

R3G630-PC04-08 ebmpapst Datasheet

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Nominal data

Type	R3G630-PC04-08	
Motor	M3G150-NA	
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	1650
Power consumption	W	5900
Current draw	A	9.0
Min. ambient temperature	°C	-25
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}	%	66.7	59.6	09 Power consumption P_{ed}	kW	5.87
02 Measurement category		A		09 Air flow q_v	m ³ /h	13340
03 Efficiency category		Static		09 Pressure increase p_{fs}	Pa	1021
04 Efficiency grade N		69.1	62	10 Speed (rpm) n	min ⁻¹	1660
05 Variable speed drive		Yes		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 = $1 + p_{fs} / 100\,000\text{ Pa}$

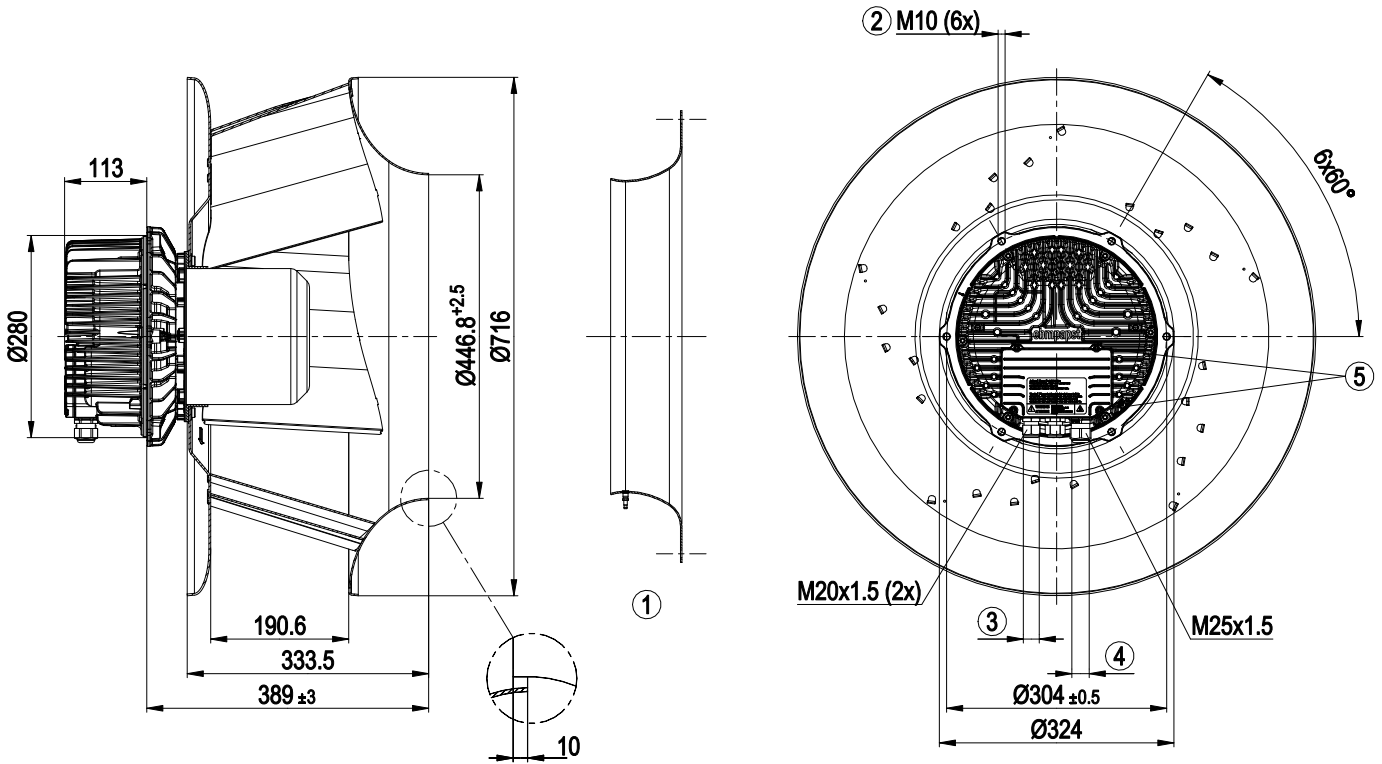
LU-187147



Technical description

Weight	40 kg
Size	630 mm
Motor size	150
Rotor surface	Painted black
Electronics housing material	Die-cast aluminum
Impeller material	Sheet aluminum
Number of blades	5
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP20
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 - Operation and alarm display - Input for sensor 0-10 V or 4-20 mA - External 24 V input (parameter setting) - External release input - Alarm relay - Integrated PID controller - Power limiter - Motor current limitation - PFC, passive - RS-485 MODBUS-RTU - 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
EMC immunity to interference	According to EN 61000-6-2 (industrial environment)
EMC interference emission	According to EN 61000-6-3 (household environment), except EN 61000-3-2 for professionally used equipment with a total rated power greater than 1 kW
Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)	<= 3.5 mA
Electrical hookup	Terminal box
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

