R3G450-AL34-63

EC centrifugal fan

backward curved, single inlet

R3G450-AL34-63 ebmpapst Datasheet
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County court Stuttgart · HRB 590142

ErP2015 EXCEEDS THE NORM

Nominal data

Type	**R3G450-AL34-63**	
Motor	**M3G084-FA**	
Phase		1~
Nominal voltage	VAC	230
Nominal voltage range	VAC	200 .. 277
Frequency	Hz	50/60
Type of data definition		ml
Speed	min^{-1}	1050
Power input	W	330
Current draw	A	1.4
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	40

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*	1.00

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

		Actual	Request 2013	Request 2015
Overall efficiency η_{es}		60.2	42.2	46.2
Efficiency grade N		76	58	62
Power input P_{ed}	kW	0.31		
Air flow q_v	m^3/h	2855		
Pressure increase p_{fs}	Pa	216		
Speed n	min^{-1}	1055		

Data established at point of optimum efficiency

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Technical features

Mass	6.8 kg
Size	450 mm
Surface of rotor	Coated in black
Material of electronics housing	Plastic PA6.6, fibreglass-reinforced
Material of impeller	PP-GF40 plastic
Number of blades	6
Direction of rotation	Clockwise, seen on rotor
Type of protection	IP 20
Insulation class	"B"
Humidity class	F0
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 top; rotor on bottom on request
Condensate discharge holes	None
Operation mode	S1
Motor bearing	Ball bearing
Technical features	- Operation and alarm display: Reversible voltage output 0 V / +15 V - Integrated PID controller - Motor current limit - PFC, active - RS485 ebmBUS - Soft start - Over-temperature protected electronics / motor - Line undervoltage / phase failure detection
EMC interference immunity	Acc. to EN 61000-6-2 (industrial environment)
EMC harmonics	Acc. to EN 61000-3-2/3
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	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	UL 2111; CCC; CSA C22.2 Nr.77

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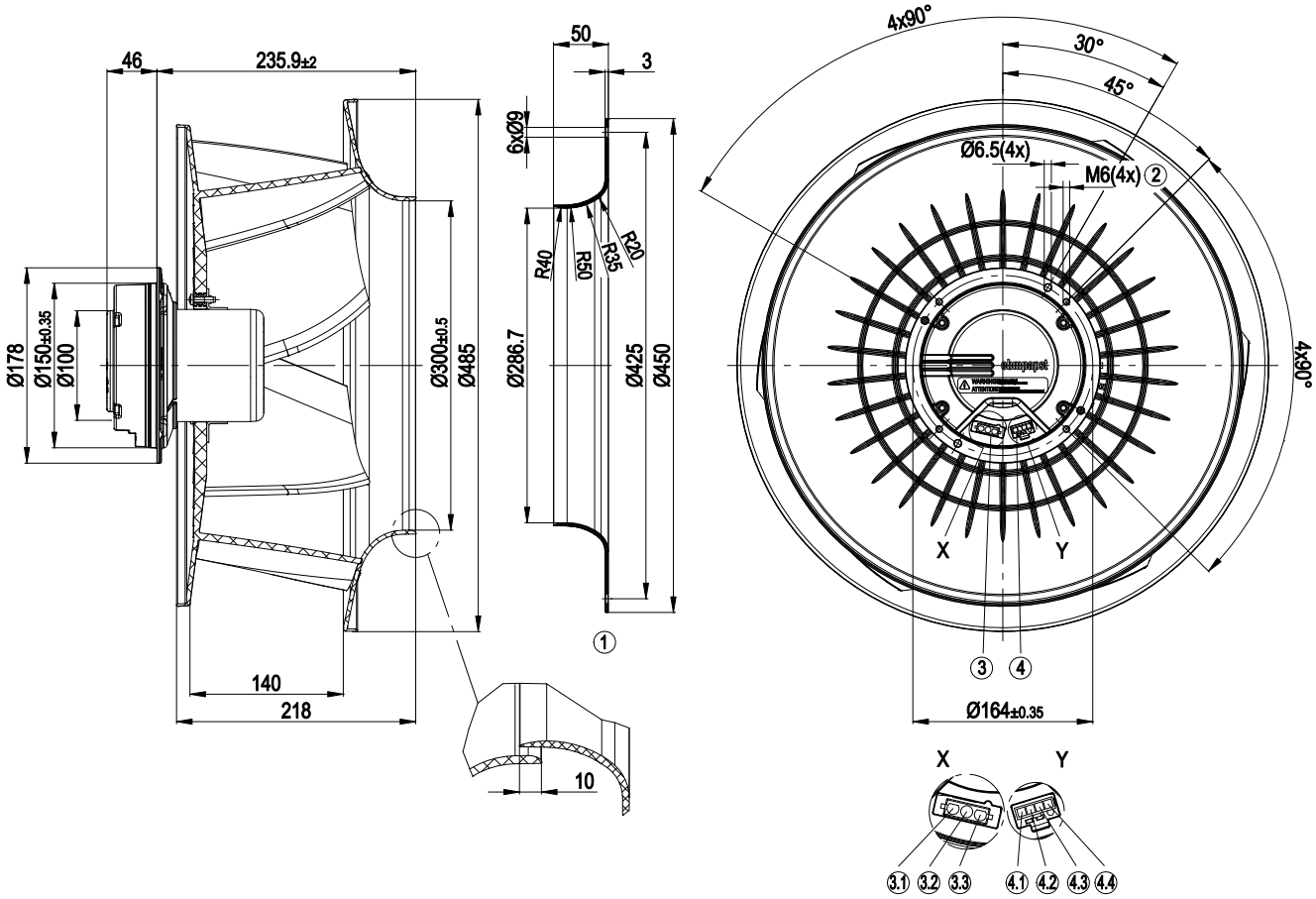
Product drawing



