R3G250-RU27-86

Ingersoll-Rand/Thermoking

3A88081G05

EC centrifugal fan - RadiCal

backward-curved, single-intake

Automotive

R3G250-RU27-86 ebmpapst Datasheet
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www.fansco.com

Nominal data

Type	**R3G250-RU27-86**	
Motor	**M3G084-CF**	
Nominal voltage	VDC	26
Nominal voltage range	VDC	16 .. 32
Method of obtaining data		fa
Speed (rpm)	min^{-1}	3860
Power consumption	W	410
Current draw	A	15.8
Min. ambient temperature	°C	-40
Max. ambient temperature	°C	60

ml = Max. load · me = Max. efficiency · fa = Free air · cs = Customer specification · ce = Customer equipment
Subject to change

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Technical description

Weight	2.75 kg
Size	250 mm
Motor size	84
Rotor surface	Painted black
Electronics housing material	Die-cast aluminum, painted black
Impeller material	PA plastic UL94 V0
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP24 KM; (motor); electronics IP66 / 69K
Insulation class	"B"
Moisture (F) / Environmental (H) protection class	H3
Max. permitted ambient temp. for motor (transport/storage)	+80 °C
Min. permitted ambient temp. for motor (transport/storage)	-40 °C
Installation position	Any
Condensation drainage holes	None
Cooling hole/opening	On rotor side
Mode	S1
Motor mounting	Ball bearing
Motor bearing	(sealed)
Technical features	-Start at 85 °C (2 min permitted) -Fault output (high-side switch max. 30 mA) -Load dump (58 V) -Motor current limitation -Soft start -Control input 0-10 VDC / PWM -Temperature derating -Overvoltage detection -Thermal overload protection for electronics -Undervoltage detection
Motor protection	Reverse polarity and locked-rotor protection
With cable	Lateral
Protection class	III
Conformity with standards	EN 15085-1, CPC3: 2007; EN 45545-2, HL3: 2013; EN 50155: 2008; EN 61373, Cat. 1B: 2010
Comment	EMC regulation: EN 50121-3-2 in preparation

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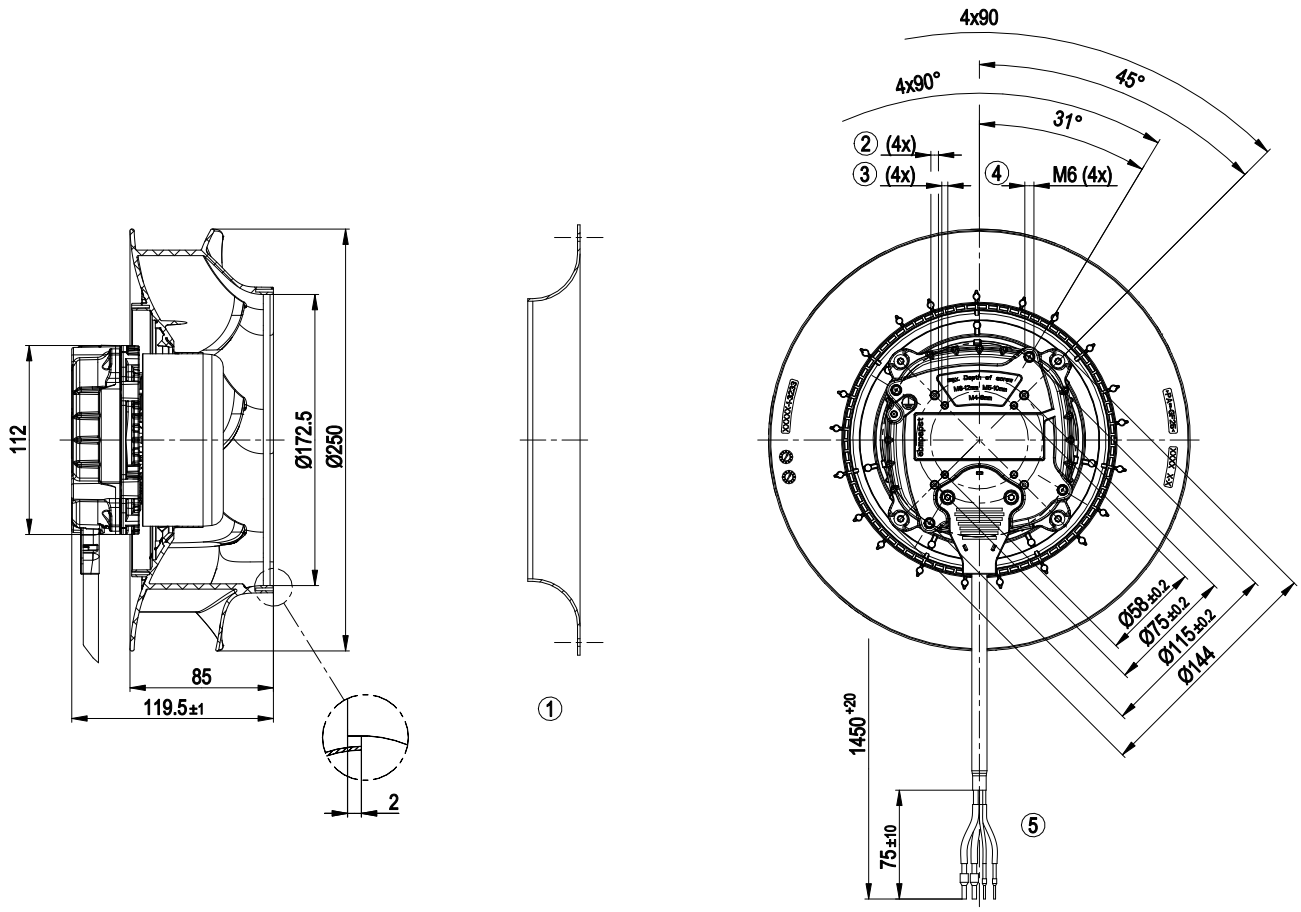
Product drawing