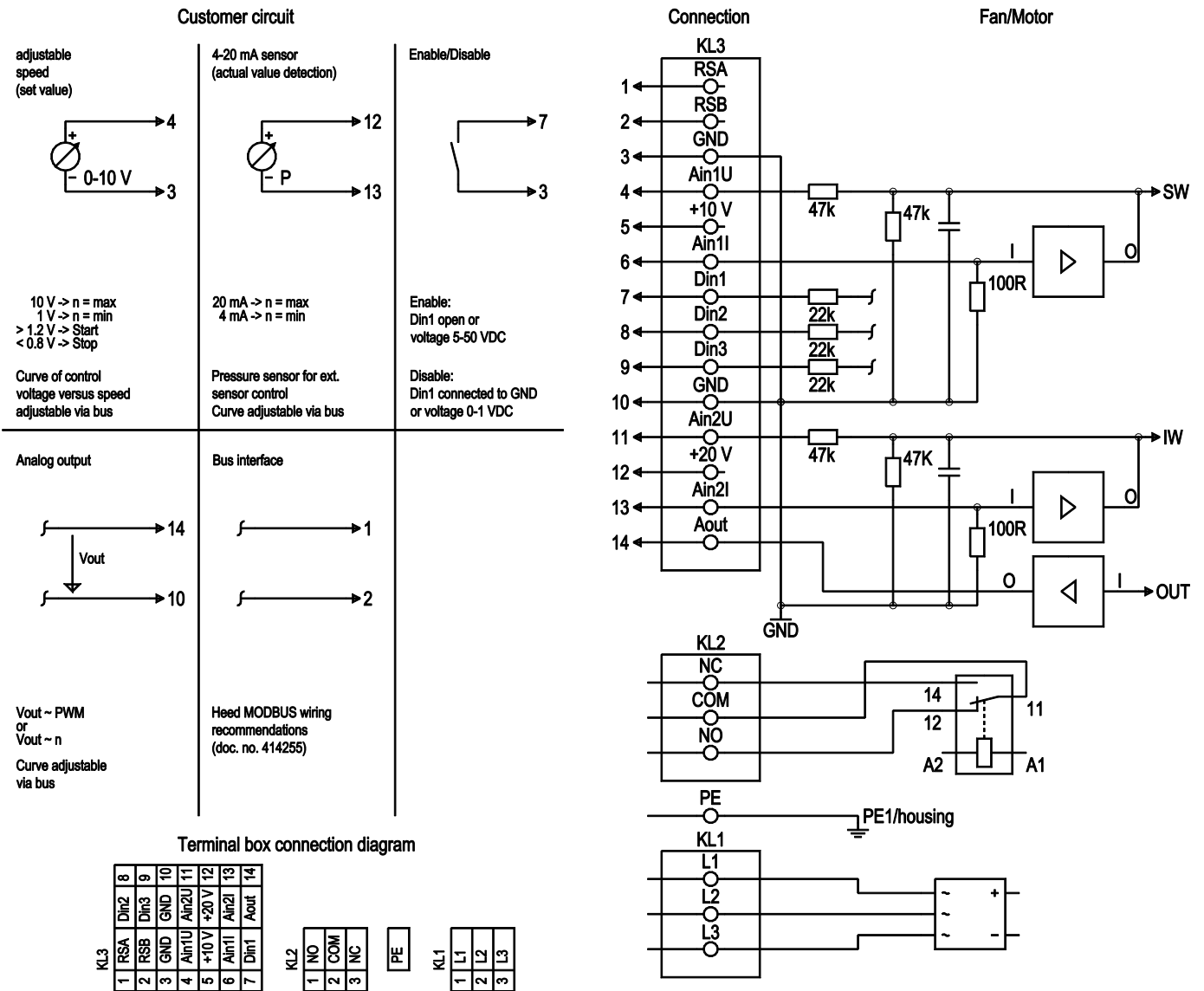
Product drawing



1	Accessory part: Inlet ring 64030-2-4013 with pressure tap (k-factor: 348) not included in scope of delivery
2	Max. clearance for screw 20 mm
3	Cable diameter min. 4 mm, max. 10 mm, tightening torque 4 ± 0.6 Nm
4	Cable diameter min. 9 mm, max. 16 mm, tightening torque 6 ± 0.9 Nm
5	Tightening torque 3.5 ± 0.5 Nm



