

# AC axial fan - HyBlade

sickle-shaped blades (S series)

with guard grille for full nozzle

S8D910-BD03-12 ebmpapst Datasheet

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Limited partnership · Headquarters Mulfingen

Amtsgericht (court of registration) Stuttgart · HRA 590344

General partner Elektrobau Mulfingen GmbH · Headquarters Mulfingen

Amtsgericht (court of registration) Stuttgart · HRB 590142

## Nominal data

<b>Type</b>	<b>S8D910-BD03-12</b>		
<b>Motor</b>	<b>M8D138-LA</b>		
Phase		3~	3~
Nominal voltage	VAC	400	400
Wiring		Δ	Y
Frequency	Hz	50	50
Method of obtaining data		ml	ml
Valid for approval/standard		-	-
Speed (rpm)	min <sup>-1</sup>	650	465
Power consumption	W	1150	650
Current draw	A	2.75	1.4
Max. back pressure	Pa	90	48
Max. back pressure	in. wg	0.36	0.19
Min. ambient temperature	°C	-40	-40
Max. ambient temperature	°C	65	65
Starting current	A	6.2	2.1

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



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## Technical description

<b>Weight</b>	32.5 kg
<b>Size</b>	910 mm
<b>Motor size</b>	138
<b>Rotor surface</b>	Cast in aluminum
<b>Terminal box material</b>	Die-cast aluminum
<b>Blade material</b>	Sheet aluminum insert, sprayed with PP plastic
<b>Guard grille material</b>	Steel, coated with black plastic (RAL 9005)
<b>Number of blades</b>	5
<b>Blade pitch</b>	0°
<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>	H2
<b>Ambient temperature note</b>	Occasional start-up at temperatures between -40°C and -25°C is permitted. For continuous operation at ambient temperatures below -25°C (such as refrigeration applications), use must be made of a fan design with special low-temperature bearings.
<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>	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)
<b>Approval</b>	VDE; EAC

