W2D250-HJ02-10

AC axial compact fan

sickle-shaped blades (S series), single-intake

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ErP2015 EXCEEDS THE NORM

Nominal data

Type	**W2D250-HJ02-10**
Motor	**M2D068-DC**

Phase		3~	3~	3~
Nominal voltage	VAC	400	400	460
Wiring		Y	Y	Y
Frequency	Hz	50	60	60
Method of obtaining data		fa	fa	fa
Valid for approval/standard		CE	CE	CE
Speed (rpm)	min^{-1}	2660	2920	3050
Power consumption	W	115	165	180
Current draw	A	0.23	0.27	0.28
Max. back pressure	Pa	155	175	195
Max. back pressure	inH2O	0.62	0.7	0.78
Min. ambient temperature	°C	-25	-25	-25
Max. ambient temperature	°C	65	45	45

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

Data according to ErP Directive

		Actual	Req. 2015
01 Overall efficiency η_{es}	%	28.4	28.3
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		40.1	40
05 Variable speed drive		No	

09 Power consumption P_e	kW	0.14
09 Air flow q_v	m^3/h	1450
09 Pressure increase p_{fs}	Pa	100
10 Speed (rpm) n	min^{-1}	2530
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-51572

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Technical description

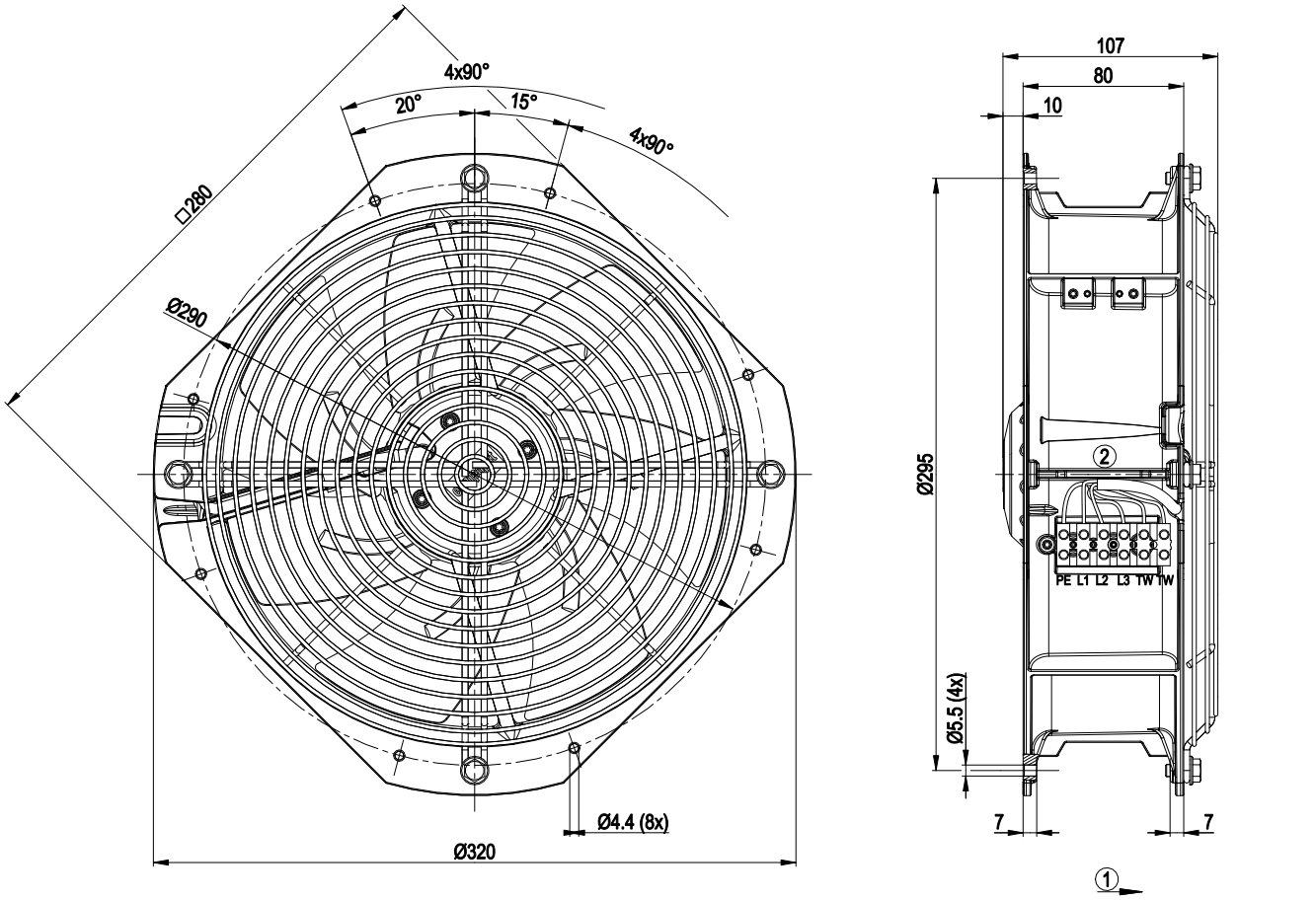
Weight	3.4 kg
Fan size	250 mm
Rotor surface	Painted black
Blade material	Sheet steel, painted black
Fan housing material	Die-cast aluminum
Guard grille material	Steel, coated with white-aluminum plastic (RAL 9006)
Number of blades	7
Airflow direction	"V"
Direction of rotation	Counterclockwise, viewed toward rotor
Degree of protection	IP44; installation- and position-dependent
Insulation class	"B"
Moisture (F) / Environmental (H) protection class	F2-2
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
Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)	< 0.75 mA
Electrical hookup	Via terminal strip
Motor protection	Thermal overload protector (TOP) with basic insulation
With cable	Axial
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



