

EC centrifugal fan

forward curved, single inlet



R3G180-AD43-71 ebmpapst Datasheet
 sales@fansco.com
 www.fansco.com

Nominal data

Type	R3G180-AD43-71	
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	2450
Power input	W	510
Current draw	A	3.15
Min. back pressure	Pa	300
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	50

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 = $1 + p_{fs} / 100\,000\text{ Pa}$

		Actual	Request 2013	Request 2015
Overall efficiency η_{es}	%	46.4	27.5	34.5
Efficiency grade N		55.9	37	44
Power input P_{ed}	kW	0.31		
Air flow q_v	m ³ /h	760		
Pressure increase p_{fs}	Pa	628		
Speed n	min ⁻¹	2605		

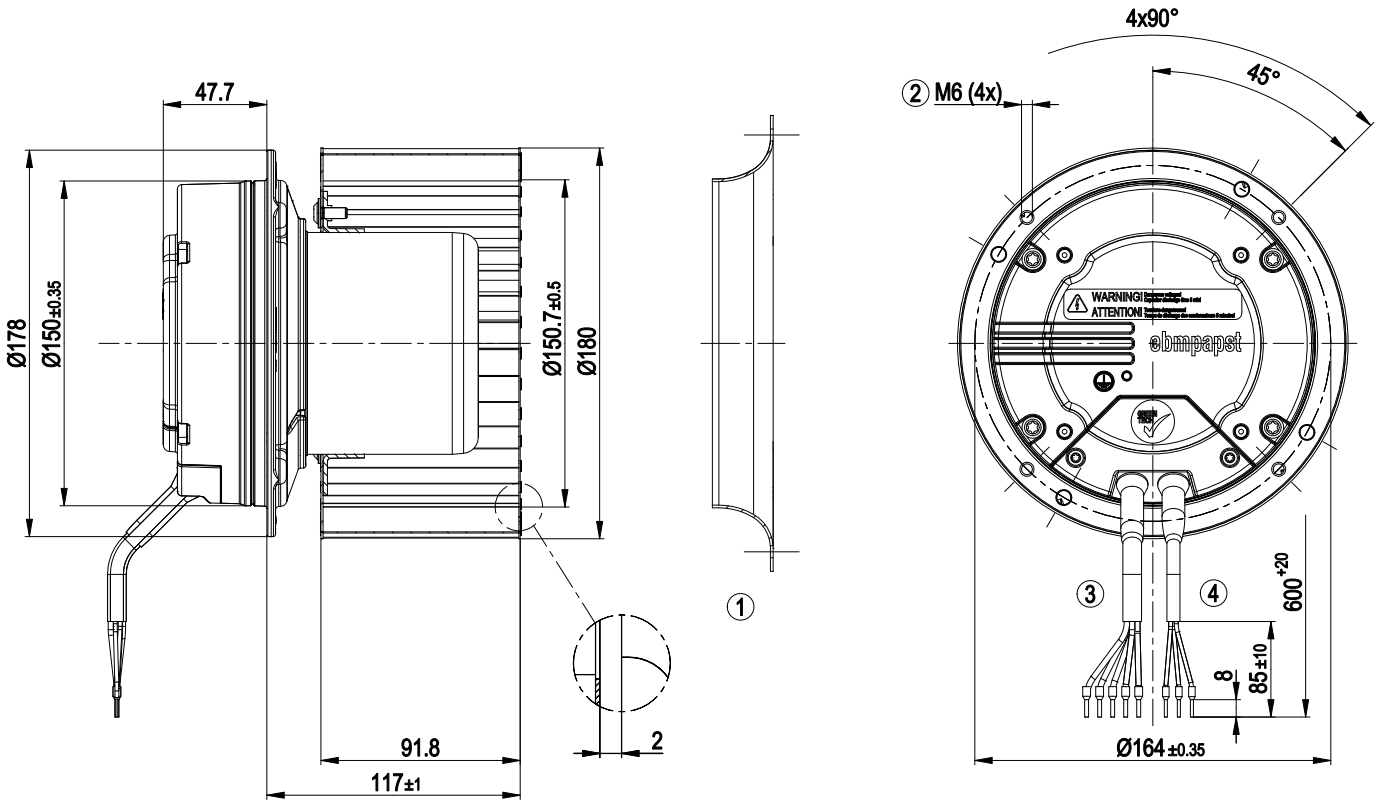
Data definition with optimum efficiency. LU-111416
 The ErP data is determined using a motor-impeller combination in a standardised measurement configuration.