1	Accessory part: inlet ring 96359-2-4013 not included in scope of delivery
2	Max. clearance for screw 10 mm, tapping hole ready for self-tapping M5 screw
3	Max. clearance for screw 8 mm, tapping hole ready for self-tapping M4 screw
4	Max. clearance for screw 12 mm
5	Cable (railway) 2x 2.5 mm², 2x 1.0 mm², 4x crimped ferrules

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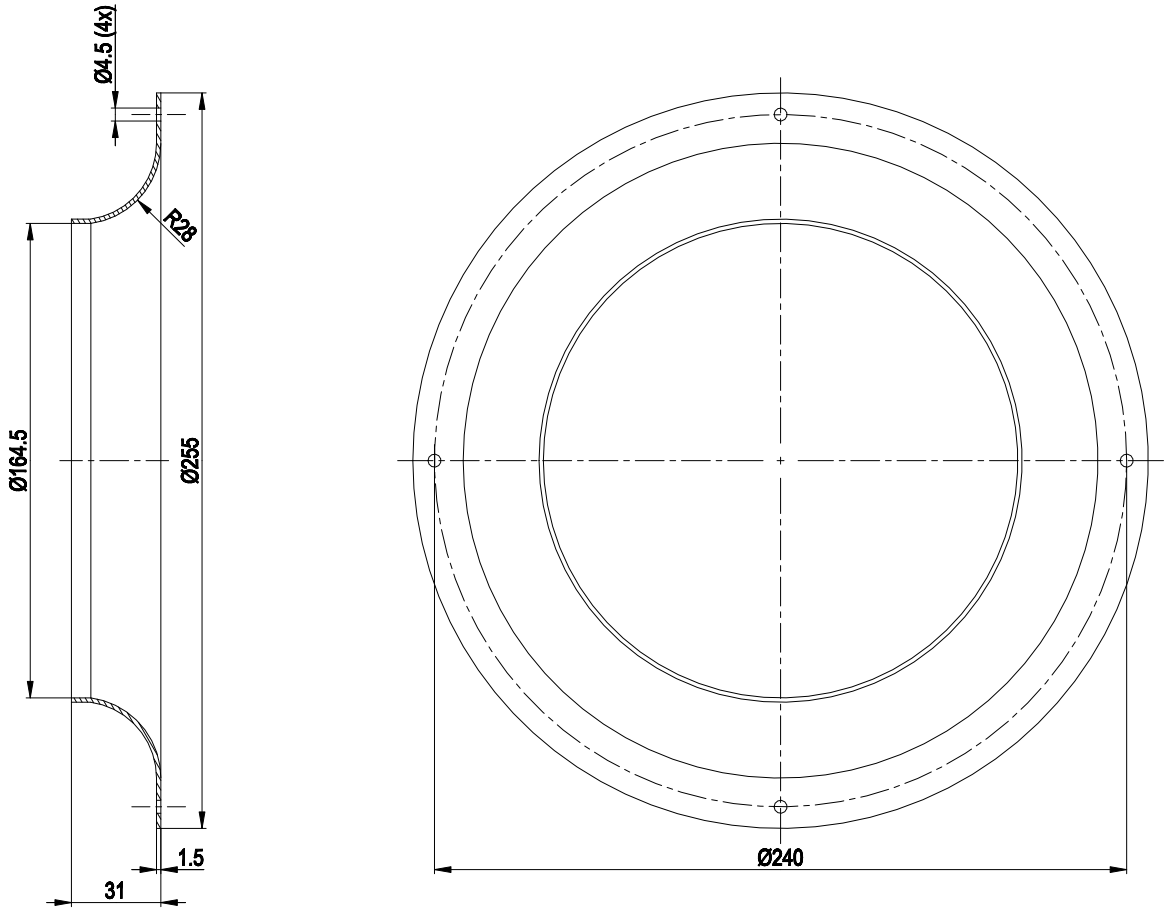
Accessory part



