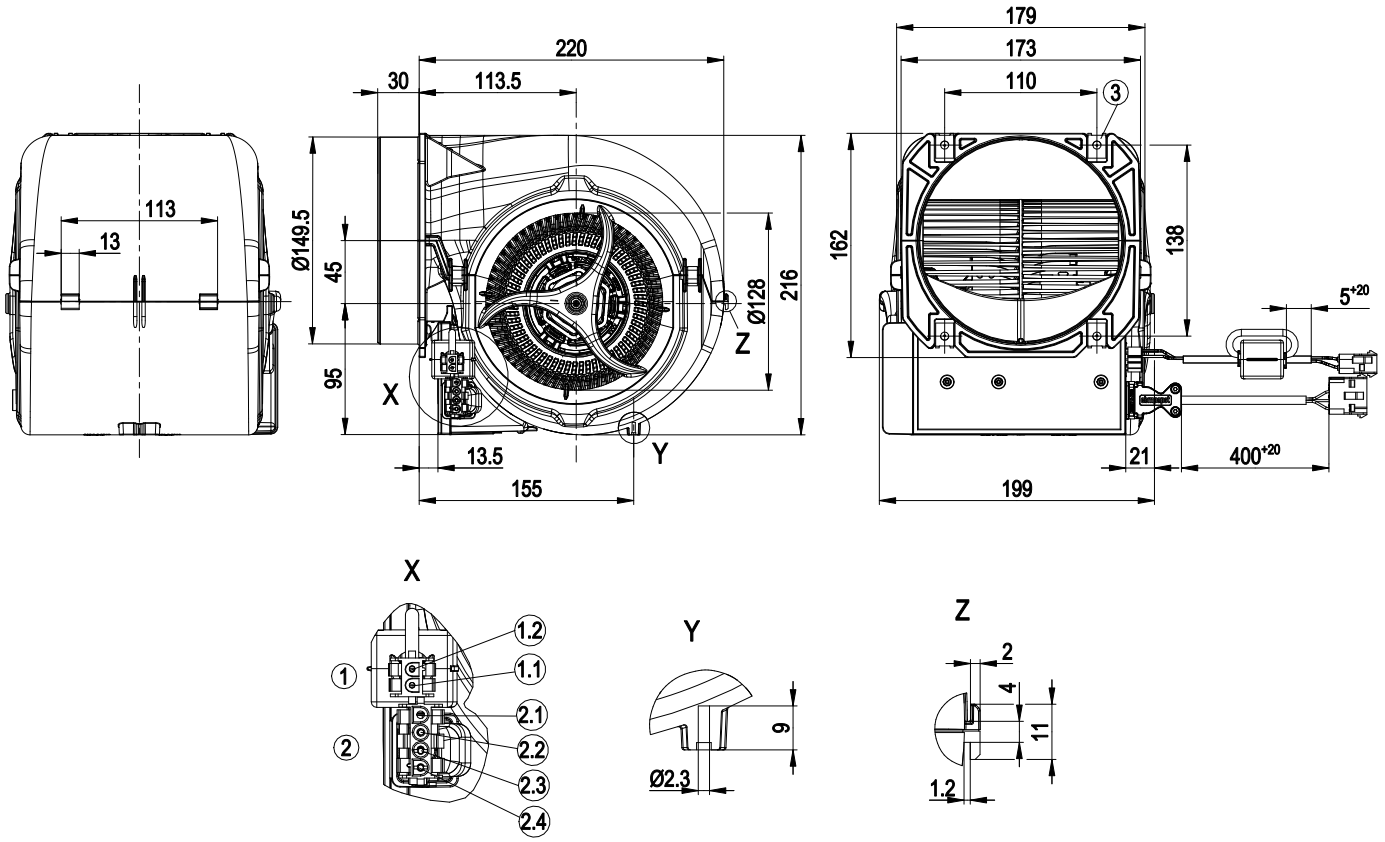
ebm-papst Mulfingen GmbH & Co. KG · Bachmühle 2 · D-74673 Mulfingen · Phone +49 (0) 7938 81-0 · Fax +49 (0) 7938 81-110 · info1@de.ebmpapst.com · www.ebmpapst.com

