S6D990-BX05-06

AC axial fan - HyBlade

sickle-shaped blades (S series)

with guard grille for full nozzle

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Nominal data

Type	**S6D990-BX05-06**
Motor	**M6D138-OA**

Phase		3~	3~	3~
Nominal voltage	VAC	400	400	415
Wiring		Δ	Y	Δ
Frequency	Hz	50	50	50
Method of obtaining data		ml	ml	ml
Valid for approval/standard		CE	CE	CE
Speed (rpm)	min^{-1}	930	770	930
Power consumption	W	2480	1820	2900
Current draw	A	5.63	3.42	6.4
Max. back pressure	Pa	120	80	195
Max. back pressure	in. wg	0.48	0.32	0.78
Min. ambient temperature	°C	-40	-40	-40
Max. ambient temperature	°C	60	60	45
Starting current	A	21	12	22

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}	%	38.3	36.4
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		41.9	40
05 Variable speed drive		No	

09 Power consumption P_e	kW	2.69
09 Air flow q_v	m^3/h	22620
09 Pressure increase p_{fs}	Pa	170
10 Speed (rpm) n	min^{-1}	920
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-134881

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Technical description

Weight	0.001 kg
Size	990 mm
Motor size	138
Rotor surface	Painted black
Terminal box material	Die-cast aluminum, painted black
Blade material	Sheet aluminum insert (painted black), sprayed with PP plastic
Number of blades	5
Blade pitch	-5°
Airflow direction	V
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP55
Insulation class	"F"
Moisture (F) / Environmental (H) protection class	H2+A
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	Shaft horizontal or rotor on bottom; rotor on top on request
Condensation drainage holes	On rotor side
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
With cable	Axial
Protection class	I (with customer connection of protective earth)
Conformity with standards	EN 60034-1 (2010); CE
Approval	VDE; EAC

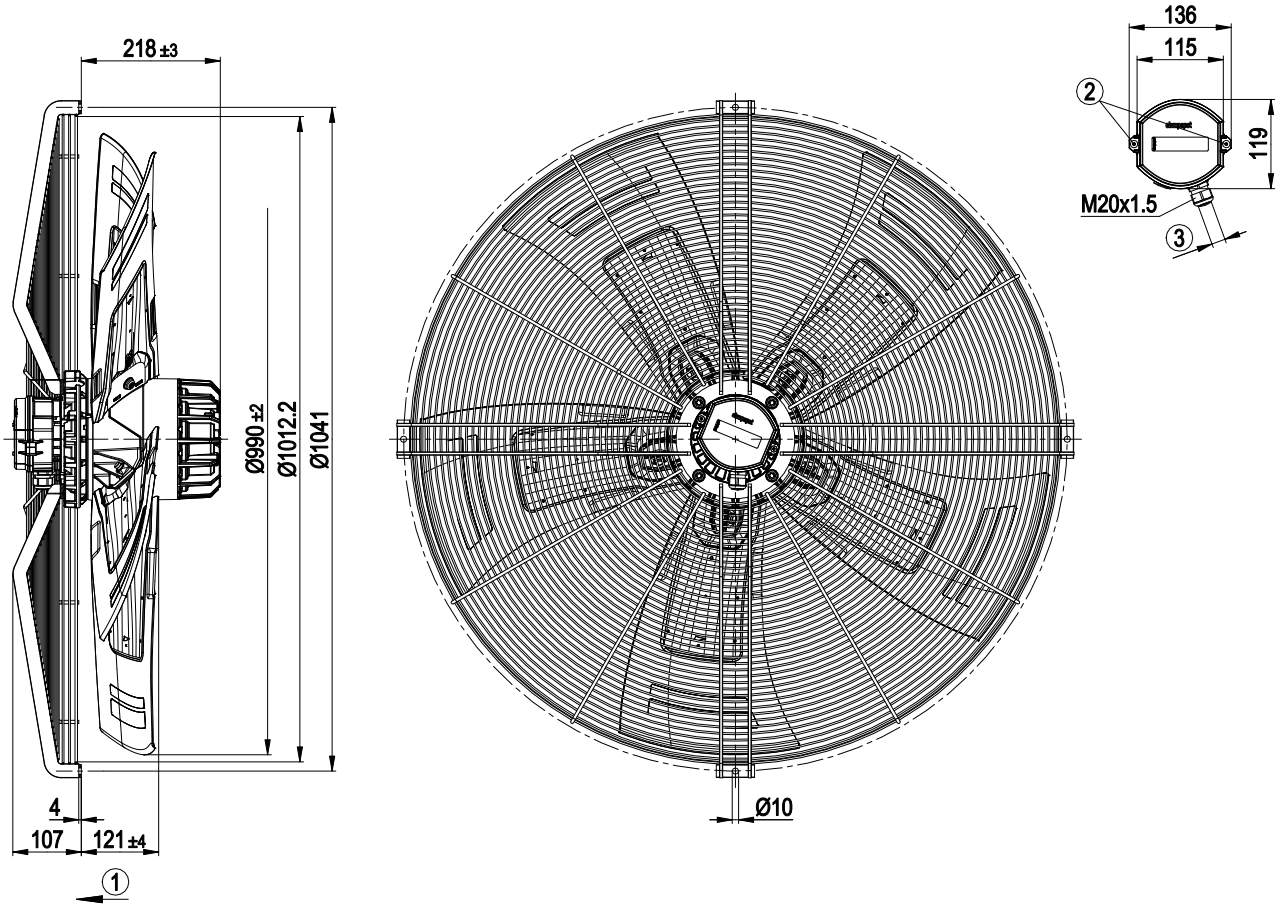
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Product drawing



