W8D800-CJ01-87

AC axial fan

sickle-shaped blades (S series)

with round full nozzle, Transformer fan

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

ErP2015 EXCEEDS THE NORM

Nominal data

Type	**W8D800-CJ01-87**
Motor	**M8D138-LA**

Phase		3~	3~	3~	3~
Nominal voltage	VAC	400	400	480	480
Wiring		Δ	Y	Δ	Y
Frequency	Hz	50	50	60	60
Method of obtaining data		fa	fa	fa	fa
Valid for approval/standard		CE	CE	CE	CE
Speed	min^{-1}	695	585	815	640
Power consumption	W	690	465	1070	680
Current draw	A	2.15	0.99	2.33	1.2
Min. ambient temperature	°C	-40	-40	-40	-40
Max. ambient temperature	°C	65	65	60	60
Starting current	A	6.0	2.0	6.6	2.2

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}	%	33.4	33.4
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		40	40
05 Variable speed drive		No	

09 Power consumption P_e	kW	0.89
09 Air flow q_v	m^3/h	12045
09 Pressure increase p_{fs}	Pa	85
10 Speed n	min^{-1}	675
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-71660

ebmpapst

AC axial fan

sickle-shaped blades (S series)

with round full nozzle, Transformer fan

Technical description

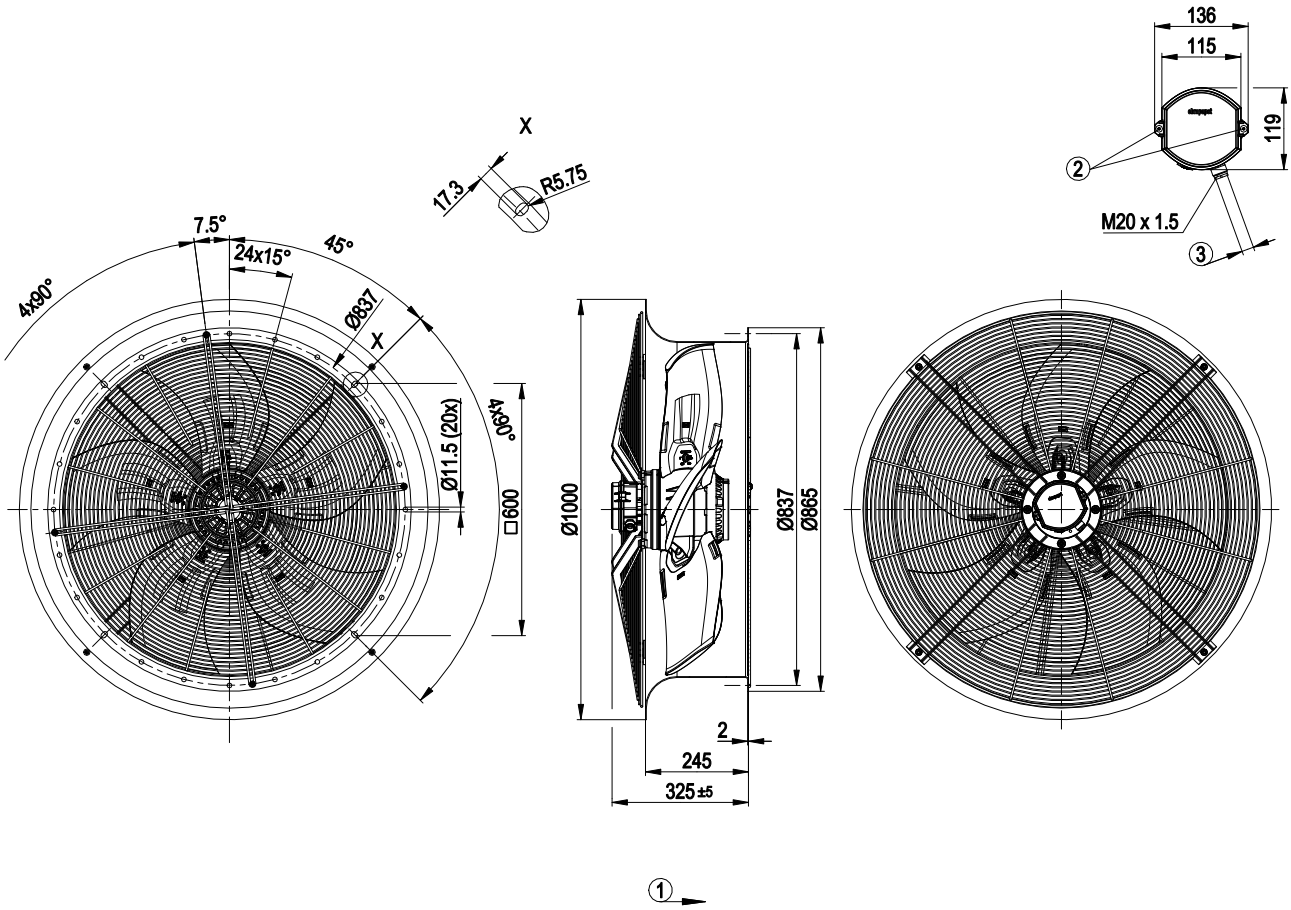
Weight	50.1 kg
Fan size	800 mm
Rotor surface	Painted black
Terminal box material	Die-cast aluminum, painted black
Blade material	Die-cast aluminum, painted black
Fan housing material	Sheet steel, galvanized and coated with cement-gray plastic (RAL 7033)
Guard grille material	Steel, coated with black plastic (RAL 9005)
Number of blades	5
Blade pitch	0°
Airflow direction	"A"
Direction of rotation	Counterclockwise, viewed toward rotor
Degree of protection	IP54
Insulation class	"F"
Moisture (F) / Environmental (H) protection class	F4-2
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
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 60034-1 (2010); EN 61800-5-1; CE
Approval	EAC; VDE

