

# AC axial fan - HyBlade

sickle-shaped blades (S series)

with square full nozzle

W8D800-GI09-03 ebmpapst Datasheet FansCo

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## Nominal data

<b>Type</b>	W8D800-GI09-03				
<b>Motor</b>	M8D138-HF				
Phase		3~	3~	3~	3~
Nominal voltage	VAC	230	277	400	480
Wiring		$\Delta$	$\Delta$	Y	Y
Frequency	Hz	50	60	50	60
Method of obtaining data		ml	ml	ml	ml
Valid for approval/standard		CE	CE	CE	CE
Speed	min <sup>-1</sup>	700	825	700	825
Power consumption	W	610	960	610	960
Current draw	A	3.2	3.55	1.85	2.05
Max. back pressure	Pa	90	125	90	125
Min. ambient temperature	°C	-40	-40	-40	-40
Max. ambient temperature	°C	70	70	70	70
Starting current	A	9.7	10.8	5.6	6.2

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 $\eta_{es}$	%	32.1	32.1	09 Power consumption $P_e$	kW 0.56
02 Measurement category	A			09 Air flow $q_v$	m <sup>3</sup> /h 8915
03 Efficiency category	Static			09 Pressure increase $p_{fs}$	Pa 73
04 Efficiency grade N	40	40		10 Speed n	min <sup>-1</sup> 705
05 Variable speed drive	No			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 =  $1 + p_g / 100\,000\text{ Pa}$ 

LU-126925



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## Technical description

<b>Weight</b>	39.5 kg
<b>Fan size</b>	800 mm
<b>Rotor surface</b>	Cast in aluminum
<b>Terminal box material</b>	PP plastic
<b>Blade material</b>	Sheet aluminum insert, sprayed with PP plastic
<b>Fan housing material</b>	Sheet steel, pre-galvanized and coated with black plastic (RAL 9005)
<b>Guard grille material</b>	Steel, coated with black plastic (RAL 9005)
<b>Number of blades</b>	5
<b>Blade pitch</b>	-10°
<b>Airflow direction</b>	"V"
<b>Direction of rotation</b>	Clockwise, viewed toward rotor
<b>Degree of protection</b>	IP54
<b>Insulation class</b>	"F"
<b>Moisture (F) / Environmental (H) protection class</b>	F3-1
<b>Max. permitted ambient temp. for motor (transport/storage)</b>	+ 80 °C
<b>Min. permitted ambient temp. for motor (transport/storage)</b>	- 40 °C
<b>Installation position</b>	Any
<b>Condensation drainage holes</b>	On rotor and stator sides
<b>Mode</b>	S1
<b>Motor bearing</b>	Ball bearing
<b>Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)</b>	<= 3.5 mA
<b>Electrical hookup</b>	Via terminal box
<b>Motor protection</b>	Thermal overload protector (TOP) with basic insulation
<b>With cable</b>	Axial
<b>Protection class</b>	I (with customer connection of protective earth)
<b>Conformity with standards</b>	EN 60034-1 (2010); EN 61800-5-1; CE
<b>Approval</b>	CSA C22.2 No. 100; EAC; UL 1004-1

