R3G280-AH33-31

EC centrifugal fan

backward-curved, single-intake

R3G280-AH33-31 ebmpapst Datesheet
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Nominal data

Type	**R3G280-AH33-31**	
Motor	**M3G084-DF**	
Nominal voltage	VDC	48
Nominal voltage range	VDC	36 .. 57
Method of obtaining data		fa
Speed (rpm)	min^{-1}	2360
Power consumption	W	135
Current draw	A	2.8
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	60

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

Data according to Commission Regulation (EU) 327/2011

		Actual	Req. 2015
01 Overall efficiency η_{es}	%	56.2	44.2
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		74	62
05 Variable speed drive		Yes	

09 Power consumption P_e	kW	0.2
09 Air flow q_v	m^3/h	1050
09 Pressure increase p_{fs}	Pa	342
10 Speed (rpm) n	min^{-1}	2305
11 Specific ratio*		1.00

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-75621

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Technical description

Weight	3.7 kg
Fan size	280 mm
Rotor surface	Painted black
Electronics housing material	Die-cast aluminum
Impeller material	Sheet steel, galvanized
Number of blades	11
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP42
Insulation class	"B"
Moisture (F) / Environmental (H) protection class	H1
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
Mode	S1
Motor bearing	Ball bearing
Technical features	- Tach output - Power limiter - Motor current limitation - Soft start - Control input 0-10 VDC / PWM - Thermal overload protection for motor
EMC immunity to interference	According to EN 61000-6-2 (industrial environment)
EMC interference emission	According to EN 55022 (Class B, household environment)
Electrical hookup	With plug
Motor protection	Thermal overload protector (TOP) internally connected
With cable	Variable
Conformity with standards	CE
Approval	UL 1004-1; CSA C22.2 No. 100; CCC

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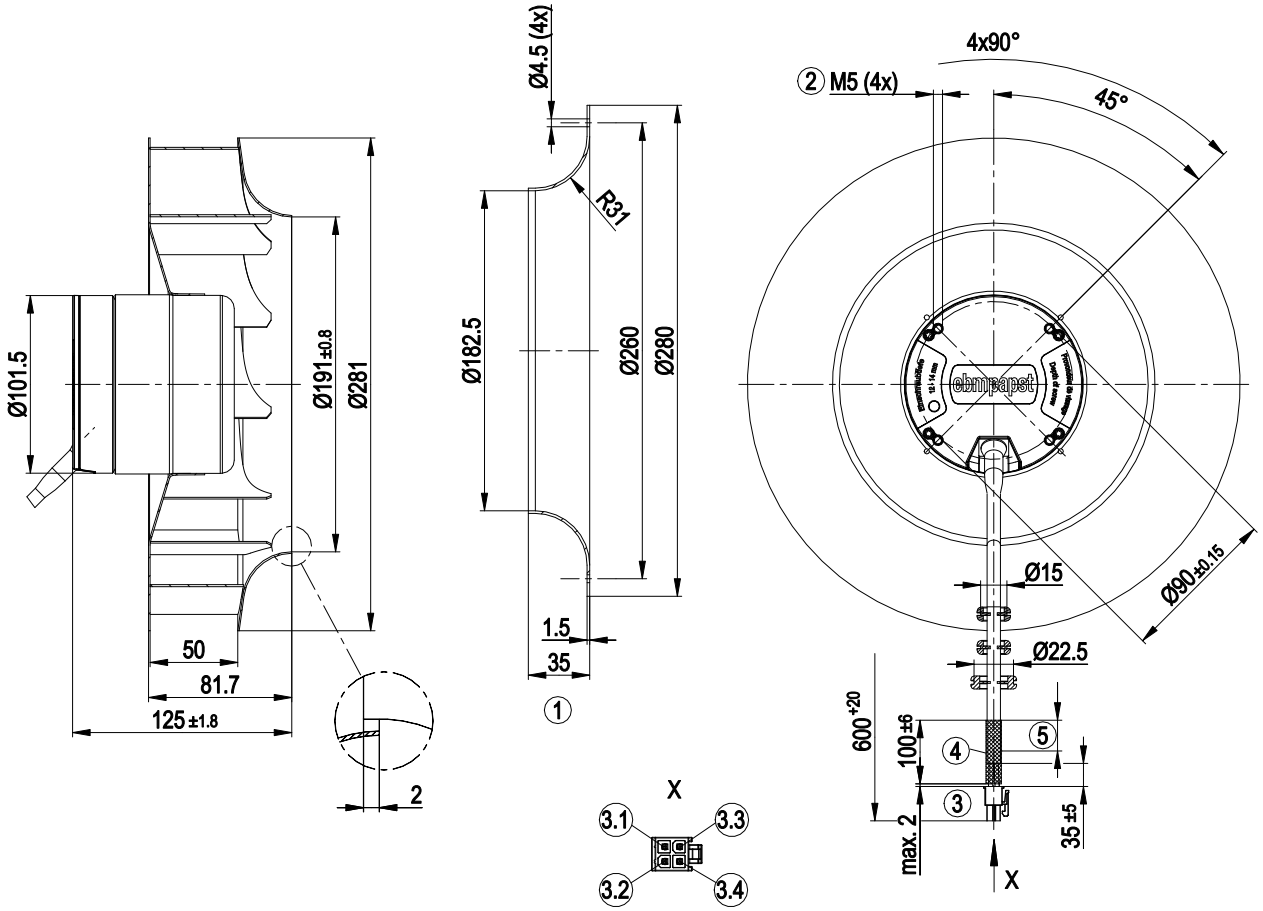
Product drawing



