K3G450-PB30-67

EC centrifugal module - RadiPac

backward-curved, single-intake

with support bracket

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Nominal data

Type	**K3G450-PB30-67**
Motor	**M3G150-IF**

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}	2600
Power consumption	W	5050
Current draw	A	7.8
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 (prEN 17166)

		Actual	Req. 2015
01 Overall efficiency η_{es}	%	67.8	58.8
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		71	62
05 Variable speed drive		Yes	

09 Power consumption P_{ed}	kW	4.97
09 Air flow q_v	m^3/h	7915
09 Pressure increase p_{fs}	Pa	1490
10 Speed (rpm) n	min^{-1}	2605
11 Specific ratio*		1.02

Data obtained at optimum efficiency level.

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

LU-176837

The efficiency values displayed for achieving conformity with the Ecodesign Regulation EU 327/2011 has been reached with defined air duct components (e.g. inlet rings).
The dimensions must be requested from ebm-papst. If other air conduction geometries are used on the installation side, the ebm-papst evaluation loses its validity/the conformity must be confirmed again.

The product does not fall within the scope of Regulation (EU) 2019/1781 due to the exception specified in Article 2 (2a) (motors completely integrated into a product).

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Technical description

Weight	49.3 kg
Size	450 mm
Motor size	150
Rotor surface	Painted black
Electronics housing material	Die-cast aluminum, painted black
Impeller material	Sheet aluminum, painted black
Support plate material	Sheet steel, galvanized and painted black
Support bracket material	Steel, painted black
Inlet nozzle material	Sheet steel, galvanized and painted black
Number of blades	5
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP55
Insulation class	"F"
Moisture (F) / Environmental (H) protection class	H2+S
Max. permitted ambient temp. for motor (transport/storage)	+80 °C
Min. permitted ambient temp. for motor (transport/storage)	-40 °C
Installation position	See legend on product drawing
Condensation drainage holes	On rotor side
Mode	S1
Motor bearing	Ball bearing
Technical features	- Output 10 VDC, max. 10 mA - Output for slave 0-10 V - External 24 V input (parameter setting) - External release input - Alarm relay - Integrated PID controller - Power limiter - MODBUS V5.1 - Motor current limitation - PFC, passive - RS-485 MODBUS-RTU - Soft start - Control input 0-10 VDC - 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

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Protection class assignment	I; If a protective earth is connected by the customer This component for installation may have several local protection classes. This information relates to this component's basic design. The final protection class is based on the component's intended installation and connection.
Conformity with standards	EN 61800-5-1; CE
Approval	CSA C22.2 No. 77 + CAN/CSA-E60730-1; EAC; UL 1004-7 + 60730-1

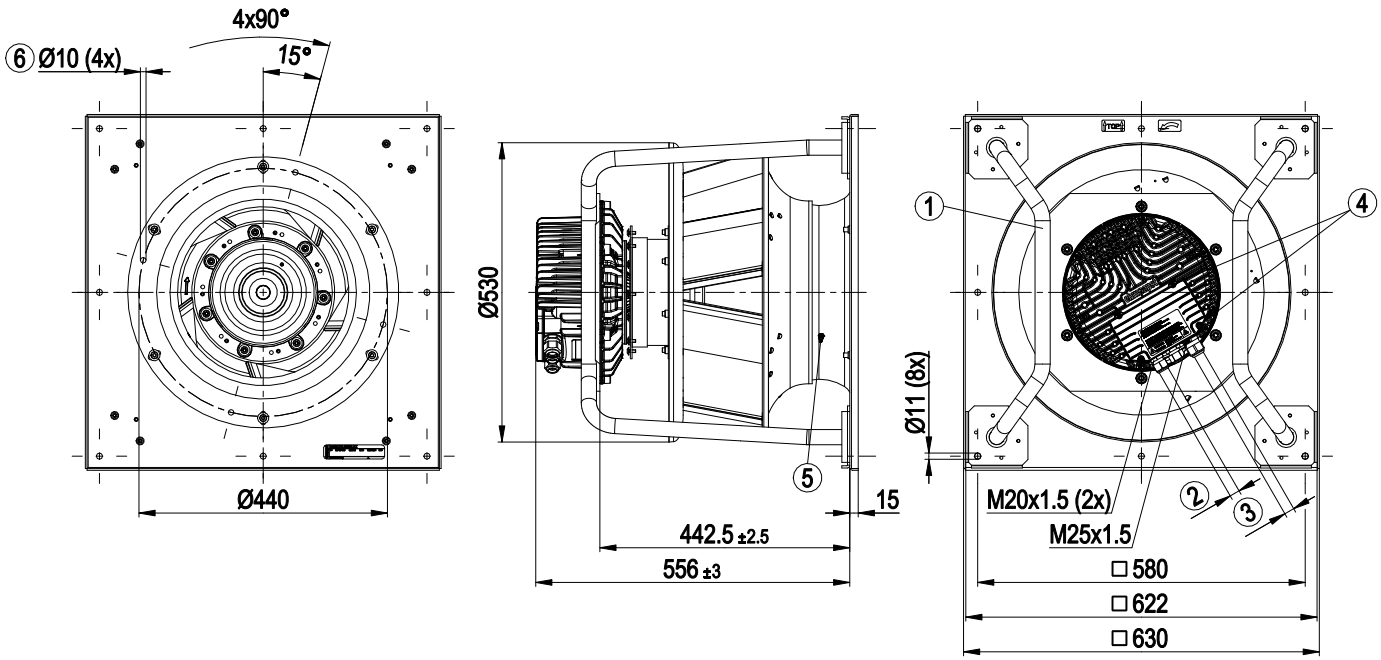
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Product drawing



