R3G280-AU06-B1

EC centrifugal fan - RadiPac

backward curved, single inlet



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

Nominal data

Type	**R3G280-AU06-B1**
Motor	**M3G084-GF**

Phase		1~
Nominal voltage	VAC	230
Nominal voltage range	VAC	200 .. 277
Frequency	Hz	50/60
Type of data definition		ml
Speed (rpm)	min^{-1}	2800
Power input	W	715
Current draw	A	3.1
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	40

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

		Actual	Request 2015
01 Overall efficiency η_{es}	%	58.7	50
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		70.7	62
05 Variable speed drive		Yes	

09 Power input P_{ed}	kW	0.72
09 Air flow q_v	m^3/h	2110
09 Pressure increase p_{fs}	Pa	667
10 Speed (rpm) n	min^{-1}	2770
11 Specific ratio*		1.01

Data definition with optimum efficiency.
The ErP data is determined using a motor-impeller combination in a standardised measurement configuration.

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

LU-125805

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Technical features

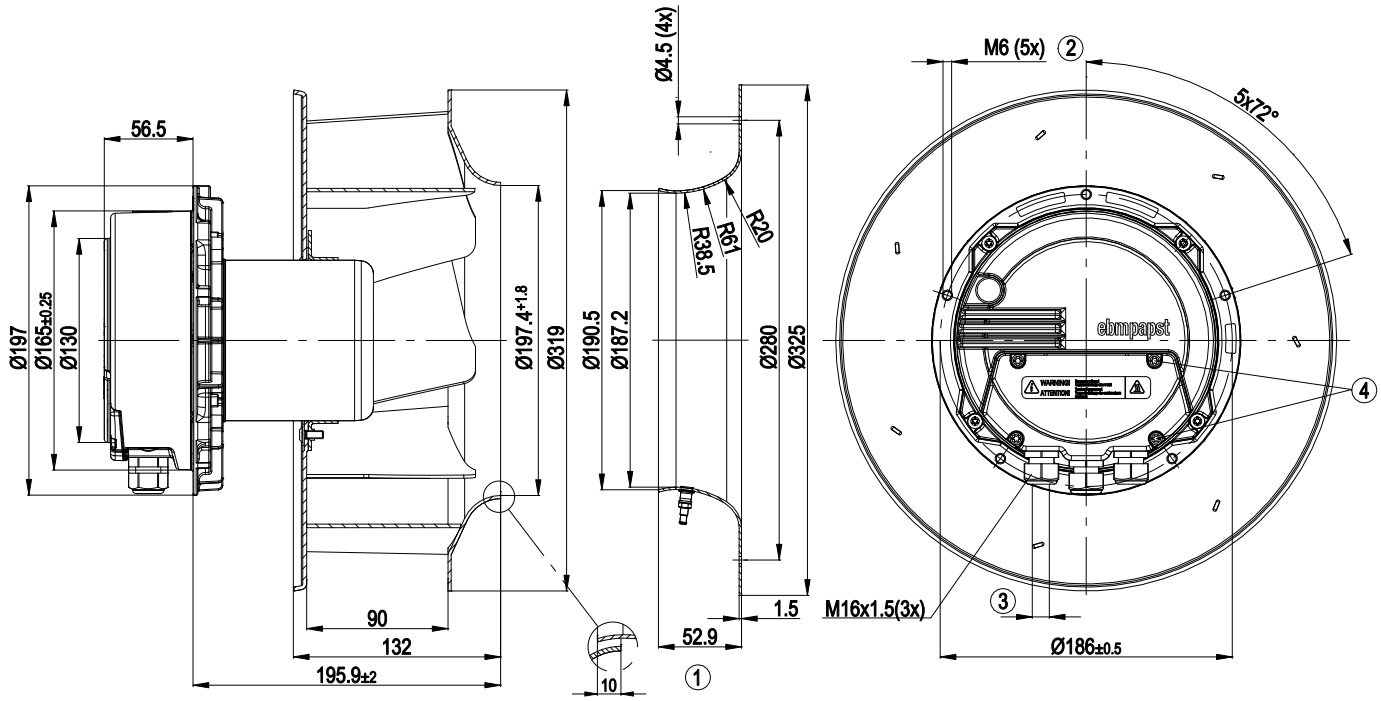
Mass	6.8 kg
Size	280 mm
Surface of rotor	Coated in black
Material of electronics housing	Die-cast aluminium
Material of impeller	Aluminium sheet
Number of blades	7
Direction of rotation	Clockwise, seen on rotor
Type of protection	IP 54
Insulation class	"B"
Humidity (F)/environmental protection class (H)	F3-1
Max. permissible ambient motor temp. (transp./ storage)	+80 °C
Min. permissible ambient motor temp. (transp./storage)	-40 °C
Mounting position	Shaft horizontal or rotor on bottom; rotor on top on request
Condensate discharge holes	Rotor-side
Operation mode	S1
Motor bearing	Ball bearing
Technical features	- Output 10 VDC, max. 10 mA - Output 20 VDC, max. 50 mA - Output for slave 0-10 V - Input for sensor 0-10 V or 4-20 mA - Alarm relay - Motor current limit - PFC, active - RS485 MODBUS RTU - Soft start - Control input 0-10 VDC / PWM - Control interface with SELV potential safely disconnected from the mains - Over-temperature protected electronics / motor - Line undervoltage / phase failure detection
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 55022 (Class B, household environment)
Touch current acc. IEC 60990 (measuring network Fig. 4, TN system)	<= 3.5 mA
Electrical leads	Via terminal box
Motor protection	Thermal overload protector (TOP) wired internally
Protection class	I (if protective earth is connected by customer)
Product conforming to standard	EN 61800-5-1; CE
Approval	CCC; EAC

