

K3G710-AS06-01 ebmpapst Datasheet

sales@fansco.com

www.fansco.com

## Nominal data

Type	K3G710-AS06-01	
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 <sup>-1</sup>	1550
Power consumption	W	12000
Current draw	A	18.6
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 $\eta_{es}$	%	65.7	62.1	09 Power consumption $P_{ed}$	kW	12.12
02 Measurement category		A		09 Air flow $q_v$	m <sup>3</sup> /h	20390
03 Efficiency category		Static		09 Pressure increase $p_{fs}$	Pa	1343
04 Efficiency grade N		65.6	62	10 Speed (rpm) n	min <sup>-1</sup>	1560
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-168377



## Technical description

<b>Weight</b>	182 kg
<b>Size</b>	710 mm
<b>Motor size</b>	200
<b>Rotor surface</b>	Painted black
<b>Electronics housing material</b>	Die-cast aluminum, painted black
<b>Impeller material</b>	Sheet aluminum
<b>Inlet nozzle material</b>	Sheet steel, galvanized and coated with light gray plastic (RAL 7035)
<b>Support structure material</b>	Sheet steel, galvanized and coated with light gray plastic (RAL 7035)
<b>Number of blades</b>	7
<b>Direction of rotation</b>	Clockwise, viewed toward rotor
<b>Degree of protection</b>	IP55
<b>Insulation class</b>	"F"
<b>Moisture (F) / Environmental (H) protection class</b>	H2
<b>Ambient temperature note</b>	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.
<b>Max. permitted ambient temp. for motor (transport/storage)</b>	+80 °C
<b>Min. permitted ambient temp. for motor (transport/storage)</b>	-40 °C
<b>Installation position</b>	Shaft horizontal (base mounting only) or rotor on bottom; rotor on top on request
<b>Condensation drainage holes</b>	On rotor side
<b>Mode</b>	S1
<b>Motor bearing</b>	Ball bearing
<b>Technical features</b>	<ul style="list-style-type: none"> <li>- Output 10 VDC, max. 10 mA</li> <li>- Output 20 VDC, max. 50 mA</li> <li>- Output for slave 0-10 V</li> <li>- Operation and alarm display</li> <li>- Input for sensor 0-10 V or 4-20 mA</li> <li>- External 24 V input (parameter setting)</li> <li>- External release input</li> <li>- Alarm relay</li> <li>- Integrated PID controller</li> <li>- Power limiter</li> <li>- Motor current limitation</li> <li>- PFC, passive</li> <li>- RS-485 MODBUS-RTU</li> <li>- Soft start</li> <li>- Control input 0-10 VDC / PWM</li> <li>- Control interface with SELV potential safely disconnected from the mains</li> <li>- Temperature derating</li> <li>- Thermal overload protection for electronics/motor</li> <li>- Line undervoltage / phase failure detection</li> </ul>
<b>EMC immunity to interference</b>	According to EN 61000-6-2 (industrial environment)
<b>EMC interference emission</b>	According to EN 61000-6-4 (industrial environment)
<b>Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)</b>	<= 3.5 mA
<b>Electrical hookup</b>	Terminal box

