K3G280-AU11-F9

EC centrifugal module - RadiPac

backward curved, single inlet

with support bracket

K3G280-AU11-F9 ebmpapst Datasheet FansCo

sales@fansco.com

www.fansco.com

Nominal data

Type	**K3G280-AU11-F9**
Motor	**M3G084-GF**

Phase		3~
Nominal voltage	VAC	400
Nominal voltage range	VAC	380 .. 480
Frequency	Hz	50/60
Type of data definition		ml
Speed (rpm)	min^{-1}	3100
Power input	W	1000
Current draw	A	1.6
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	60

ml = Max. load · me = Max. efficiency · fa = Running at free air · cs = Customer specs · cu = Customer unit
Subject to alterations

Data in accordance with ecodesign regulation EU 327/2011

		Actual	Request 2015
01 Overall efficiency η_{es}	%	61.4	51.5
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		71.9	62
05 Variable speed drive		Yes	

09 Power input P_{ed}	kW	0.99
09 Air flow q_v	m^3/h	2675
09 Pressure increase p_{fs}	Pa	758
10 Speed (rpm) n	min^{-1}	3115
11 Specific ratio*		1.01

Data definition with optimum efficiency.
The ErP data is determined using a motor-impeller combination in a standardised measurement configuration.

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

LU-130335

ebmpapst

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Technical features

Mass	11.6 kg
Size	280 mm
Surface of rotor	Coated in black
Material of electronics housing	Die-cast aluminium, coated in black
Material of impeller	Aluminium sheet, coated in black
Material of mounting plate	Sheet steel, galvanised and coated in black
Material of support bracket	Steel, galvanised and coated in black
Material of inlet nozzle	Sheet steel, galvanised and coated in black
Number of blades	7
Direction of rotation	Clockwise, seen on rotor
Type of protection	IP 54
Insulation class	"B"
Humidity (F)/environmental protection class (H)	H2+
Note ambient temperature	Operation at +60 °C to +70 °C and power consumption above 735 W can lead to a shortened service life.
Max. permissible ambient motor temp. (transp./ storage)	+80 °C
Min. permissible ambient motor temp. (transp./storage)	-40 °C
Mounting position	Shaft horizontal or rotor on bottom; rotor on top on request
Condensate discharge holes	Rotor-side
Operation 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 - Input for sensor 0-10 V or 4-20 mA - External 24 V input (programming) - Alarm relay - Output limit - Motor current limit - RS485 MODBUS RTU - Soft start - Control input 0-10 VDC / PWM - Control interface with SELV potential safely disconnected from the mains - Over-temperature protected electronics / motor - Line undervoltage / phase failure detection
Touch current acc. IEC 60990 (measuring network Fig. 4, TN system)	<= 3.5 mA
Electrical leads	With plug
Motor protection	Thermal overload protector (TOP) wired internally
Cable exit	Variable
Protection class	I (if protective earth is connected by customer)
Product conforming to standard	EN 61800-5-1; CE
Approval	C22.2 Nr.77 + CAN/CSA-E60730-1; UL 1004-7 + 60730

