AC axial fan - HyBlade

sickle-shaped blades (S series)

with guard grille for short nozzle

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

Type	**S4D630-AR11-09**
Motor	**M4D110-IA**

Phase		3~	3~	3~	3~
Nominal voltage	VAC	400	400	480	480
Wiring		Δ	Y	Δ	Y
Frequency	Hz	60	60	60	60
Method of obtaining data		ml	ml	ml	ml
Valid for approval/standard		CE	CE	CE	CE
Speed (rpm)	min^{-1}	1310	835	1440	960
Power consumption	W	1320	600	1590	820
Current draw	A	2.32	1.1	2.4	1.22
Max. back pressure	Pa	90	37	110	50
Max. back pressure	in. wg	0.36	0.15	0.44	0.2
Min. ambient temperature	°C	-25	-25	-25	-25
Max. ambient temperature	°C	40	40	40	40
Starting current	A	4.8	1.5	6.1	2.0

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

		Actual	Req. 2015
01 Overall efficiency η_{es}	%	34.1	34
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	1.14
09 Air flow q_v	m^3/h	8070
09 Pressure increase p_{fs}	Pa	175
10 Speed (rpm) n	min^{-1}	1200
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-127547

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Technical description

Weight	16.5 kg
Fan size	630 mm
Rotor surface	Cast in aluminum
Terminal box material	PP plastic
Blade material	Sheet aluminum insert, sprayed with PP plastic
Guard grille material	Steel, coated with black plastic (RAL 9005)
Number of blades	5
Blade pitch	-10°
Airflow direction	"V"
Direction of rotation	Counterclockwise, viewed toward rotor
Degree of protection	IP54
Insulation class	"F"
Moisture (F) / Environmental (H) protection class	H2
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	Via terminal box
Motor protection	Thermal overload protector (TOP) with basic insulation
Protection class	I (with customer connection of protective earth)
Conformity with standards	EN 61800-5-1; CE
Approval	VDE; EAC; UL 1004-1; CSA C22.2 No. 100

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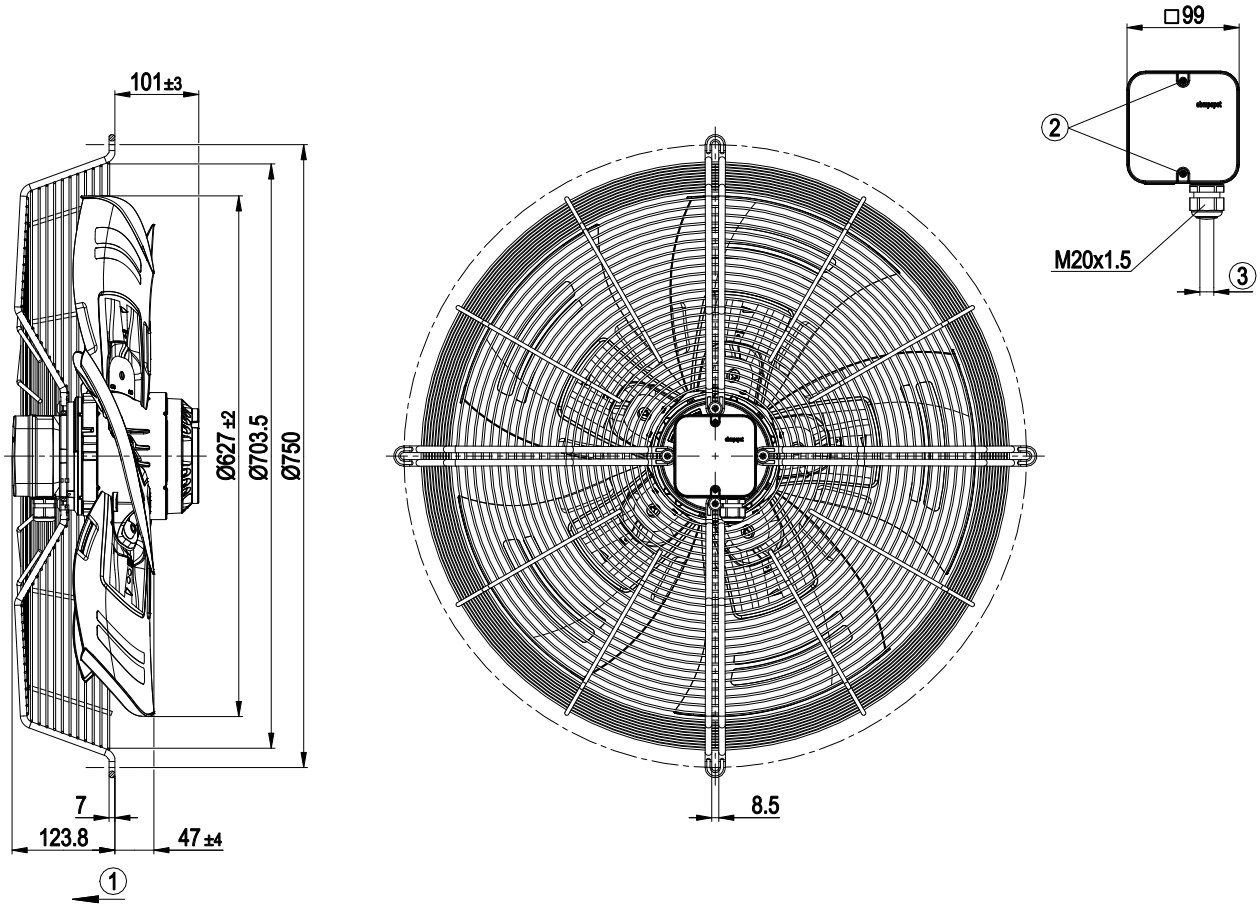
Product drawing



