R3G800-PW07-05

EC centrifugal fan - RadiPac

backward-curved, single-intake

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Nominal data

Type	**R3G800-PW07-05**
Motor	**M3G200-QA**

Phase		3~
Nominal voltage	VAC	400
Nominal voltage range	VAC	380 .. 480
Frequency	Hz	50/60
Method of obtaining data		ml
Speed (rpm)	min^{-1}	1370
Power consumption	W	11300
Current draw	A	17.5
Min. ambient temperature	°C	-40
Max. ambient temperature	°C	40

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

Data according to Commission Regulation (EU) 327/2011 (EN 17166)

		Actual	Req. 2015
01 Overall efficiency η_{es}	%	70.1	62.1
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		70	62
05 Variable speed drive		Yes	

09 Power consumption P_{ed}	kW	11.37
09 Air flow q_v	m^3/h	25985
09 Pressure increase p_{fs}	Pa	1069
10 Speed (rpm) n	min^{-1}	1365
11 Specific ratio*		1.01

Data obtained at optimum efficiency level.
The ErP data is determined using a motor-impeller combination in a standardized measurement setup.

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

LU-184297

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Technical description

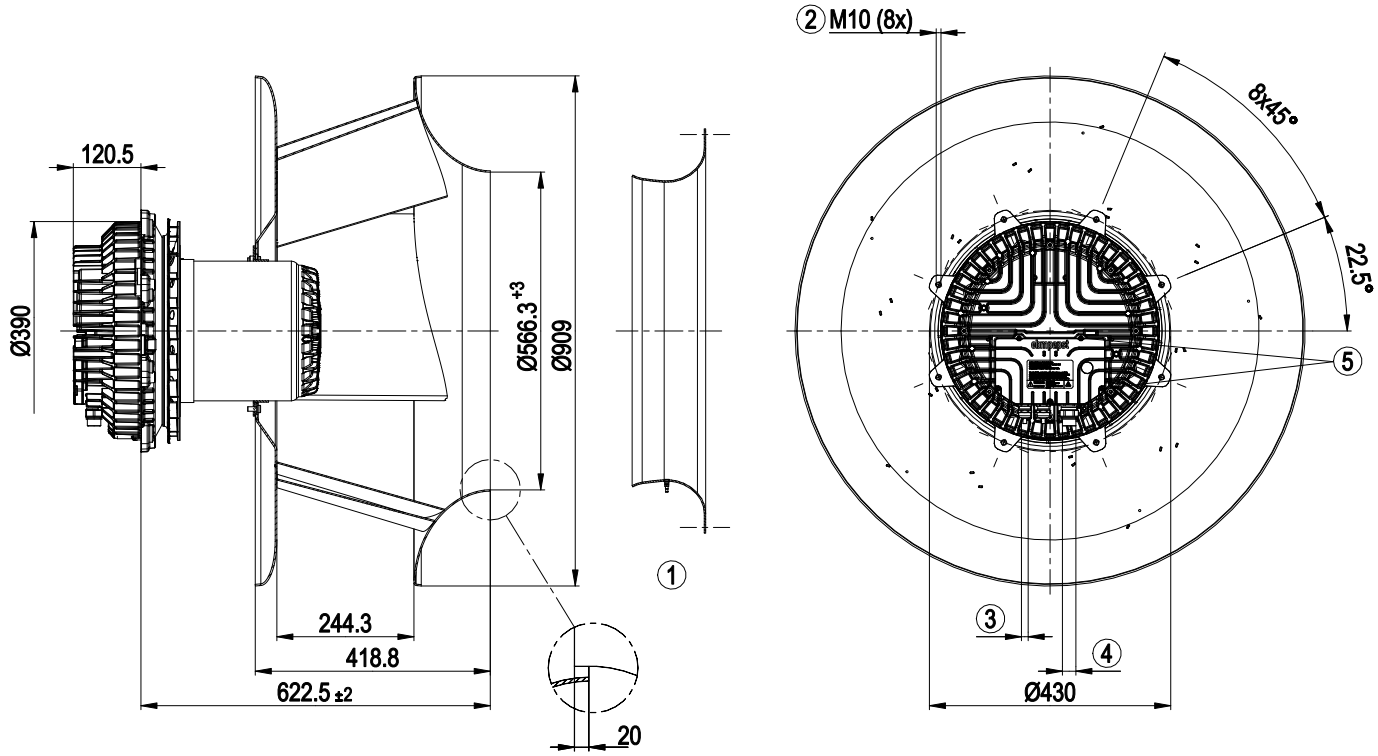
Weight	82.9 kg
Size	800 mm
Motor size	200
Rotor surface	Painted black
Electronics housing material	Die-cast aluminum
Impeller material	Sheet aluminum
Inlet nozzle material	Sheet steel, galvanized
Number of blades	5
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP55
Insulation class	"F"
Moisture (F) / Environmental (H) protection class	H1
Ambient temperature note	Occasional start-up at temperatures between -40°C and -25°C is permitted. For continuous operation at ambient temperatures below -25°C (such as refrigeration applications), use must be made of a fan design with special low-temperature bearings.
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; rotor on top on request
Condensation drainage holes	On rotor side
Mode	S1
Motor bearing	Ball bearing; (sealed)
Technical features	- Power limiter - Motor current limitation - Soft start - Temperature derating - Thermal overload protection for electronics/motor - Line undervoltage / phase failure detection
EMC immunity to interference	According to EN 61000-6-2 (industrial environment)
EMC interference emission	According to EN 61000-6-4 (industrial environment)
Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)	<= 3.5 mA
Electrical hookup	Terminal box
Motor protection	Reverse polarity and locked-rotor protection
Protection class	I (with customer connection of protective earth)
Conformity with standards	EN 61800-5-1; CE
Approval	CSA C22.2 No. 77 + CAN/CSA-E60730-1; EAC; UL 1004-7 + 60730-1