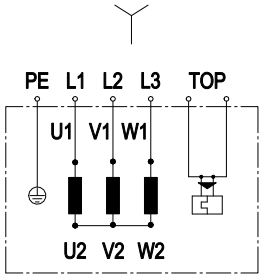
1	Direction of air flow "V"
2	Cable PFA 5x AWG20, 1x AWG18 (green/yellow); 6x crimped splices

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Connection diagram



Note: Change of rotation direction by reversing two phases

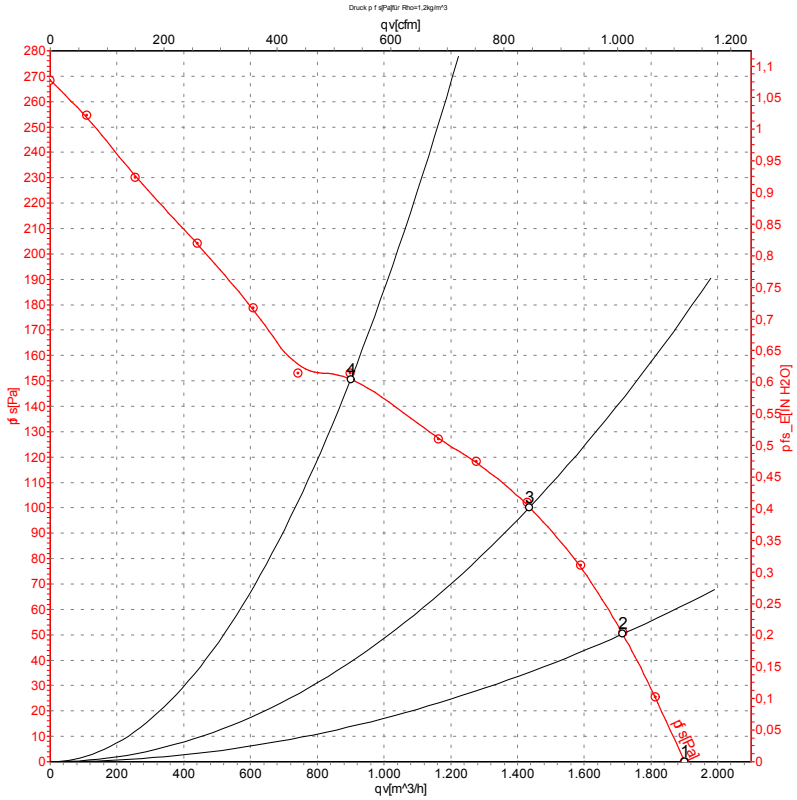
Y	Star connection	L1	= U1 = black	L2	= V1 = blue
L3	= W1 = brown	PE	green/yellow	TOP	2x gray