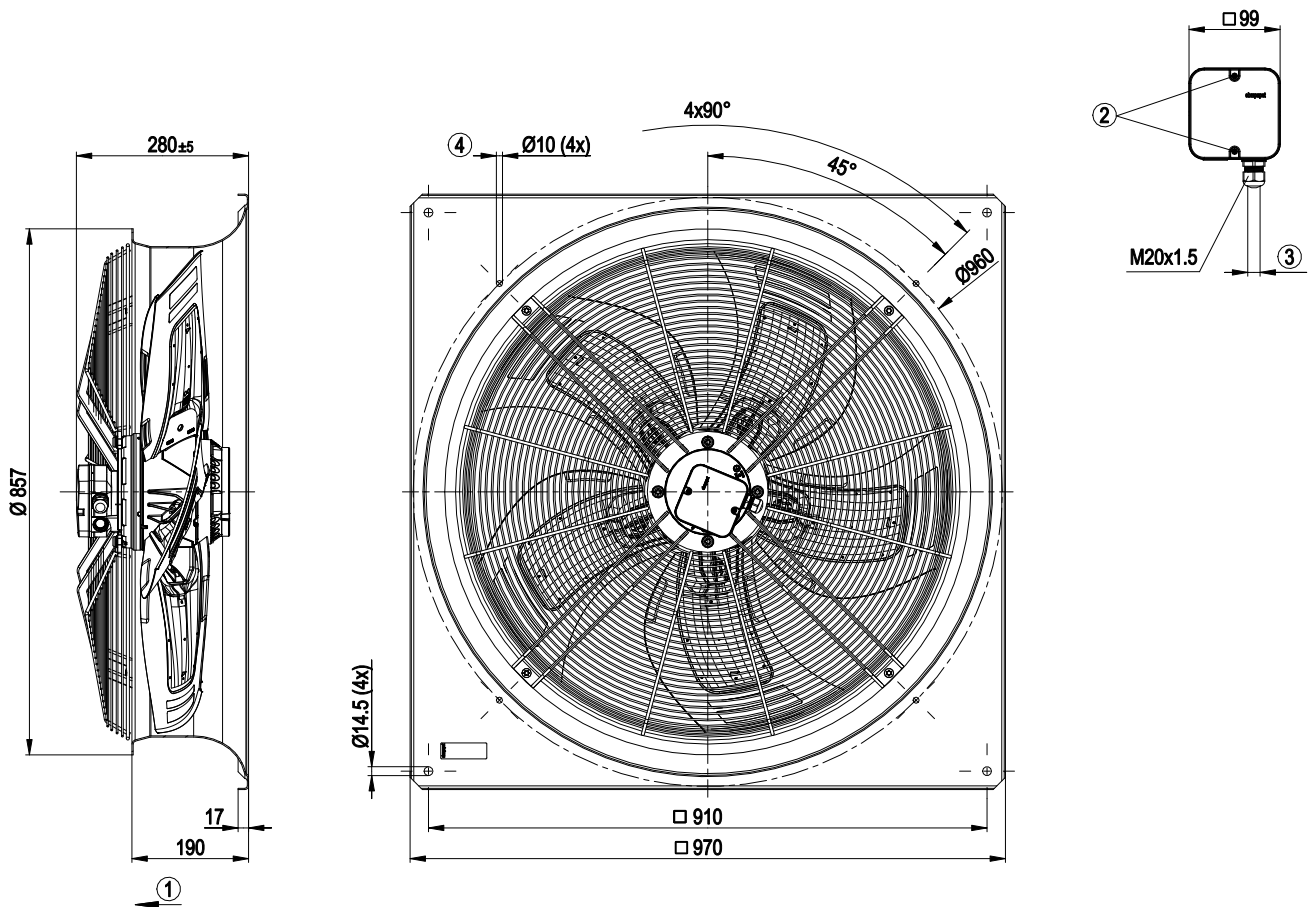


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## Product drawing



1	Direction of air flow "V"
2	Tightening torque $1.5 \pm 0.2$ Nm
3	Cable diameter: min. 7 mm, max. 14 mm, tightening torque $2 \pm 0.3$ Nm
4	Mounting holes for FlowGrid

