K3G190-RD15-12

EC centrifugal module - RadiCal®

backward curved

with housing

K3G190-RD15-12 ebmpapst Datasheet
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ErP2015 EXCEEDS THE NORM

Nominal data

Type	**K3G190-RD15-12**	
Motor	**M3G055-CF**	
Phase		1~
Nominal voltage	VAC	230
Nominal voltage range	VAC	200 .. 240
Frequency	Hz	50/60
Type of data definition		ml
Speed	min^{-1}	4530
Power input	W	167
Current draw	A	1.4
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 according to ErP directive

Installation category	A
Efficiency category	Static
Variable speed drive	Yes
Specific ratio*	1.01

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

		Actual	Request 2013	Request 2015
Overall efficiency η_{es}	%	54	39.1	43.1
Efficiency grade N		72.9	58	62
Power input P_{ed}	kW	0.16		
Air flow q_v	m^3/h	560		
Pressure increase p_{fs}	Pa	508		
Speed n	min^{-1}	4125		

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

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Technical features

Mass	1.9 kg
Size	190 mm
Surface of rotor	Thick layer passivated
Material of electronics housing	Die-cast aluminium
Material of impeller	PA plastic
Housing material	PA plastic
Number of blades	7
Direction of rotation	Clockwise, seen on rotor
Type of protection	IP 54
Insulation class	"B"
Max. permissible ambient motor temp. (transp./ storage)	+ 80 °C
Min. permissible ambient motor temp. (transp./storage)	- 40 °C
Mounting position	Any
Condensate discharge holes	None, open rotor
Operation mode	S1
Motor bearing	Ball bearing
Technical features	- Output 10 VDC, max. 1.1 mA - Tach output - Motor current limit - Soft start - Control input 0-10 VDC / PWM - Over-temperature protected electronics / motor - Line undervoltage detection
EMC interference immunity	Acc. to EN 61000-6-2 (industrial environment)
EMC interference emission	Acc. to EN 61000-6-4 (industrial environment)
Touch current acc. IEC 60990 (measuring network Fig. 4, TN system)	<= 3.5 mA
Electrical leads	With plug
Motor protection	Locked-rotor protection
Cable exit	Variable
Protection class	I (if protective earth is connected by customer)
Product conforming to standard	EN 60335-1; CE

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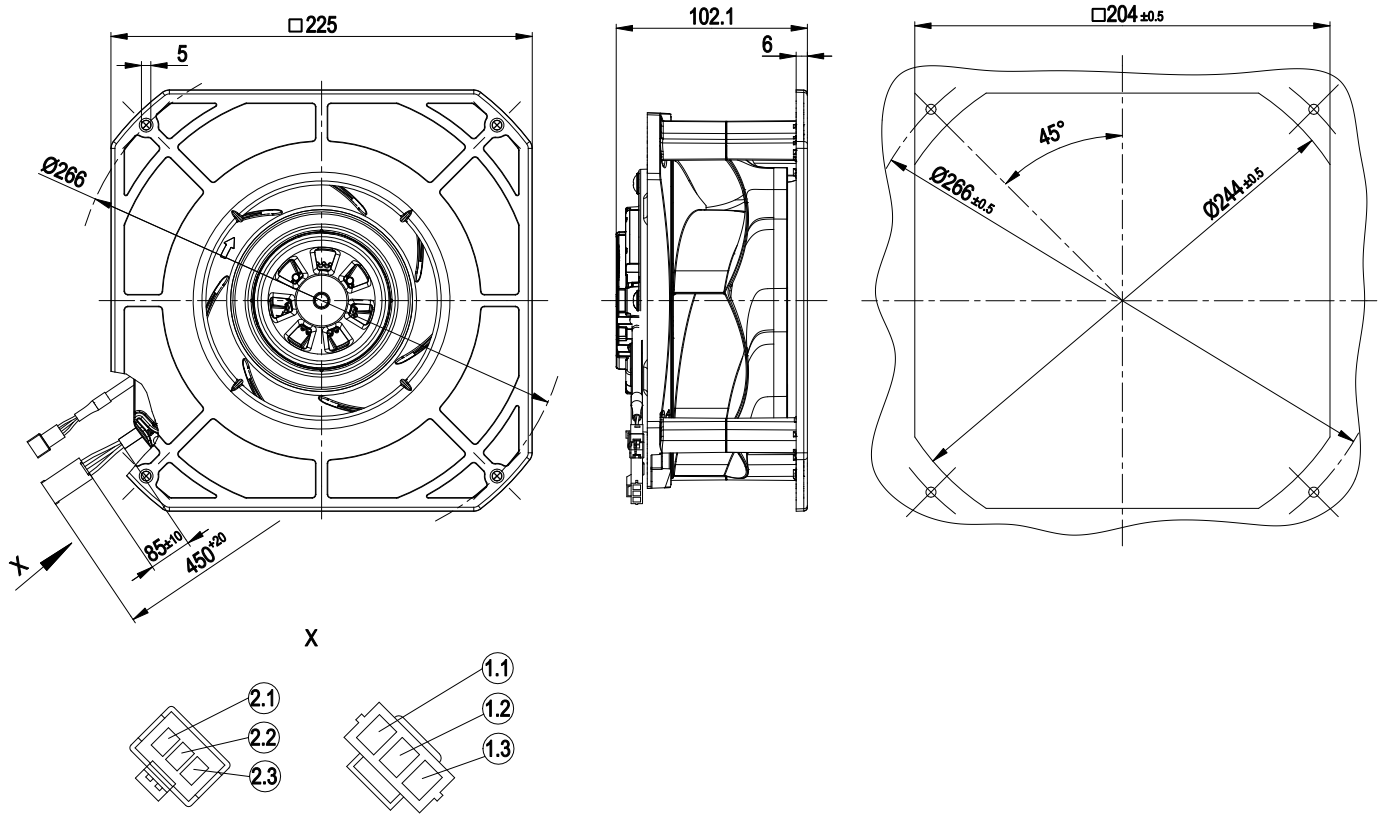
Product drawing