Accessory part: inlet ring 96359-2-4013 not included in scope of delivery

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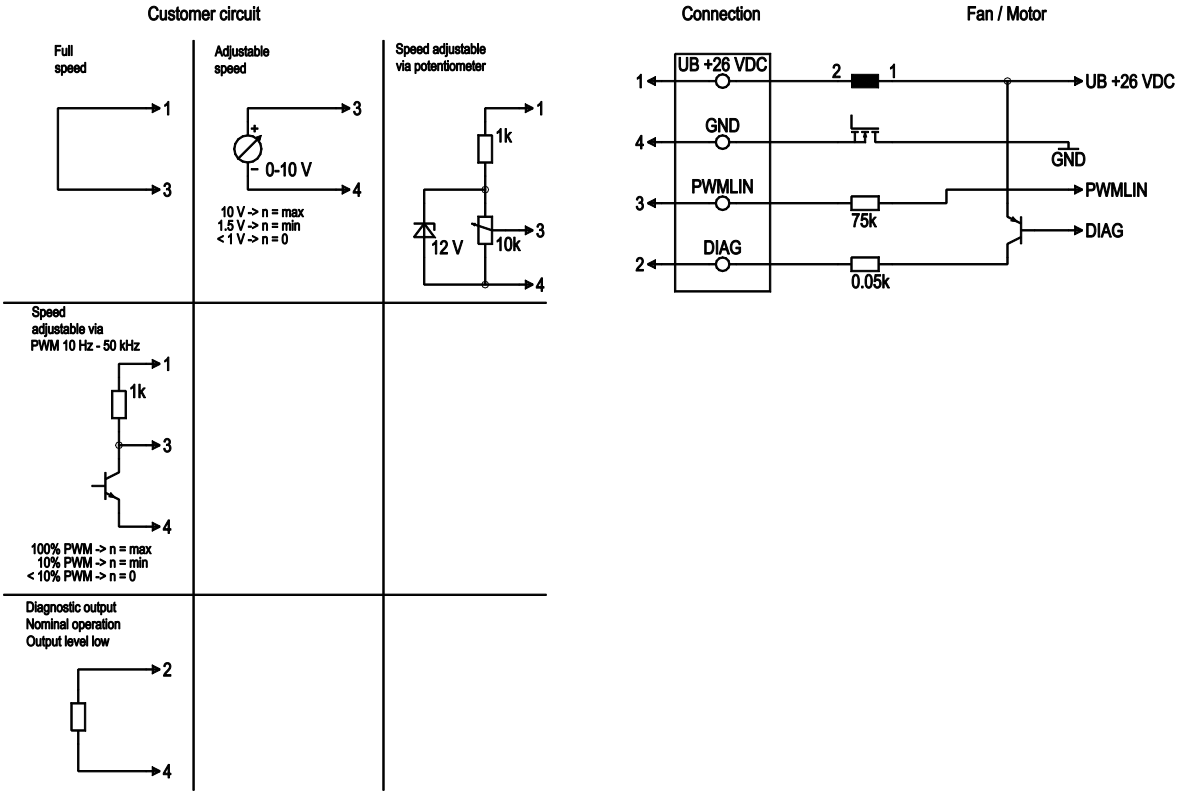
Connection diagram



