R3G250-PU65-21

EC centrifugal fan - RadiPac

backward-curved, single-intake

Automotive

R3G250-PU65-21 ebmpapst Datasheet
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Amtsgericht (court of registration) Stuttgart · HRA 590344

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

Nominal data

Type	**R3G250-PU65-21**
Motor	**M3G084-CF**

Nominal voltage	VDC	26
Nominal voltage range	VDC	16 .. 32
Method of obtaining data		fa
Speed (rpm)	min^{-1}	3380
Power consumption	W	495
Current draw	A	19
Min. ambient temperature	°C	-30
Max. ambient temperature	°C	75
-with power derating to	°C	80

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	3.1 kg
Size	250 mm
Motor size	84
Rotor surface	Painted black
Electronics housing material	Die-cast aluminum, painted black
Impeller material	PA plastic
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	Motor IP24 KM, electronics IP6K9K (mating connector installed)
Insulation class	"B"
Moisture (F) / Environmental (H) protection class	H4
Ambient temperature note	Above +75°C with temperature derating; External sources of heat above +80°C can affect the service life
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 bearing	Ball bearing; (sealed)
Technical features	-Start at 85 °C (2 min) permitted - Error output (high-side switch) - Load dump (58 V) - Motor current limitation - Soft start - Control input 0-10 VDC / PWM - Temperature derating - Overvoltage detection - Thermal overload protection for electronics - Line undervoltage detection
Electrical hookup	Connector with cable; Standby current less than 500 µA
Motor protection	Reverse polarity and locked-rotor protection
With cable	Lateral
Protection class assignment	III; Requires supply with safety extra-low voltage SELV. This component for installation may have several local protection classes. This information relates to this component's basic design. The final protection class is based on the component's intended installation and connection.

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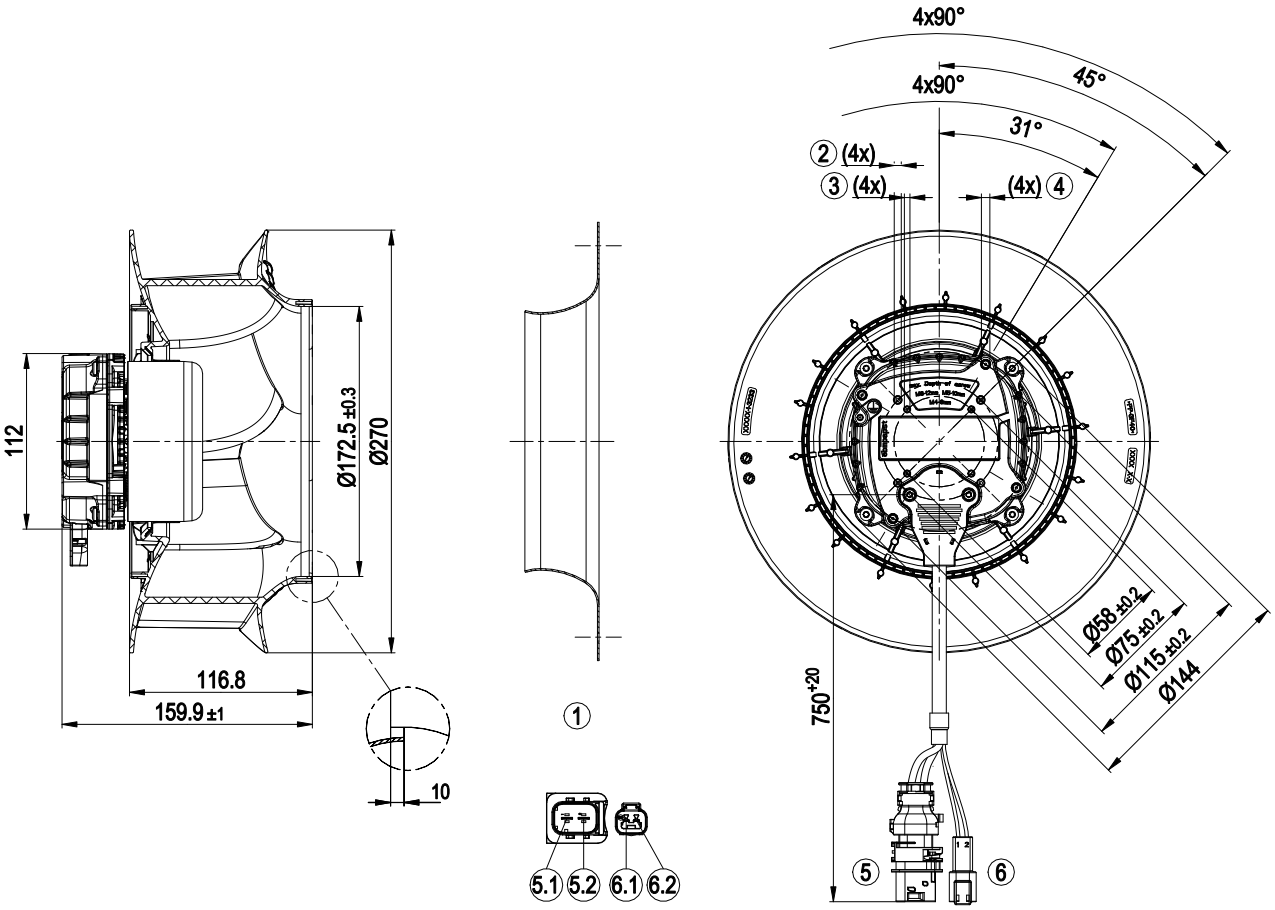
Product drawing



