EC centrifugal module - RadiPac

backward-curved, single-intake

with support bracket

K3G280-AT04-89 ebmpapst Datasheet
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ErP2015 EXCEEDS THE NORM

Nominal data

Type	**K3G280-AT04-89**
Motor	**M3G084-FA**

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}	2400
Power consumption	W	415
Current draw	A	2.7
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}	%	64.5	47.5
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		79	62
05 Variable speed drive		Yes	

09 Power consumption P_{ed}	kW	0.42
09 Air flow q_v	m^3/h	1770
09 Pressure increase p_{fs}	Pa	500
10 Speed (rpm) n	min^{-1}	2340
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-131078

ebmpapst

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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
Technical features	- Output 10 VDC, max. 1.1 mA - Alarm relay - Motor current limitation - Soft start - Control input 0-10 VDC / PWM - Control interface with SELV potential safely disconnected from supply - Thermal overload protection for electronics/motor - Line undervoltage detection
EMC immunity to interference	According to EN 61000-6-2 (industrial environment)
EMC interference emission	According to EN 61000-6-3 (household environment)
Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)	<= 3.5 mA
Motor protection	Thermal overload protector (TOP) internally connected
With cable	Variable
Protection class	I (with customer connection of protective earth)
Conformity with standards	EN 61800-5-1; CE
Approval	EAC

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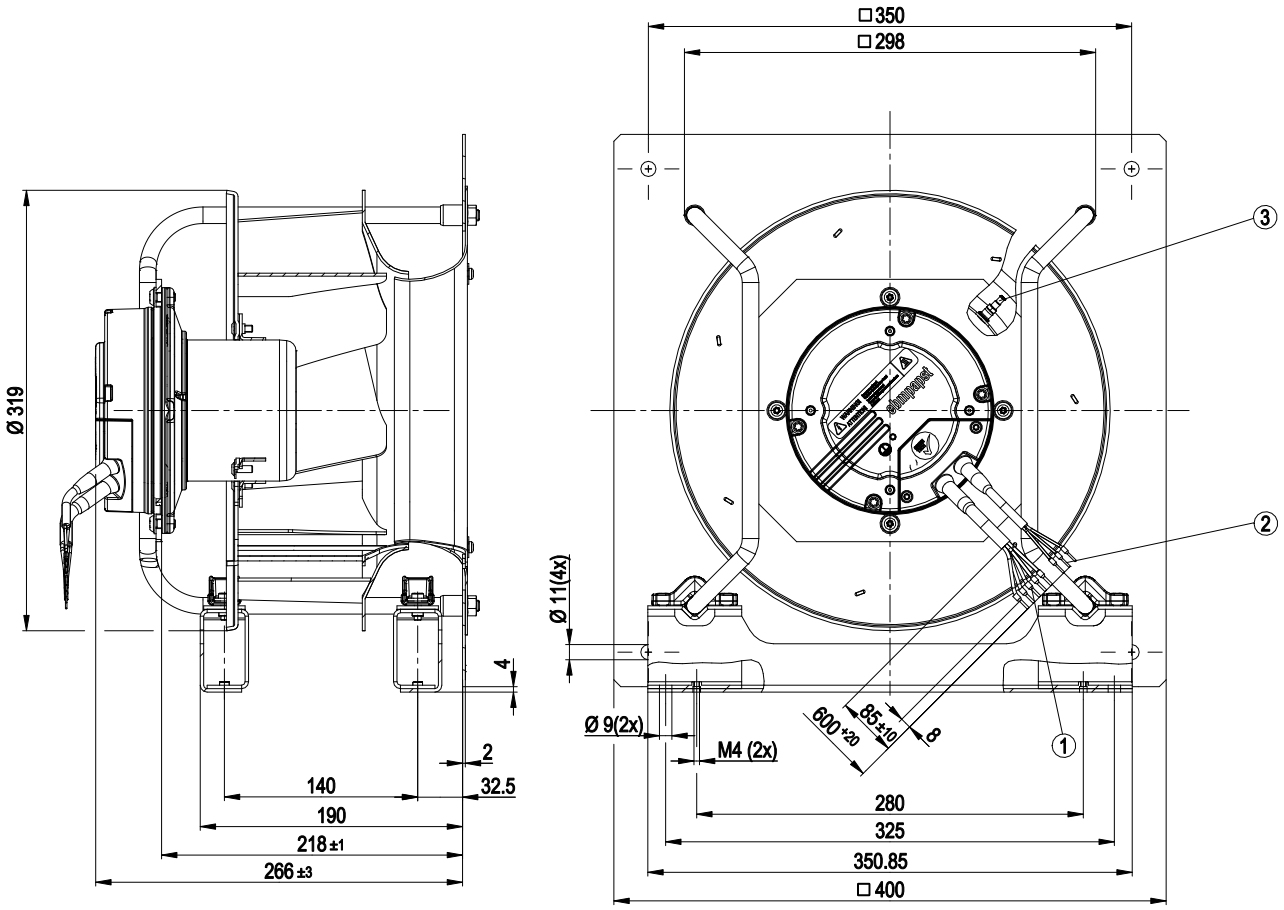
Product drawing