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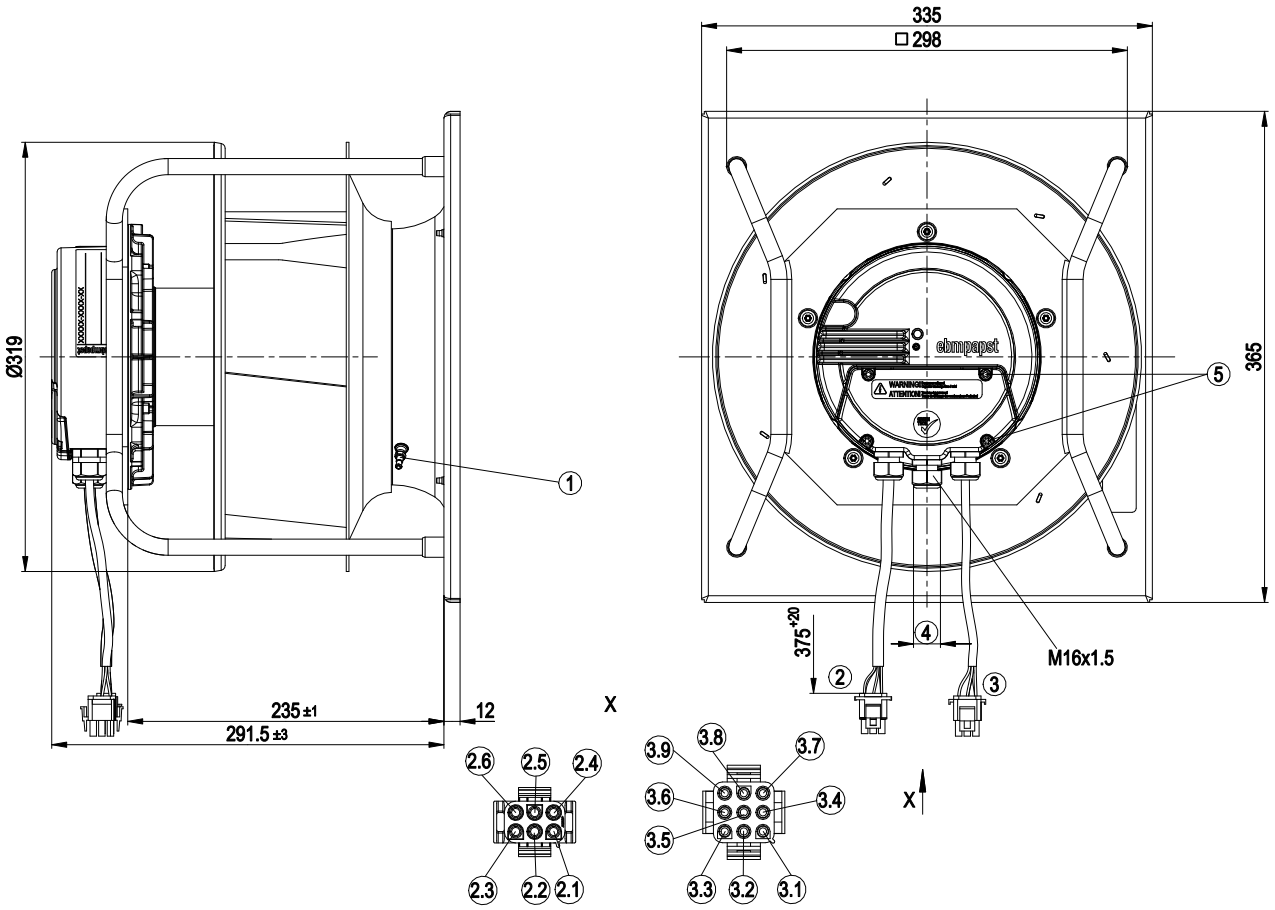
Product drawing



1	Inlet nozzle with pressure tap (k-factor 93)
2	Connection line PVC AWG20 with 6-pole connector housing TE 350715-4, 5x plug pin TE 350218-1, 1x seal TE 794275-1 and 1x seal TE 794276-1
2.1	0-10 V/PWM (red)
2.2	not used
2.3	NO (yellow)
2.4	GND (blue)
2.5	COM (white)
2.6	NC (black)
3	Connection line PVC AWG18 with 9-pole connector housing TE 350720-1, 5x plug pin TE 926887-1, 1x seal TE 794277-1 and 1x seal TE 794278-1
3.1	L1 (black1)
3.2	L2 (black2)
3.3	L3 (black3)
3.4	PE (green/yellow)
3.5	PE (yellow/green)
3.6-3.9	not used
4	Cable diameter min. 4 mm, max. 10 mm, tightening torque 2.5±0.4 Nm
5	Tightening torque 3.5±0.5 Nm

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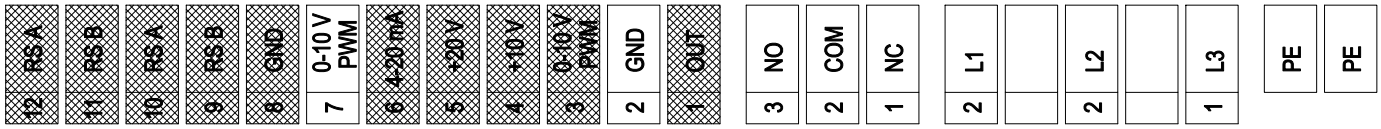
Connection screen