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Curves: Air performance 50 Hz



Measurement: LU-42099-1

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	400	50	2660	115	0.23	1900	0	1120	0.00
2	400	50	2610	129	0.25	1715	50	1010	0.20
3	400	50	2545	146	0.27	1435	100	845	0.40
4	400	50	2470	164	0.29	900	150	530	0.60

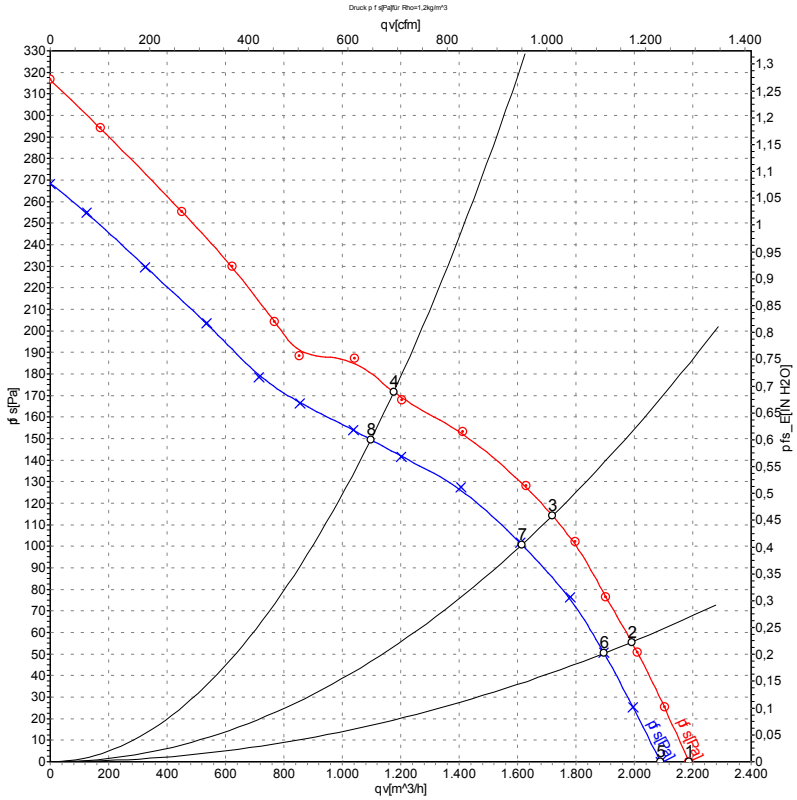
U = Power supply · f = Frequency · n = Speed (rpm) · P_e = Power consumption · I = Current draw · qv = Air flow · p_{fs} = Pressure increase

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Curves: Air performance 60 Hz



Measurement: LU-42101-1
Measurement: LU-42100-1

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	460	60	3050	180	0.28	2185	0	1285	0.00
2	460	60	2985	198	0.29	1990	56	1170	0.22
3	460	60	2900	220	0.32	1720	114	1010	0.46
4	460	60	2785	248	0.35	1175	170	690	0.68
5	400	60	2920	165	0.27	2090	0	1230	0.00
6	400	60	2835	182	0.29	1895	50	1115	0.20
7	400	60	2730	200	0.32	1615	100	950	0.40
8	400	60	2610	221	0.35	1095	150	645	0.60

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