

R3G400-AS14-13

EC centrifugal fan

backward-curved, single-intake



R3G400-AS14-13 ebmpapst Datasheet

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Nominal data

Type	R3G400-AS14-13	
Motor	M3G150-FF	
Phase		3~
Nominal voltage	VAC	200
Nominal voltage range	VAC	200 .. 240
Frequency	Hz	50/60
Method of obtaining data		ml
Status		prelim.
Speed (rpm)	min ⁻¹	2400
Power consumption	W	2400
Current draw	A	7.0
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	60

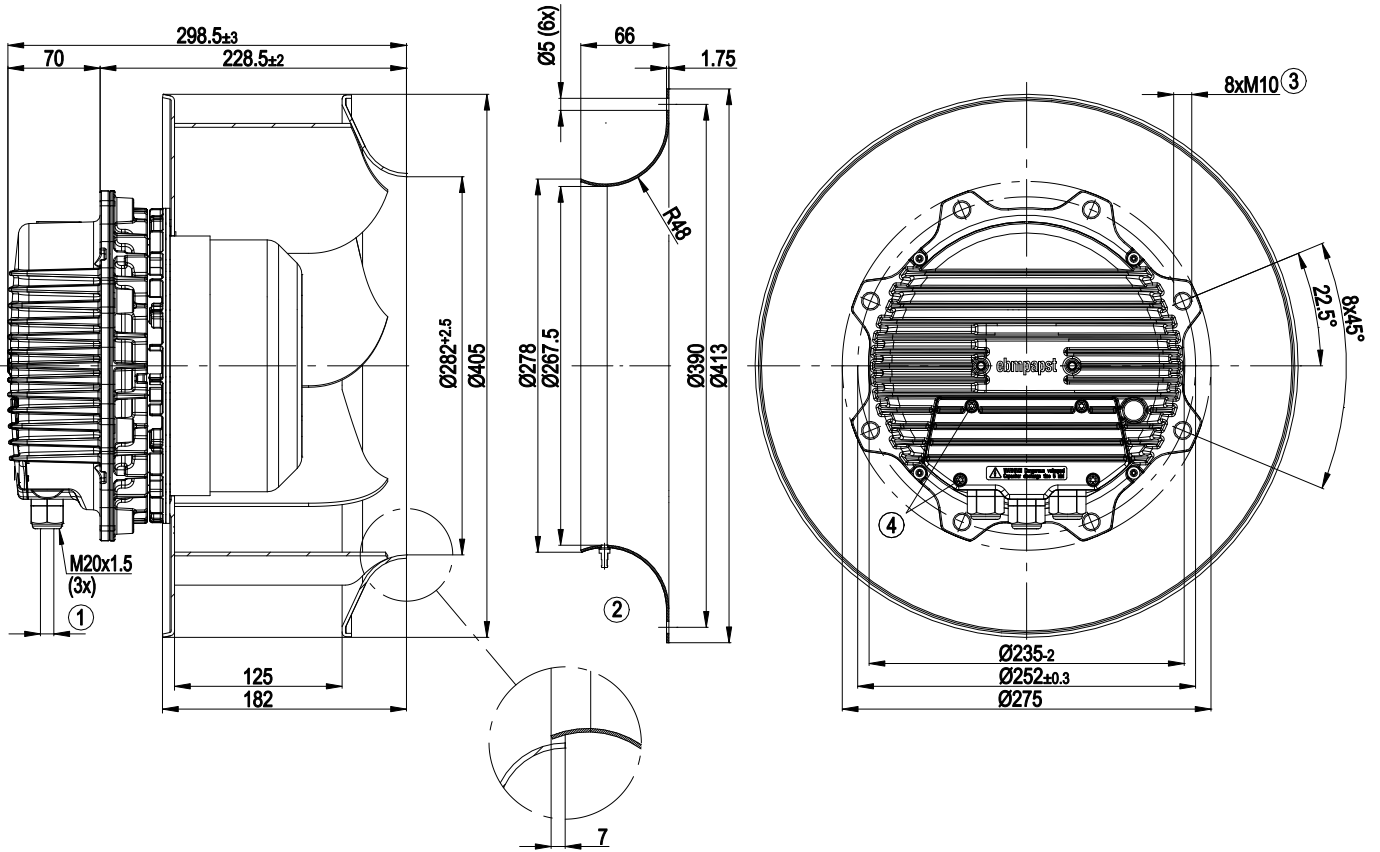
ml = Max. load · me = Max. efficiency · fa = Free air · cs = Customer specification · ce = Customer equipment
Subject to change