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Product drawing



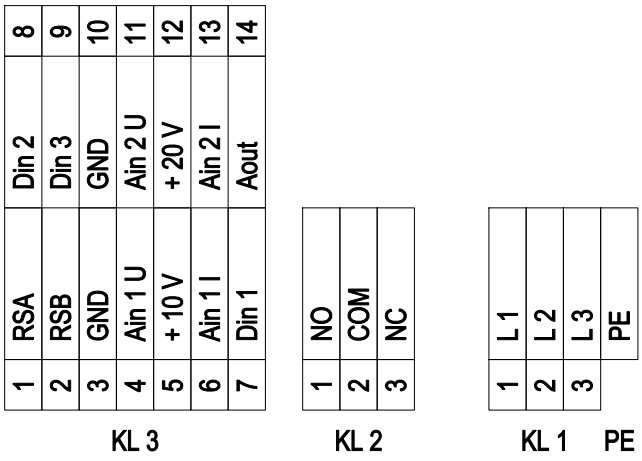
1	Accessory part: Inlet ring 80075-2-4013 with pressure tap (k-factor: 695) not included in scope of delivery
2	Max. clearance for screw 25 mm
3	Cable diameter min. 5 mm, max. 13 mm, tightening torque 6 ±0.9 Nm
4	Cable diameter min. 16 mm, max. 20.5 mm, tightening torque 6 ± 0.9 Nm
5	Tightening torque 3.5 ± 0.5 Nm

