EC centrifugal fan - AHU

backward-curved, single-intake

Limited partnership · Headquarters Mulfingen
Amtsgericht (court of registration) Stuttgart · HRA 590344

General partner Elektrobau Mulfingen GmbH · Headquarters Mulfingen
Amtsgericht (court of registration) Stuttgart · HRB 590142

ErP2015 EXCEEDS THE NORM

Nominal data

Type	**R3G250-AP06-71**
Motor	**M3G084-DF**

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}	3350
Power consumption	W	480
Current draw	A	3.0
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}	%	57.6	48.3
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		71.3	62
05 Variable speed drive		Yes	

09 Power consumption P_{ed}	kW	0.5
09 Air flow q_v	m^3/h	1350
09 Pressure increase p_{fs}	Pa	702
10 Speed (rpm) n	min^{-1}	3310
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-113785

ebmpapst

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Technical description

Weight	4.34 kg
Fan size	250 mm
Rotor surface	Painted black
Electronics housing material	Die-cast aluminum
Impeller material	Sheet aluminum
Number of blades	6
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 top; rotor on bottom on request
Condensation drainage holes	None
Mode	S1
Motor bearing	Ball bearing
Technical features	- Control input 0-10 VDC / PWM - Output 10 VDC max. 1.1 mA - Alarm relay - Thermal overload protection for motor
EMC immunity to interference	According to EN 61000-6-2 (industrial environment)
EMC circuit feedback	According to EN 61000-3-2/3
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	UL 2111; CSA C22.2 No. 77

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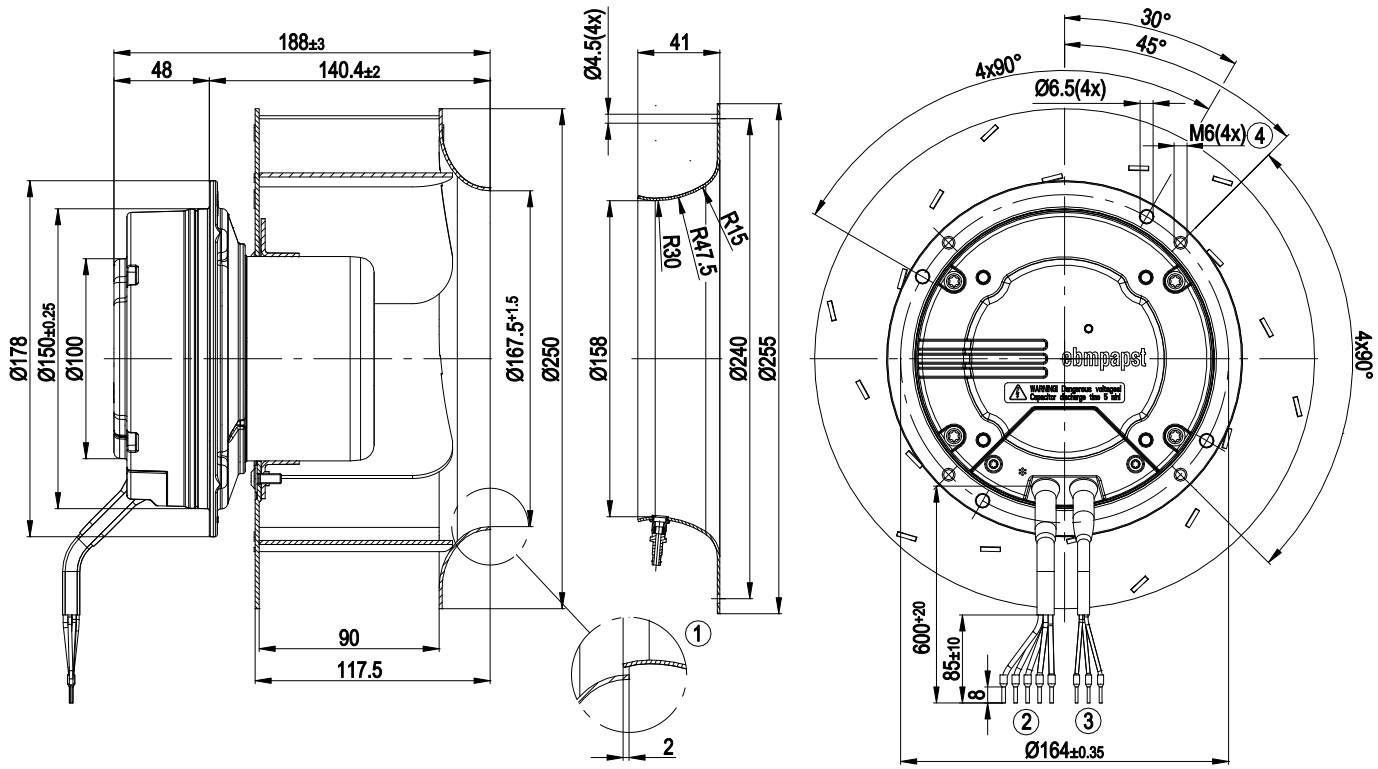
Product drawing