1	Accessory part: Inlet ring 96350-2-4013 not included in scope of delivery
2	Max. screw-in depth 10 mm, tapping hole prepared for self-tapping M5 screw
3	Max. screw-in depth 8 mm, tapping hole prepared for self-tapping M4 screw
4	Max. screw-in depth 12 mm, tapping hole prepared for self-tapping M6 screw
5	Cable FLRYW 2x 6.0 mm²
	2-pole connector housing TE 1-1564544-1, 2x plug pin TE 2-211-2966-2, 2x seal TE 1719043-1, 1x cover TE 1670364-1
5.1	+ UB
5.2	GND
	2-pole mating connector TE 1-1564542-1, 2x socket TE 2177771-3, 2x seal TE 1719043-1
6	Cable FLRYW 2x 1.0 mm²
	2-pole connector housing TE DT04-2P-C015, 1x locking element TE W2P, 2x plug pin TE 0460-202-1631
6.1	Diagnostic output
6.2	PWM/LIN
	2-pole mating connector TE DT06-2S, 1x locking element TE W2S, 2x socket TE 0462-201-16141

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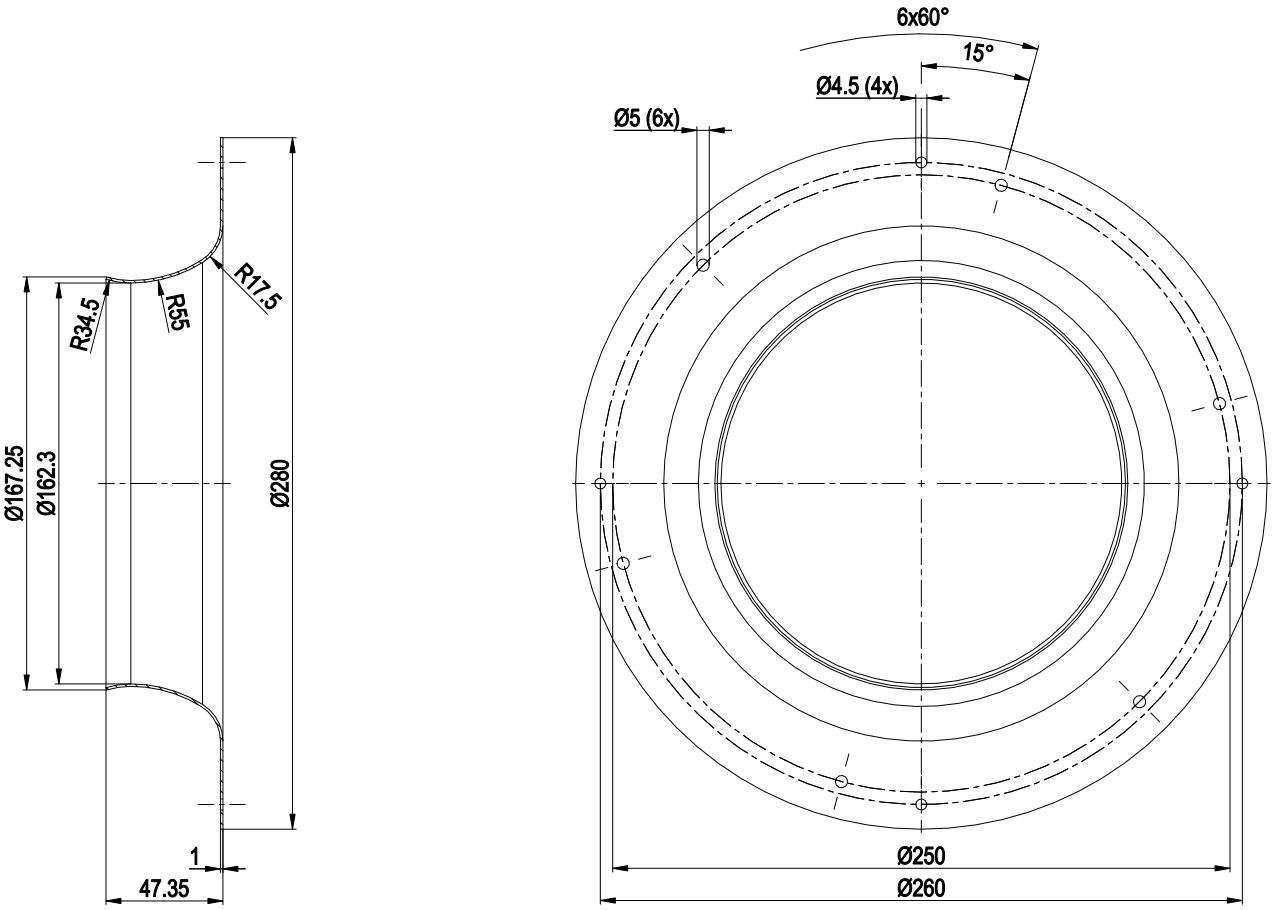
Accessory part



