W8D910-HD03-01

AC axial fan - HyBlade

sickle-shaped blades (S series)

with square full nozzle with AxiTop diffuser

W8D910-HD03-01 ebmpapst Datasheet
sales@fansco.com
www.fansco.com

Nominal data

Type	**W8D910-HD03-01**		
Motor	**M8D138-LA**		
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		CE	CE
Speed (rpm)	min^{-1}	650	475
Power consumption	W	1150	640
Current draw	A	2.78	1.36
Max. back pressure	Pa	90	47
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

Data according to Commission Regulation (EU) 327/2011 (EN 17166)

		Actual	Req. 2015
01 Overall efficiency η_{es}	%	34.2	33.8
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		40.4	40
05 Variable speed drive		No	

09 Power consumption P_e	kW	1.05
09 Air flow q_v	m^3/h	18340
09 Pressure increase p_{fs}	Pa	71
10 Speed (rpm) n	min^{-1}	665
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-154912

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Technical description

Weight	62.0 kg
Size	910 mm
Motor size	138
Rotor surface	Cast in aluminum
Terminal box material	PP plastic
Blade material	Sheet aluminum insert, sprayed with PP plastic
Support ring material	Steel, coated with black plastic (RAL 9005)
Fan housing material	Sheet steel, galvanized and coated with black plastic (RAL 9005)
Guard grille material	Steel, coated with black plastic (RAL 9005)
Outer diffuser material	PP plastic
Internal diffuser material including cover	PP plastic
Number of blades	5
Blade pitch	0°
Airflow direction	V
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP54
Insulation class	"F"
Moisture (F) / Environmental (H) protection class	H2
Ambient temperature note	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.
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 and stator sides
Mode	S1
Motor bearing	Ball bearing
Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)	<= 3.5 mA
Electrical hookup	Terminal box
Motor protection	Thermal overload protector (TOP) with basic insulation
Protection class	I (with customer connection of protective earth)
Conformity with standards	EN 60034-1 (2010); CE
Approval	EAC; VDE

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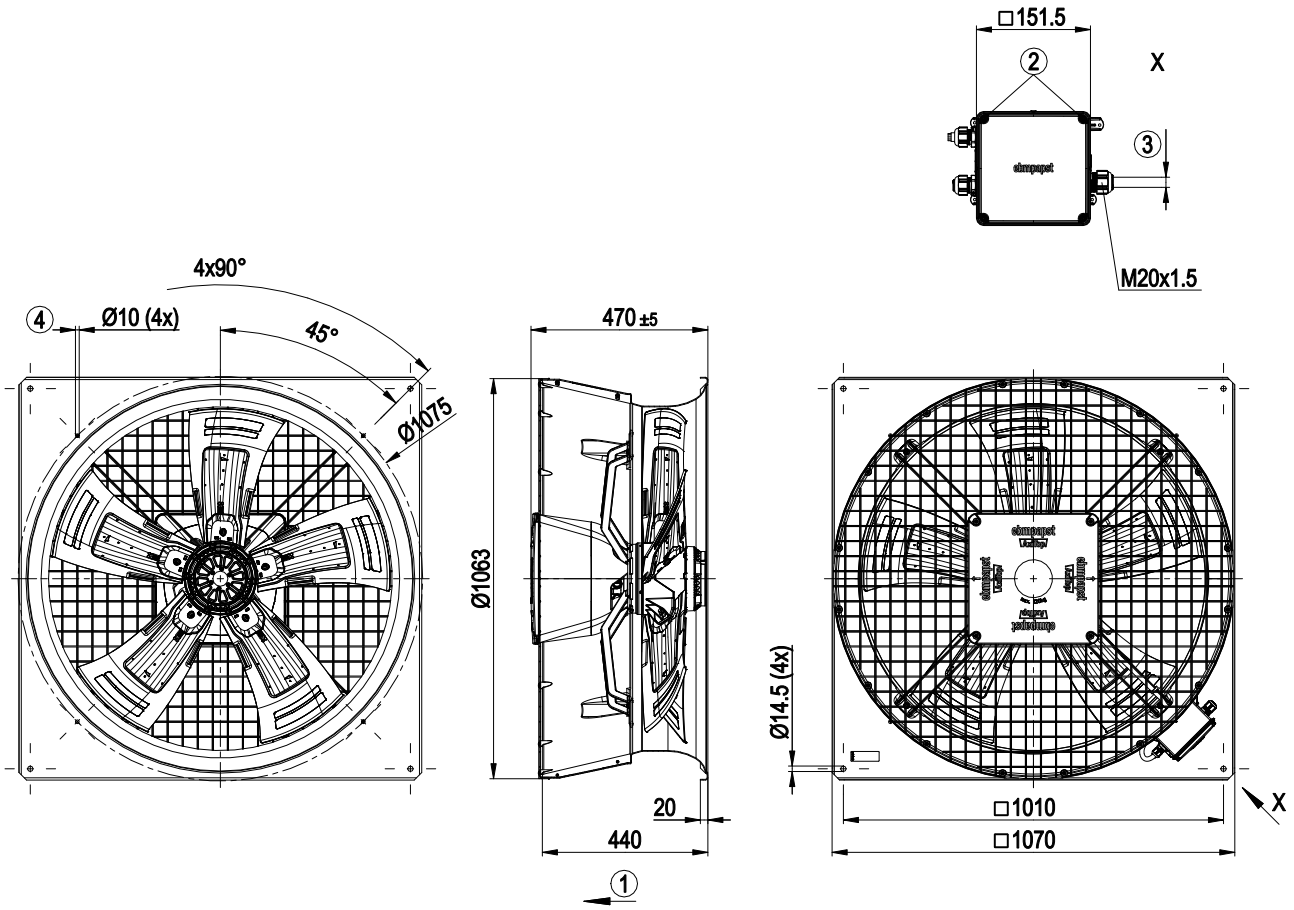
Product drawing