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Product drawing



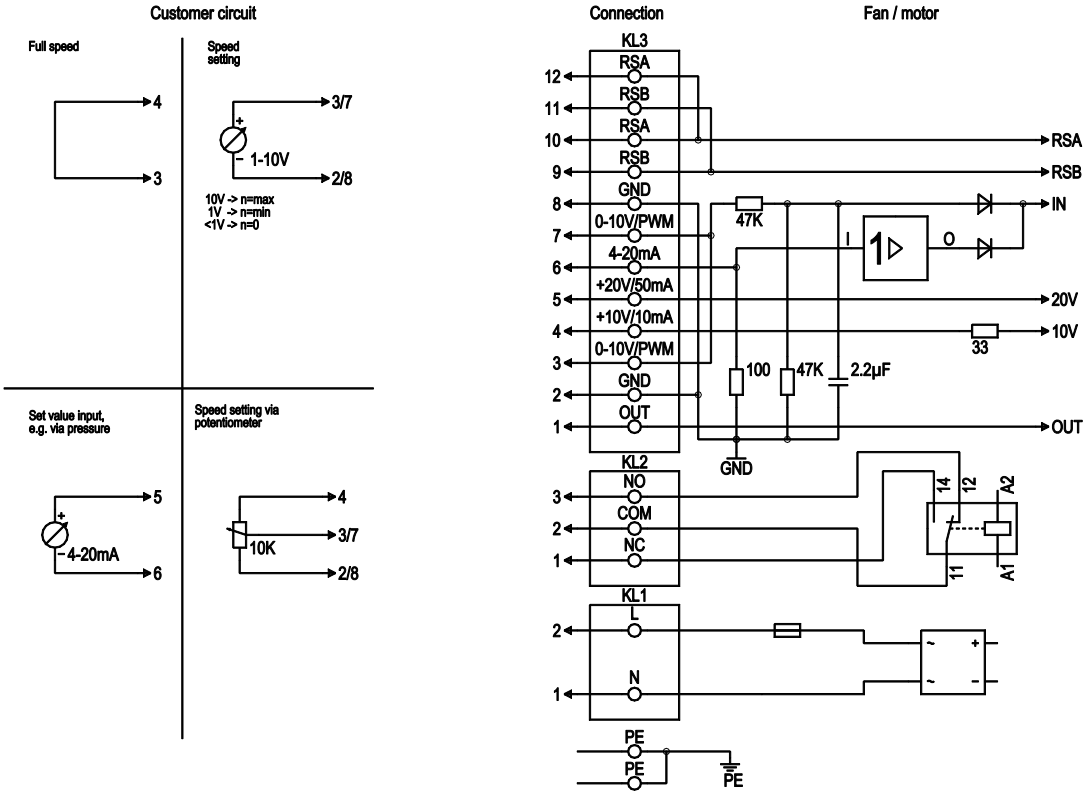
1	Accessory part: Inlet nozzle 28075-2-4013 with a bleeder connection for pressure relief (k-factor:93), not included in the standard scope of delivery
2	Depth of screw max. 16 mm
3	Cable diameter: min. 4 mm, max. 10 mm, tightening torque: 2.5±0.4 Nm
4	Tightening torque 3.5±0.5 Nm