1	Airflow direction "V"
2	Tightening torque 1.5 ± 0.2 Nm
3	Cable diameter: min. 6 mm, max. 12 mm, tightening torque 2±0.3 Nm

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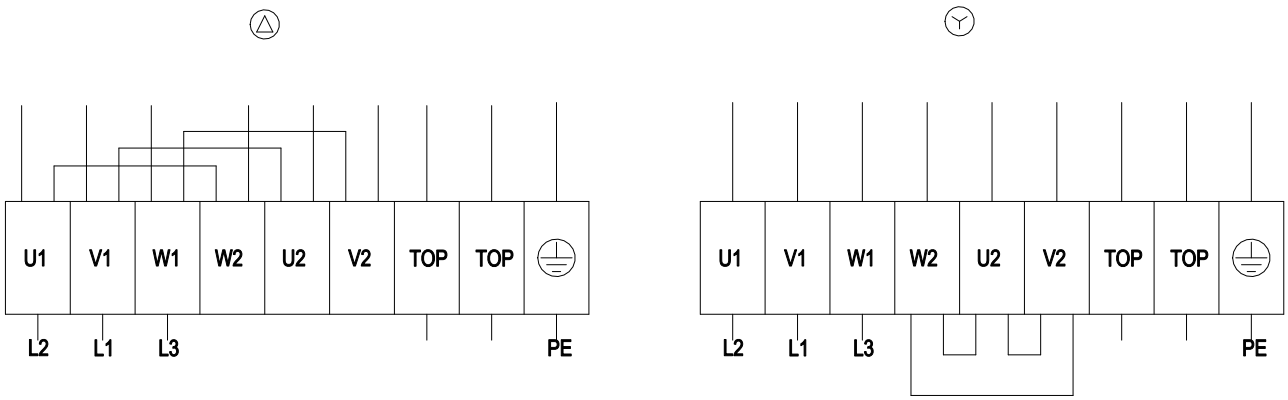
Connection diagram



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

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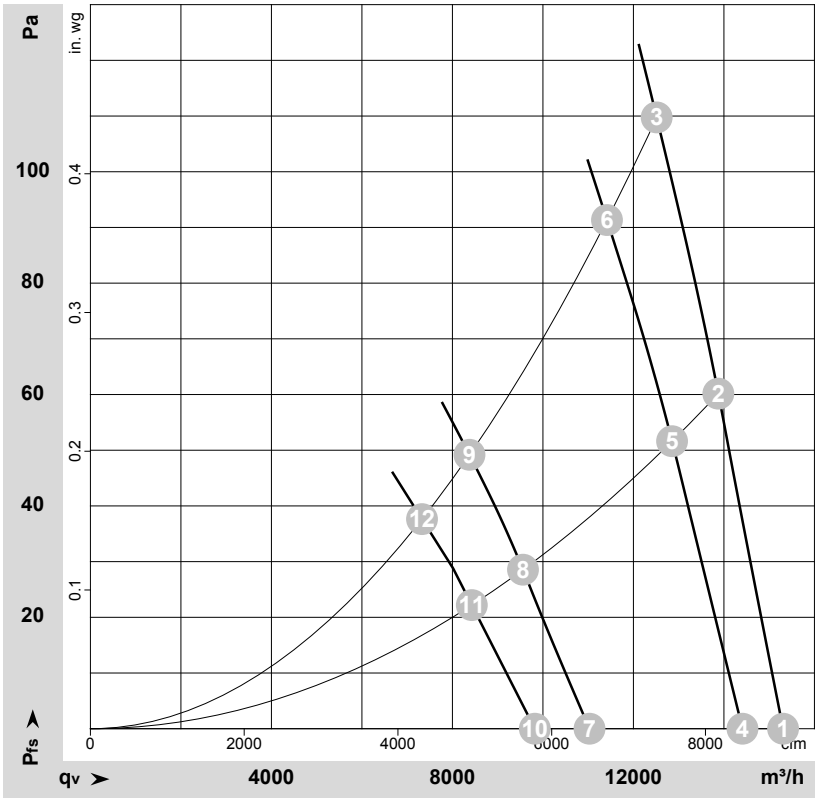
Curves: Air performance 60 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-137181-1
Measurement: LU-127706-1
Measurement: LU-137186-1
Measurement: LU-127783-1

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	480	60	1540	1291	2.02	74	81	81	15305	0	9010	0.00
2	Δ	480	60	1485	1451	2.22	71	78	78	13875	60	8165	0.24
3	Δ	480	60	1440	1590	2.40	69	76	76	12515	110	7365	0.44
4	Δ	400	60	1440	1120	2.00	72	79	78	14410	0	8480	0.00
5	Δ	400	60	1365	1231	2.18	69	76	75	12855	52	7565	0.21
6	Δ	400	60	1310	1320	2.32	66	73	73	11415	91	6720	0.37
7	Y	480	60	1095	757	1.11	67	73	72	11030	0	6490	0.00
8	Y	480	60	1020	792	1.17	63	70	69	9560	29	5625	0.12
9	Y	480	60	960	820	1.22	60	67	67	8375	49	4930	0.20
10	Y	400	60	970	578	1.06	63	70	69	9820	0	5780	0.00
11	Y	400	60	890	590	1.09	60	67	66	8430	22	4960	0.09
12	Y	400	60	835	600	1.10	58	65	64	7330	38	4315	0.15

Wired = Wiring · U = Power supply · 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