1	Installed position: shaft horizontal (install support struts only vertically as illustrated) or rotor on bottom; rotor on top on request
2	Cable diameter min. 4 mm, max. 10 mm, tightening torque 4 ± 0.6 Nm
3	Cable diameter min. 9 mm, max. 16 mm, tightening torque 6 ± 0.9 Nm
4	Tightening torque 3.5 ± 0.5 Nm
5	Inlet ring with pressure tap (k-factor: 240)
6	Attachment holes for FlowGrid (35505-2-2957 not included in scope of delivery)

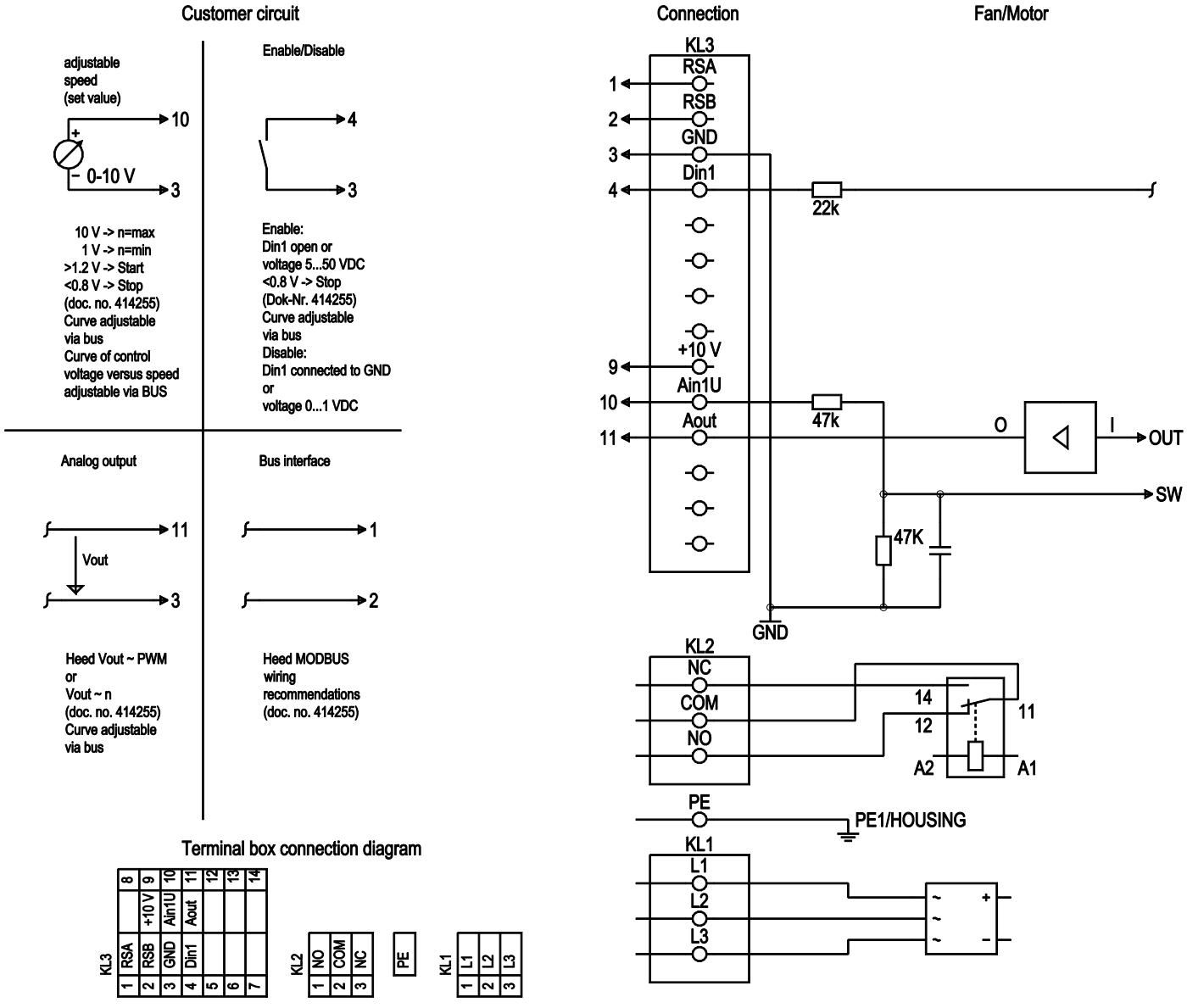
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Connection diagram