Inlet ring 96350-2-4013

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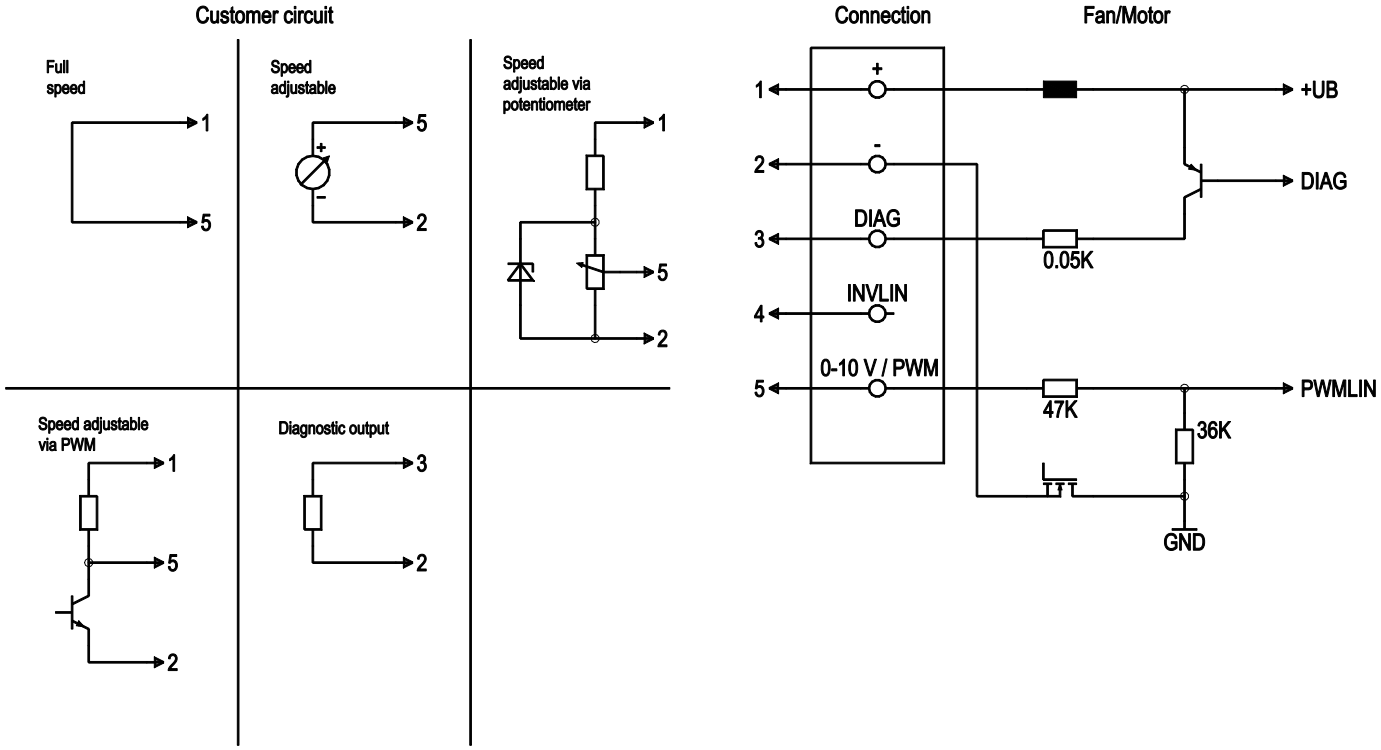
Connection diagram