1	Accessory part: inlet ring 96360-2-4013 not included in scope of delivery
2	Max. clearance for screw 14 mm
3	Cable PVC AWG16, 4-pole connector housing Molex 39-01-2045, 4x socket Molex 39-00-0079
3.1	UN +48 VDC (red)
3.2	0-10 V / PWM (yellow)
3.3	DUE (white)
3.4	GND (blue)
4	Heat shrink tube
5	With heat-shrink sleeve over a length of 50+20 mm

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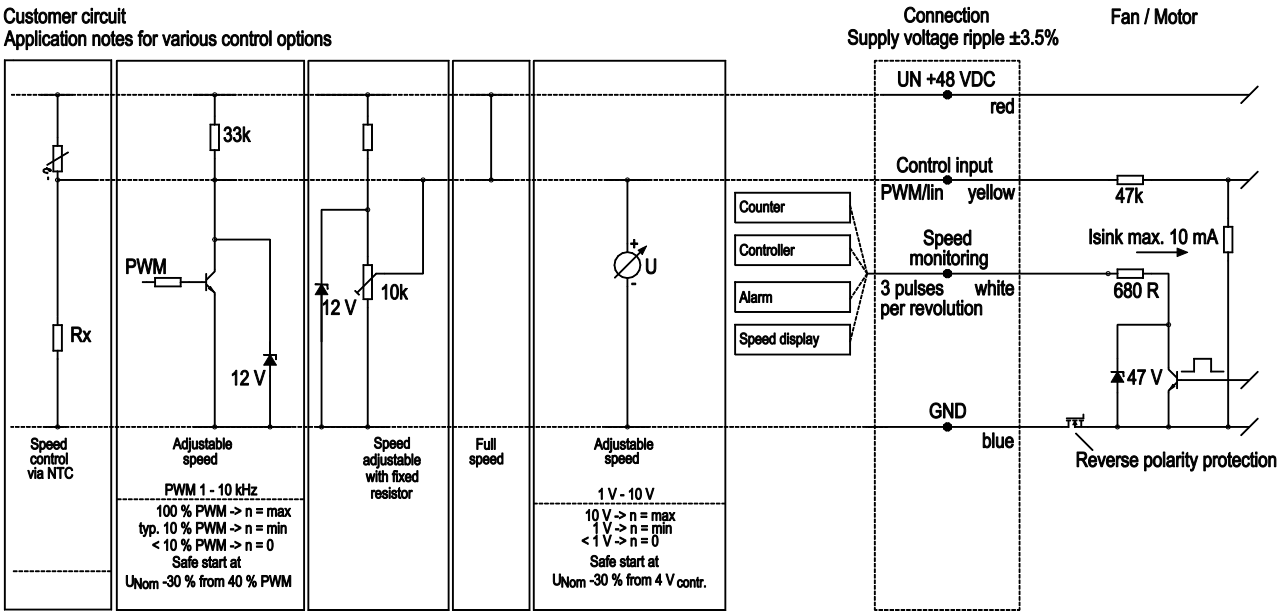
Connection diagram