Technical description

Weight	20.2 kg
Fan size	400 mm
Rotor surface	Painted black
Electronics housing material	Die-cast aluminum
Impeller material	Sheet aluminum, welded
Number of blades	7
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP55
Insulation class	"F"
Moisture (F) / Environmental (H) protection class	H1
Max. permitted ambient temp. for motor (transport/storage)	+80 °C
Min. permitted ambient temp. for motor (transport/storage)	-40 °C
Installation position	Shaft horizontal or rotor on bottom
Condensation drainage holes	On rotor side
Mode	S1
Motor bearing	Ball bearing
Technical features	<ul style="list-style-type: none"> - 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 - Integrated PID controller - Motor current limitation - PFC, passive - RS-485 ebmBUS - Soft start - Control input 0-10 VDC / PWM - Control interface with SELV potential safely disconnected from the mains - Thermal overload protection for electronics/motor - Line undervoltage / phase failure detection
Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)	<= 3.5 mA
Electrical hookup	Via terminal box
Motor protection	Reverse polarity and locked-rotor protection
Protection class	I (with customer connection of protective earth)
Conformity with standards	CE
Approval	CSA C22.2 No. 77; EAC; UL 2111

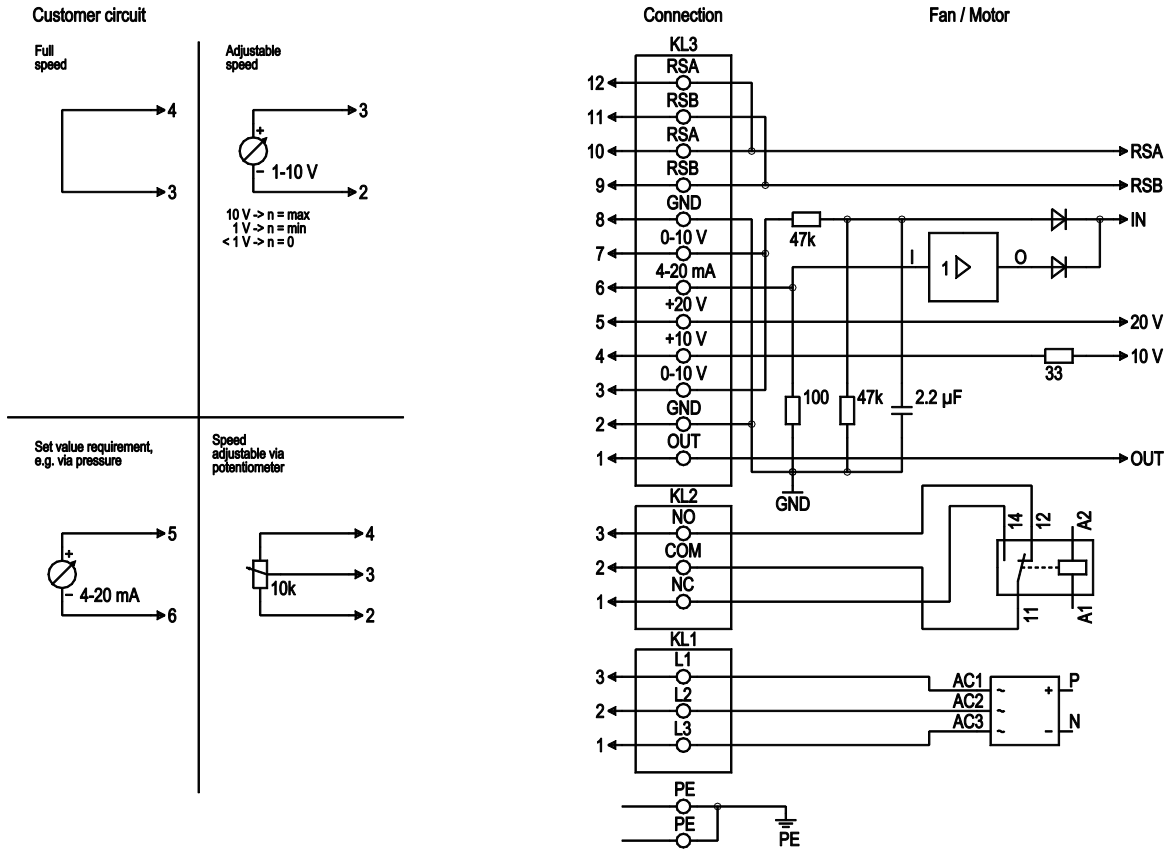
Product drawing



1	Cable diameter min. 4 mm, max. 10 mm; tightening torque 4±0.6 Nm
2	Accessory part: inlet ring 40041-2-4013 with pressure tap not included in scope of delivery, other inlet rings on request
3	Max. clearance for screw 25 mm
4	Tightening torque 3.5 ± 0.5 Nm