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Connection screen



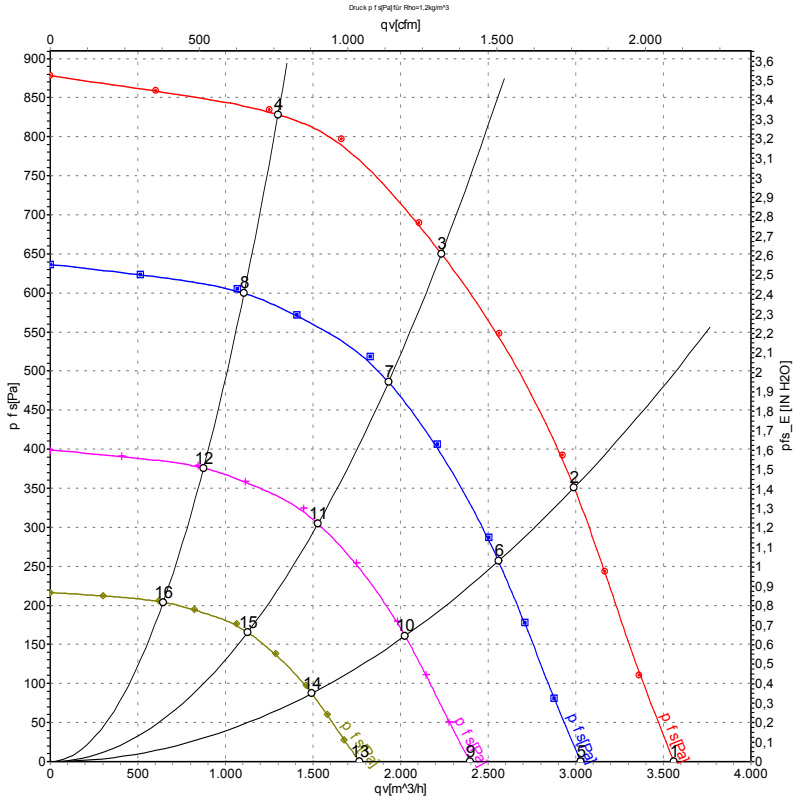
No.	Conn.	Designation	Function / assignment
PE	-	PE	Protective earth connection
KL1	1, 2	N, L	Supply voltage, 50/60 Hz
KL2	1	NC	Floating status message contact, break for failure
KL2	2	COM	Floating status message contact, changeover contact, common connection (2 A, max. 250 VAC, min. 10 mA, AC1)
KL2	3	NO	Floating status message contact, normally open, make for failure
KL3	1	OUT	Analogue output, 0-10 VDC, max. 3 mA, SELV, Output of the current motor level control coefficient: 1 V corresponds to 10% level control coefficient, 10 V correspond to 100% level control coefficient.
KL3	2, 8	GND	Reference mass for control interface, SELV
KL3	3, 7	0-10 V	Use control / actual value input 0-10 VDC, impedance 100 kΩ only as alternative to 4-20 mA input, SELV
KL3	4	+10 V	Voltage output 10 VDC (+/- 3%), max. 10 mA, Supply voltage for ext. devices (e.g. potentiometer), SELV
KL3	5	+20 V	Voltage output 20 VDC (+25%/-10%), max. 50 mA Supply voltage for ext. devices (e.g. sensors), SELV
KL3	6	4-20 mA	Use control / actual value input 4-20 mA, impedance 100 Ω, only as alternative to 0-10 V input, SELV
KL3	9, 11	RSB	RS485 interface for MODBUS, RSB
KL3	10, 12	RSA	RS485 interface for MODBUS, RSA

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Charts: Air flow 50 Hz



Measurement: LU-125805-1

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	LpA_{in}	LwA_{in}	LwA_{out}	q_V	p_{fs}	q_V	p_{fs}
	V	Hz	min^{-1}	W	A	dB(A)	dB(A)	dB(A)	m^3/h	Pa	cfm	inH2O
1	230	50	2800	479	2.11	75	83	89	3560	0	2095	0.00
2	230	50	2800	655	2.88	71	79	85	2990	350	1760	1.41
3	230	50	2800	715	3.10	69	76	83	2235	650	1315	2.61
4	230	50	2800	650	2.85	73	82	87	1300	830	765	3.33
5	230	50	2400	294	1.30	71	79	85	3025	0	1780	0.00
6	230	50	2400	410	1.80	68	75	81	2560	258	1505	1.04
7	230	50	2400	471	2.06	66	73	80	1930	488	1135	1.96
8	230	50	2400	401	1.76	69	78	84	1105	602	650	2.42
9	230	50	1900	146	0.65	66	74	80	2395	0	1410	0.00
10	230	50	1900	203	0.89	62	70	76	2025	161	1190	0.65
11	230	50	1900	234	1.02	61	68	75	1530	306	900	1.23
12	230	50	1900	199	0.87	64	73	78	875	377	515	1.51
13	230	50	1400	58	0.26	60	67	73	1765	0	1040	0.00
14	230	50	1400	81	0.36	56	63	70	1495	88	880	0.35
15	230	50	1400	93	0.41	54	62	68	1125	166	665	0.67
16	230	50	1400	80	0.35	58	66	72	645	205	380	0.82

U = Supply voltage · f = Frequency · n = Speed (rpm) · P_{ed} = Power input · I = Current draw · LpA_{in} = Sound pressure level inlet side · LwA_{in} = Sound power level inlet side · LwA_{out} = Sound power level outlet side
q_V = Air flow · p_{fs} = Pressure increase

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