R3G250-RO47-77

EC centrifugal fan

backward curved, single inlet

R3G250-RO47-77 ebmpapst Datasheet
sales@fansco.com
www.fansco.com

Limited partnership · Headquarters Mulfingen
County court Stuttgart · HRA 590344

General partner Elektrobau Mulfingen GmbH · Headquarters Mulfingen
County court Stuttgart · HRB 590142

Nominal data

Type	**R3G250-RO47-77**
Motor	**M3G084-DF**

Phase		1~
Nominal voltage	VAC	230
Nominal voltage range	VAC	200 .. 277
Frequency	Hz	50/60
Type of data definition		ml
Speed (rpm)	min^{-1}	3700
Power input	W	500
Current draw	A	3.3
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	45

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

		Actual	Request 2015
01 Overall efficiency η_{es}	%	60.8	48.2
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		74.6	62
05 Variable speed drive		Yes	

09 Power input P_{ed}	kW	0.49
09 Air flow q_v	m^3/h	1300
09 Pressure increase p_{fs}	Pa	756
10 Speed (rpm) n	min^{-1}	3730
11 Specific ratio*		1.01

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

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

LU-162753

EC centrifugal fan

backward curved, single inlet

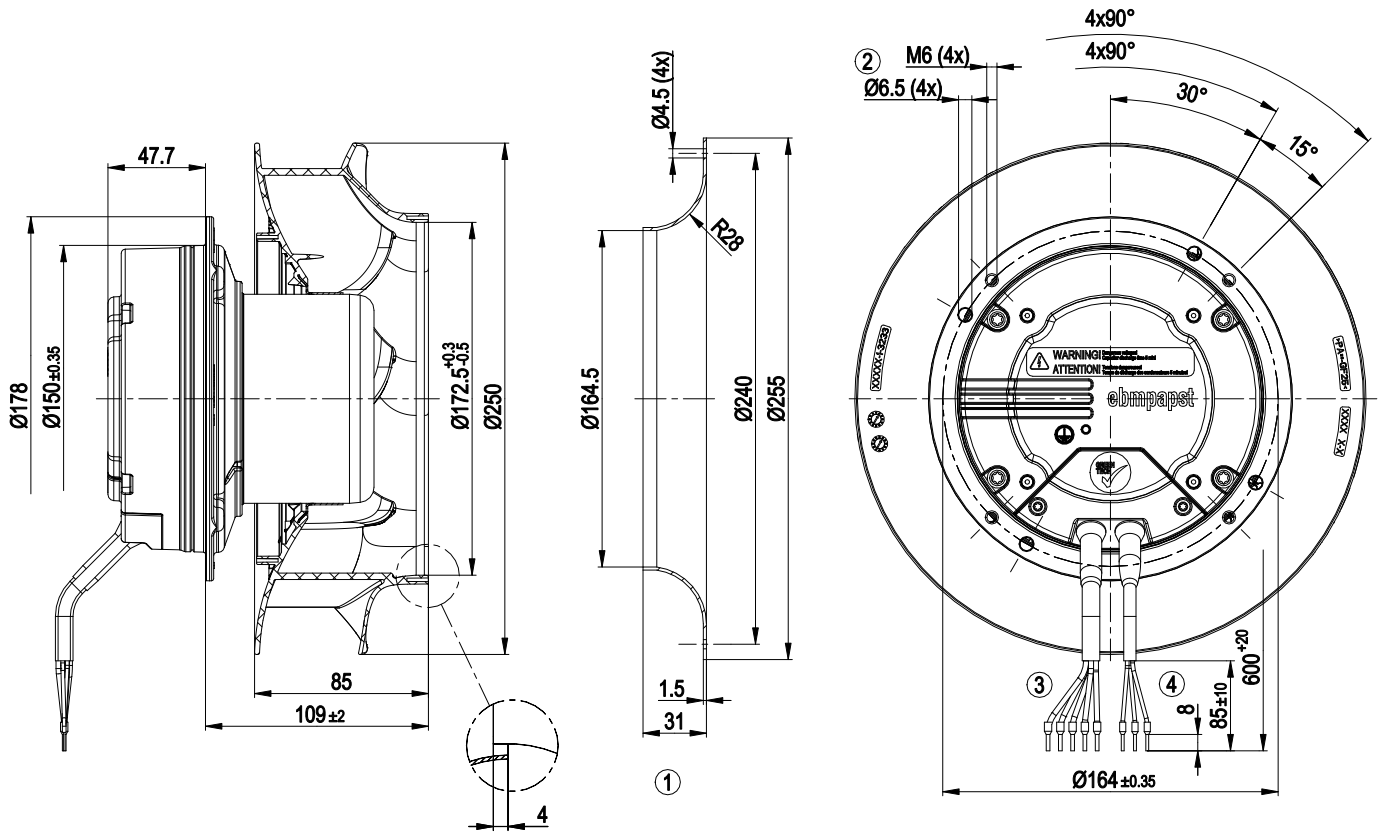
Technical features

Mass	3.9 kg
Size	250 mm
Surface of rotor	Coated in black
Material of electronics housing	Die-cast aluminium
Material of impeller	PA plastic
Number of blades	7
Direction of rotation	Clockwise, seen on rotor
Type of protection	IP 54
Insulation class	"B"
Humidity (F)/environmental protection class (H)	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	- Output 10 VDC, max. 1.1 mA - Alarm relay - Motor current limit - PFC, passive - 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 61000-6-4 (industrial 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	5C; C22.2 Nr.77 + CAN/CSA-E60730-1; EAC

EC centrifugal fan

backward curved, single inlet

Product drawing

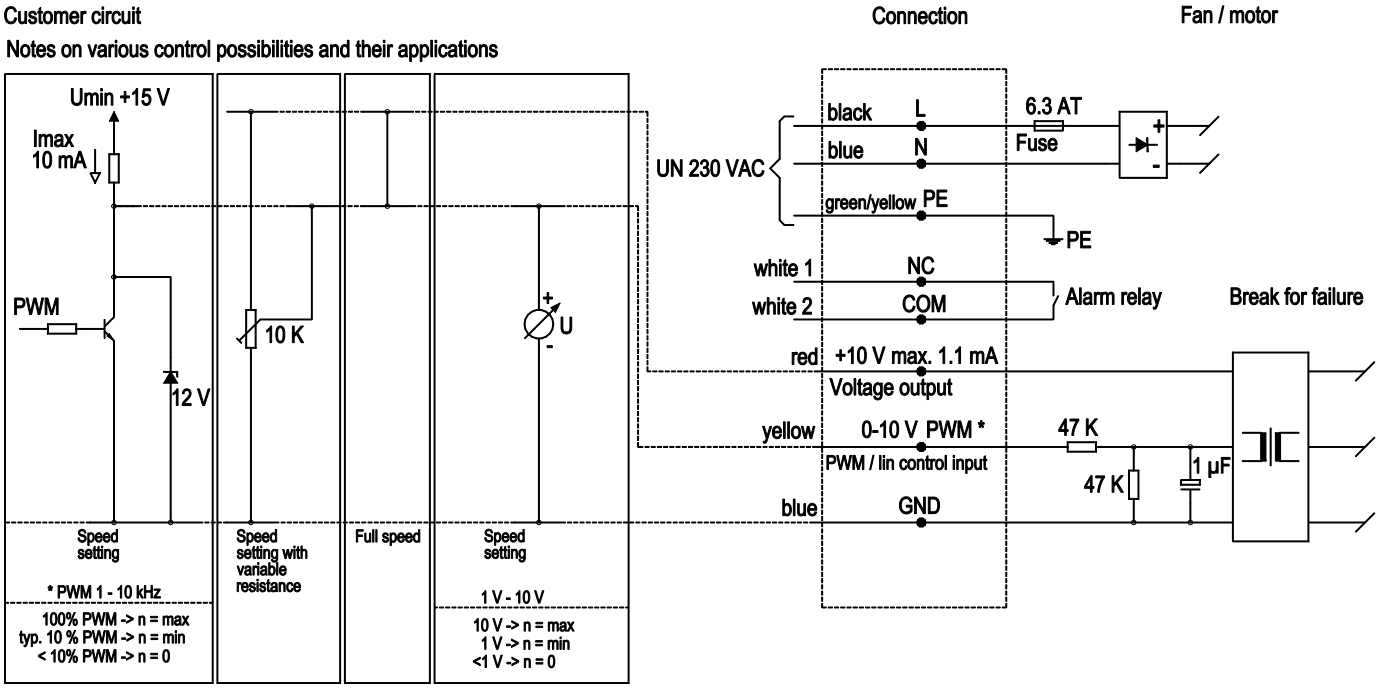


1	Accessory part: Inlet nozzle 96359-2-4013 not included in scope of delivery
2	Thread reach max. 10 mm
3	Connection line PVC AWG18, 5x crimped core-end sleeves
4	Connection line PVC AWG22, 3x crimped core-end sleeves

