K3G280-AU06-B1

EC centrifugal module - RadiPac

backward-curved, single-intake

with support bracket



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ErP2015 EXCEEDS THE NORM

Nominal data

Type	**K3G280-AU06-B1**
Motor	**M3G084-GF**

Phase		1~
Nominal voltage	VAC	230
Nominal voltage range	VAC	200 .. 277
Frequency	Hz	50/60
Method of obtaining data		ml
Speed (rpm)	min^{-1}	2800
Power consumption	W	715
Current draw	A	3.1
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 ErP Directive

		Actual	Req. 2015
01 Overall efficiency η_{es}	%	58.7	50
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		70.7	62
05 Variable speed drive		Yes	

09 Power consumption P_{ed}	kW	0.72
09 Air flow q_v	m^3/h	2110
09 Pressure increase p_{fs}	Pa	667
10 Speed (rpm) n	min^{-1}	2770
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-125805

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Technical description

Weight	11.5 kg
Fan size	280 mm
Rotor surface	Painted black
Electronics housing material	Die-cast aluminum
Impeller material	Sheet aluminum
Support plate material	Sheet steel, galvanized
Support bracket material	Steel, painted black
Inlet nozzle material	Sheet steel, galvanized
Number of blades	7
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP54
Insulation class	"B"
Moisture (F) / Environmental (H) protection class	F3-1
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	- Output 10 VDC, max. 10 mA - Output 20 VDC, max. 50 mA - Output for slave 0-10 V - Input for sensor 0-10 V or 4-20 mA - Alarm relay - Motor operation detected starting at 60 rpm - Motor current limitation - PFC, active - 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 circuit feedback	According to EN 61000-3-2/3
EMC interference emission	According to EN 55022 (Class B, household environment)
Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)	<= 3.5 mA
Electrical hookup	Via terminal box
Motor protection	Thermal overload protector (TOP) internally connected
Protection class	I (if protective earth is connected by customer to the housing's connection point)
Conformity with standards	EN 61800-5-1; CE
Approval	EAC

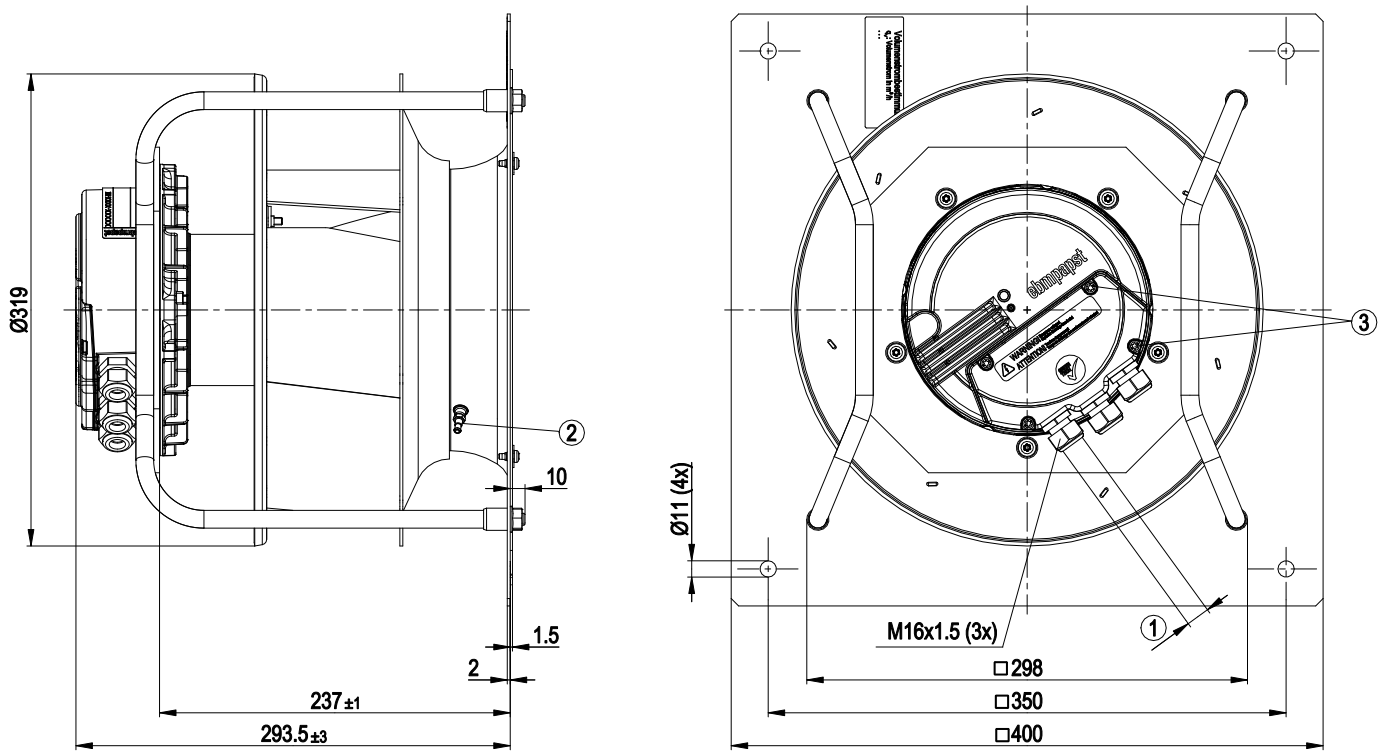
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Product drawing