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Connection diagram



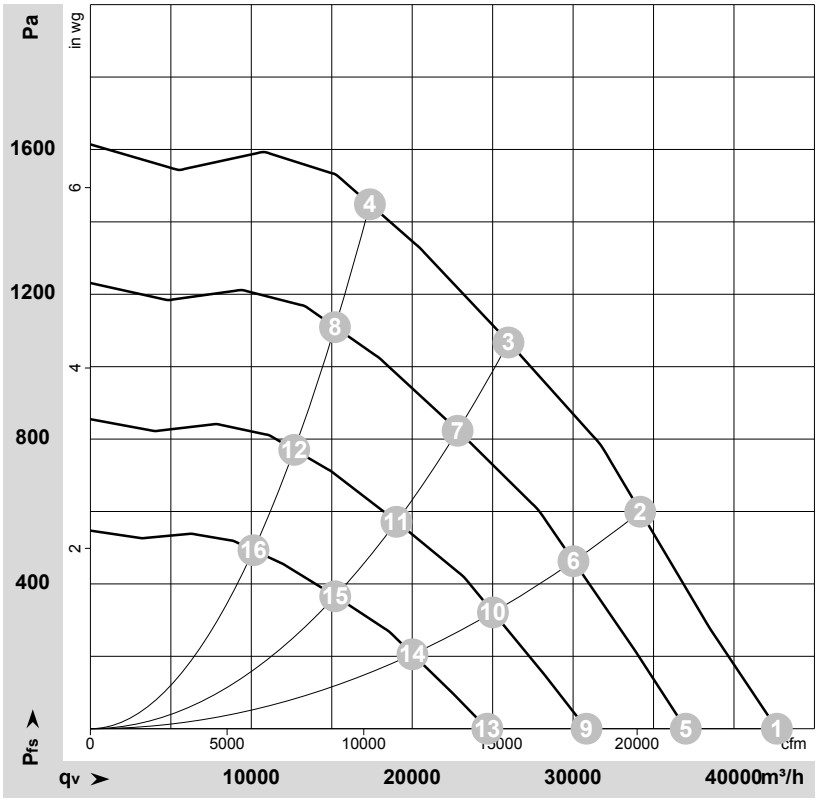
No.	Conn.	Designation	Function/assignment
KL 1	1	L1	Supply connection, power supply 3-phase 380-480 VAC, 50/60 Hz
KL 1	2	L2	Supply connection, power supply 3-phase 380-480 VAC, 50/60 Hz
KL 1	3	L3	Supply connection, power supply 3-phase 380-480 VAC, 50/60 Hz
PE		PE	Ground connection, PE connection
KL 2	1	NO	Status relay, floating status contact, make for failure
KL2	2	COM	Status relay, floating status contact; changeover contact; common connection; contact rating 250 VAC / max. 2 A (AC1) / min. 10 mA
KL2	3	NC	Status relay, floating status contact, break for failure
KL 3	1	RSA	Bus connection RS485, RSA, MODBUS RTU
KL 3	2	RSB	Bus connection RS485, RSB, MODBUS RTU
KL 3	3 / 10	GND	Reference ground for control interface
KL 3	4	Ain1 U	Analog input 1 (set value), 0-10 V, Ri = 100 kΩ, adjustable curves, only usable as alternative to input Ain1I
KL 3	5	+ 10 V	Fixed voltage output 10 VDC, +10 V ±3%; max. 10 mA; short-circuit-proof; power supply for external devices (e.g. pot)
KL 3	6	Ain1 I	Analog input 1 (set value), 4-20 mA, Ri = 100 Ω, adjustable curves, only usable as alternative to input Ain1U
KL 3	7	Din1	Digital input 1: enable electronics, enable: pin open or applied voltage 5...50 VDC: disable: bridge to GND or applied voltage < 1 VDC; reset function: triggers software reset after a level change to < 1 V
KL 3	8	Din2	Digital input 2: Switching parameter sets 1/2; according to EEPROM setting, the valid or used parameter set can be selected via bus or via digital input DIN2. Parameter set 1: pin open or applied voltage 5-50 VDC; parameter set 2: bridge to GND or applied voltage < 1 VDC
KL 3	9	Din3	Digital input 3: according to EEPROM setting, the integrated controller's direction of action can be selected as normal/inverse via bus or digital input; normal: pin open or applied voltage 5-50 VDC inverse: bridge to GND or applied voltage < 1 VDC
KL 3	11	Ain2 U	Analog input 2, measured value 0-10 V, Ri = 100 kΩ, adjustable curve, only usable as alternative to input Ain2I
KL 3	12	+ 20 V	Fixed voltage output 20 VDC, 20 V +25/-10%, max. 50 mA, short-circuit-proof power supply for external devices (e.g. sensors)
KL 3	13	Ain2 I	Analog input 2, measured value: 4-20 mA, Ri = 100 Ω, adjustable curve, only usable as alternative to input Ain2U
KL 3	14	Aout	Analog output 0-10 V, max. 5 mA, output of current motor modulation level / of the current motor speed. Adjustable curve.

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Curves: Air performance 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-184297-1

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}	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	in. wg
1	400	50	1370	6370	10.26	83	91	95	42670	0	25115	0.00
2	400	50	1370	9600	14.99	80	88	92	34170	600	20110	2.41
3	400	50	1370	11300	17.50	78	85	90	25980	1070	15290	4.30
4	400	50	1370	10990	17.04	80	88	93	17370	1450	10225	5.82
5	400	50	1200	4155	6.70	80	87	91	37000	0	21780	0.00
6	400	50	1200	6512	10.16	77	84	88	30020	464	17670	1.86
7	400	50	1200	7708	11.95	75	82	87	22820	825	13435	3.31
8	400	50	1200	7367	11.42	77	85	90	15200	1110	8945	4.46
9	400	50	1000	2405	3.87	75	83	87	30835	0	18150	0.00
10	400	50	1000	3768	5.88	72	80	84	25020	322	14725	1.29
11	400	50	1000	4461	6.91	70	77	82	19020	573	11195	2.30
12	400	50	1000	4263	6.61	72	80	85	12665	771	7455	3.10
13	400	50	800	1231	1.98	69	77	81	24670	0	14520	0.00
14	400	50	800	1929	3.01	66	74	78	20015	206	11780	0.83
15	400	50	800	2284	3.54	64	72	77	15215	367	8955	1.47
16	400	50	800	2183	3.38	67	75	79	10135	493	5965	1.98

U = Voltage · 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
LwA_{out} = Sound power level outlet side · q_V = Air flow · p_{fs} = Pressure increase

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