K3G710-AS06-01

## EC centrifugal module - RadiPac

backward-curved, single-intake  
with cube design

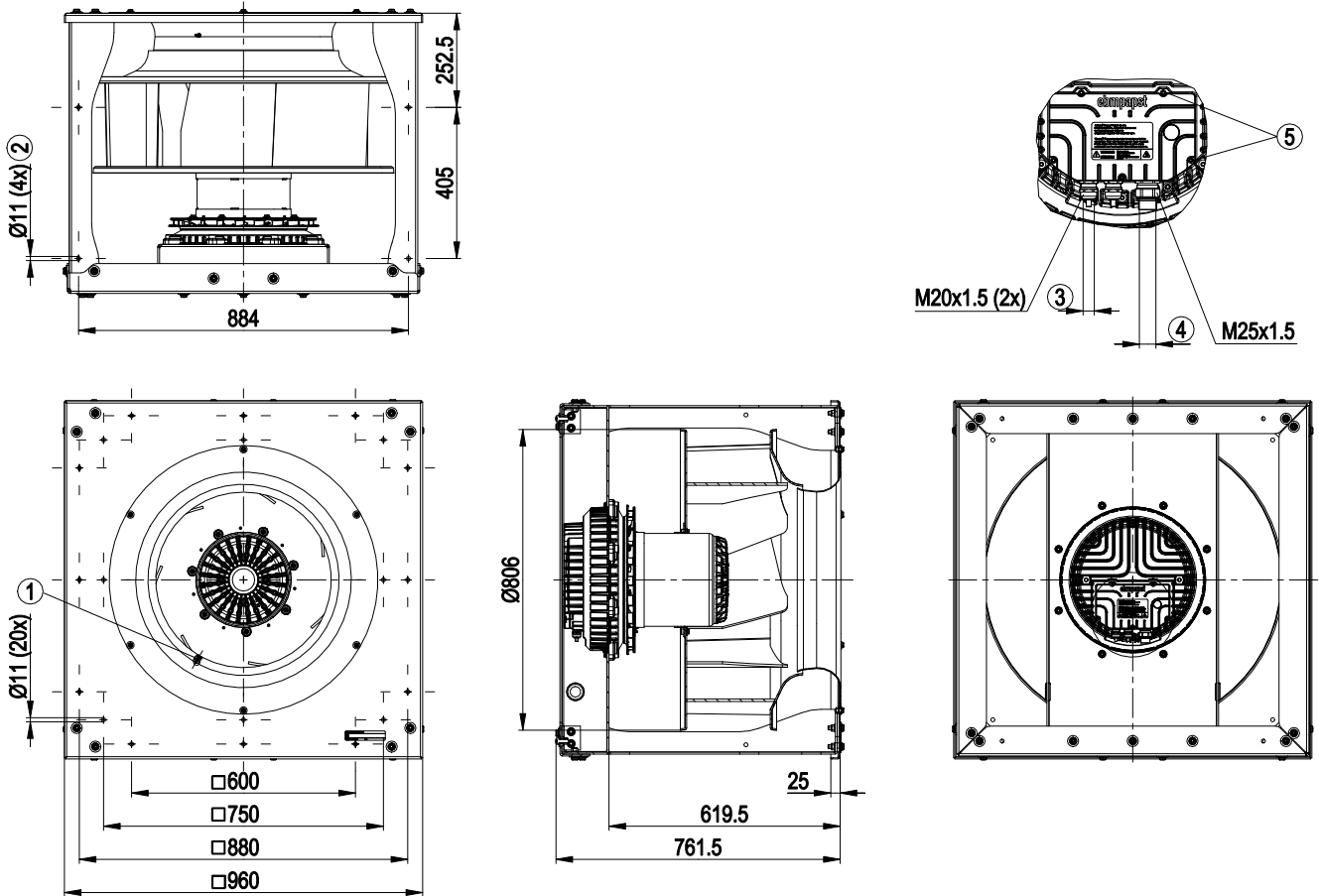
<b>Motor protection</b>	Reverse polarity and locked-rotor protection
<b>Protection class</b>	I (with customer connection of protective earth)
<b>Conformity with standards</b>	EN 61800-5-1; CE
<b>Approval</b>	CSA C22.2 No. 77 + CAN/CSA-E60730-1; EAC; UL 1004-7 + 60730-1



# EC centrifugal module - RadiPac

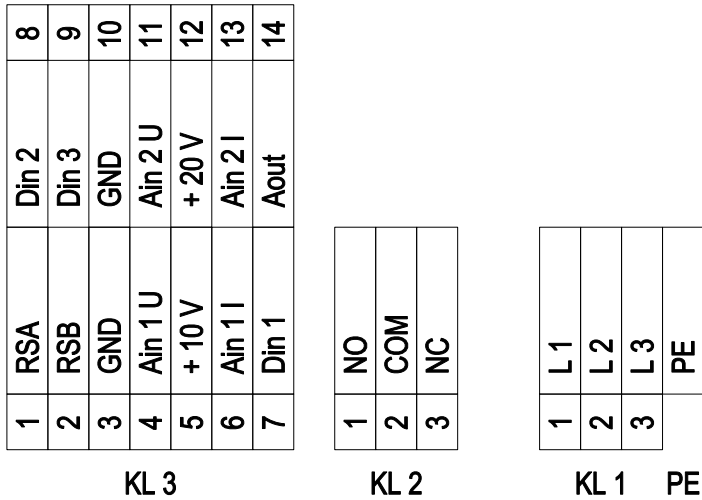
backward-curved, single-intake  
with cube design

