K3G630-PV04-01

EC centrifugal module - RadiPac

backward-curved, single-intake

with cube design

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Nominal data

Type	**K3G630-PV04-01**
Motor	**M3G200-HF**

Phase		3~
Nominal voltage	VAC	400
Nominal voltage range	VAC	380 .. 480
Frequency	Hz	50/60
Method of obtaining data		me
Speed (rpm)	min^{-1}	1750
Power consumption	W	7060
Current draw	A	10.8
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

		Actual	Req. 2015
01 Overall efficiency η_{es}	%	68.5	60.4
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		70.1	62
05 Variable speed drive		Yes	

09 Power consumption P_{ed}	kW	7.09
09 Air flow q_v	m^3/h	15565
09 Pressure increase p_{fs}	Pa	1089
10 Speed (rpm) n	min^{-1}	1750
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

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Technical description

Weight	97.3 kg
Size	630 mm
Motor size	200
Rotor surface	Painted black
Electronics housing material	Die-cast aluminum
Impeller material	Sheet aluminum
Support plate material	Sheet steel, galvanized
Spacer material	Aluminum
Inlet nozzle material	Sheet steel, galvanized
Number of blades	5
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP54
Insulation class	"F"
Moisture (F) / Environmental (H) protection class	H1
Ambient temperature note	Occasional start-up between -40°C and -25°C is permissible. For continuous operation at temperatures below -25°C (e.g. refrigeration applications) we recommend our 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	See product drawing
Condensation drainage holes	On rotor side
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 - 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 - Motor current limitation - PFC, passive - RS-485 MODBUS-RTU - Soft start - EEPROM write cycles: 100,000 maximum - 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 61000-6-4 (industrial environment)
Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)	<= 3.5 mA
Electrical hookup	Terminal box

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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	UL 1004-7 + 60730; EAC; CSA C22.2 No. 77 + CAN/CSA-E60730-1

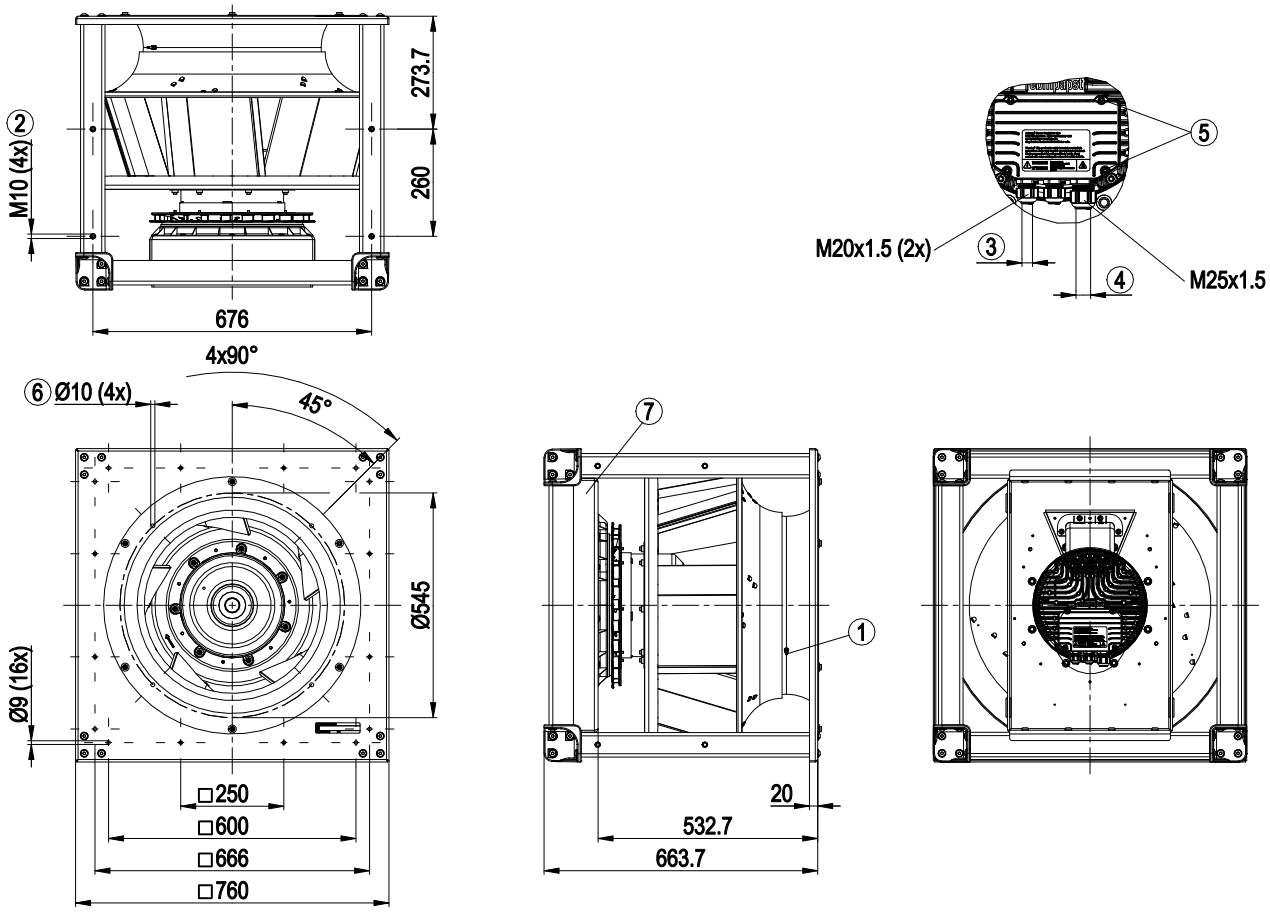
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Product drawing