1	Accessory part: Inlet nozzle 45901-2-2943, included in the standard scope of delivery
2	Depth of screw 8-10 mm
3	Strip Lonco No. C63502-3A, mating connectors with female terminals are not included in the standard scope of delivery
3.1	PE
3.2	L
3.3	N
4	Strip Molex No. 39-30-2046, mating connectors with female terminals are not included in the standard scope of delivery
4.1	RSB
4.2	RSA
4.3	+15 V; in the event of fault: 0 V
4.4	0 V; in the event of fault: +15 V

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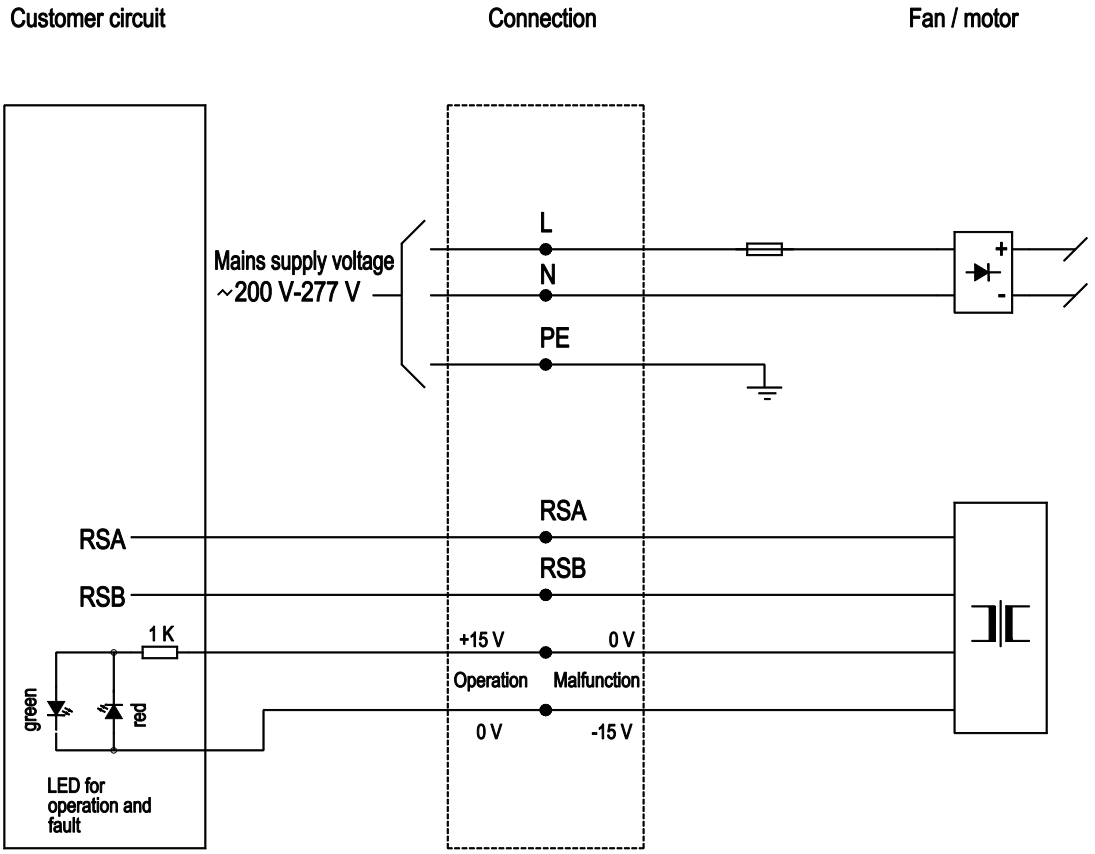
Connection screen



