

# EC centrifugal fan

backward-curved, single-intake

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## Nominal data

Type	R1G280-AE45-52	
Motor	M1G074-CF	
Nominal voltage	VDC	24
Nominal voltage range	VDC	16 .. 28
Method of obtaining data		fa
Speed (rpm)	min <sup>-1</sup>	1710
Power consumption	W	95
Current draw	A	4.6
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	60

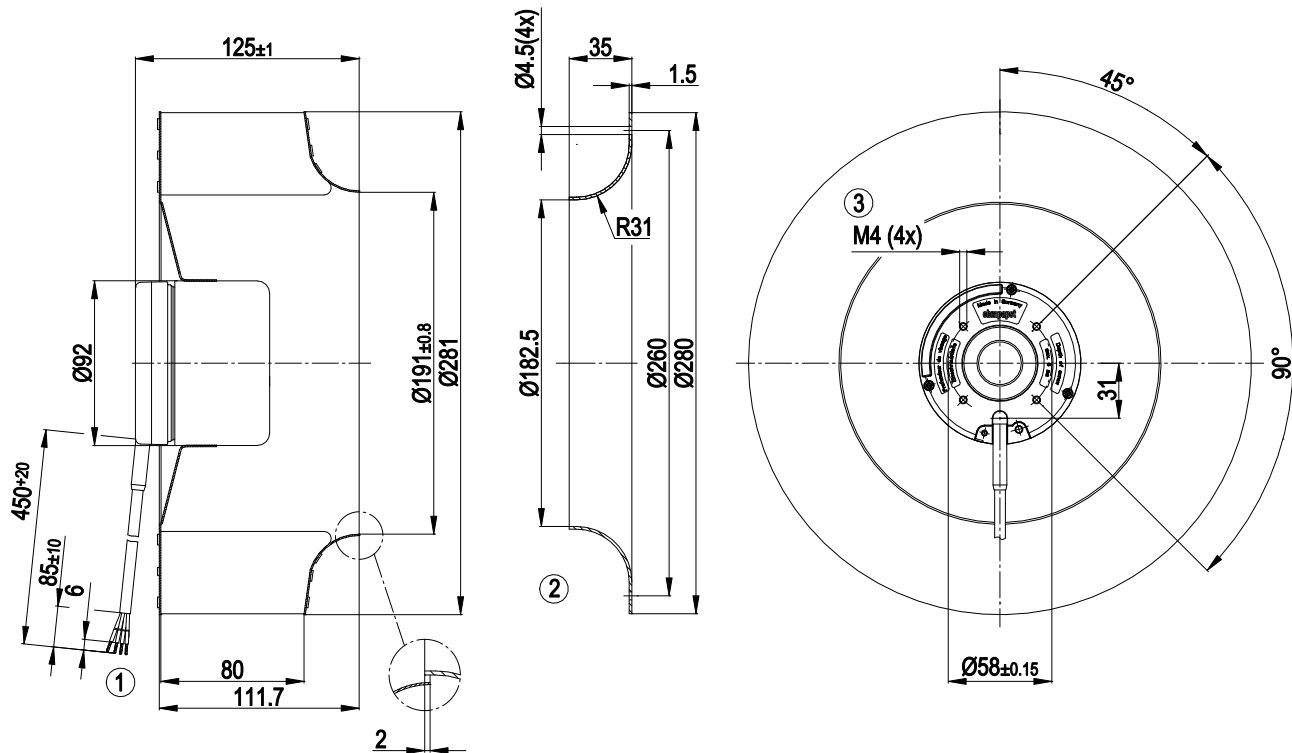
ml = Max. load · me = Max. efficiency · fa = Free air · cs = Customer specification · ce = Customer equipment  
Subject to change