Connection diagram

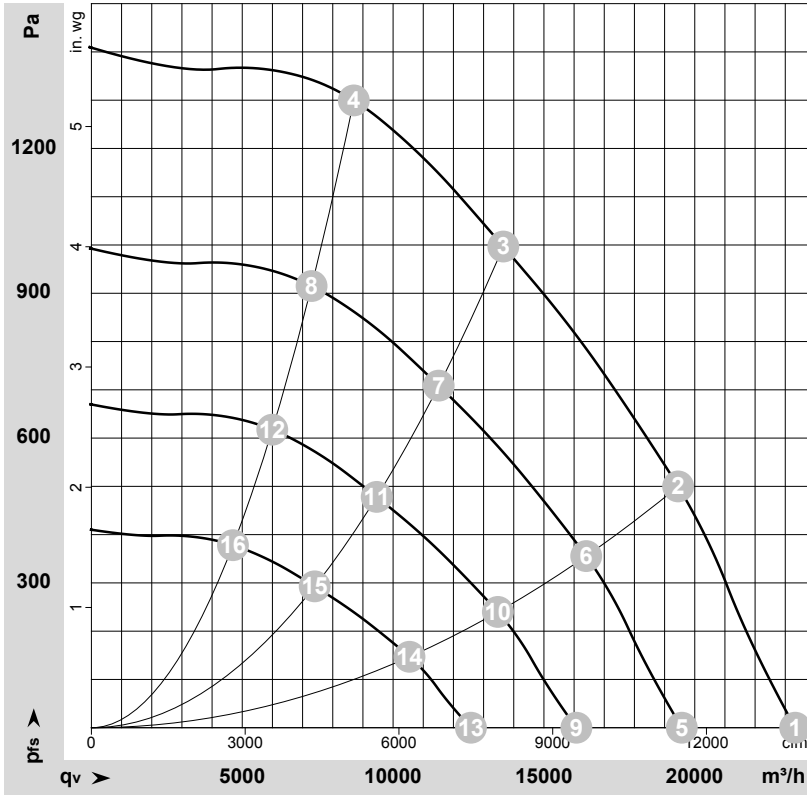


No.	Conn.	Designation	Function/assignment
KL 1	1	L1	Supply connection, power supply, phase, see nameplate for voltage range
KL 1	2	L2	Supply connection, power supply, phase, see nameplate for voltage range
KL 1	3	L3	Supply connection, power supply, phase, see nameplate for voltage range
PE		PE	Ground connection, PE connection
KL 2	1	NO	Status relay, floating status contact, make for failure
KL 2	2	COM	Status relay, floating status contact, changeover contact, common connection, contact rating, max. 250 VAC/2 A (AC1)/min. 10 mA
KL 2	3	NC	Status relay, floating status contact, break for failure
KL 3	1	RSA	Bus connection RS485, RSA, MODBUS RTU; SELV
KL 3	2	RSB	Bus connection RS485, RSB, MODBUS RTU; SELV
KL 3	3 / 10	GND	Reference ground for control interface, SELV
KL 3	4	Ain1 U	Analog input 1, set value: 0-10 V, Ri = 100 kΩ, adjustable curve, only usable as alternative to input Ain1 I; SELV



No.	Conn.	Designation	Function/assignment
KL 3	5	+ 10 V	Fixed voltage output 10 VDC, +10 V \pm 3%, max. 10 mA, short-circuit-proof, power supply for external devices (e.g. pot); SELV
KL 3	6	Ain1 I	Analog input 1, set value: 4-20 mA, Ri = 100 Ω , adjustable curve, only usable as alternative to input Ain1 U; SELV
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 VDC; SELV
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; SELV
KL 3	9	Din3	Digital input 3: Direction of action of integrated controller, according to EEPROM setting, the direction of action of the integrated controller 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; SELV
KL 3	11	Ain2 U	Analog input 2, measured value: 0-10 V, Ri = 100 k Ω , adjustable curve, only usable as alternative to input Ain2 I; SELV