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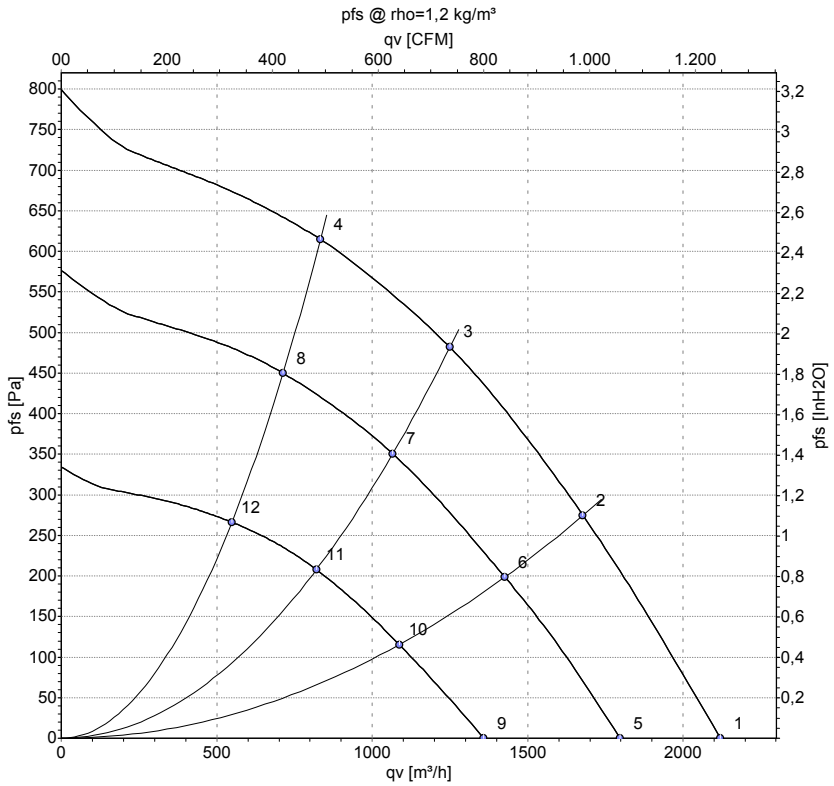
Curves: Air performance



Measurement: LU-75625-1
Measurement: LU-75621-1
Measurement: LU-75624-1

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	q_V	p_{fs}	q_V	p_{fs}
	V	min^{-1}	W	A	m^3/h	Pa	cfm	inH2O
1	57	2775	209	3.70	2120	0	1250	0.00
2	57	2710	280	4.96	1680	275	990	1.10
3	57	2685	311	5.51	1250	482	735	1.94
4	57	2705	295	5.20	835	615	490	2.47
5	48	2360	135	2.85	1795	0	1060	0.00
6	48	2325	180	3.79	1425	200	840	0.80
7	48	2305	201	4.22	1065	350	625	1.41
8	48	2320	191	4.00	715	450	420	1.81
9	36	1815	66	1.84	1360	0	800	0.00
10	36	1795	85	2.39	1085	115	640	0.46
11	36	1780	96	2.68	820	208	485	0.84
12	36	1785	91	2.55	550	266	325	1.07

U = Power supply · n = Speed (rpm) · P_{ed} = Power consumption · I = Current draw · q_V = Air flow · p_{fs} = Pressure increase