1	Accessory part: inlet ring 25002-2-4013 not included in scope of delivery, other inlet rings on request
2	Cable 5x AWG18
3	Cable 3x AWG22
4	Clearance for screw min. 8 mm, max. 10 mm

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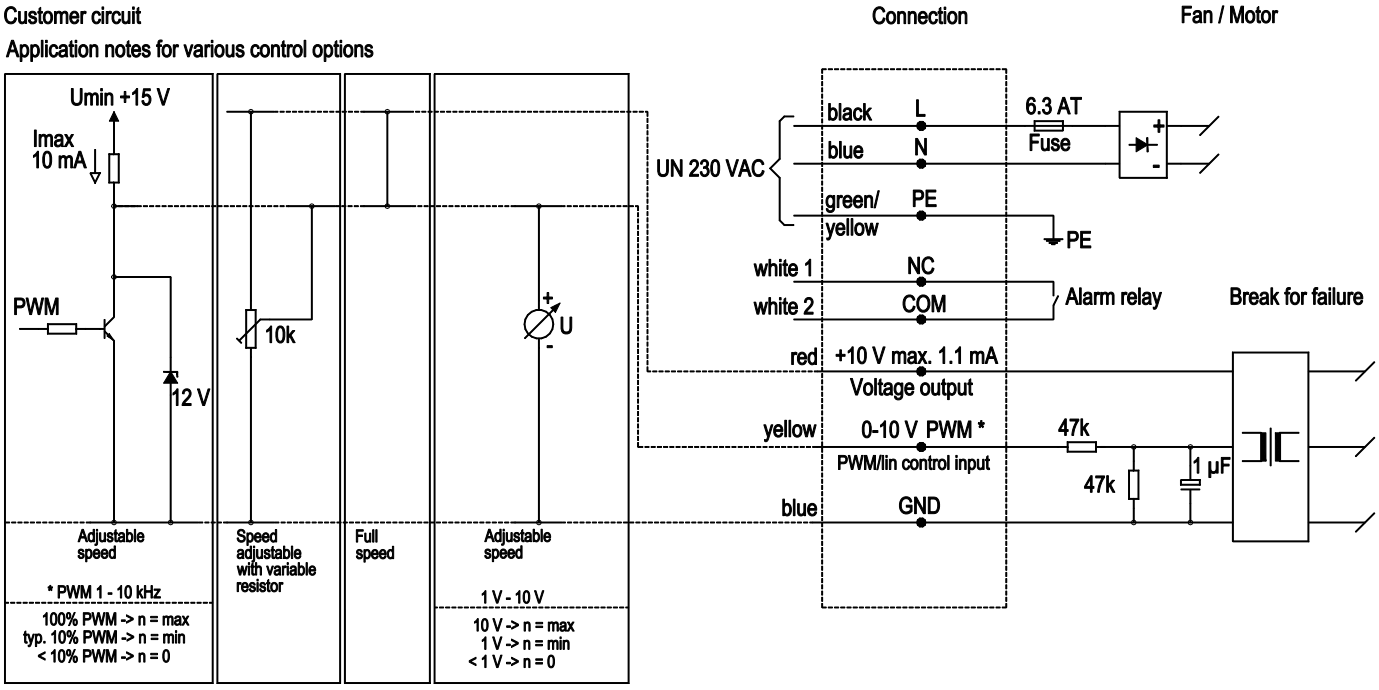
Connection diagram