No.	Conn.	Designation	Color	Function/assignment
1	1	UB +26 VDC	black	Power supply 26 VDC
1	2	DIAG	white	Diagnostic output
1	3	PWMLIN	yellow	Analog voltage control input 0-10 V or PWM
1	4	GND	brown	Power supply GND, reference ground

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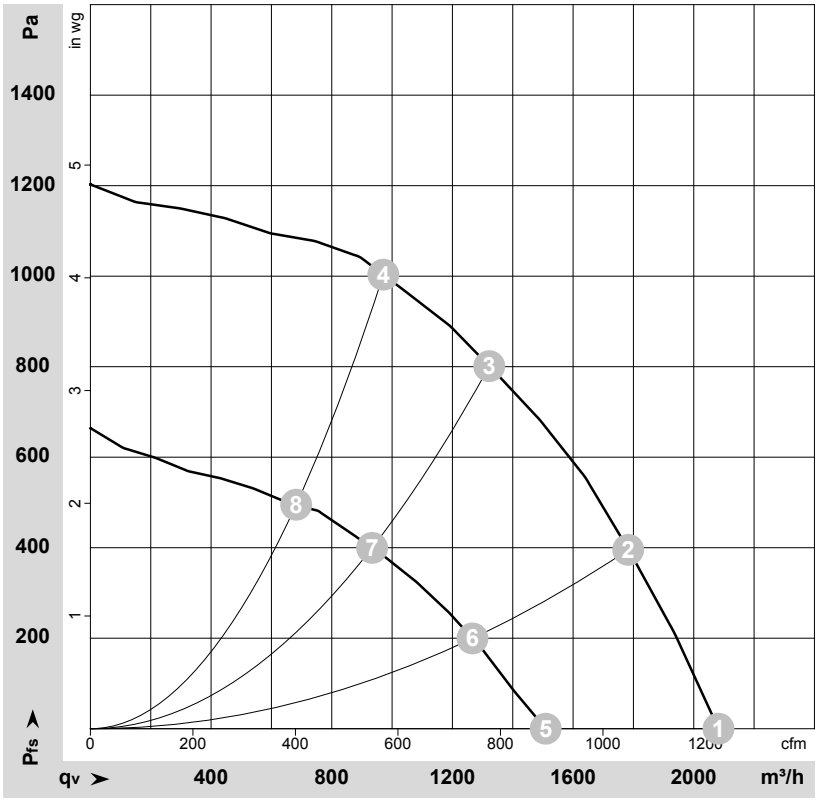
Curves: Air performance



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-162027-1
Measurement: LU-162195-1

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	n	P_{ed}	I	LpA_{in}	LwA_{in}	q_V	p_{fs}	q_V	p_{fs}
	V	min^{-1}	W	A	dB(A)	dB(A)	m^3/h	Pa	cfm	in. wg
1	26	3860	410	15.80	80	87	2080	0	1225	0.00
2	26	3860	513	19.80	78	85	1785	400	1050	1.61
3	26	3860	568	21.90	74	81	1320	800	780	3.21
4	26	3860	560	21.60	76	82	970	1000	570	4.01
5	16	2800	166	10.43			1510	0	890	0.00
6	16	2755	187	11.72			1265	200	745	0.80
7	16	2730	204	12.78			935	400	550	1.61
8	16	2730	197	12.39			680	495	400	1.99

U = Power supply · n = Speed (rpm) · P_{ed} = Power consumption · I = Current draw · LpA_{in} = Sound pressure level intake side · LwA_{in} = Sound power level intake side · q_V = Air flow
p_{fs} = Pressure increase