D1G160-DA33-20

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	**D1G160-DA33-20**
Motor	**M1G074-CF**

Nominal voltage	VDC	48
Nominal voltage range	VDC	36 .. 57
Frequency	Hz	-
Method of obtaining data		fa
Speed (rpm)	min^{-1}	1250
Power consumption	W	112
Current draw	A	2.9
Min. back pressure	Pa	100
Min. back pressure	in. wg	0.4
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	60

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	4.24 kg
Size	160 mm
Motor size	74
Rotor surface	Painted black
Impeller material	Sheet steel, galvanized
Housing material	Sheet steel, galvanized
Direction of rotation	Counterclockwise, viewed toward rotor
Degree of protection	IP42
Insulation class	"B"
Moisture (F) / Environmental (H) protection class	H0+
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
Mode	S1
Motor bearing	Ball bearing
Technical features	- Tach output - Motor current limitation - Soft start - Control input 0-10 VDC / PWM - Reverse polarity protection
Electrical hookup	Connector with cable
With cable	Variable
Conformity with standards	EN 60034-1; EN 60204-1; EN 60335-1, motor not provided with overheating protection at the factory
Approval	UL 1004-1; CSA C22.2 No. 77

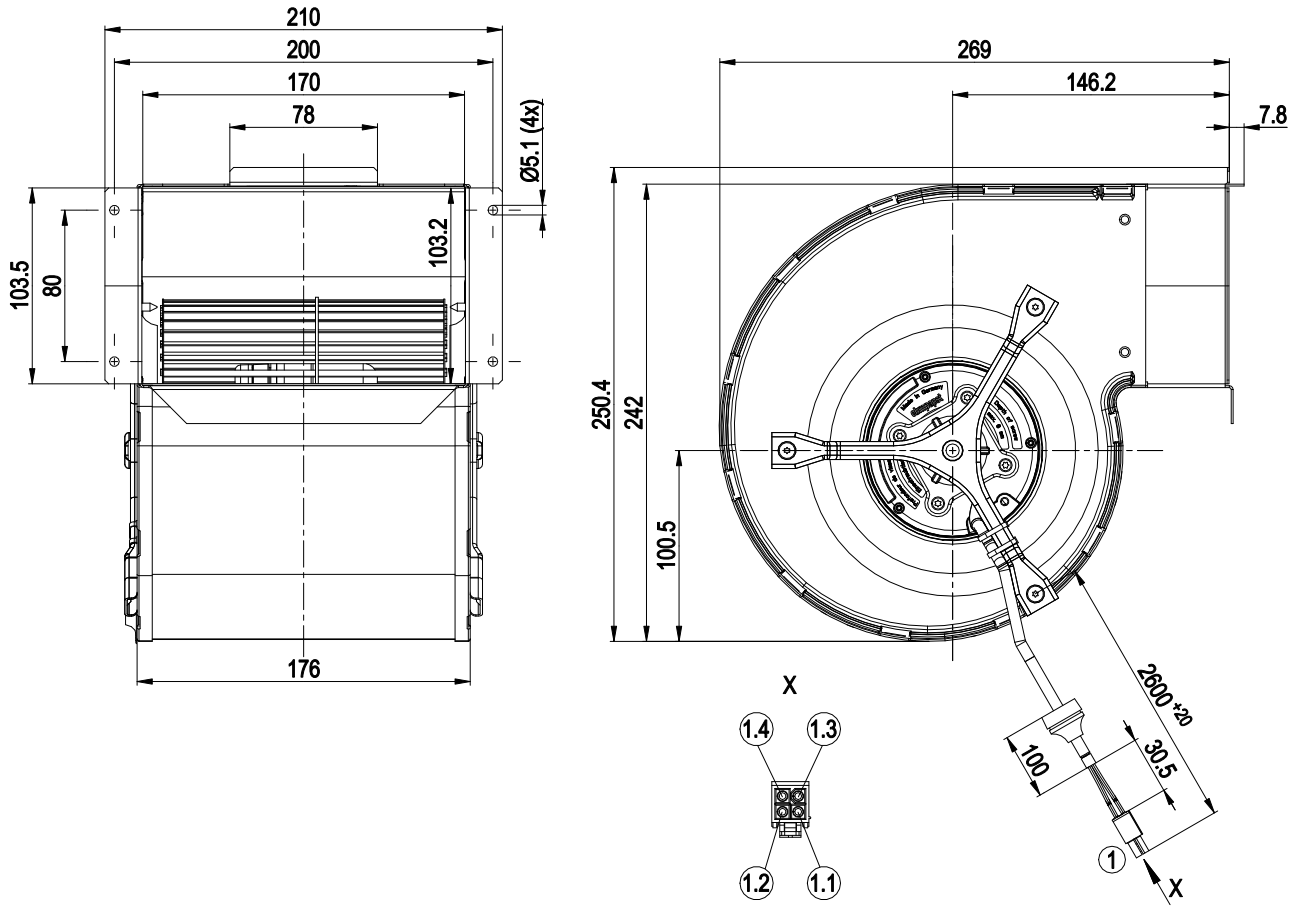
ebm-papst Mulfingen GmbH & Co. KG · Bachmühle 2 · D-74673 Mulfingen · Phone +49 (0) 7938 81-0 · Fax +49 (0) 7938 81-110 · info1@de.ebmpapst.com · www.ebmpapst.com