1	Inlet ring with pressure tap (k-factor: 438)
2	Mounting position for vibration-absorbing elements, tightening torque max. 40 Nm
3	Cable diameter min. 5 mm, max. 13 mm, tightening torque 4 ± 0.6 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
6	Mounting holes for FlowGrid
7	Installation position: shaft horizontal (motor support plate must stand upright) or rotor on bottom; rotor on top on request

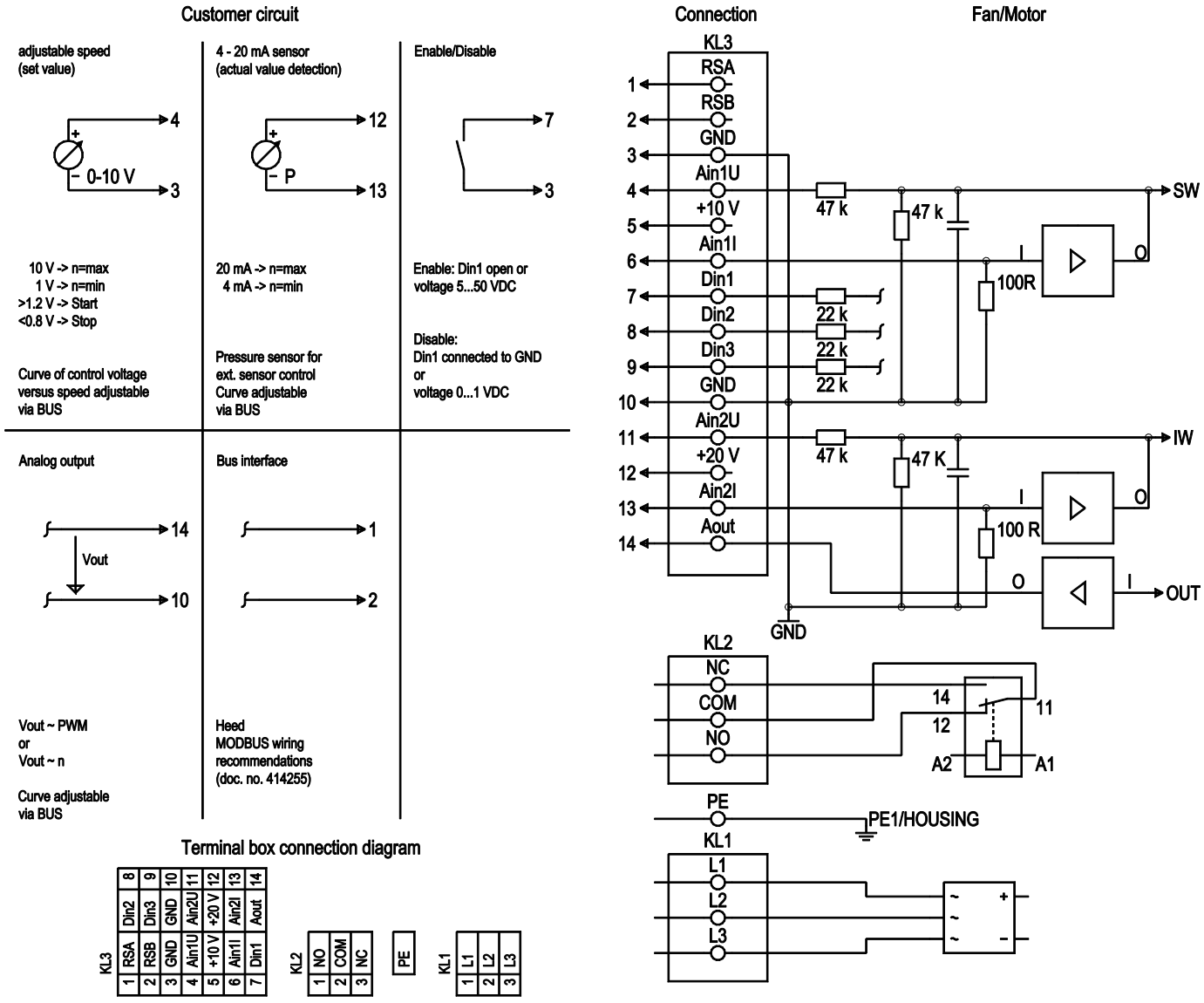
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Connection diagram