### Technical description

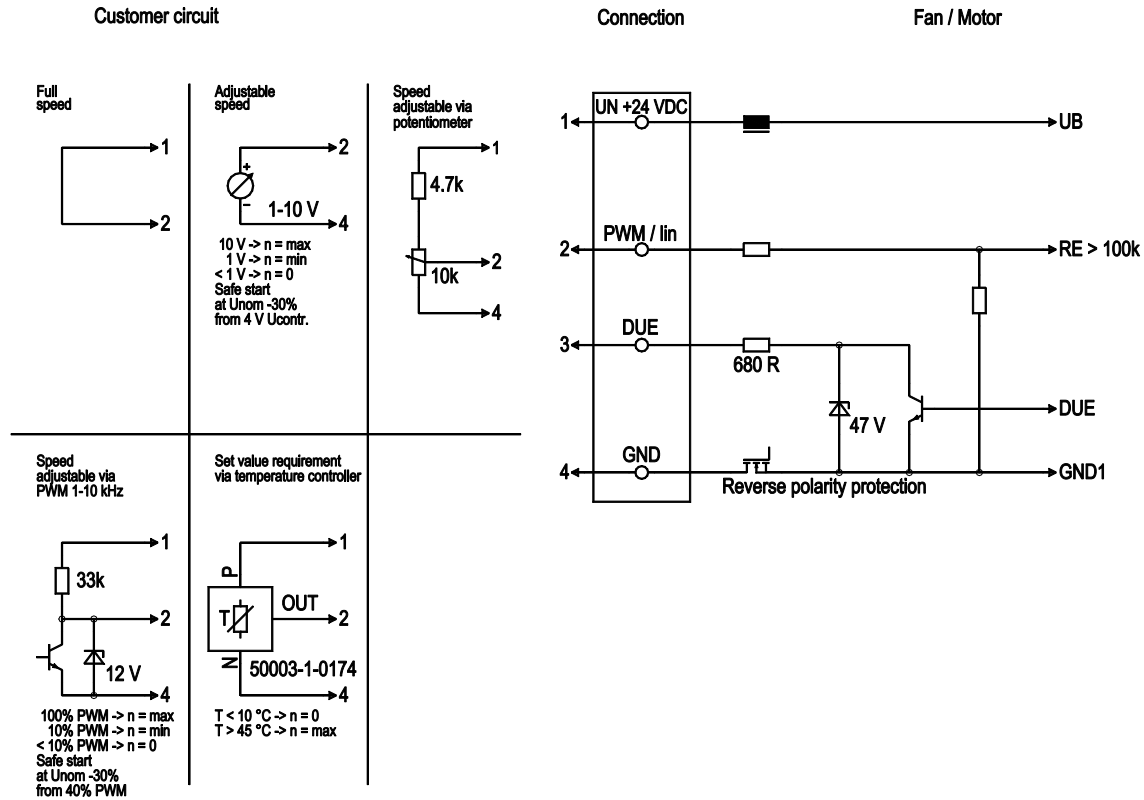
<b>Weight</b>	2.8 kg
<b>Fan size</b>	280 mm
<b>Rotor surface</b>	Painted black
<b>Electronics housing material</b>	Die-cast aluminum
<b>Impeller material</b>	Sheet steel, hot-dip galvanized
<b>Number of blades</b>	11
<b>Direction of rotation</b>	Clockwise, viewed toward rotor
<b>Degree of protection</b>	IP42
<b>Insulation class</b>	"B"
<b>Moisture (F) / Environmental (H) protection class</b>	F0
<b>Max. permitted ambient temp. for motor (transport/storage)</b>	+80 °C
<b>Min. permitted ambient temp. for motor (transport/storage)</b>	-40 °C
<b>Installation position</b>	Any
<b>Condensation drainage holes</b>	None
<b>Mode</b>	S1
<b>Motor bearing</b>	Ball bearing
<b>Technical features</b>	<ul style="list-style-type: none"> <li>- Tach output</li> <li>- Motor current limitation</li> <li>- Soft start</li> <li>- Control input 0-10 VDC / PWM</li> </ul>
<b>EMC immunity to interference</b>	According to EN 61000-6-2 (industrial environment)
<b>EMC interference emission</b>	According to EN 55022 (Class B)
<b>Motor protection</b>	Reverse polarity and locked-rotor protection
<b>With cable</b>	Variable
<b>Protection class</b>	I (with customer connection of protective earth)
<b>Conformity with standards</b>	EN 60950-1
<b>Approval</b>	EAC; UL 1004-1; CSA C22.2 No. 77

