R3G270-AA40-73

EC centrifugal fan

backward curved, single inlet

R3G270-AA40-73 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	**R3G270-AA40-73**
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}	2740
Power input	W	325
Current draw	A	2.1
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

		Actual	Request 2015
01 Overall efficiency η_{es}	%	51.8	46.3
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		67.5	62
05 Variable speed drive		Yes	

09 Power input P_{ed}	kW	0.32
09 Air flow q_v	m^3/h	1405
09 Pressure increase p_{fs}	Pa	383
10 Speed (rpm) n	min^{-1}	2740
11 Specific ratio*		1.00

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-145281

EC centrifugal fan

backward curved, single inlet

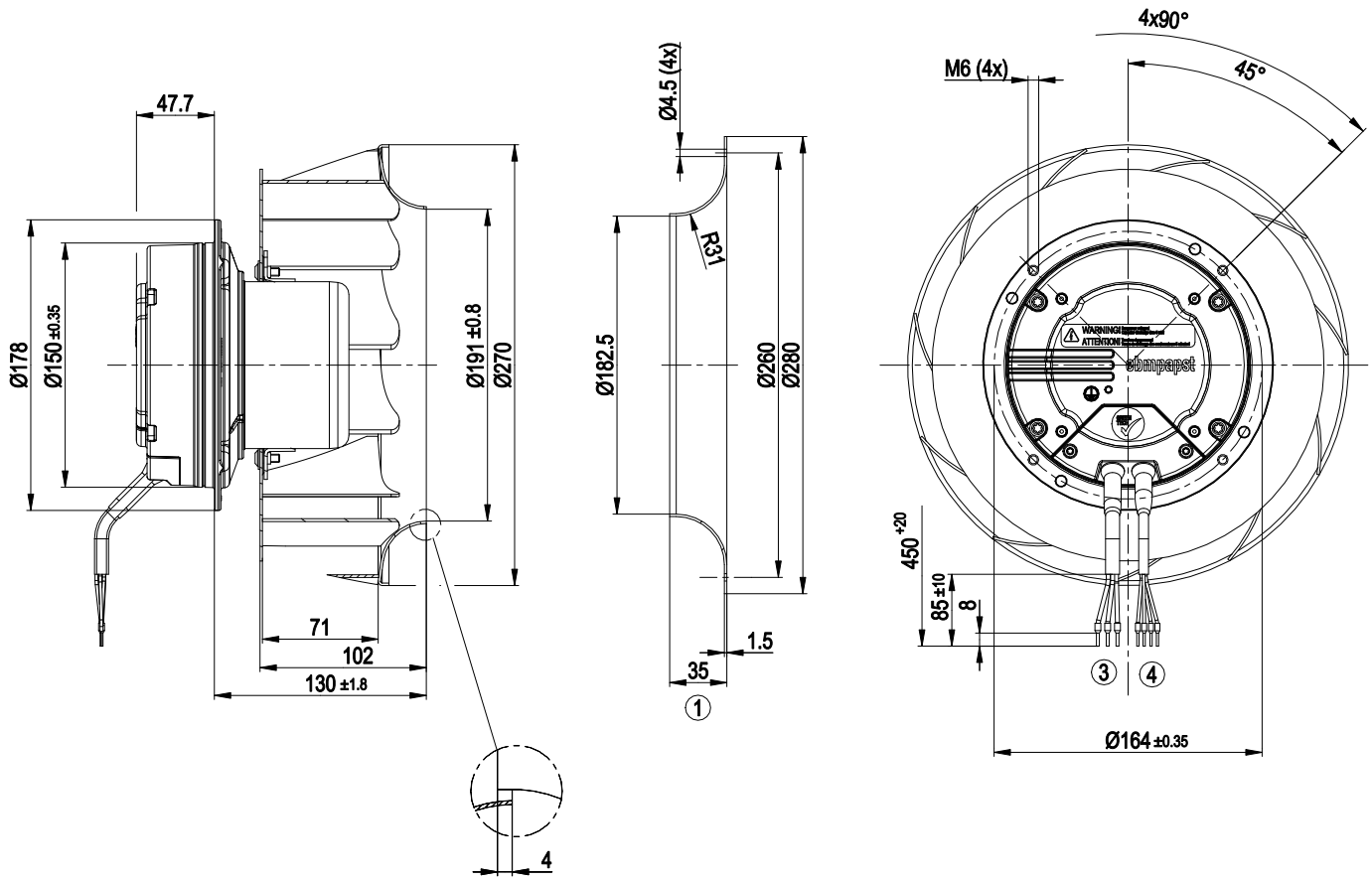
Technical features

Mass	4.2 kg
Size	270 mm
Surface of rotor	Coated in black
Material of electronics housing	Die-cast aluminium
Material of impeller	Sheet steel, galvanised
Number of blades	11
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
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
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

EC centrifugal fan

backward curved, single inlet

Product drawing

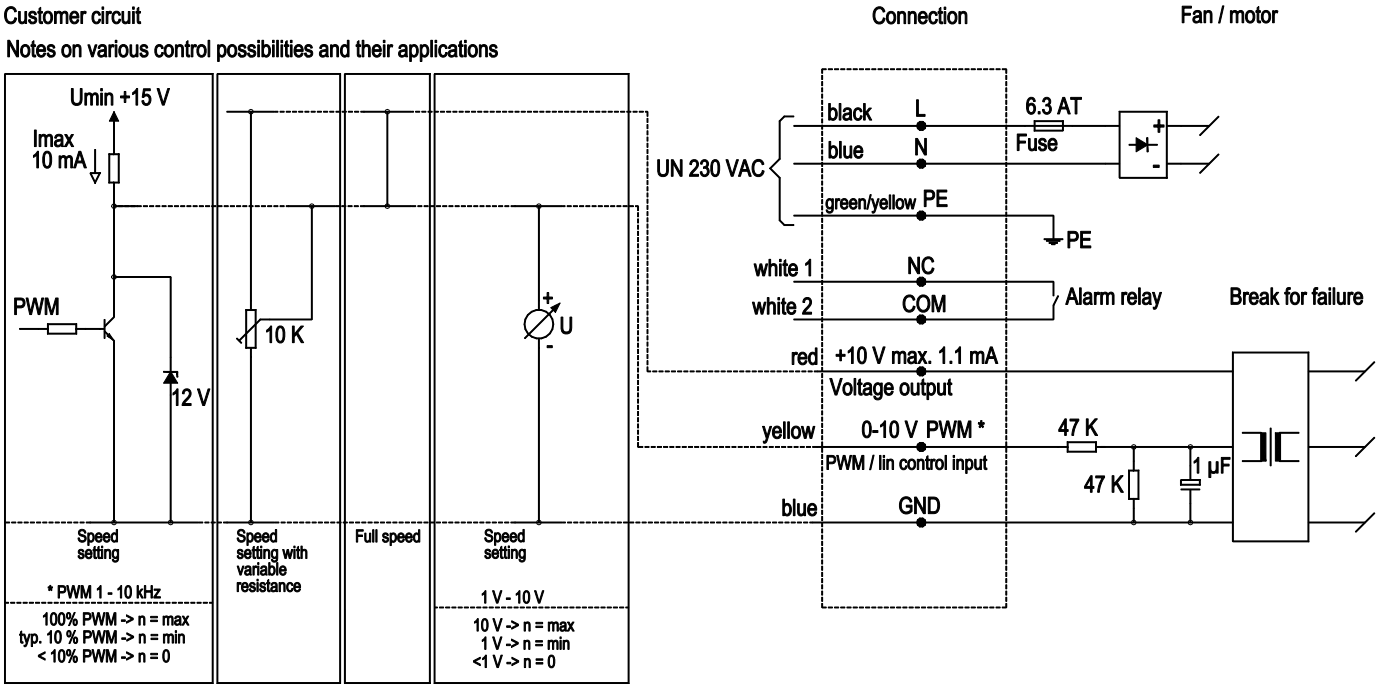


1	Accessory part: Inlet nozzle 96360-2-4013 not included in scope of delivery
2	Thread reach max. 10 mm
3	Connection line PVC AWG18, 5x crimped core-end sleeves
4	Connection line PVC AWG22, 3x crimped core-end sleeves