AC axial fan

sickle-shaped blades (S series)

with round full nozzle, Transformer fan

Product drawing



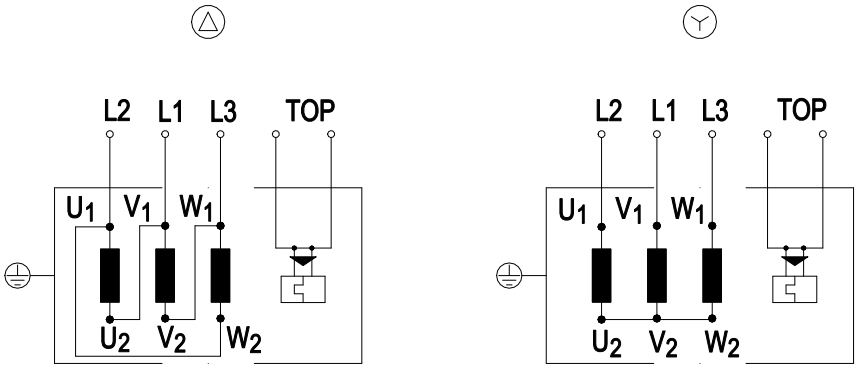
1	Direction of air flow "A"
2	Tightening torque 2.5±0.4 Nm
3	Cable diameter: min. 10 mm, max. 12 mm, tightening torque 4 ± 0.4 Nm

AC axial fan

sickle-shaped blades (S series)

with round full nozzle, Transformer fan

Connection diagram



Change of rotation direction by reversing two phases

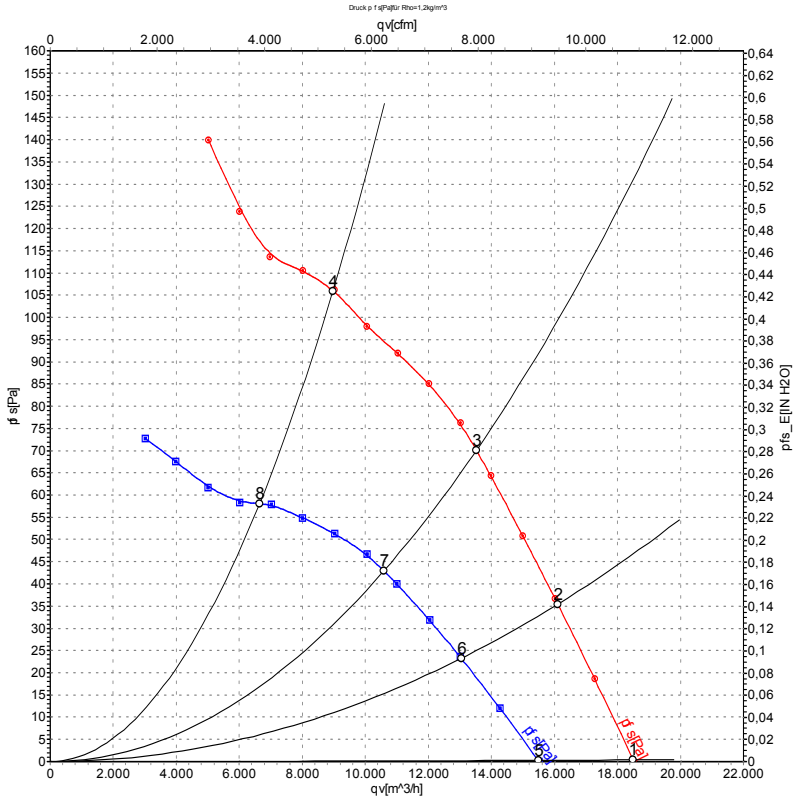
Δ	Delta connection	Y	Star connection	L2	= U1 = black
L1	= V1 = blue	L3	= W1 = brown	W2	yellow
U2	green	V2	white	TOP	2x gray
PE	green/yellow				

