

AC axial fan

sickle-shaped blades (S series)
with round full nozzle, Transformer fan

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Nominal data

Type	W6D630-CA01-80						
Motor	M6D110-IA						
Phase		3~	3~	3~	3~	3~	3~
Nominal voltage	VAC	400	400	400	400	480	480
Wiring		Δ	Y	Δ	Y	Δ	Y
Frequency	Hz	50	50	60	60	60	60
Method of obtaining data		fa	fa	fa	fa	fa	fa
Valid for approval/standard		-	-	-	-	-	-
Speed (rpm)	min ⁻¹	925	775	1035	730	1090	850
Power consumption	W	575	420	845	505	925	635
Current draw	A	1.45	0.75	1.6	0.95	1.65	0.95
Max. back pressure	Pa	85	55	50	20	55	30
Max. back pressure	in. wg	0.34	0.22	0.2	0.08	0.22	0.12
Min. ambient temperature	°C	-40	-40	-40	-40	-40	-40
Max. ambient temperature	°C	65	65	40	40	40	40
Starting current	A	5.2	1.75	4.8	1.6	6	2

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



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Technical description

Weight	33 kg
Size	630 mm
Motor size	110
Rotor surface	Painted black
Terminal box material	Die-cast aluminum, painted black
Blade material	Sheet aluminum, painted black
Fan housing material	Sheet steel, galvanized and coated with white aluminum plastic (RAL 9006)
Guard grille material	Steel, coated with white-aluminum plastic (RAL 9006)
Number of blades	5
Blade pitch	0°
Airflow direction	A
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP54
Insulation class	"F"
Moisture (F) / Environmental (H) protection class	H2+T
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 top; rotor on bottom on request
Condensation drainage holes	On stator 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)
Approval	VDE; EAC