1	Direction of air flow "V"
2	Tightening torque 1.8±0.3 Nm
3	Cable diameter min. 9 mm, max. 16 mm, tightening torque 2.5±0.4 Nm
4	Mounting holes for FlowGrid

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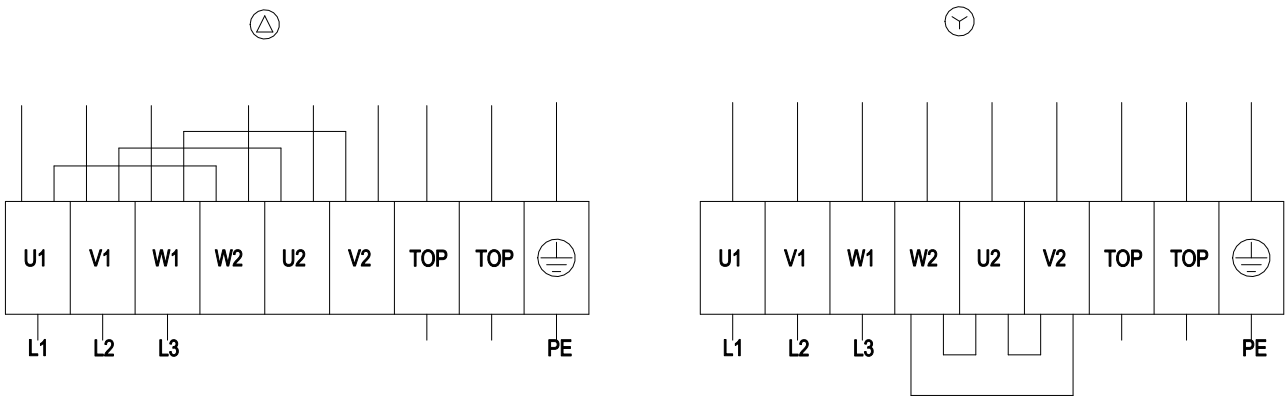
Connection diagram



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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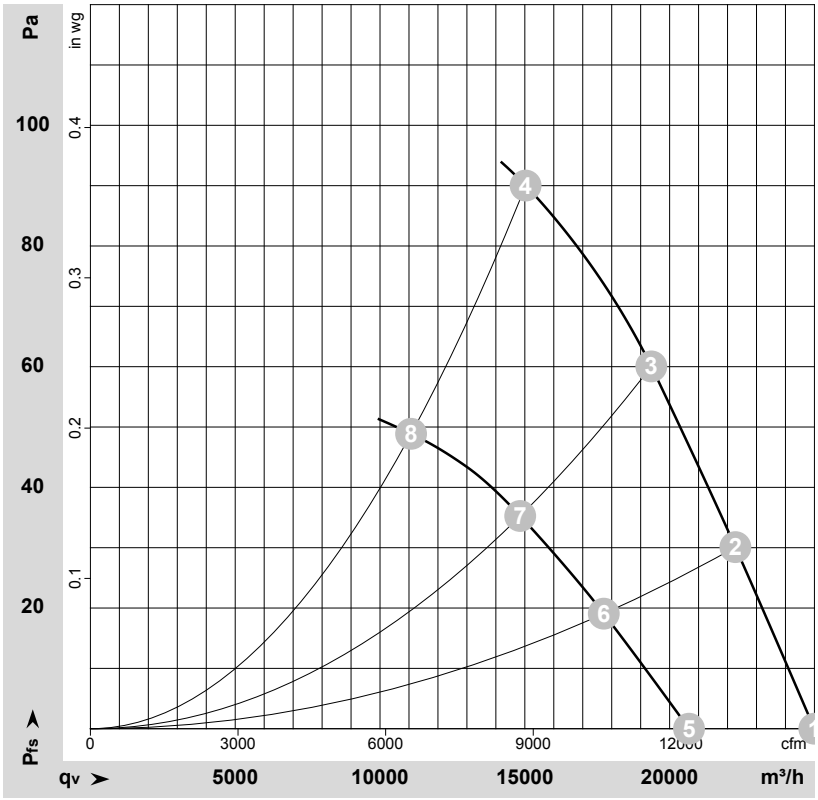
Curves: Air performance 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-154912-1
Measurement: LU-154911-1

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_e	I	LpA_{in}	LwA_{in}	LwA_{out}	q_V	p_{fs}	q_V	p_{fs}
		V	Hz	min^{-1}	W	A	dB(A)	dB(A)	dB(A)	m^3/h	Pa	cfm	in. wg
1	Δ	400	50	695	790	2.31	63	71	71	24995	0	14710	0.00
2	Δ	400	50	680	909	2.43	61	69	69	22270	30	13110	0.12
3	Δ	400	50	670	1017	2.56	60	68	68	19370	60	11400	0.24
4	Δ	400	50	650	1150	2.78	62	70	70	15025	90	8845	0.36
5	Y	400	50	580	539	1.10	58	66	66	20670	0	12165	0.00
6	Y	400	50	545	596	1.21	56	63	64	17725	19	10435	0.08
7	Y	400	50	515	636	1.29	54	61	62	14840	35	8735	0.14
8	Y	400	50	475	640	1.36	54	61	62	11075	49	6515	0.20

Wired = Wiring · U = Voltage · f = Frequency · n = Speed (rpm) · P_e = Power consumption · I = Current draw · LpA_{in} = Sound pressure level intake side · LwA_{in} = Sound power level intake side
LwA_{out} = Sound power level outlet side · q_V = Air flow · p_{fs} = Pressure increase