AC centrifugal fan

backward-curved, single-intake

R2S133-AE77-27 ebmpapst Datasheet

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Nominal data

Type	**R2S133-AE77-27**		
Motor	**M2S052-CA**		
Phase		1~	1~
Nominal voltage	VAC	115	115
Frequency	Hz	50	60
Method of obtaining data		fa	fa
Valid for approval/standard		CE	CE
Speed (rpm)	min^{-1}	2790	3150
Power consumption	W	35	34
Current draw	A	0.48	0.41
Min. back pressure	Pa	0	0
Min. back pressure	inH2O	0	0
Max. ambient temperature	°C	40	45
Starting current	A	0.75	0.62

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

ebmpapst

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Technical description

Weight	0.86 kg
Fan size	133 mm
Impeller material	PA6 plastic, glass-fiber reinforced
Number of blades	7
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP22; installation- and position-dependent
Insulation class	"B"
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	On rotor side
Mode	S1
Motor bearing	Ball bearing
Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)	< 0.75 mA
Motor protection	Thermal overload protector (TOP) internally connected
With cable	Variable
Protection class	I (with customer connection of protective earth)
Conformity with standards	EN 60335-1; CE
Approval	CSA C22.2 No. 100; UL 1004-1

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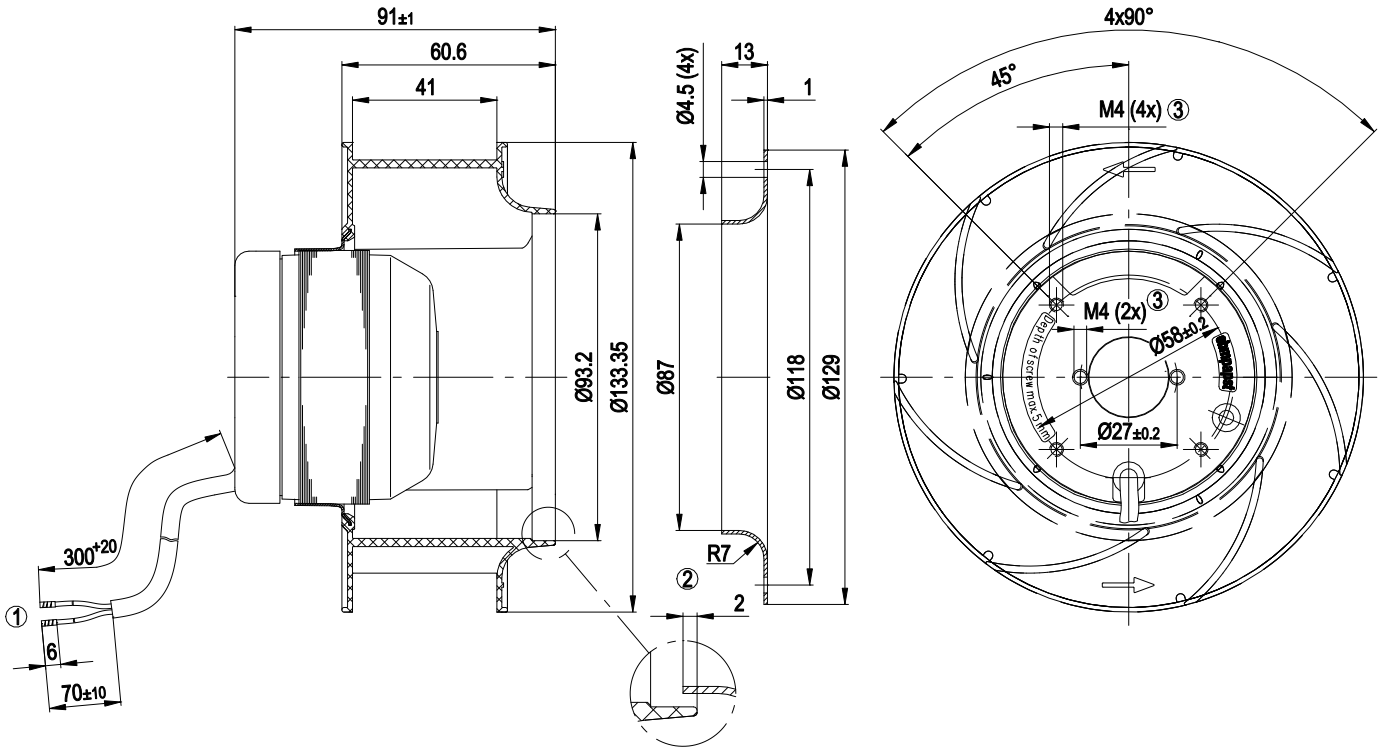
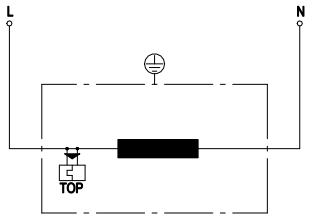
Product drawing



1	Cable AWG20, 2x crimped splices
2	Accessory part: inlet ring 09566-2-4013, not included in scope of delivery
3	Max. clearance for screw 5 mm

