S4D630-BR11-08

AC axial fan - HyBlade

sickle-shaped blades (S series)

with guard grille for full nozzle

S4D630-BR11-08 ebmpapst Datasheet
sales@fansco.com
www.fansco.com

Nominal data

Type	**S4D630-BR11-08**
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	inH2O	0.36	0.15	0.44	0.2
Min. ambient temperature	°C	-40	-40	-40	-40
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 ErP Directive

		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 kg
Fan size	630 mm
Rotor surface	Cast in aluminum
Terminal box material	PC/ABS 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	F3-1
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
With cable	Axial
Protection class	I (with customer connection of protective earth)
Conformity with standards	EN 61800-5-1; CE
Approval	CSA C22.2 No. 100; UL 1004-1; VDE

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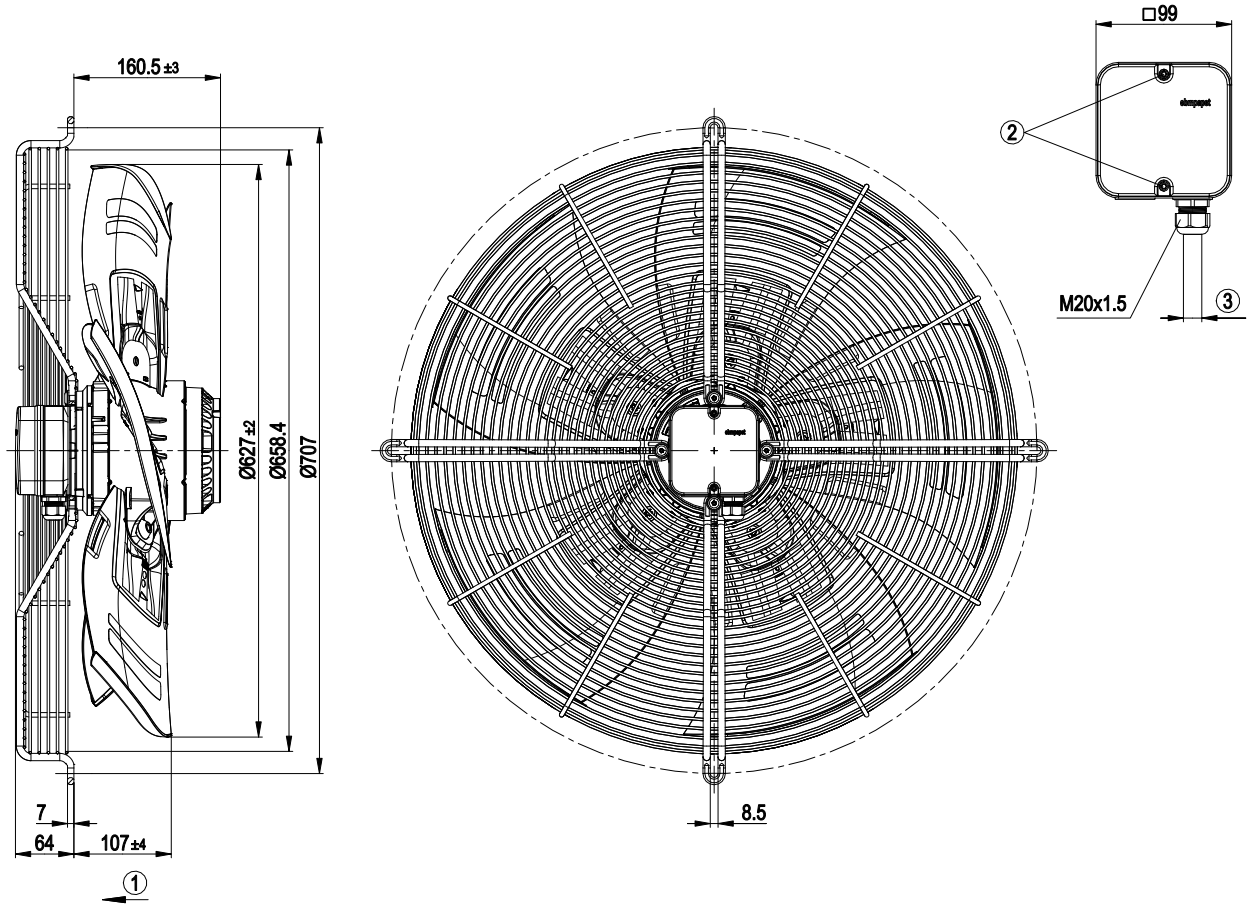
Product drawing