No.	Conn.	Designation	Function/assignment
KL 1	1, 2, 3	L1, L2, L3	Power supply, phase, see nameplate for voltage range
PE	PE	PE	Protective earth
KL2	1	NO	Status relay, floating status contact, option 1: make for failure, option 2: make for error for run monitor
KL2	2	COM	Status relay, floating status contact, common connection, contact rating 250 VAC / 2 A (AC1) / min. 10 mA; basic insulation on supply side and reinforced insulation on control interface side
KL2	3	NC	Status relay, floating status contact, option 1: break for failure, option 2: break for error message for run monitor
KL 3	1	RSA	RS485 interface for MODBUS, RSA; SELV
KL 3	2	RSB	RS485 interface for MODBUS, RSB; SELV
KL 3	3	GND	Reference ground for control interface; SELV

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No.	Conn.	Designation	Function/assignment
KL 3	4	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	-	-	-
KL 3	-	-	-
KL3	-	-	-
KL3	-	-	-
KL 3	9	10 V / max. 10 mA	Voltage output, power supply for external devices (e.g. potentiometers), SELV
KL 3	10	Ain1 U	Analog input 1, set value: 0-10 V, Ri = 100 kΩ, adjustable curve; SELV
KL 3	11	Aout	Analog output 0-10 VDC, max. 5 mA, output of current motor modulation level / motor speed adjustable curve; SELV
KL 3	-	-	-
KL 3	-	-	-
KL 3	-	-	-

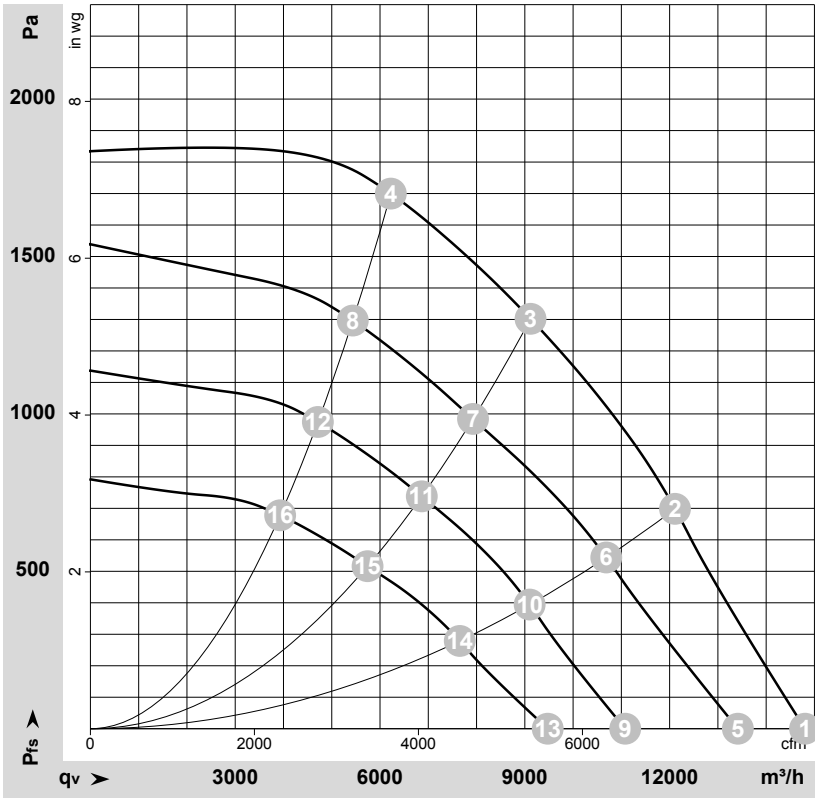
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Curves: Air performance 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-176837-1

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	2600	2853	4.48	95	101	101	14805	0	8715	0.00
2	400	50	2600	4271	6.58	86	93	97	12110	700	7130	2.81
3	400	50	2600	5050	7.80	79	86	95	9120	1300	5365	5.22
4	400	50	2600	4858	7.47	84	90	96	6225	1700	3665	6.82
5	400	50	2360	2170	3.49	90	98	98	13415	0	7895	0.00
6	400	50	2300	2968	4.64	82	89	95	10690	546	6290	2.19
7	400	50	2265	3331	5.18	76	83	93	7925	984	4665	3.95
8	400	50	2275	3260	5.08	80	86	93	5435	1300	3200	5.22
9	400	50	1980	1330	2.32	87	93	95	11080	0	6520	0.00
10	400	50	1960	1888	3.08	77	85	91	9100	396	5355	1.59
11	400	50	1955	2202	3.53	73	79	90	6865	739	4040	2.97
12	400	50	1965	2158	3.47	76	83	90	4710	977	2775	3.92
13	400	50	1685	867	1.64	84	90	92	9475	0	5575	0.00
14	400	50	1655	1202	2.15	74	81	87	7650	280	4505	1.12
15	400	50	1645	1366	2.37	68	75	85	5740	516	3380	2.07
16	400	50	1645	1326	2.32	71	78	85	3930	680	2315	2.73

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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