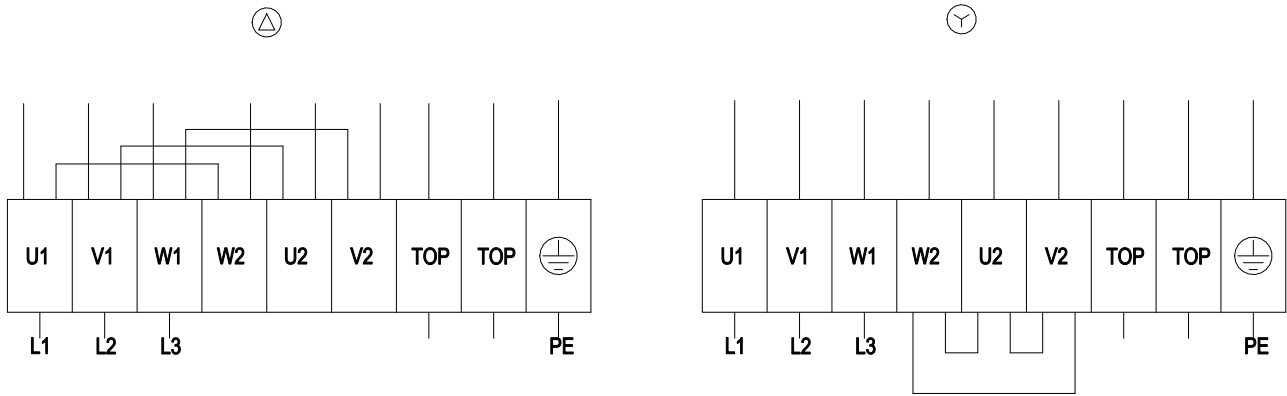


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## Connection diagram



Δ	Delta connection	Y	Star connection	L1	= U1 = black
L2	= V1 = blue	L3	= W1 = brown	W2	yellow
U2	green	V2	white	TOP	2x gray
PE	green/yellow				

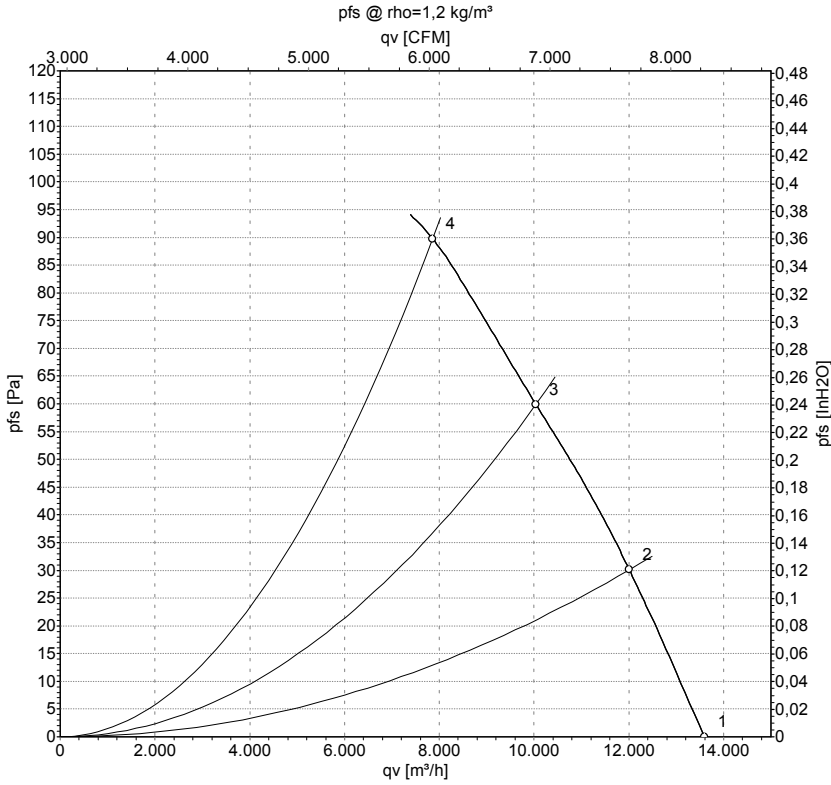


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## Curves: Air performance 50 Hz



Measurement: LU-126925-1

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

	Wired	U	f	n	P <sub>e</sub>	I	LpA <sub>in</sub>	LwA <sub>in</sub>	LwA <sub>out</sub>	qv	p <sub>fs</sub>
		V	Hz	min <sup>-1</sup>	W	A	dB(A)	dB(A)	dB(A)	m <sup>3</sup> /h	Pa
1	Y	400	50	725	405	1.74	61	67	66	13595	0
2	Y	400	50	715	474	1.75	58	64	63	12010	30
3	Y	400	50	710	534	1.77	60	66	65	10040	60
4	Y	400	50	700	610	1.85	63	70	69	7860	90