AC axial fan

sickle-shaped blades (S series)

with round full nozzle, Transformer fan

Curves: Air performance 50 Hz



Measurement: LU-100471-1
Measurement: LU-100473-1

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}	qv	p_{fs}
		V	Hz	min^{-1}	W	A	dB(A)	dB(A)	m^3/h	Pa
1	Δ	400	50	695	690	2.15	62	67	18520	0
2	Δ	400	50	685	775	2.21	61	67	16100	35
3	Δ	400	50	680	846	2.26	61	67	13530	70
4	Δ	400	50	660	980	2.41	65	72	8975	105
5	Y	400	50	585	465	0.99	59	64	15520	0
6	Y	400	50	555	509	1.08	57	63	13040	23
7	Y	400	50	535	535	1.13	56	62	10580	43
8	Y	400	50	515	570	1.21	58	65	6645	57

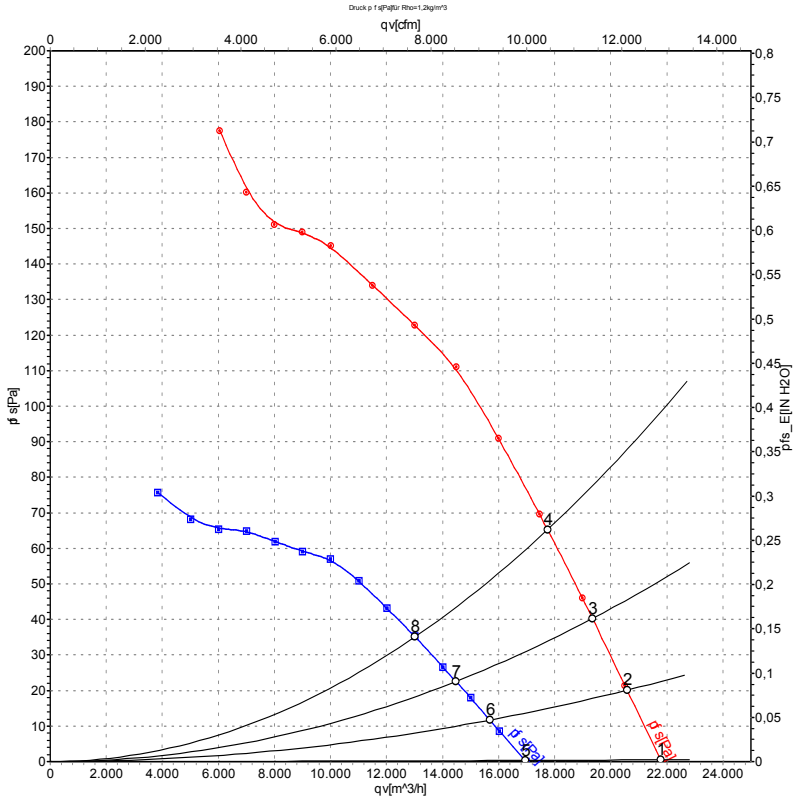
Wired = Wiring · U = Power supply · f = Frequency · n = Speed · P_e = Power consumption · I = Current draw · LpA_{in} = Sound pressure level intake side · LwA_{in} = Sound power level intake side
qv = Air flow · p_{fs} = Pressure increase

AC axial fan

sickle-shaped blades (S series)

with round full nozzle, Transformer fan

Curves: Air performance 60 Hz



Measurement: LU-101195-1
Measurement: LU-101199-1

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}	qv	p_{fs}
		V	Hz	min^{-1}	W	A	dB(A)	dB(A)	m^3/h	Pa
1	Δ	480	60	815	1070	2.33	64	71	21820	0
2	Δ	480	60	810	1134	2.40	64	70	20580	20
3	Δ	480	60	805	1193	2.45	63	70	19350	40
4	Δ	480	60	790	1250	2.53	63	70	17750	65
5	Y	480	60	640	680	1.20	60	66	16980	0
6	Y	480	60	620	702	1.24	59	65	15690	12
7	Y	480	60	605	719	1.27	58	64	14480	22
8	Y	480	60	580	740	1.30	57	64	13020	35

Wired = Wiring · U = Power supply · f = Frequency · n = Speed · P_e = Power consumption · I = Current draw · LpA_{in} = Sound pressure level intake side · LwA_{in} = Sound power level intake side
qv = Air flow · p_{fs} = Pressure increase