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); SELV Alternatively: +24 VDC input for parameterization without line voltage
KL 3	13	Ain2 I	Analog input 2, measured value: 4-20 mA, Ri = 100 Ω , adjustable curve, only usable as alternative to input Ain2 U; SELV
KL 3	14	Aout	Analog output 0-10 V, max. 5 mA, output of current motor modulation level; adjustable curve; SELV

Curves: Air performance 50 Hz



$\rho = 1.15 \text{ kg/m}^3 \pm 2 \%$

Measurement: LU-187147-1

Air performance measured according to ISO 5801 installation category A. For detailed information on the measurement setup, contact ebmpapst. 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

	Wired	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	3~	400	50	1650	3121	4.90	91	99	99	23330	0	13730	0.00
2	3~	400	50	1650	4792	7.38	85	91	94	19450	500	11445	2.01
3	3~	400	50	1650	5900	9.00	79	85	91	13655	1000	8035	4.01
4	3~	400	50	1650	5579	8.54	81	89	94	8700	1300	5120	5.22
5	3~	400	50	1400	1843	2.89	86	95	95	19570	0	11520	0.00
6	3~	400	50	1400	2874	4.42	81	87	89	16400	356	9655	1.43
7	3~	400	50	1400	3511	5.37	74	81	86	11510	709	6775	2.85
8	3~	400	50	1400	3294	5.04	77	84	90	7300	918	4295	3.69
9	3~	400	50	1150	1021	1.60	81	90	90	16075	0	9460	0.00
10	3~	400	50	1150	1593	2.45	76	82	84	13475	240	7930	0.96
11	3~	400	50	1150	1946	2.98	69	76	81	9455	479	5565	1.92
12	3~	400	50	1150	1825	2.80	72	79	85	5995	620	3530	2.49
13	3~	400	50	900	490	0.77	75	84	84	12580	0	7405	0.00
14	3~	400	50	900	764	1.18	69	76	78	10545	147	6205	0.59
15	3~	400	50	900	933	1.43	63	70	75	7400	293	4355	1.18
16	3~	400	50	900	875	1.34	66	73	78	4690	380	2760	1.53

Wired = Wiring · 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