Line	No.	Signal	Colour	Function / assignment
		1		Connection line PVC 3G AWG20, connector housing JST SLR-03V-F, 3x plug pin SSM-21T-P1.4 crimped
		1.1		black (L)
		1.2		green/yellow (PE)
		1.3		blue (N)
		2		Connection line PVC 3X AWG22, connector housing JST SMR-03V-B, plug pin SYM-001T-P0.6 crimped
		2.1		blue (GND)
		2.2		white (Tach)
		2.3		yellow (0-10 PWM)
		3		Mounting dimensions

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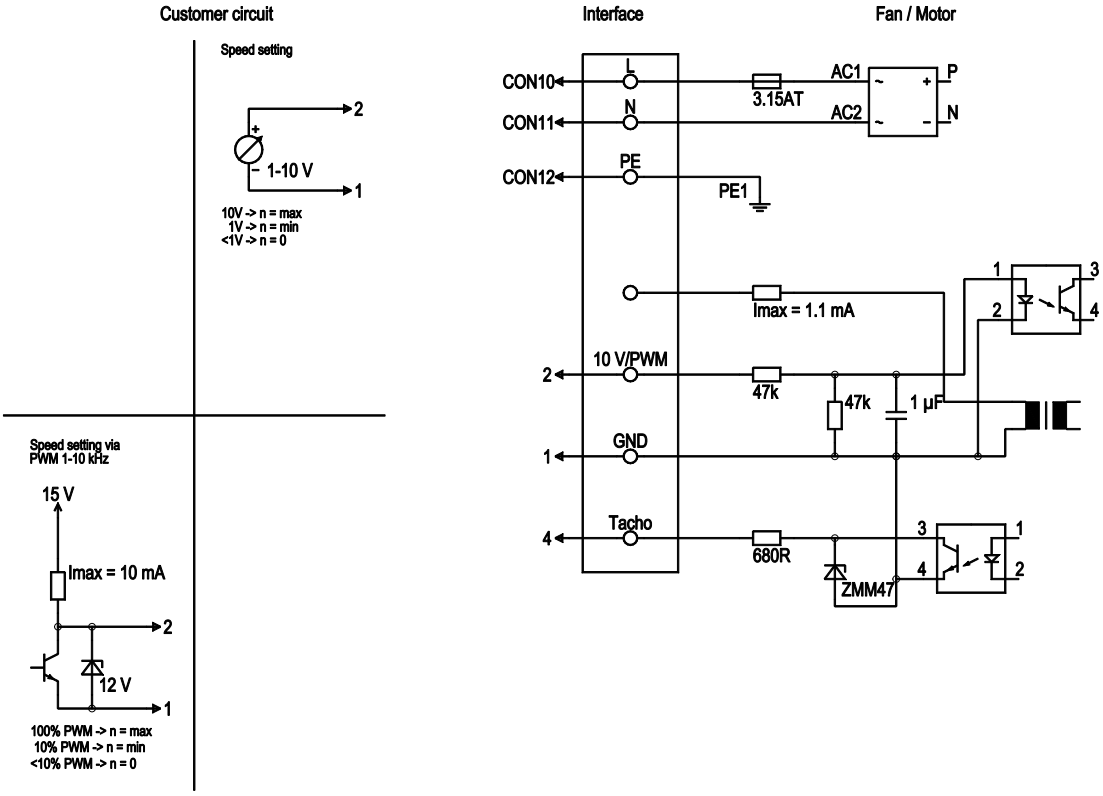
Connection screen