1	Direction of air flow "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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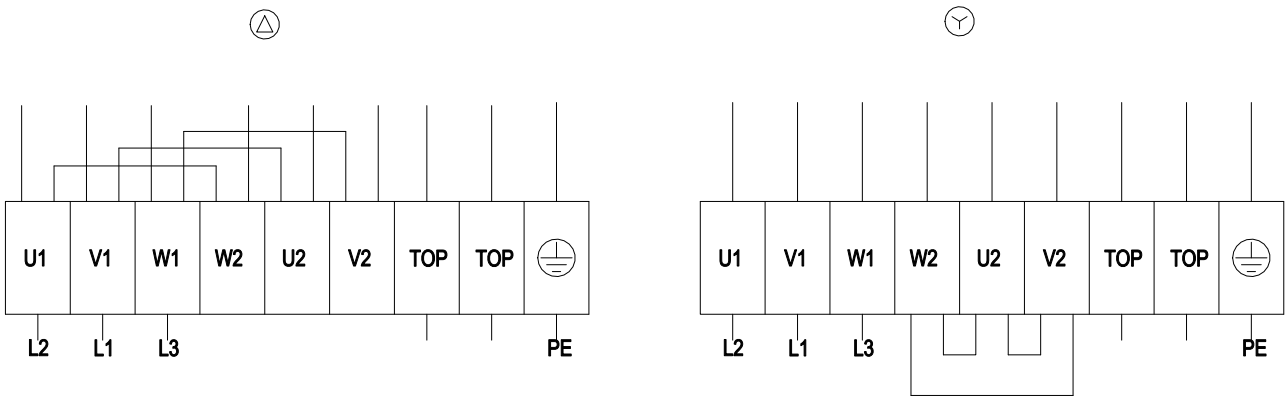
Connection diagram



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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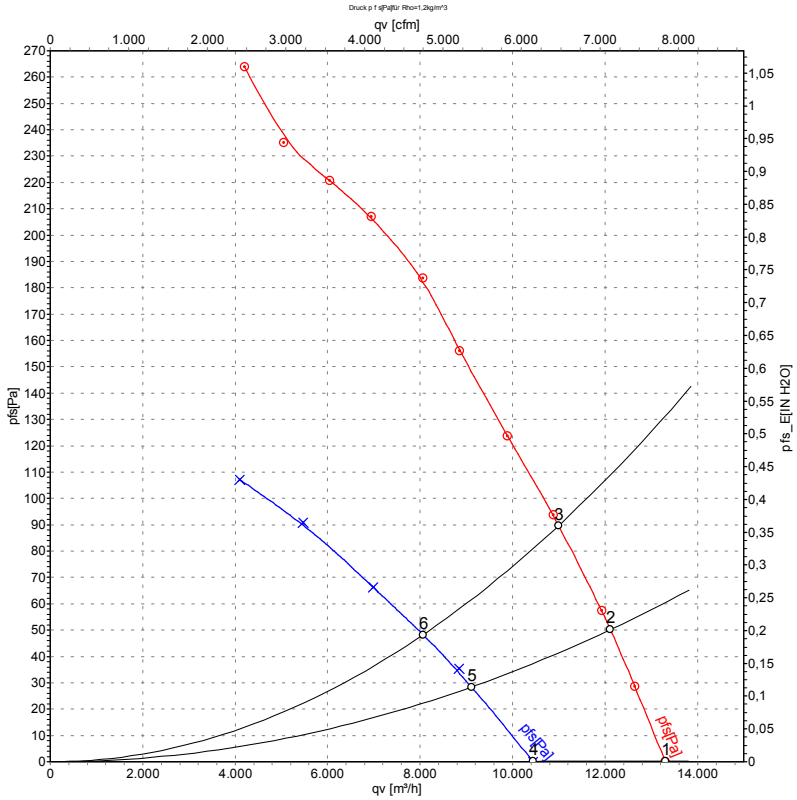
Curves: Air performance 50 Hz