Wired = Wiring · U = Power supply · f = Frequency · n = Speed · P<sub>e</sub> = Power consumption · I = Current draw · LpA<sub>in</sub> = Sound pressure level intake side · LwA<sub>in</sub> = Sound power level intake side  
 LwA<sub>out</sub> = Sound power level outlet side · qv = Air flow · p<sub>fs</sub> = Pressure increase

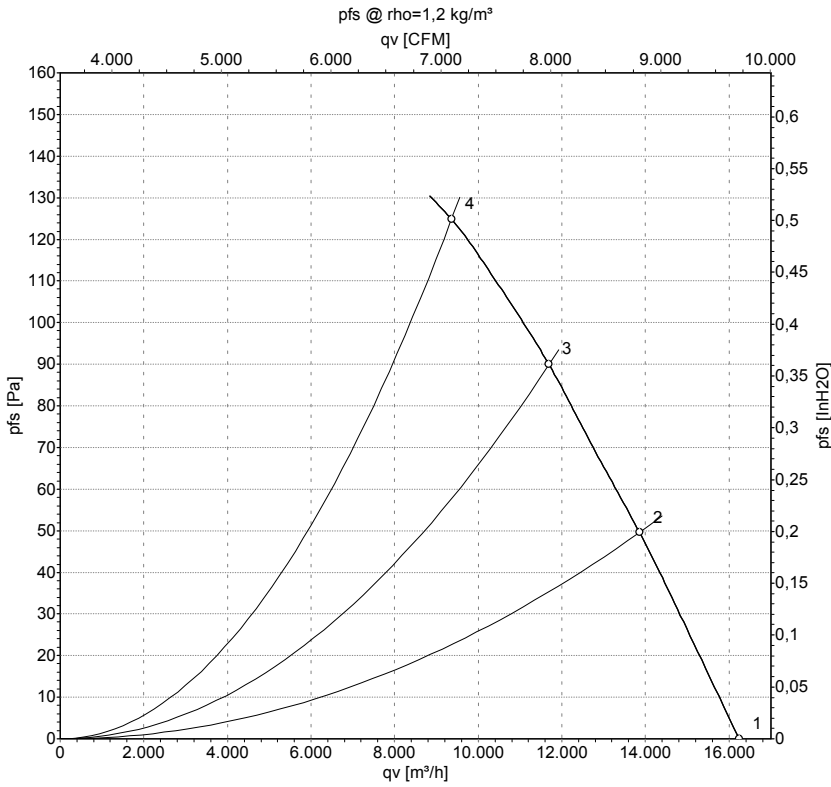


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## Curves: Air performance 60 Hz



Measurement: LU-126928-1

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

	Wired	U	f	n	P <sub>e</sub>	I	LpA <sub>in</sub>	LwA <sub>in</sub>	LwA <sub>out</sub>	qv	p <sub>fs</sub>
		V	Hz	min <sup>-1</sup>	W	A	dB(A)	dB(A)	dB(A)	m <sup>3</sup> /h	Pa
1	Y	480	60	860	595	1.76	65	71	71	16240	0
2	Y	480	60	845	743	1.86	61	68	67	13855	50
3	Y	480	60	840	836	1.93	65	71	70	11690	90
4	Y	480	60	825	960	2.05	67	74	74	9360	125

Wired = Wiring · U = Power supply · f = Frequency · n = Speed · P<sub>e</sub> = Power consumption · I = Current draw · LpA<sub>in</sub> = Sound pressure level intake side · LwA<sub>in</sub> = Sound power level intake side  
 LwA<sub>out</sub> = Sound power level outlet side · qv = Air flow · p<sub>fs</sub> = Pressure increase