No.	Conn.	Designation	Color	Function/assignment
5.1	1	+	black	Power supply, see nameplate for voltage range
5.2	2	-	brown	Power supply, see nameplate for voltage range
6.1	3	DIAG	white	Diagnostic output: Open collector, Isource max = 20 mA, Fan OK -> low; fan error -> high
	4	INVLIN		Not used / no function
6.2	5	0-10 V / PWM	yellow	Control input: Ri > 47 kΩ 0-10 V (typ. < 1 V -> n=0; 1.5 V -> n=min; > 10 V -> n=max) PWM (amplitude 10 V; 1-50 kHz; typ. < 5 % -> n=0; 15% -> n=min; > 100% -> n=max)

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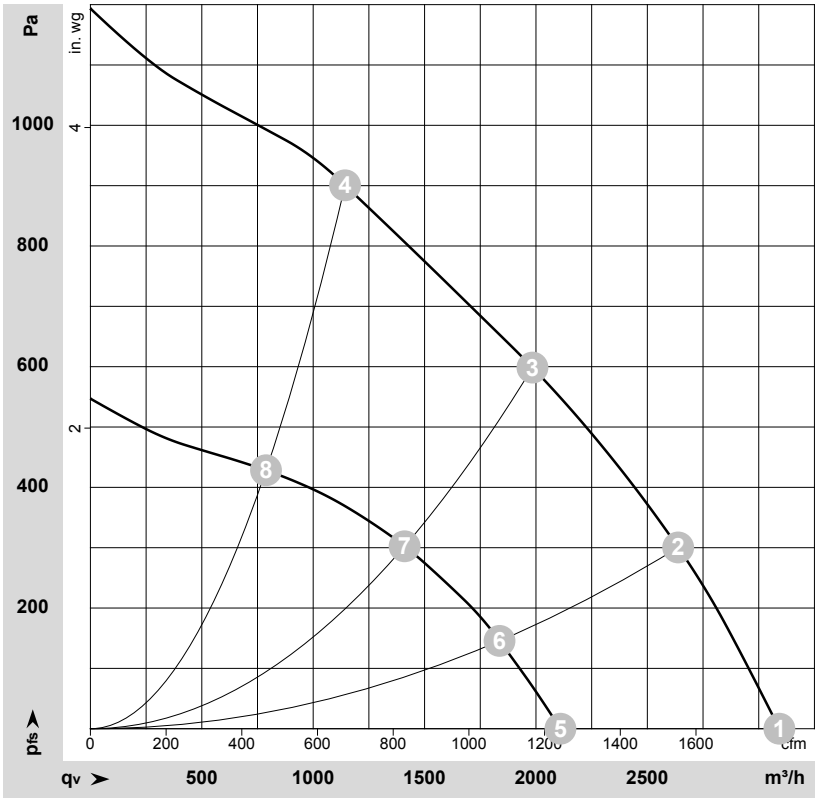
Curves: Air performance



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-212120-1
Measurement: LU-212508-1

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	26-32	3380	495	19.00*	80	86	3095	0	1820	0.00
2	26-32	3275	569	21.90*	75	81	2640	300	1555	1.20
3	26-32	3135	572	22.10*	71	77	1985	600	1170	2.41
4	26-32	3270	570	22.00*	72	79	1145	900	675	3.61
5	16	2330	161	10.07			2110	0	1240	0.00
6	16	2280	195	12.20			1835	146	1080	0.59
7	16	2255	207	12.99			1410	303	830	1.22
8	16	2285	192	12.04			790	428	465	1.72

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