1	Cable diameter min. 4 mm, max. 10 mm, tightening torque 2.5 ± 0.4 Nm
2	Inlet ring with pressure tap (k-factor: 93)
3	Tightening torque 3.5 ± 0.5 Nm

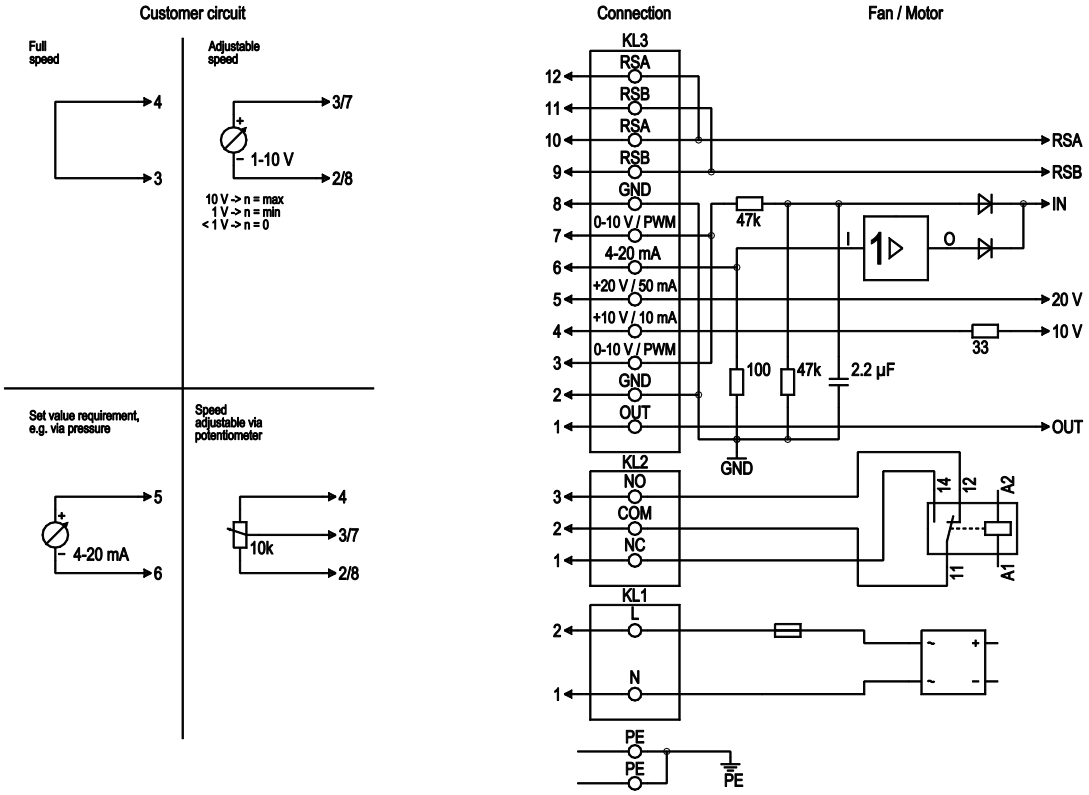
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Connection diagram