EC centrifugal fan

backward curved, single inlet

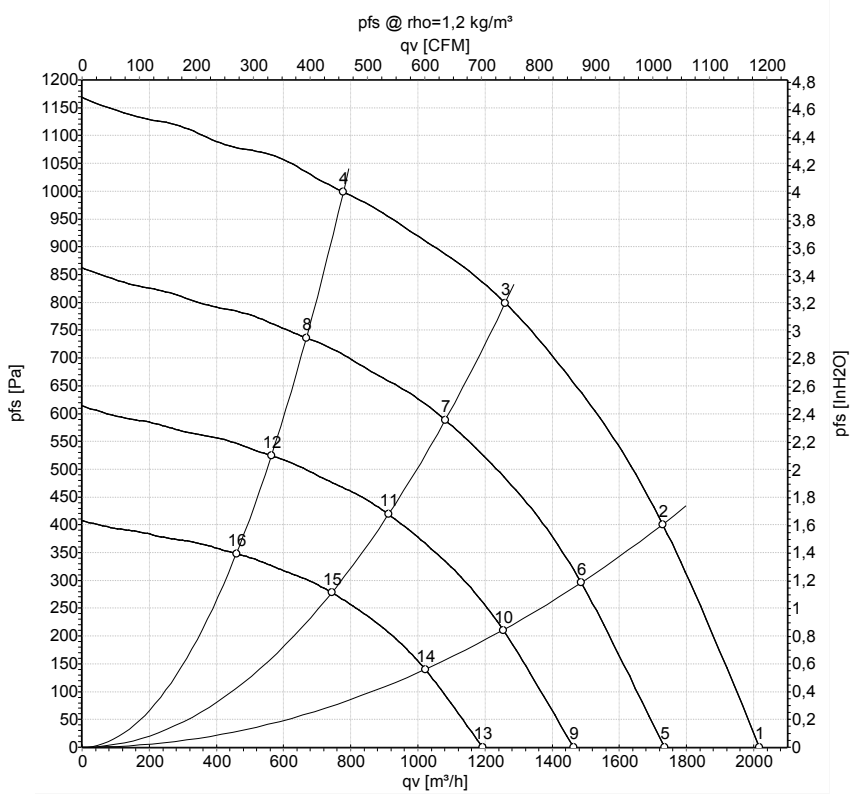
Connection screen



EC centrifugal fan

backward curved, single inlet

Charts: Air flow 50 Hz



Measurement: LU-162753-1

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	q_V	p_{fs}	q_V	p_{fs}
	V	Hz	min^{-1}	W	A	m^3/h	Pa	cfm	inH2O
1	230	50	3700	384	2.50	2015	0	1185	0.00
2	230	50	3700	438	2.84	1730	400	1020	1.61
3	230	50	3700	500	3.30	1260	800	740	3.21
4	230	50	3700	444	2.88	780	1000	460	4.01
5	230	50	3200	244	1.59	1735	0	1020	0.00
6	230	50	3200	278	1.80	1485	300	875	1.20
7	230	50	3200	314	2.03	1080	589	635	2.36
8	230	50	3200	281	1.82	670	736	395	2.95
9	230	50	2700	147	0.95	1465	0	860	0.00
10	230	50	2700	167	1.08	1255	213	740	0.86
11	230	50	2700	189	1.22	910	419	535	1.68
12	230	50	2700	169	1.10	565	524	330	2.10
13	230	50	2200	79	0.52	1190	0	700	0.00
14	230	50	2200	90	0.59	1020	142	600	0.57
15	230	50	2200	102	0.66	745	278	435	1.12
16	230	50	2200	91	0.59	460	348	270	1.40

U = Supply voltage · f = Frequency · n = Speed (rpm) · P_{ed} = Power input · I = Current draw · q_V = Air flow · p_{fs} = Pressure increase