EC centrifugal fan

forward-curved, single-intake

with housing (flange)

Product drawing



1	Cable PVC AWG20
	4-pole connector housing TE 172167-1, 4x socket TE 170362-1
1.1	GND (blue)
1.2	PWM/LIN (yellow)
1.3	DUE (white)
1.4	UN +48 VDC (red)

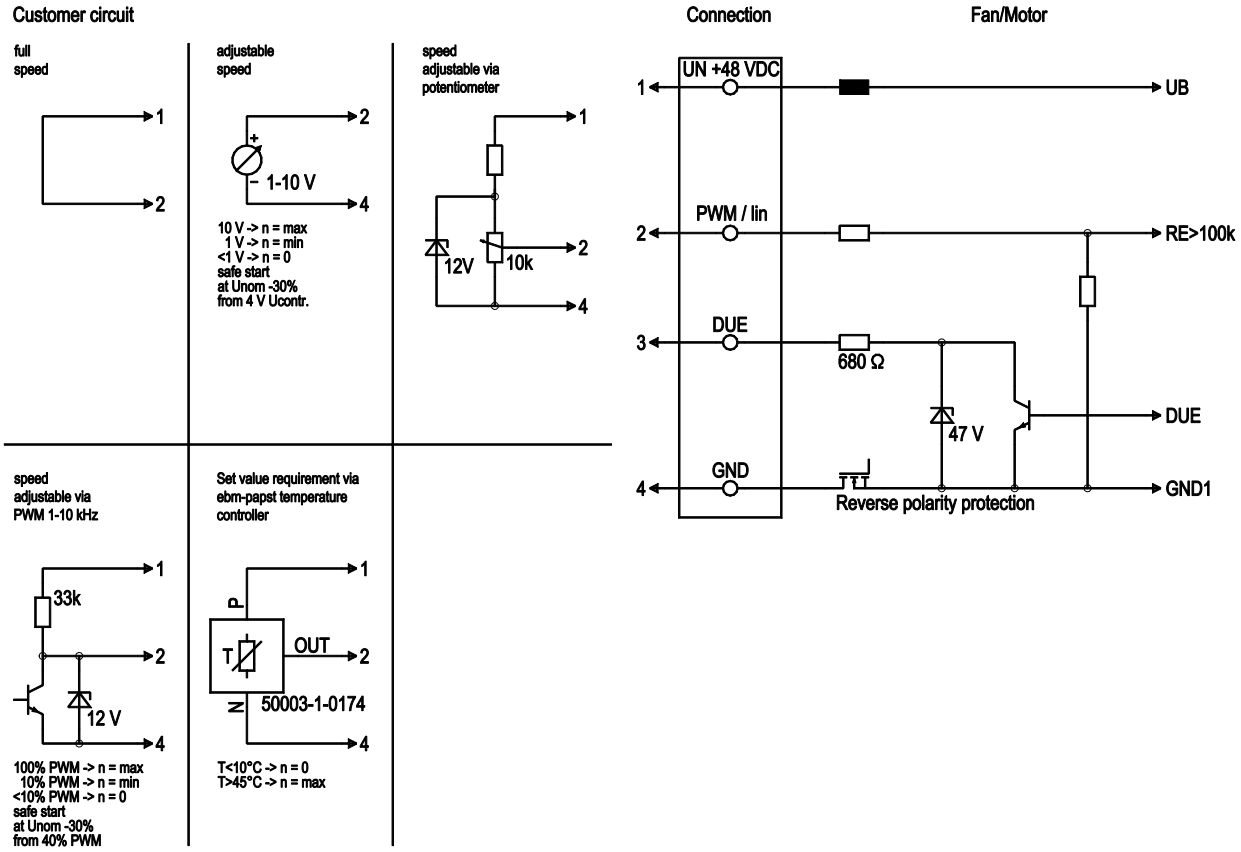
ebm-papst Mulfingen GmbH & Co. KG · Bachmühle 2 · D-74673 Mulfingen · Phone +49 (0) 7938 81-0 · Fax +49 (0) 7938 81-110 · info1@de.ebmpapst.com · www.ebmpapst.com