No.	Conn.	Designation	Function/assignment
PE	-	PE	Protective earth terminal
KL1	1, 2	N, L	Power supply 50/60 Hz
KL2	1	NC	Floating status contact, break for failure
KL2	2	COM	Floating status contact, changeover contact, common connection (2 A, max. 250 VAC, min. 10 mA, AC1)
KL2	3	NO	Floating status contact, make for failure
KL3	1	OUT	Analog output, 0-10 VDC, max. 3 mA, SELV output of current motor modulation level: 1 V corresponds to 10% modulation level. 10 V corresponds to 100% modulation level.
KL3	2, 8	GND	Reference ground for control interface, SELV
KL3	3, 7	0-10 V	Control/current sensor value input 0-10 VDC, impedance 100 kΩ, use only as alternative to 4-20 mA input, SELV
KL3	4	+10 V	Voltage output 10 VDC (+/- 3%), max. 10 mA, power supply for ext. devices (e.g. potentiometer), SELV
KL3	5	+20 V	Voltage output 20 VDC (+25%/-10%), max. 50 mA power supply for ext. devices (e.g. sensors), SELV
KL3	6	4-20 mA	Control/current sensor value input 4-20 mA, impedance 100 Ω, use only as alternative to 0-10 V input, SELV
KL3	9, 11	RSB	RS485 interface for MODBUS, RSB
KL3	10, 12	RSA	RS485 interface for MODBUS, RSA

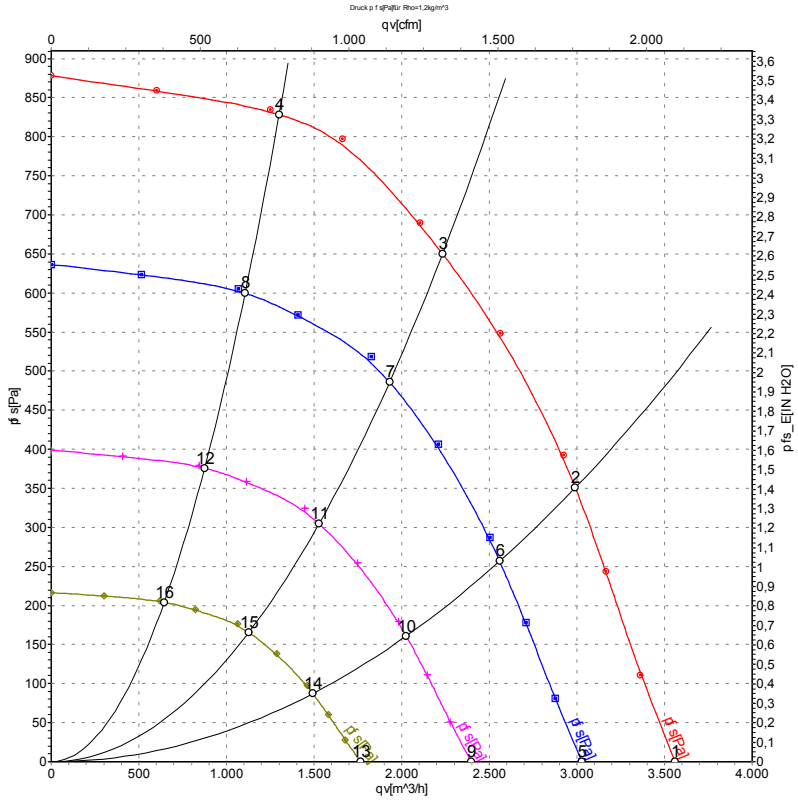
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Curves: Air performance 50 Hz



Measurement: LU-125805-1

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}	qv	p_{fs}	qv	p_{fs}
	V	Hz	min^{-1}	W	A	dB(A)	dB(A)	dB(A)	m^3/h	Pa	CFM	inH2O
1	230	50	2800	479	2.11	75	83	89	3560	0	2095	0.00
2	230	50	2800	655	2.88	71	79	85	2990	350	1760	1.41
3	230	50	2800	715	3.10	69	76	83	2235	650	1315	2.61
4	230	50	2800	650	2.85	73	82	87	1300	830	765	3.33
5	230	50	2400	294	1.30	71	79	85	3025	0	1780	0.00
6	230	50	2400	410	1.80	68	75	81	2560	258	1505	1.04
7	230	50	2400	471	2.06	66	73	80	1930	488	1135	1.96
8	230	50	2400	401	1.76	69	78	84	1105	602	650	2.42
9	230	50	1900	146	0.65	66	74	80	2395	0	1410	0.00
10	230	50	1900	203	0.89	62	70	76	2025	161	1190	0.65
11	230	50	1900	234	1.02	61	68	75	1530	306	900	1.23
12	230	50	1900	199	0.87	64	73	78	875	377	515	1.51
13	230	50	1400	58	0.26	60	67	73	1765	0	1040	0.00
14	230	50	1400	81	0.36	56	63	70	1495	88	880	0.35
15	230	50	1400	93	0.41	54	62	68	1125	166	665	0.67
16	230	50	1400	80	0.35	58	66	72	645	205	380	0.82

U = Power supply · 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 · qv = Air flow · p_{fs} = Pressure increase

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