Technical features

Mass	4.6 kg
Size	180 mm
Surface of rotor	Coated in black
Material of electronics housing	Die-cast aluminium
Material of impeller	Sheet steel, galvanised
Number of blades	38
Direction of rotation	Clockwise, seen on rotor
Type of protection	IP 54
Insulation class	"B"
Humidity class	F3-1
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
Operation mode	S1
Motor bearing	Ball bearing
Technical features	<ul style="list-style-type: none"> - Output 10 VDC, max. 1.1 mA - Alarm relay - Motor current limit - 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 detection
EMC interference immunity	Acc. to EN 61000-6-2 (industrial environment)
EMC interference emission	Acc. to EN 61000-6-3 (household environment)
Touch current acc. IEC 60990 (measuring network Fig. 4, TN system)	<= 3.5 mA
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	EAC; UL 2111; CSA C22.2 Nr.77; CCC

Product drawing

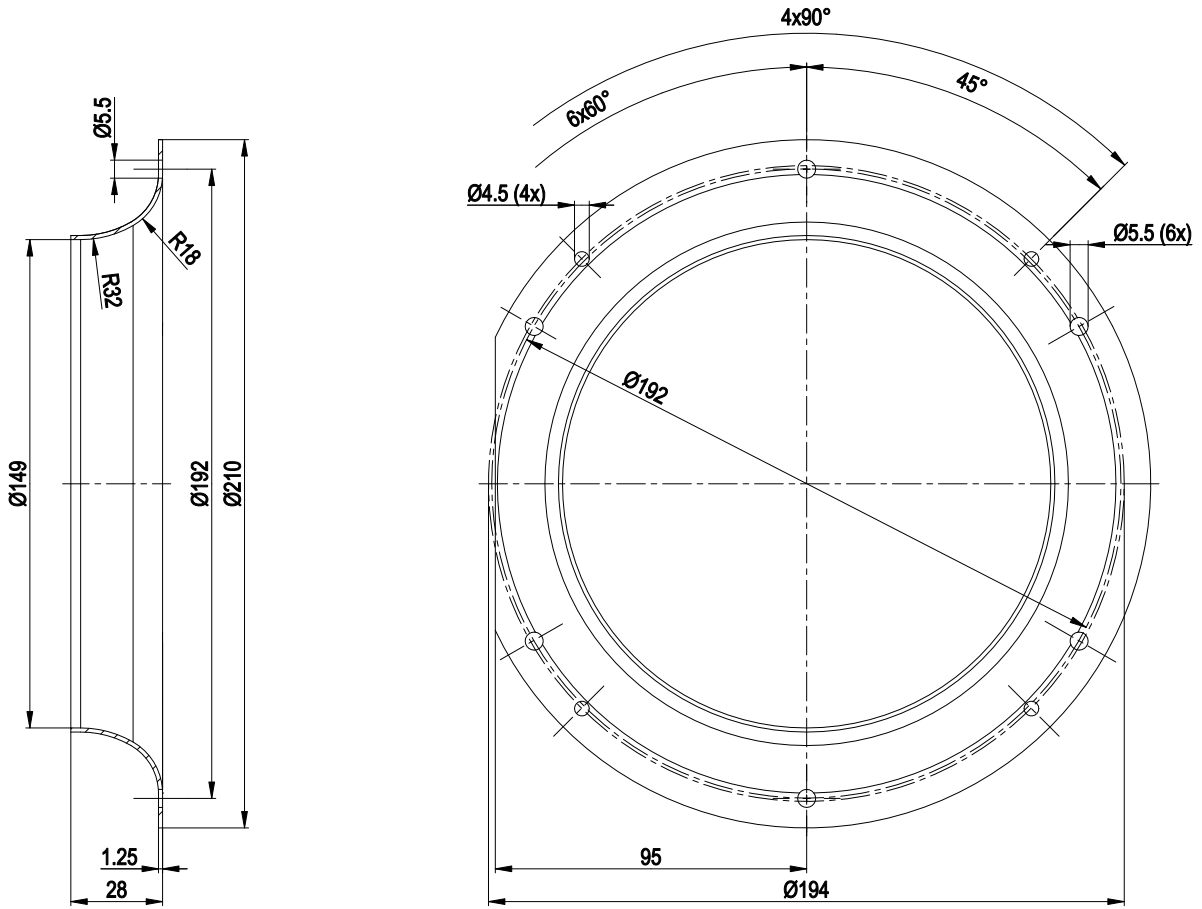


1	Accessory part: Inlet nozzle 09597-2-4013 not included in scope of delivery
2	Depth of screw max. 10 mm
3	Connection line PVC AWG18, 5x crimped core-end sleeves
4	Connection line PVC AWG22, 3x crimped core-end sleeves