Measurement: LU-127547-1
Measurement: LU-127784-1

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}	qv	p_{fs}	qv	p_{fs}
		V	Hz	min^{-1}	W	A	dB(A)	dB(A)	dB(A)	m^3/h	Pa	CFM	inH2O
1	Δ	400	50	1330	782	1.53	71	78	77	13300	0	7830	0.00
2	Δ	400	50	1295	902	1.71	68	75	75	12120	50	7135	0.20
3	Δ	400	50	1260	1000	1.85	66	73	73	10990	90	6470	0.36
4	Y	400	50	1035	513	0.90	65	72	71	10440	0	6145	0.00
5	Y	400	50	970	550	0.97	62	68	68	9110	29	5365	0.12
6	Y	400	50	915	570	1.02	60	67	66	8065	48	4745	0.19

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 · qv = Air flow · p_{fs} = Pressure increase

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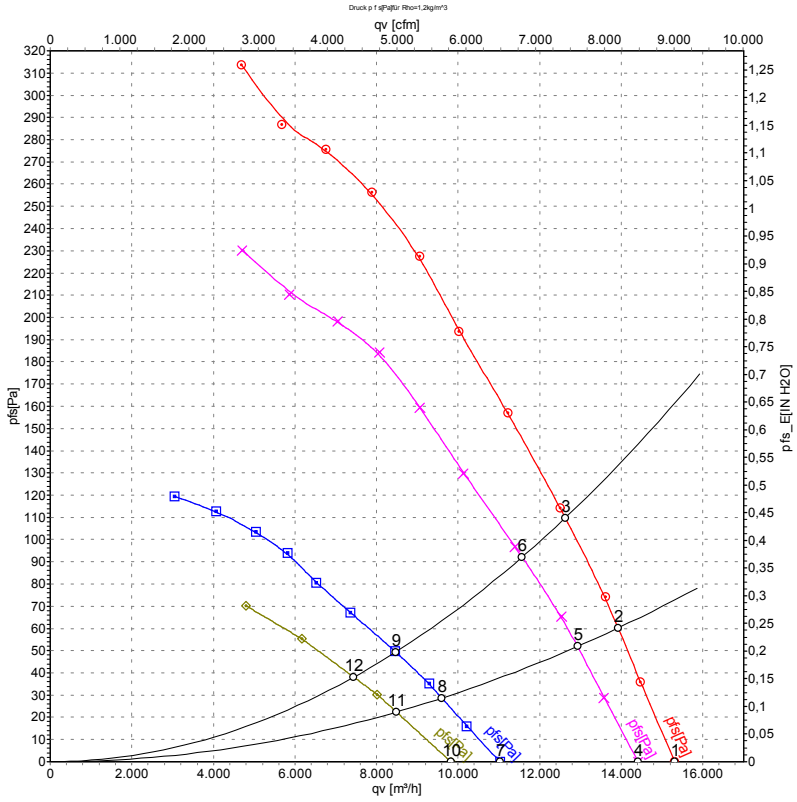
Curves: Air performance 60 Hz



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}	qv	p_{fs}	qv	p_{fs}
		V	Hz	min^{-1}	W	A	dB(A)	dB(A)	dB(A)	m^3/h	Pa	CFM	inH2O
1	Δ	480	60	1540	1291	2.02	74	81	81	15310	0	9010	0.00
2	Δ	480	60	1490	1446	2.21	71	79	78	13920	60	8195	0.24
3	Δ	480	60	1440	1590	2.40	69	76	76	12620	110	7430	0.44
4	Δ	400	60	1440	1120	2.00	72	79	78	14410	0	8480	0.00
5	Δ	400	60	1370	1227	2.17	69	76	75	12930	52	7610	0.21
6	Δ	400	60	1310	1320	2.32	66	74	73	11570	92	6810	0.37
7	Y	480	60	1095	757	1.11	67	73	72	11030	0	6490	0.00
8	Y	480	60	1025	791	1.17	63	70	69	9605	29	5650	0.12
9	Y	480	60	960	820	1.22	60	67	67	8470	50	4985	0.20
10	Y	400	60	970	578	1.06	63	70	69	9820	0	5780	0.00
11	Y	400	60	895	590	1.09	60	67	66	8485	22	4995	0.09
12	Y	400	60	835	600	1.10	58	65	65	7440	38	4380	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 · qv = Air flow · p_{fs} = Pressure increase