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

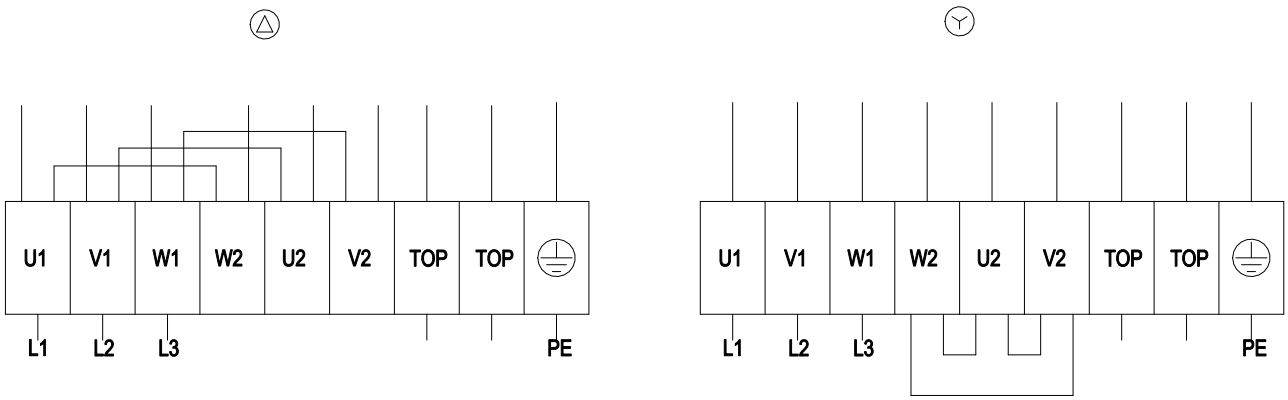
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Connection diagram



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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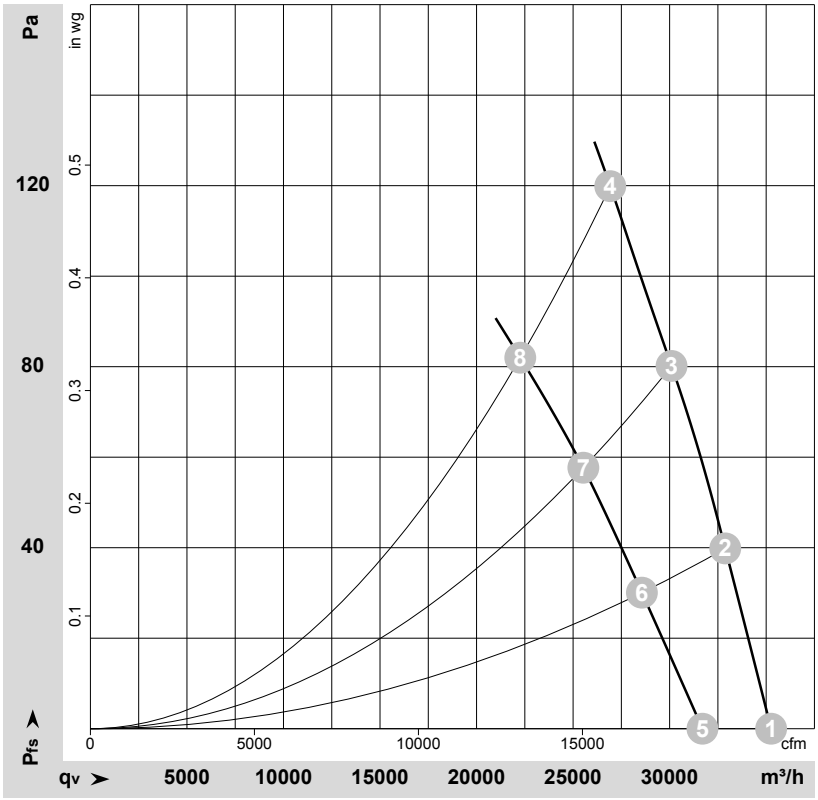
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Curves: Air performance 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-134881-1
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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	960	1742	4.92	76	84	84	35260	0	20750	0.00
2	Δ	400	50	950	1996	5.12	75	82	83	32880	40	19355	0.16
3	Δ	400	50	940	2234	5.35	74	81	82	30100	80	17715	0.32
4	Δ	400	50	930	2480	5.63	74	81	81	26925	120	15845	0.48
5	Y	400	50	855	1377	2.60	73	81	81	31700	0	18660	0.00
6	Y	400	50	825	1543	2.90	71	79	79	28565	30	16810	0.12
7	Y	400	50	800	1691	3.18	70	78	77	25530	58	15025	0.23
8	Y	400	50	770	1820	3.42	69	77	76	22265	81	13105	0.33

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

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