EC centrifugal fan

forward-curved, single-intake

with housing (flange)

Connection diagram



No.	Conn.	Designation	Color	Function/assignment
1	1	Un +48 VDC	red	Power supply 48 VDC, maximum ripple 3.5%
1	2	PWM / lin	yellow	PWM/lin. Control input, 0-10 V
1	3	DUE	white	Tach output, 3 pulses per revolution, Isink max = 10 mA
1	4	GND	blue	Reference ground

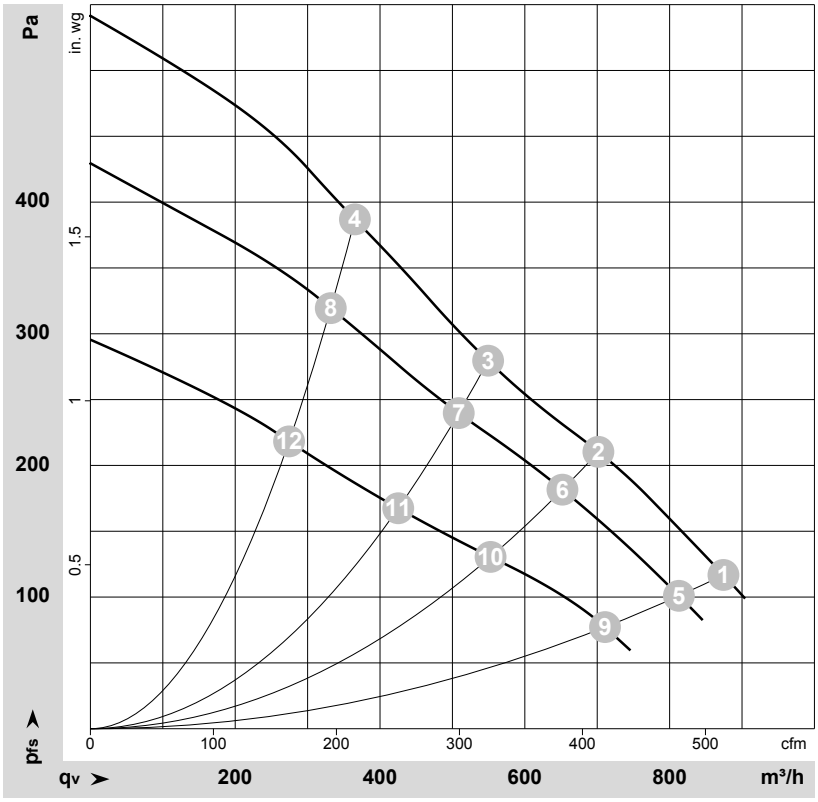
ebm-papst Mulfingen GmbH & Co. KG · Bachmühle 2 · D-74673 Mulfingen · Phone +49 (0) 7938 81-0 · Fax +49 (0) 7938 81-110 · info1@de.ebmpapst.com · www.ebmpapst.com

EC centrifugal fan

forward-curved, single-intake

with housing (flange)

Curves: Air performance



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-51358-1
Measurement: LU-51357-1
Measurement: LU-51359-1

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	q_V	p_{fs}	q_V	p_{fs}
	V	min^{-1}	W	A	m^3/h	Pa	cfm	in. wg
1	57	1525	128	2.82	875	117	515	0.47
2	57	1735	118	2.50	700	211	415	0.85
3	57	1925	111	2.31	550	280	325	1.12
4	57	2155	105	2.15	365	387	215	1.55
5	48	1420	102	2.50	815	100	480	0.40
6	48	1610	94	2.28	650	180	385	0.72
7	48	1775	89	2.14	510	240	300	0.96
8	48	1950	78	1.89	330	320	195	1.28
9	36	1255	69	2.16	710	77	420	0.31
10	36	1390	60	1.90	555	130	325	0.52
11	36	1490	53	1.69	425	167	250	0.67
12	36	1620	46	1.49	275	218	160	0.88

U = Voltage · n = Speed (rpm) · P_{ed} = Power consumption · I = Current draw · 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