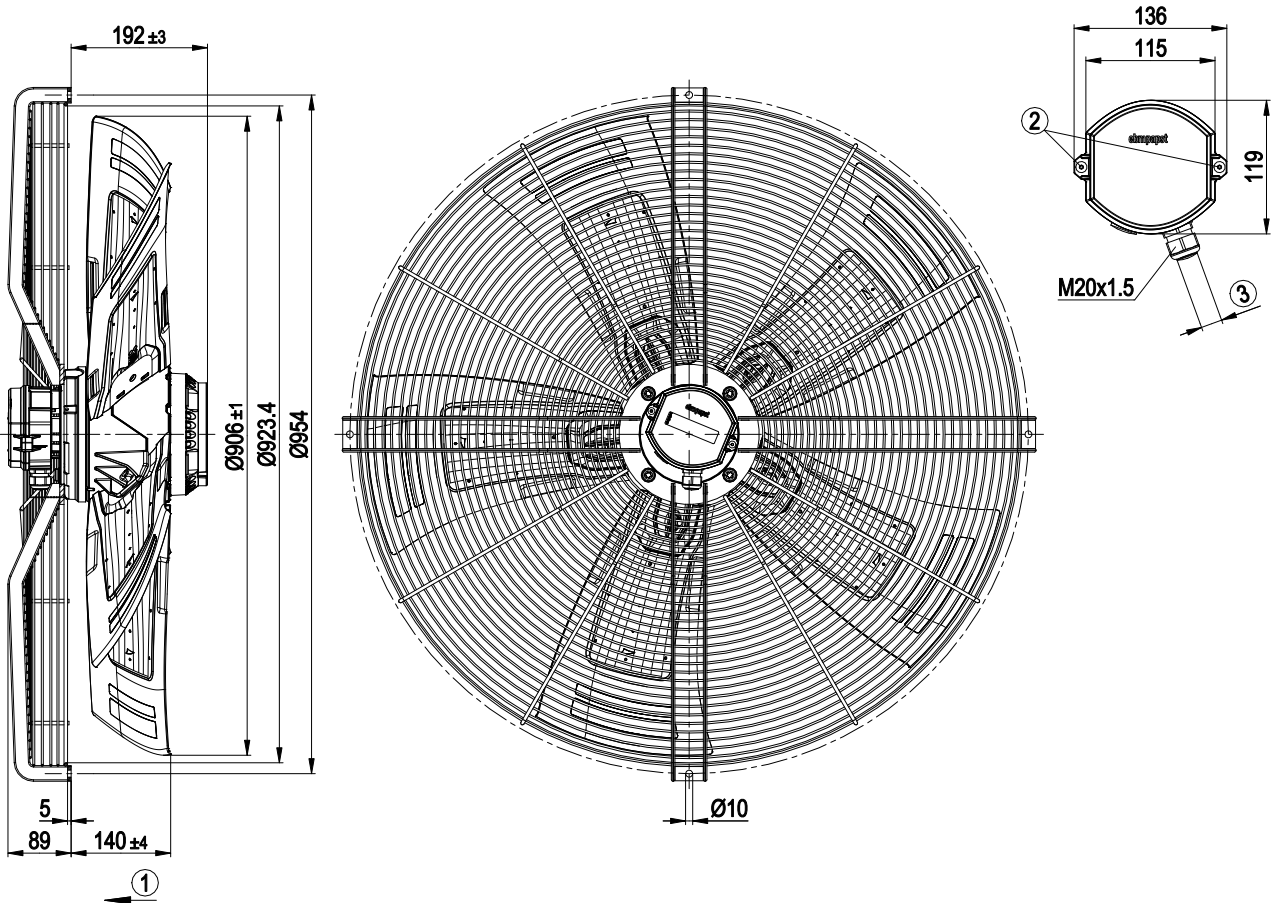


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## Product drawing



1	Airflow direction "V"
2	Tightening torque $2.5 \pm 0.4$ Nm
3	Cable diameter min. 7 mm, max. 14 mm, tightening torque $2 \pm 0.3$ Nm



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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				

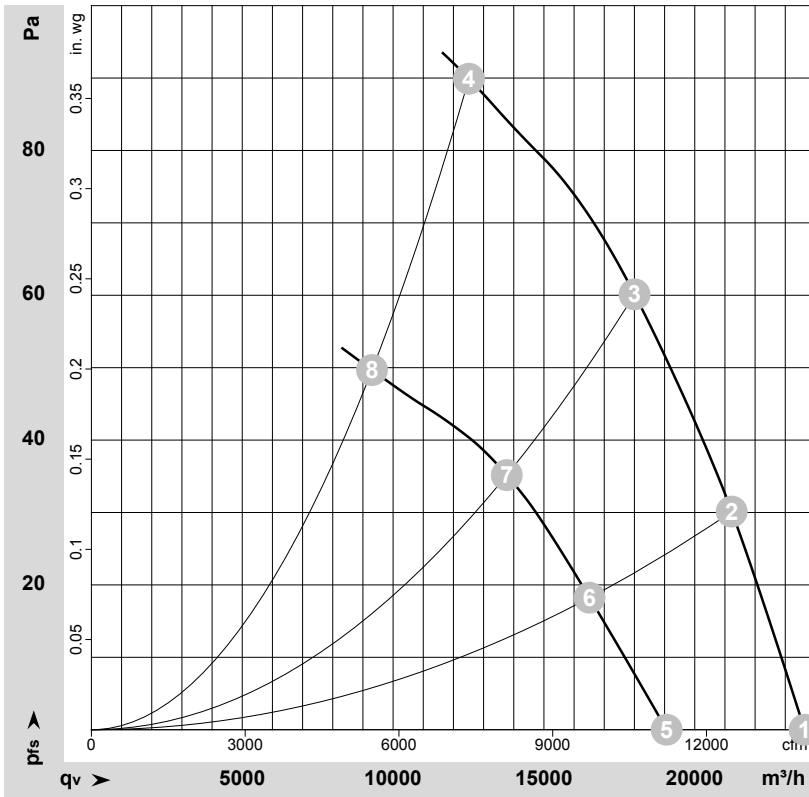


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## Curves: Air performance 50 Hz



$\rho = 1.15 \text{ kg/m}^3 \pm 2 \%$

Measurement: LU-192818-1  
Measurement: LU-193287-1

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>	q <sub>v</sub>	p <sub>fs</sub>	q <sub>v</sub>	p <sub>fs</sub>
		V	Hz	min <sup>-1</sup>	W	A	dB(A)	dB(A)	dB(A)	m <sup>3</sup> /h	Pa	cfm	in. wg
1	Δ	400	50	685	901	2.45	62	70	72	23640	0	13915	0.00
2	Δ	400	50	675	1000	2.55	61	69	71	21225	30	12495	0.12
3	Δ	400	50	665	1095	2.66	61	69	71	18005	60	10595	0.24
4	Δ	400	50	650	1150	2.75	67	75	77	12515	90	7365	0.36
5	Y	400	50	555	602	1.20	57	64	65	19070	0	11225	0.00
6	Y	400	50	530	640	1.28	55	63	64	16510	19	9720	0.08
7	Y	400	50	505	672	1.34	54	61	63	13770	35	8105	0.14
8	Y	400	50	465	650	1.40	59	67	68	9300	50	5475	0.20

Wired = Wiring · U = Voltage · f = Frequency · n = Speed (rpm) · 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 · q<sub>v</sub> = Air flow · p<sub>fs</sub> = Pressure increase