grey shaded => not brought out via leads

No.	Conn.	Designation	Colour	Function / assignment
1	-	PE	green/yellow	Protective earth connection
1	-	PE	green/yellow	Protective earth connection
1	KL1	L1	black 1	Supply voltage, for voltage range refer to rating plate, 50/60 Hz
1	KL1	L2	black 2	Supply voltage, for voltage range refer to rating plate, 50/60 Hz
1	KL1	L3	black 3	Supply voltage, for voltage range refer to rating plate, 50/60 Hz
2	KL2	NC	black	Floating status contact, break for failure
2	KL2	COM	white	Floating status contact, changeover contact, common connection (2 A, max. 250 VAC, min. 10 mA, AC1)
2	KL2	NO	yellow	Floating status contact, make for failure
-	KL3	OUT		Analogue output, 0-10 VDC, max. 3 mA, SELV, Output of the actual motor control factor (output voltage of electronics): 1 V corresponds to 10% level control factor, 10 V correspond to 100% level control factor.
-	KL3	GND	blue	Signal ground for control interface, SELV
-	KL3	0-10 V PWM		Use control / actual sensor value input 0-10 VDC, impedance 100 kΩ only as alternative to 4-20 mA input, SELV
-	KL3	+10 V		Voltage output 10 VDC (+/-3%), max. 10 mA, power supply for ext. devices (e.g. potentiometer), SELV
-	KL3	+20 V		Voltage output 20 VDC (+25%/-10%), max. 50 mA power supply for ext. devices (e.g. sensors), SELV
-	KL3	4-20 mA		Use control / actual sensor value input 4-20 mA, impedance 100 Ω, only as alternative to 0-10 V input, SELV
2	KL3	0-10 V PWM	red	Use control / actual sensor value input 0-10 VDC, impedance 100 kΩ only as alternative to 4-20 mA input, SELV
-	KL3	GND		Signal ground for control interface, SELV
-	KL3	RSB		RS485 interface for MODBUS, RSB
-	KL3	RSA		RS485 interface for MODBUS, RSA
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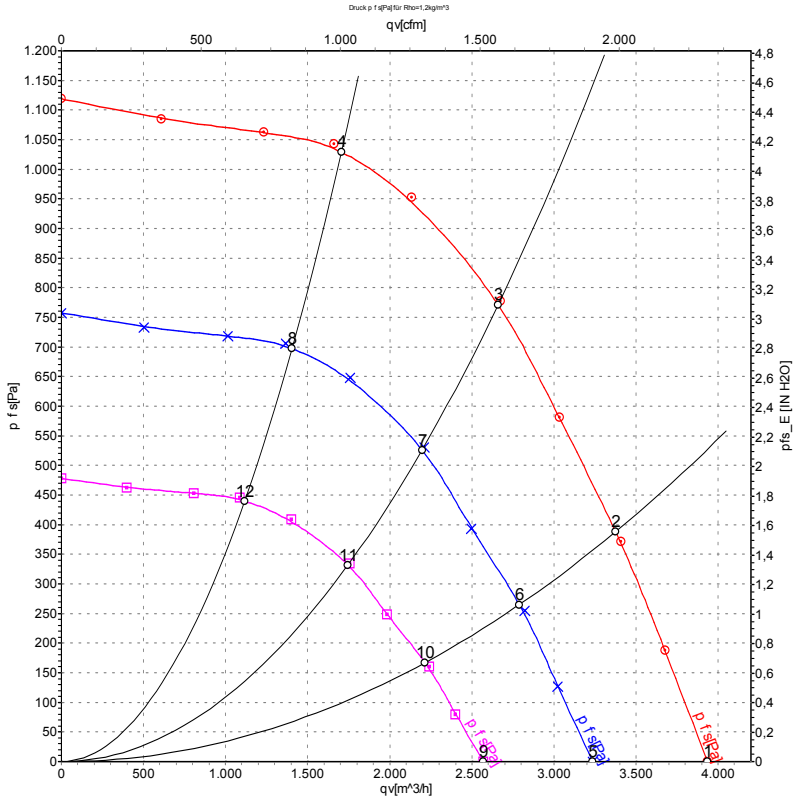
Charts: Air flow 50 Hz



Measurement: LU-130335-1

Air performance measured as per ISO 5801 Installation category A. For detailed information on the measuring set-up, please contact ebm-papst. Suction-side noise levels: LwA measured as per ISO 13347 / LpA measured with 1m distance to fan axis. The values given are valid under the measuring conditions mentioned above and may vary according to the actual installation situation. With any deviation from the standard set-up, the specific values have to be checked and reviewed with the unit installed.

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	inH2O
1	400	50	3100	645	1.04	78	86	93	3935	0	2315	0.00
2	400	50	3100	852	1.35	75	83	90	3375	390	1985	1.57
3	400	50	3100	1000	1.60	72	80	86	2660	775	1565	3.11
4	400	50	3100	921	1.46	76	83	89	1705	1030	1005	4.14
5	400	50	2575	358	0.58	74	82	88	3235	0	1905	0.00
6	400	50	2575	482	0.76	71	79	85	2790	269	1640	1.08
7	400	50	2575	562	0.89	68	76	82	2195	534	1295	2.14
8	400	50	2575	514	0.82	71	79	84	1405	700	825	2.81
9	400	50	2045	180	0.29	69	77	83	2570	0	1515	0.00
10	400	50	2045	242	0.38	66	74	80	2215	170	1305	0.68
11	400	50	2045	282	0.45	63	71	77	1745	337	1025	1.35
12	400	50	2045	257	0.41	66	74	79	1115	442	655	1.77

U = Supply voltage · f = Frequency · n = Speed (rpm) · P_{ed} = Power input · I = Current draw · LpA_{in} = Sound pressure level inlet side · LwA_{in} = Sound power level inlet side · LwA_{out} = Sound power level outlet side
q_V = Air flow · p_{fs} = Pressure increase

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