EC centrifugal fan

backward curved, single inlet

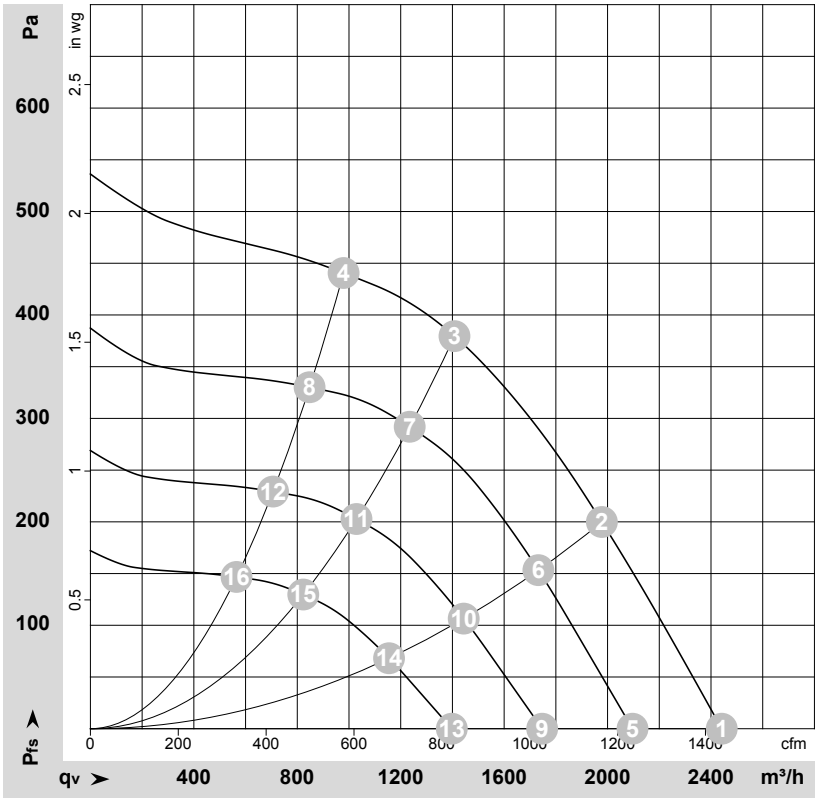
Connection screen



EC centrifugal fan

backward curved, single inlet

Charts: Air flow 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-145281-1

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	LpA_{in}	LwA_{in}	q_V	p_{fs}	q_V	p_{fs}
	V	Hz	min^{-1}	W	A	dB(A)	dB(A)	m^3/h	Pa	cfm	inH2O
1	230	50	2795	259	1.70	75	82	2440	0	1435	0.00
2	230	50	2740	317	2.06	72	78	1980	200	1165	0.80
3	230	50	2740	325	2.10	69	77	1410	380	830	1.53
4	230	50	2770	298	1.95	72	80	980	440	575	1.77
5	230	50	2400	164	1.08	71	78	2095	0	1235	0.00
6	230	50	2400	213	1.39	68	75	1730	154	1020	0.62
7	230	50	2400	217	1.41	66	74	1235	293	725	1.18
8	230	50	2400	194	1.26	68	77	850	330	500	1.32
9	230	50	2000	95	0.62	66	74	1745	0	1030	0.00
10	230	50	2000	123	0.80	64	71	1445	107	850	0.43
11	230	50	2000	126	0.82	61	69	1030	203	605	0.81
12	230	50	2000	112	0.73	64	72	705	229	415	0.92
13	230	50	1600	49	0.32	61	68	1400	0	825	0.00
14	230	50	1600	63	0.41	58	65	1155	68	680	0.27
15	230	50	1600	64	0.42	56	64	825	130	485	0.52
16	230	50	1600	57	0.37	58	67	565	147	335	0.59

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