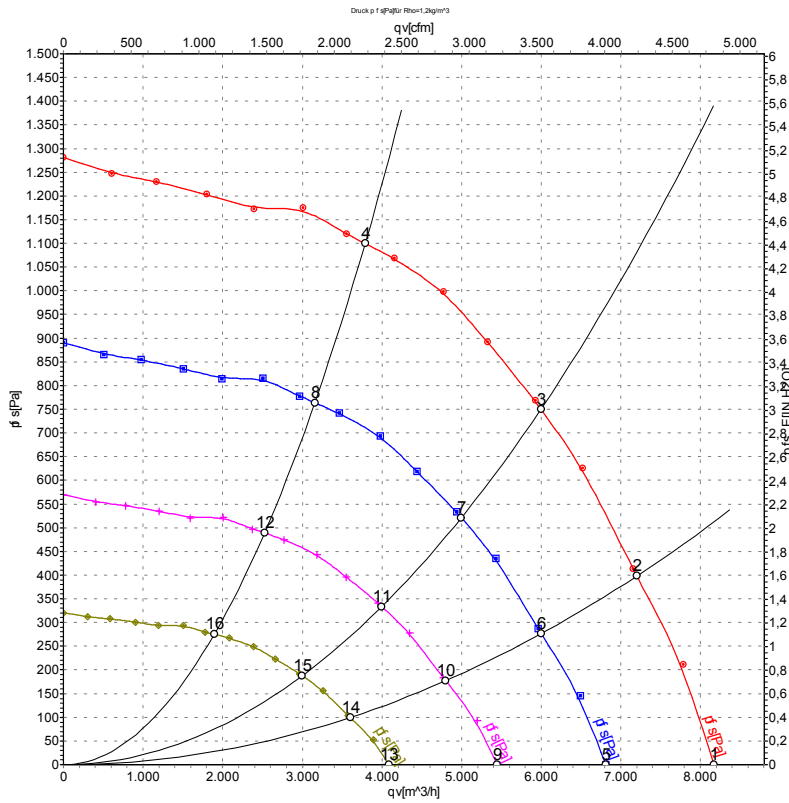
Connection diagram



No.	Conn.	Designation	Function/assignment
PE		PE	Protective earth terminal
KL1	1, 2, 3	L1, L2, L3	Power supply 50/60 Hz
KL2	1	NC	Floating status contact, break for failure
KL2	2	COM	floating status contact, changeover contact, common connection (2 A, max. 250 VAC, min. 10 mA, AC1)
KL2	3	NO	Floating status contact, make for failure
KL3	1	OUT	Analog output, 0-10 VDC, max. 3 mA, SELV, output of current motor modulation level: 1 V corresponds to 10 % modulation level. 10 V corresponds to 100 % modulation level.
KL3	2, 8	GND	Reference ground for control interface, SELV
KL3	3, 7	0-10 V	Use control / current sensor 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, power supply for external devices (e.g. potentiometer), SELV
KL3	5	+20 V	Voltage output 20 VDC (+25% / -10%), max. 50 mA, power supply for external devices (e.g. sensors); SELV
KL3	6	4-20 mA	Use control / current sensor value input 4-20 mA, impedance 100 Ω only as alternative to 0-10 V input, SELV
KL3	9, 11	RSB	RS485 interface for ebmBUS, RSB, SELV
KL3	10, 12	RSA	RS485 interface for ebmBUS, RSA, SELV



Curves: Air performance 50 Hz



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	qv	p _{fs}	qv	p _{fs}
	V	Hz	min ⁻¹	W	A	m ³ /h	Pa	CFM	inH2O
1	200	50	2400	1847	5.57	8170	0	4810	0.00
2	200	50	2400	2182	6.66	7200	400	4240	1.61
3	200	50	2400	2400	7.00	5995	750	3530	3.01
4	200	50	2400	2168	6.58	3790	1100	2230	4.42
5	200	50	2000	1069	3.22	6810	0	4005	0.00
6	200	50	2000	1263	3.85	6000	276	3530	1.11
7	200	50	2000	1359	4.12	4995	522	2940	2.10
8	200	50	2000	1255	3.81	3155	764	1860	3.07
9	200	50	1600	547	1.65	5445	0	3205	0.00
10	200	50	1600	646	1.97	4800	176	2825	0.71
11	200	50	1600	696	2.11	3995	334	2355	1.34
12	200	50	1600	642	1.95	2525	489	1485	1.96
13	200	50	1200	231	0.70	4085	0	2405	0.00
14	200	50	1200	273	0.83	3600	99	2120	0.40
15	200	50	1200	294	0.89	3000	188	1765	0.75
16	200	50	1200	271	0.82	1895	275	1115	1.10

U = Power supply · f = Frequency · n = Speed (rpm) · P_{ed} = Power consumption · I = Current draw · qv = Air flow · p_{fs} = Pressure increase