1	Cable PVC AWG18, 5 x crimped ferrules
2	Cable PVC AWG22, 3 x crimped ferrules
3	Pressure tap (k-factor 93)

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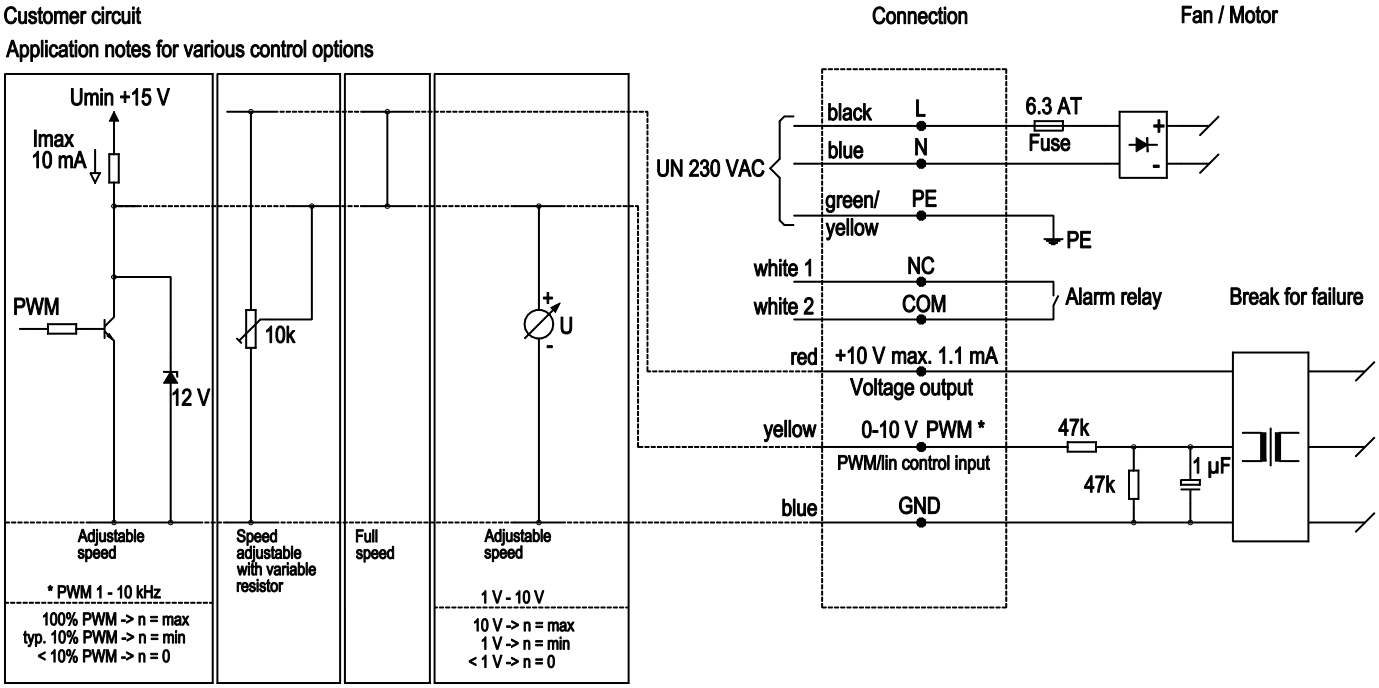
Connection diagram