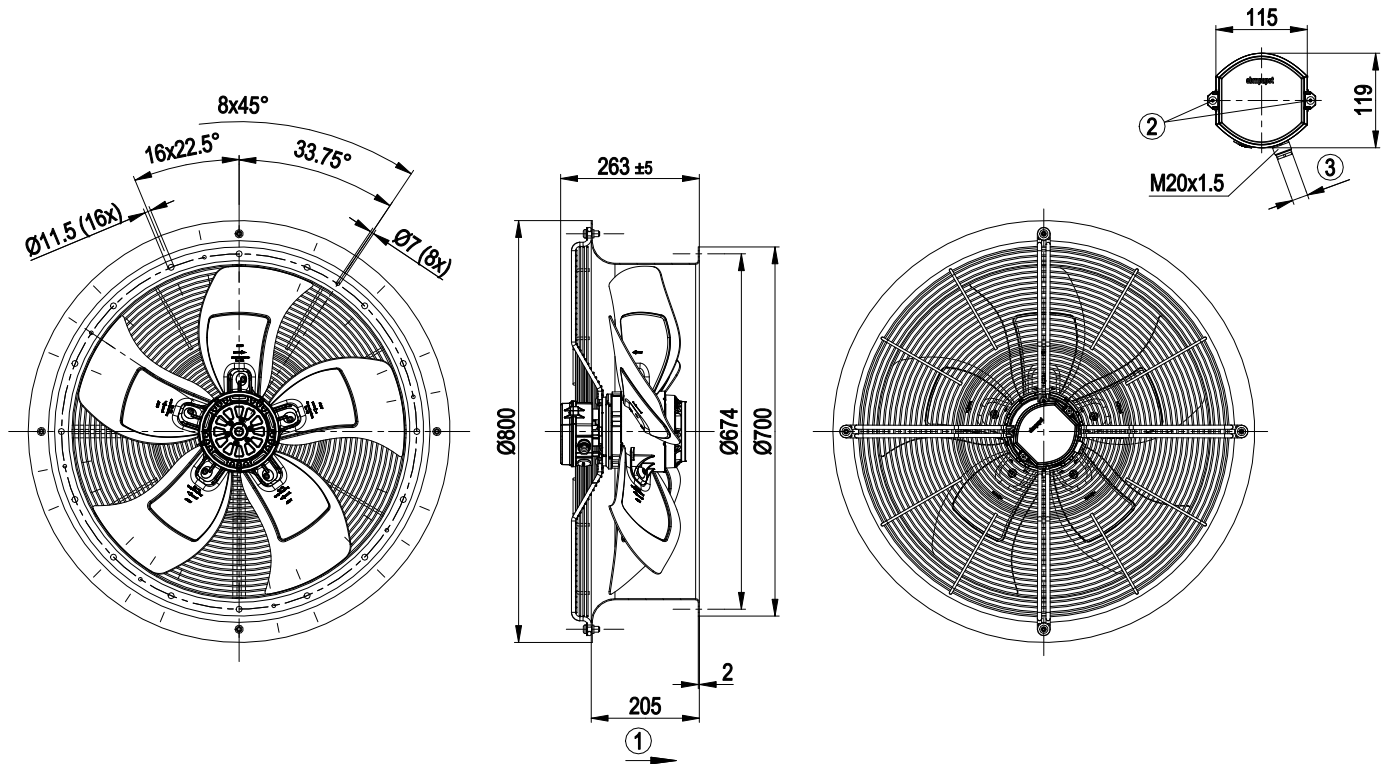


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Product drawing

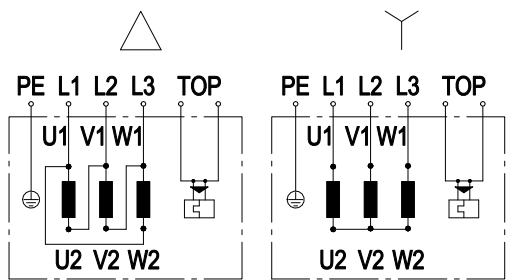


1	Direction of air flow "A"
2	Tightening torque 2.5 ± 0.4 Nm
3	Cable diameter min. 10 mm, max. 12 mm; tightening torque 4 ± 0.6 Nm

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Connection diagram



Note: Change of rotation direction by reversing two phases

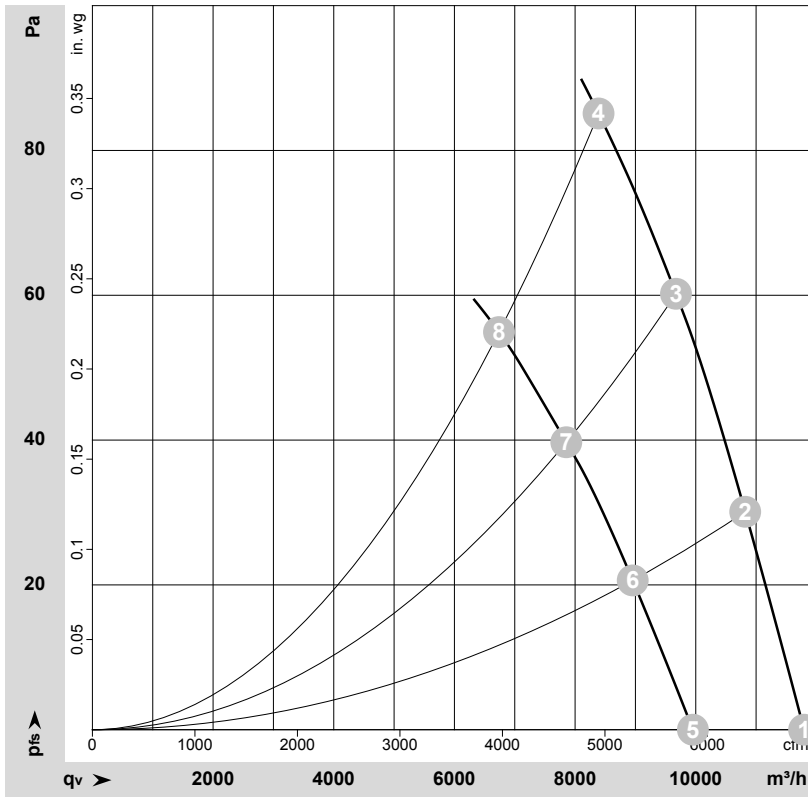
Δ	Delta connection	Y	Star connection	L1	black
L2	blue	L3	brown	U1	black
V1	blue	W1	brown	U2	green
V2	white	W2	yellow	TOP	2x gray
PE	green/yellow				