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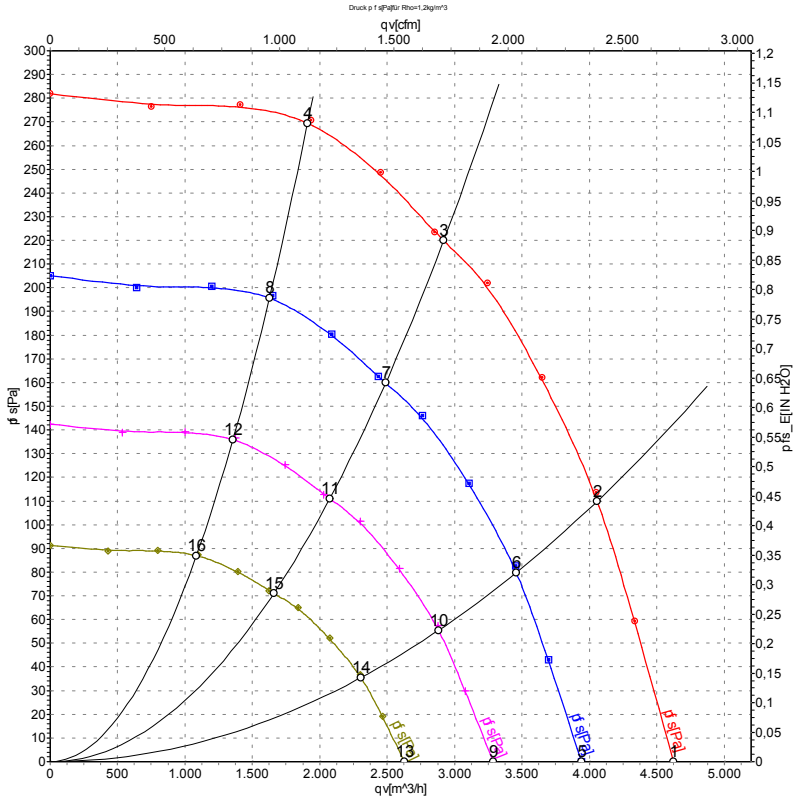
Charts: Air flow 50 Hz



Measurement: LU-124818

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}	qv	p_{fs}
	V	Hz	min^{-1}	W	A	dB(A)	dB(A)	dB(A)	m^3/h	Pa
1	230	50	1050	196	0.86	71	77	80	4625	0
2	230	50	1050	283	1.24	60	68	75	4055	110
3	230	50	1050	330	1.40	53	61	68	2920	220
4	230	50	1050	302	1.32	58	66	72	1910	270
5	230	50	900	121	0.53	67	73	76	3940	0
6	230	50	900	175	0.77	56	64	72	3455	82
7	230	50	900	199	0.87	50	58	65	2490	160
8	230	50	900	187	0.82	54	63	69	1625	197
9	230	50	750	70	0.31	63	69	72	3285	0
10	230	50	750	101	0.44	52	60	68	2880	57
11	230	50	750	115	0.50	46	54	61	2075	111
12	230	50	750	108	0.47	50	59	65	1355	137
13	230	50	600	36	0.16	58	65	67	2630	0
14	230	50	600	52	0.23	47	55	63	2305	36
15	230	50	600	59	0.26	41	49	56	1660	71
16	230	50	600	55	0.24	46	54	60	1085	88

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 · LwA_{out} = Sound power level outlet side
qv = Air flow · p_{fs} = Pressure increase