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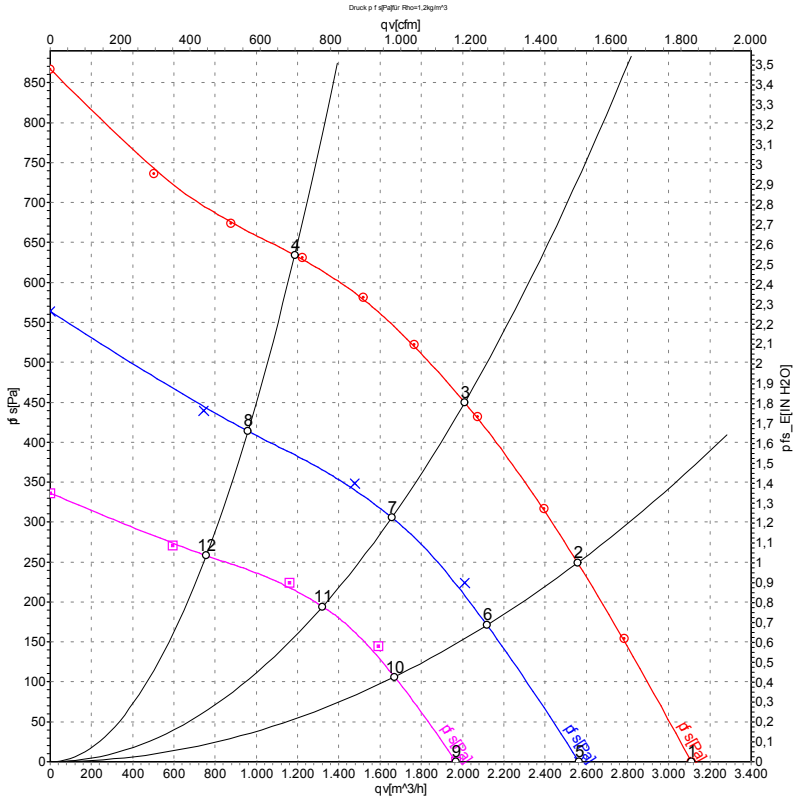
Curves: Air performance 50 Hz



Measurement: LU-131078-1
Measurement: LU-131156-1
Measurement: LU-131157-1

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	2530	335	2.19	72	80	86	3110	0	1830	0.00
2	230	50	2415	392	2.57	67	75	81	2560	250	1505	1.00
3	230	50	2400	415	2.70	63	71	78	2010	450	1185	1.81
4	230	50	2405	405	2.66	66	75	81	1185	635	700	2.55
5	230	50	2040	171	1.17	66	74	80	2565	0	1510	0.00
6	230	50	1990	216	1.45	61	69	76	2120	180	1245	0.72
7	230	50	1965	237	1.58	59	67	74	1655	306	975	1.23
8	230	50	2010	215	1.45	63	70	76	960	413	565	1.66
9	230	50	1570	85	0.63	60	67	74	1965	0	1160	0.00
10	230	50	1575	111	0.79	56	63	70	1670	114	985	0.46
11	230	50	1560	122	0.86	54	62	69	1320	195	780	0.78
12	230	50	1580	106	0.76	57	64	70	755	258	445	1.04

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