Connection diagram



L	= blue
N	= brown
TOP	Thermal overload protector

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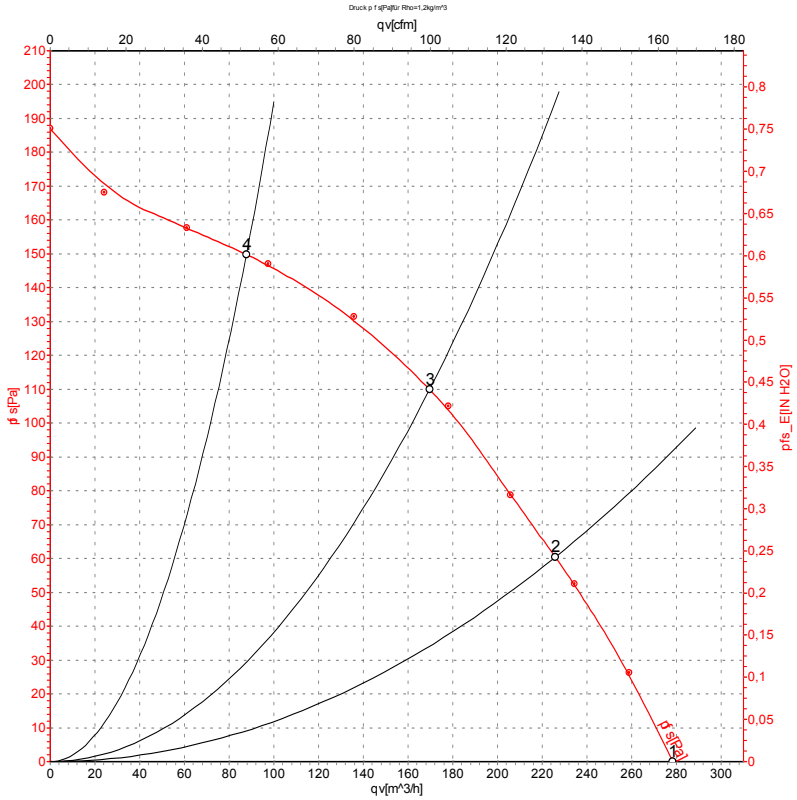
Curves: Air performance 50 Hz



Measurement: LU-56082-1

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	f	n	P_e	I	qv	p_{fs}	qv	p_{fs}
	V	Hz	min^{-1}	W	A	m^3/h	Pa	CFM	inH2O
1	115	50	2790	35	0.48	280	0	165	0.00
2	115	50	2740	37	0.48	225	60	135	0.24
3	115	50	2740	37	0.48	170	110	100	0.44
4	115	50	2760	35	0.47	90	150	50	0.60

U = Power supply · f = Frequency · n = Speed (rpm) · P_e = Power consumption · I = Current draw · qv = Air flow · p_{fs} = Pressure increase

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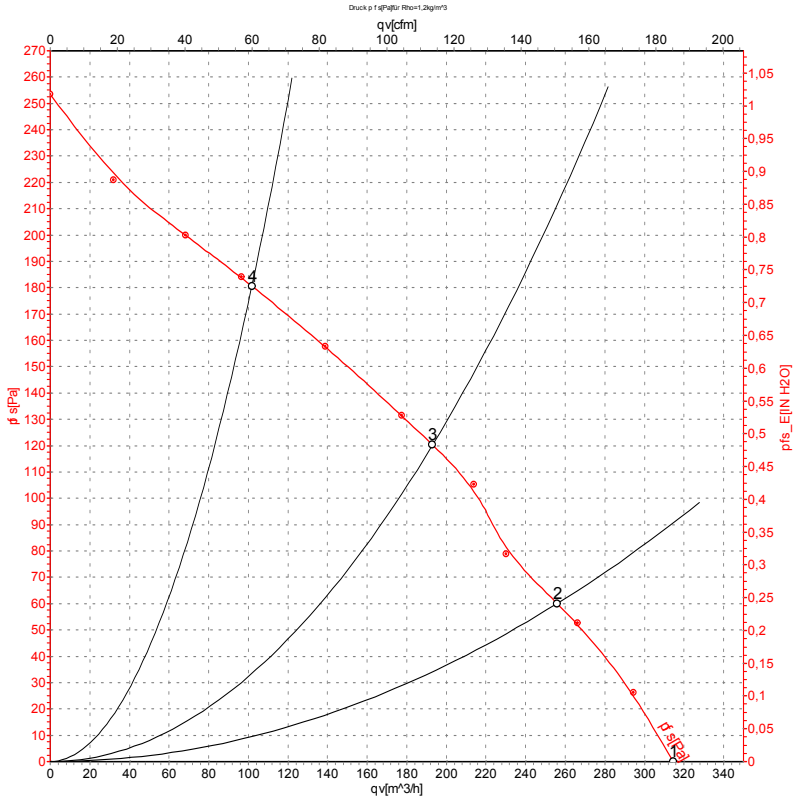
Curves: Air performance 60 Hz



Measurement: LU-56083-1

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	f	n	P_e	I	qv	p_{fs}	qv	p_{fs}
	V	Hz	min^{-1}	W	A	m^3/h	Pa	CFM	inH2O
1	115	60	3150	34	0.41	315	0	185	0.00
2	115	60	2985	38	0.43	255	60	150	0.24
3	115	60	2945	38	0.44	195	120	115	0.48
4	115	60	3040	36	0.42	100	180	60	0.72

U = Power supply · f = Frequency · n = Speed (rpm) · P_e = Power consumption · I = Current draw · qv = Air flow · p_{fs} = Pressure increase