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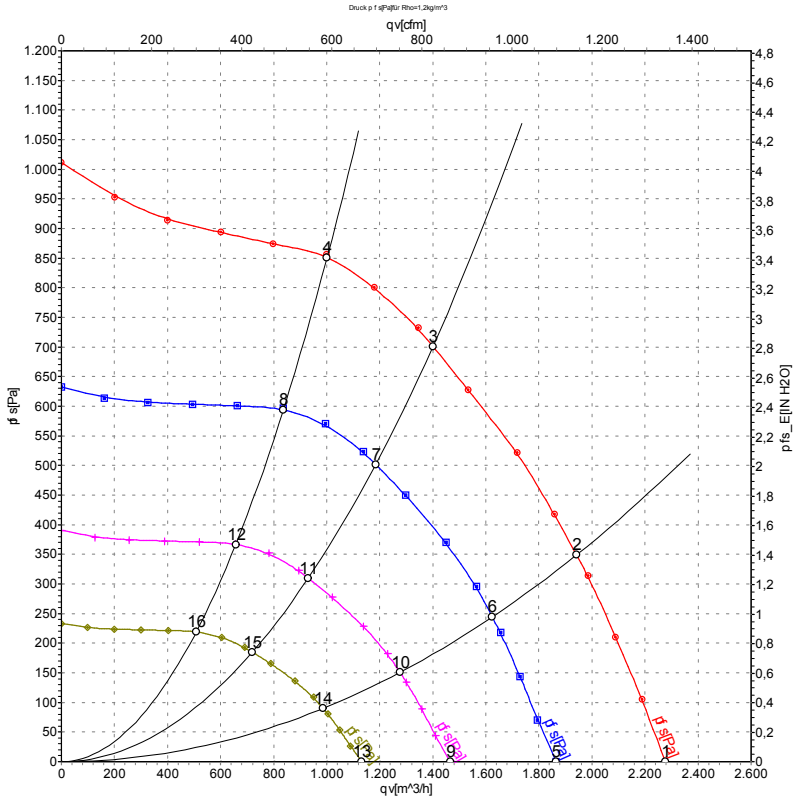
Curves: Air performance 50 Hz



Measurement: LU-113785-1

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}	qv	p_{fs}	qv	p_{fs}
	V	Hz	min^{-1}	W	A	dB(A)	dB(A)	m^3/h	Pa	CFM	inH2O
1	230	50	3420	385	2.48	78	86	2275	0	1340	0.00
2	230	50	3350	467	3.00	76	83	1940	350	1145	1.41
3	230	50	3310	504	3.21	73	80	1400	700	825	2.81
4	230	50	3355	481	3.07	74	81	1000	856	590	3.44
5	230	50	2800	212	1.36	74	81	1865	0	1100	0.00
6	230	50	2800	273	1.75	72	79	1625	244	955	0.98
7	230	50	2800	305	1.94	69	76	1185	502	695	2.02
8	230	50	2800	280	1.79	70	78	835	597	490	2.40
9	230	50	2200	103	0.66	69	76	1465	0	860	0.00
10	230	50	2200	132	0.85	66	74	1275	151	750	0.61
11	230	50	2200	148	0.94	64	71	930	310	550	1.24
12	230	50	2200	136	0.87	65	72	655	368	385	1.48
13	230	50	1700	47	0.31	63	71	1130	0	665	0.00
14	230	50	1700	61	0.39	61	68	985	90	580	0.36
15	230	50	1700	68	0.43	58	66	720	185	425	0.74
16	230	50	1700	63	0.40	60	67	510	220	300	0.88

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
qv = Air flow · p_{fs} = Pressure increase