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Curves: Air performance 50 Hz



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

Measurement: LU-195010-1
Measurement: LU-195008-1

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	925	575	1.45	71	79	80	11795	0	6945	0.00
2	Δ	400	50	920	612	1.46	71	78	79	10820	30	6370	0.12
3	Δ	400	50	915	651	1.49	71	78	79	9670	60	5695	0.24
4	Δ	400	50	910	689	1.52	71	78	79	8390	85	4940	0.34
5	Y	400	50	775	420	0.75	67	75	75	9955	0	5860	0.00
6	Y	400	50	760	436	0.80	67	74	75	8955	21	5270	0.08
7	Y	400	50	740	456	0.83	66	73	74	7855	40	4625	0.16
8	Y	400	50	725	470	0.86	66	73	74	6740	55	3965	0.22

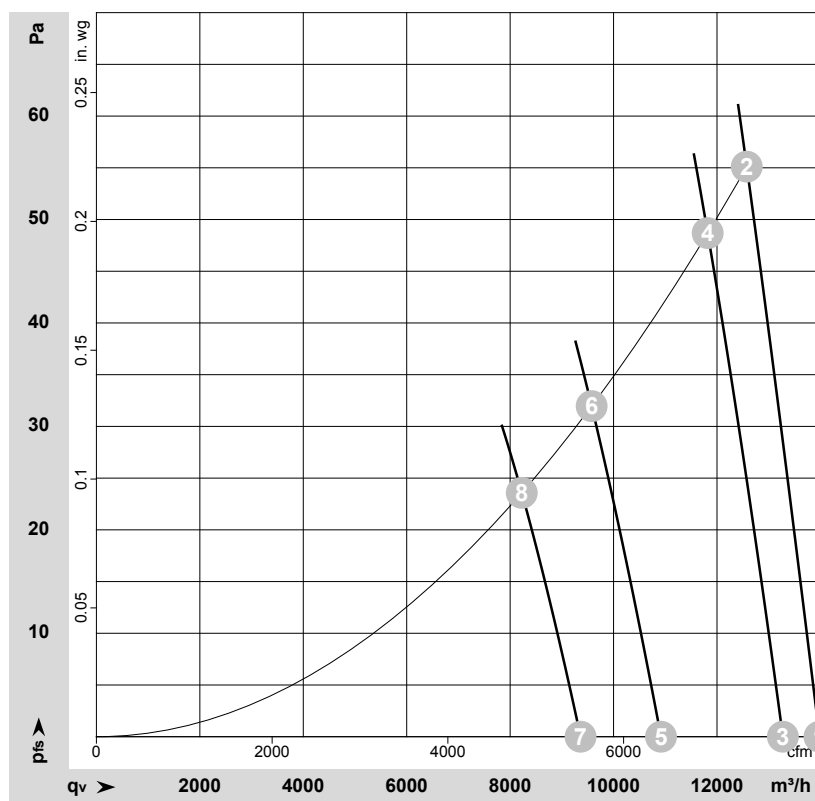
Wired = Wiring · U = Voltage · f = Frequency · n = Speed (rpm) · P_e = Power consumption · I = Current draw · LpA_{in} = Sound pressure level intake side · LwA_{in} = Sound power level intake side
LwA_{out} = Sound power level outlet side · q_v = Air flow · p_{fs} = Pressure increase



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Curves: Air performance 60 Hz



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

Measurement: LU-195251-1
Measurement: LU-195391-1
Measurement: LU-195393-1
Measurement: LU-195392-1

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	1090	925	1.65	76	83	84	13980	0	8230	0.00
2	Δ	480	60	1080	1010	1.72	75	82	83	12575	55	7400	0.22
3	Δ	400	60	1035	845	1.60	75	82	83	13275	0	7815	0.00
4	Δ	400	60	1020	915	1.69	73	81	82	11820	50	6955	0.20
5	Y	480	60	850	635	0.95	70	77	78	10915	0	6425	0.00
6	Y	480	60	825	665	1.00	68	76	77	9575	32	5635	0.13
7	Y	400	60	730	505	0.95	66	73	74	9360	0	5510	0.00
8	Y	400	60	705	516	0.95	65	72	73	8225	24	4840	0.10

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