## Product drawing



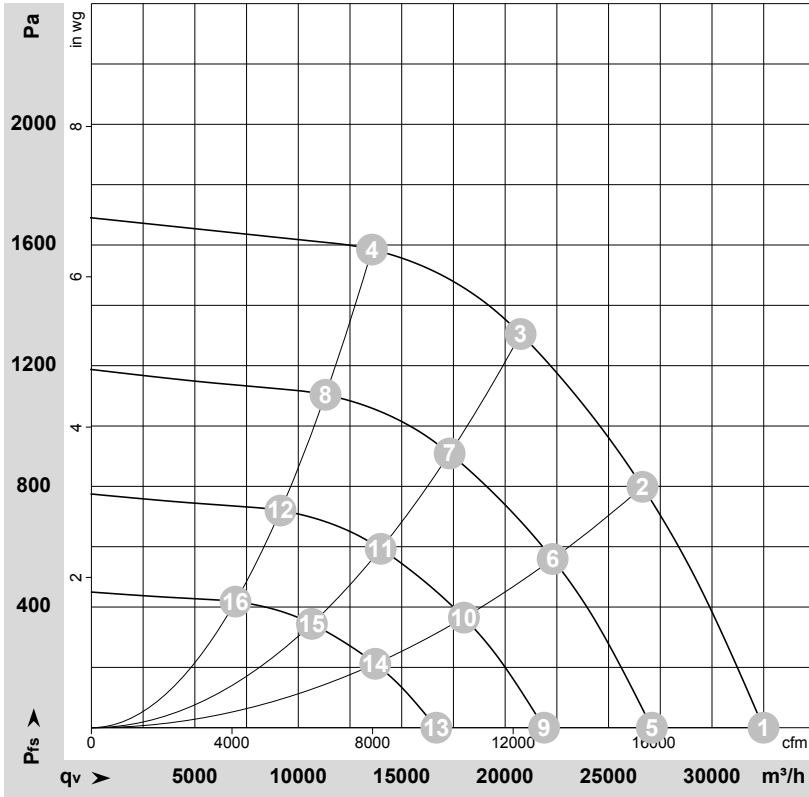
- |   |   |
|---|---|
| 1 | Inlet ring with pressure tap (k-factor: 545)                              |
| 2 | Mounting position for vibration-absorbing elements                        |
| 3 | Cable diameter min. 5 mm, max. 13 mm; tightening torque $6 \pm 0.9$ Nm    |
| 4 | Cable diameter min. 16 mm, max. 20.5 mm, tightening torque $6 \pm 0.9$ Nm |
| 5 | Tightening torque $3.5 \pm 0.5$ Nm  |

## 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.

## Curves: Air performance 50 Hz



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

Measurement: LU-168377-1

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

	U	f	n	P <sub>ed</sub>	I	LpA <sub>in</sub>	LwA <sub>in</sub>	q <sub>v</sub>	P <sub>fs</sub>	q <sub>v</sub>	P <sub>fs</sub>
	V	Hz	min <sup>-1</sup>	W	A	dB(A)	dB(A)	m <sup>3</sup> /h	Pa	cfm	in. wg
1	400	50	1550	7644	12.05	87	96	32490	0	19125	0.00
2	400	50	1550	10833	16.80	83	91	26640	800	15680	3.21
3	400	50	1550	12000	18.60	82	89	20750	1300	12210	5.22
4	400	50	1550	10810	16.74	84	91	13565	1600	7985	6.42
5	400	50	1300	4432	6.99	83	91	27095	0	15945	0.00
6	400	50	1300	6353	9.85	78	86	22295	560	13125	2.25
7	400	50	1300	7018	10.85	77	85	17315	915	10190	3.67
8	400	50	1300	6280	9.73	79	86	11315	1109	6660	4.45
9	400	50	1050	2335	3.68	77	86	21885	0	12880	0.00
10	400	50	1050	3348	5.19	73	81	18010	365	10600	1.47
11	400	50	1050	3698	5.72	72	79	13985	597	8230	2.40
12	400	50	1050	3309	5.13	74	81	9140	723	5380	2.90
13	400	50	800	1033	1.63	70	79	16675	0	9815	0.00
14	400	50	800	1481	2.30	66	74	13720	212	8075	0.85
15	400	50	800	1635	2.53	65	72	10655	346	6270	1.39
16	400	50	800	1464	2.27	67	74	6965	420	4100	1.69

U = Voltage · f = Frequency · n = Speed (rpm) · P<sub>ed</sub> = Power consumption · I = Current draw · LpA<sub>in</sub> = Sound pressure level intake side · LwA<sub>in</sub> = Sound power level intake side  
q<sub>v</sub> = Air flow · P<sub>fs</sub> = Pressure increase