## Product drawing



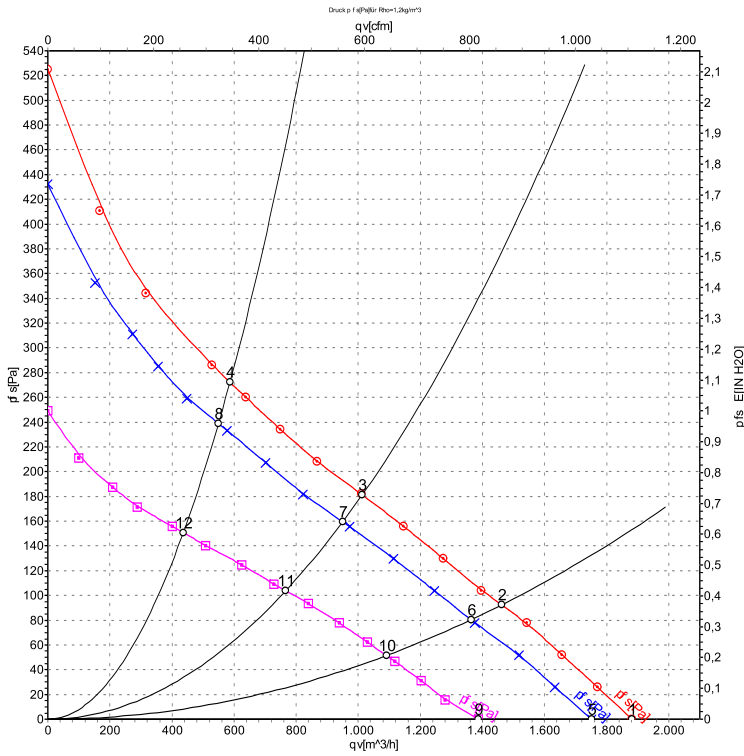
- |   |   |
|---|---|
| 1 | Cable PVC AWG 20, 4x crimped splices                                      |
| 2 | Accessory part: inlet ring 96360-2-4013 not included in scope of delivery |
| 3 | Max. clearance for screw 6 mm   |

## Connection diagram



No.	Conn.	Designation	Color	Function/assignment
1	1	Un +24V	red	Power supply 24 VDC, maximum ripple 3.5%
1	2	PWM / lin	yellow	PWM / lin., control input, 0-10 V
1	3	Tach	white	Tach output, 3 pulses per revolution, Isink max = 10 mA
1	4	GND	blue	Reference ground

## Curves: Air performance



Measurement: LU-54786-1  
 Measurement: LU-54783-1  
 Measurement: LU-54785-1

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 <sub>ed</sub>	I	qv	P <sub>fs</sub>	qv	P <sub>fs</sub>
	V	min <sup>-1</sup>	W	A	m <sup>3</sup> /h	Pa	CFM	inH2O
1	28	1835	118	4.90	1880	0	1105	0.00
2	28	1680	125	5.33	1460	92	860	0.37
3	28	1610	129	5.56	1015	181	595	0.73
4	28	1740	122	5.13	585	272	345	1.09
5	24	1710	95	4.60	1750	0	1030	0.00
6	24	1575	102	4.87	1365	80	800	0.32
7	24	1515	104	5.05	950	160	560	0.64
8	24	1630	99	4.69	550	240	325	0.96
9	16	1355	47	3.27	1385	0	815	0.00
10	16	1270	52	3.64	1090	52	640	0.21
11	16	1230	55	3.84	765	104	450	0.42
12	16	1300	51	3.52	435	151	255	0.61

U = Power supply · n = Speed (rpm) · P<sub>ed</sub> = Power consumption · I = Current draw · qv = Air flow · P<sub>fs</sub> = Pressure increase



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