EC centrifugal fan

forward-curved, dual-intake

with housing (flange)

Product drawing



1	Cable PVC AWG22, 2-pole connector housing tyco 1586856-1, 2x plug pin tyco 926886-1
1.1	0-10 V PWM (yellow)
1.2	GND (blue)
2	Cable PVC AWG20, 4-pole connector housing tyco 926305-7, 1x plug pin tyco 350654-1 (PE), 2x plug pin tyco 926883-1
2.1	not used
2.2	PE (green/yellow)
2.3	L (black)
2.4	N (blue)
3	4x sheet metal nut for thread EN ISO 1478-ST4.8

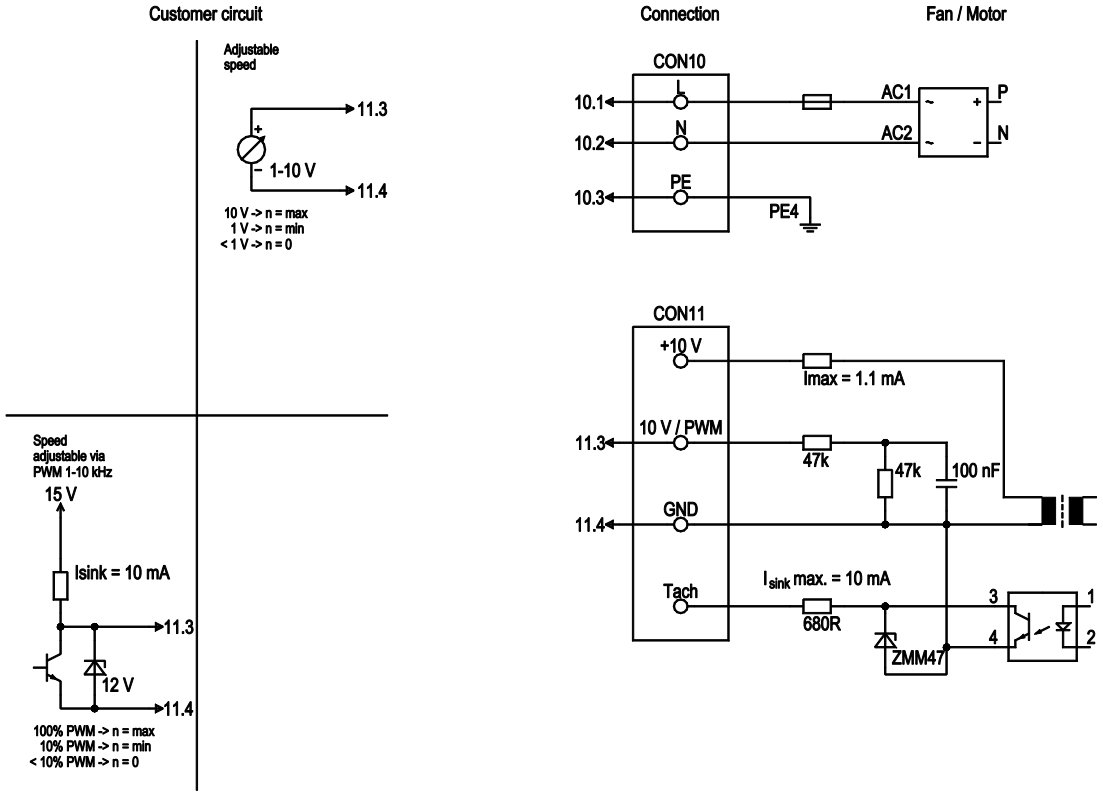
ebm-papst Mulfingen GmbH & Co. KG · Bachmühle 2 · D-74673 Mulfingen · Phone +49 (0) 7938 81-0 · Fax +49 (0) 7938 81-110 · info1@de.ebmpapst.com · www.ebmpapst.com

EC centrifugal fan

forward-curved, dual-intake

with housing (flange)