Line	No.	Signal	Colour	Function / assignment
	CON10	L	black	Power supply 230 VAC, 50-60 Hz, see type plate for voltage range
	CON11	N	blue	Neutral conductor
	CON12	PE	green/yellow	Protective earth
	1	GND	blue	GND - Connection for control interface
	2	0- 10V PWM	yellow	Control input 0 - 10 V or PWM, electrically isolated
	4	Tach	white	Tach output: open collector, 1 pulse per revolution, electrically isolated

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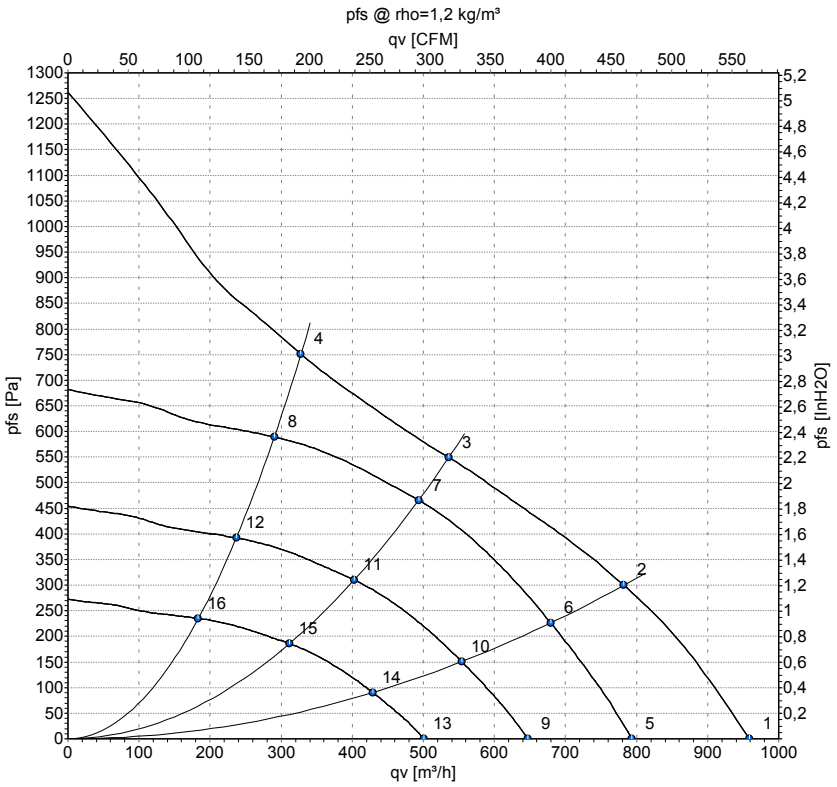
Charts: Air flow 50 Hz



Measurement: LU-153289

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}	qv	p_{fs}
	V	Hz	min^{-1}	W	A	dB(A)	dB(A)	m^3/h	Pa
1	230	50	4590	169	1.35	74	82	960	0
2	230	50	4375	169	1.35	68	76	780	300
3	230	50	4120	169	1.35	67	74	535	550
4	230	50	4285	169	1.35	70	78	330	750
5	230	50	3800	94	0.78	69	77	795	0
6	230	50	3800	110	0.91	65	72	680	227
7	230	50	3800	131	1.08	65	72	495	466
8	230	50	3800	117	0.97	67	75	290	590
9	230	50	3100	51	0.42	64	72	645	0
10	230	50	3100	59	0.49	60	67	555	151
11	230	50	3100	71	0.59	60	67	405	310
12	230	50	3100	63	0.53	62	70	235	392
13	230	50	2400	24	0.20	58	65	500	0
14	230	50	2400	28	0.23	53	61	430	91
15	230	50	2400	33	0.27	53	61	310	186
16	230	50	2400	29	0.24	55	64	185	235

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