No.	Conn.	Designation	Function/assignment
KL 1	1	L1	Supply connection, power supply; for nominal voltage range see technical data
KL 1	2	L2	Supply connection, power supply; for nominal voltage range see technical data
KL 1	3	L3	Supply connection, power supply; for nominal voltage range see technical data
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; 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

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No.	Conn.	Designation	Function/assignment
KL 3	5	+ 10 V	Fixed voltage output 10 VDC, + 10 V +/-3%, max. 10 mA, short-circuit-proof, power supply for ext. devices (e.g. potentiometers); 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: according to EEPROM setting, the integrated controller's direction of action can be selected via bus or digital input Din3; 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 kΩ, 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 ext. 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 VDC, max. 5 mA, output of current motor modulation level / motor speed adjustable curve; SELV

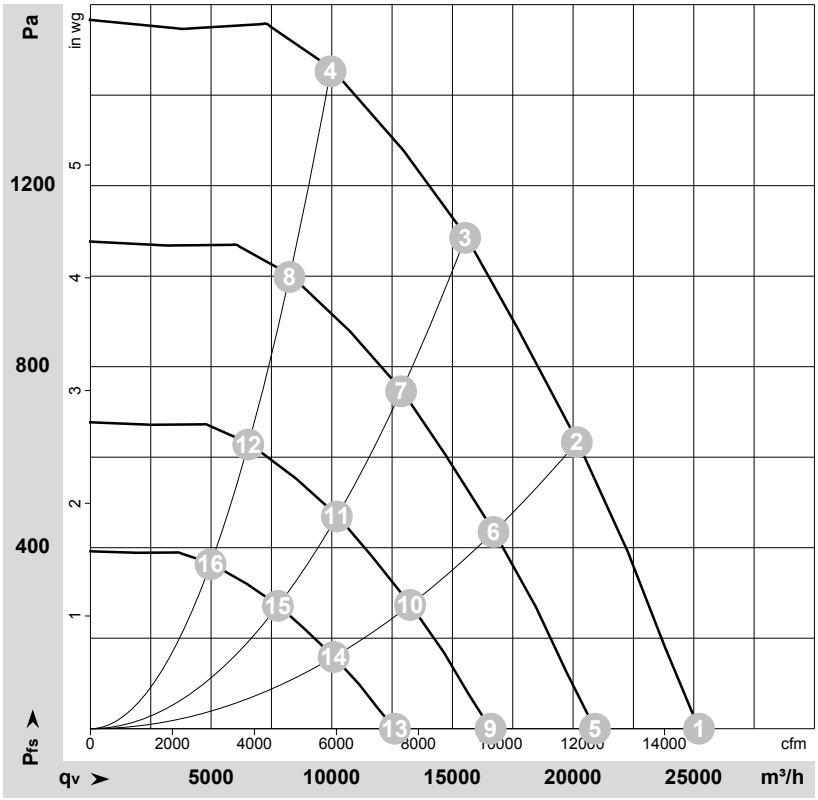
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Curves: Air performance 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-185476-1

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	1750	3735	5.89	91	99	97	25220	0	14845	0.00
2	400	50	1750	6000	9.22	82	90	93	20160	640	11865	2.57
3	400	50	1750	7060	10.80	78	86	91	15600	1080	9180	4.34
4	400	50	1750	6900	10.55	81	89	94	9950	1460	5855	5.86
5	400	50	1450	2128	3.36	86	94	93	20905	0	12305	0.00
6	400	50	1450	3414	5.24	78	85	88	16700	438	9830	1.76
7	400	50	1450	4046	6.18	73	81	86	12875	750	7580	3.01
8	400	50	1450	3930	6.01	76	84	89	8250	1004	4855	4.03
9	400	50	1150	1062	1.67	80	88	87	16580	0	9760	0.00
10	400	50	1150	1703	2.62	72	79	82	13245	275	7795	1.10
11	400	50	1150	2018	3.08	68	75	80	10210	472	6010	1.89
12	400	50	1150	1961	3.00	71	78	83	6540	632	3850	2.54
13	400	50	875	468	0.74	73	81	80	12615	0	7425	0.00
14	400	50	875	750	1.15	65	73	75	10080	159	5930	0.64
15	400	50	875	889	1.36	61	68	73	7770	273	4575	1.10
16	400	50	875	864	1.32	64	72	76	4975	366	2930	1.47

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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