Connection diagram



No.	Conn.	Designation	Color	Function/assignment
CON10	10.1	L	black	Power supply 230 VAC, 50-60 Hz, see nameplate for voltage range
CON10	10.2	N	blue	Neutral conductor
CON10	10.3	PE	green/yellow	Protective earth
CON11	11.3	0-10 V PWM	yellow	Control input 0-10 V or PWM, electrically isolated
CON11	11.4	GND	blue	GND connection for control interface

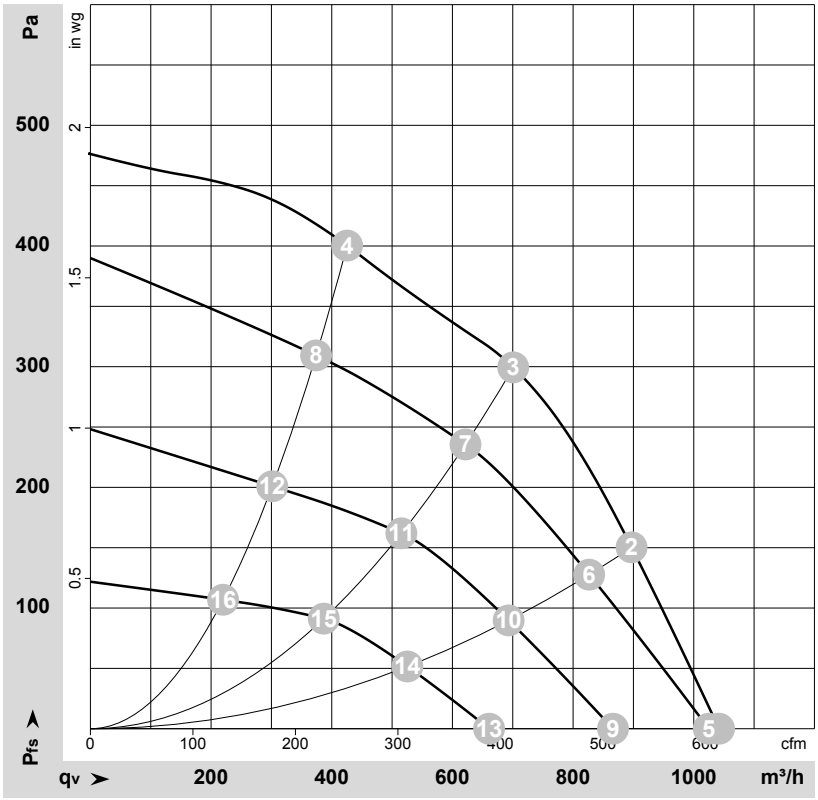
ebm-papst Mulfingen GmbH & Co. KG · Bachmühle 2 · D-74673 Mulfingen · Phone +49 (0) 7938 81-0 · Fax +49 (0) 7938 81-110 · info1@de.ebmpapst.com · www.ebmpapst.com

EC centrifugal fan

forward-curved, dual-intake

with housing (flange)

Curves: Air performance 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-171562-1
Measurement: LU-172177-1
Measurement: LU-172175-1
Measurement: LU-172173-1

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	inH2O
1	230	50	1740	175	1.20	62	73	1040	0	615	0.00
2	230	50	2025	175	1.20	60	71	895	150	530	0.60
3	230	50	2330	162	1.20	59	70	700	300	415	1.20
4	230	50	2580	118	0.93	61	72	425	400	250	1.61
5	230	50	1725	168	1.28	61	73	1025	0	605	0.00
6	230	50	1905	138	1.08	58	69	825	132	485	0.53
7	230	50	2080	108	0.87	56	67	620	236	365	0.95
8	230	50	2270	77	0.65	57	68	375	311	220	1.25
9	230	50	1455	98	0.81	57	68	865	0	510	0.00
10	230	50	1585	76	0.64	53	64	695	93	410	0.37
11	230	50	1710	57	0.50	51	62	515	162	305	0.65
12	230	50	1820	41	0.37	51	62	300	201	175	0.81
13	230	50	1110	44	0.40	50	61	660	0	390	0.00
14	230	50	1195	34	0.31	46	57	525	54	310	0.22
15	230	50	1275	25	0.24	43	54	385	91	230	0.37
16	230	50	1340	18	0.18	43	54	220	107	130	0.43

U = Power supply · 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