EC centrifugal fan

forward curved, single inlet

Accessory part



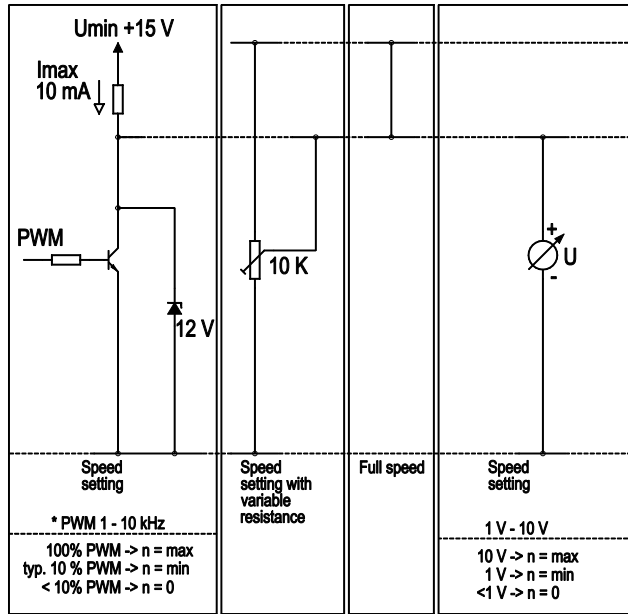
EC centrifugal fan

forward curved, single inlet

Connection screen

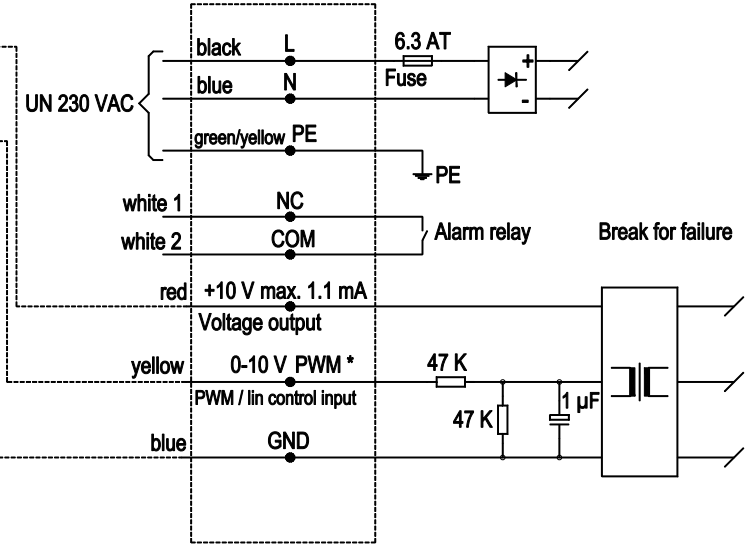
Customer circuit

Notes on various control possibilities and their applications

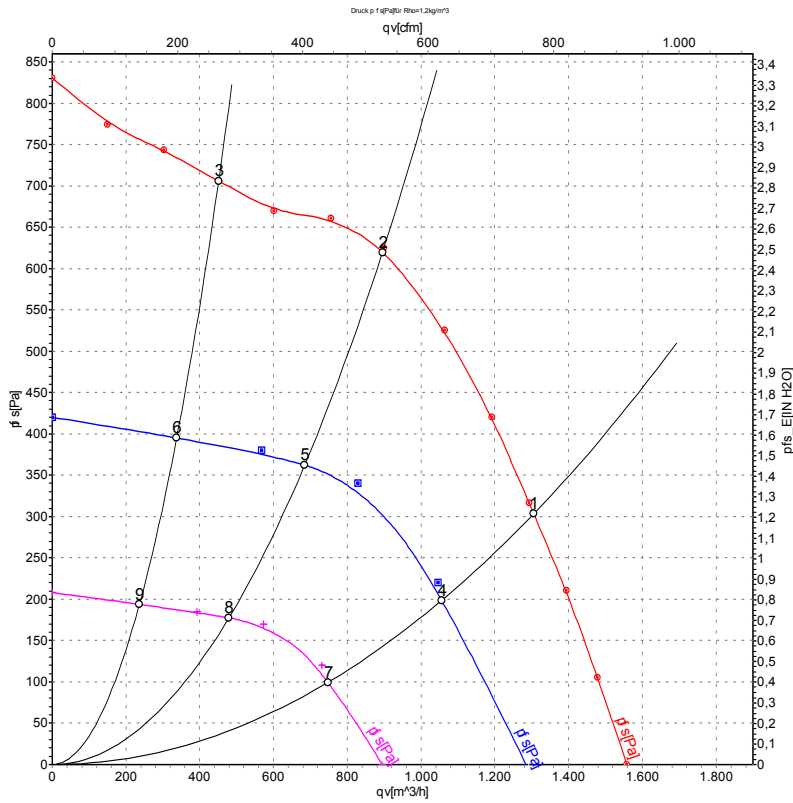


Connection

Fan / motor



Charts: Air flow 50 Hz



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: L_{wA} measured as per ISO 13347 / L_{pA} 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	L _{pA_{in}}	L _{wA_{in}}	qv	p _{fs}
	V	Hz	min ⁻¹	W	A	dB(A)	dB(A)	m ³ /h	Pa
1	230	50	2450	510	3.15	77	82	1305	300
2	230	50	2570	367	2.36	73	79	895	625
3	230	50	2675	239	1.57	73	79	450	700
4	230	50	2000	264	1.77	71	77	1055	212
5	230	50	2000	154	1.07	66	73	685	362
6	230	50	2000	102	0.73	65	72	335	396
7	230	50	1400	94	0.69	62	67	745	108
8	230	50	1400	57	0.43	57	63	480	177
9	230	50	1400	40	0.32	56	62	235	194

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

