8300100425

VWB0500HSPGZ

EC axial fan - HyBlade

sickle-shaped blades (S series)

Fan housing with mounting grille

8300100425 ebmpapst Datasheet
sales@fansco.com
www.fansco.com

Nominal data

Item	**8300100425**
Motor	**E08420-35**

Phase		1~
Nominal voltage	VAC	230
Nominal voltage range	VAC	200 .. 277
Frequency	Hz	50/60
Method of obtaining data		ml
Status		prelim.
Speed (rpm)	min^{-1}	890
Power consumption	W	185
Current draw	A	0.8
Max. back pressure	Pa	70
Max. back pressure	in. wg	0.28
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	65

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 (prEN 17166)

		Actual	Req. 2015
01 Overall efficiency η_{es}	%	42.6	29.1
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		53.5	40
05 Variable speed drive		Yes	

09 Power consumption P_{ed}	kW	0.18
09 Air flow q_v	m^3/h	3735
09 Pressure increase p_{fs}	Pa	70
10 Speed (rpm) n	min^{-1}	890
11 Specific ratio*		1.00

Data obtained at optimum efficiency level.

* Specific ratio = 1 + p_{fs} / 100 000 Pa

LU-219862

The efficiency values displayed for achieving conformity with the Ecodesign Regulation EU 327/2011 has been reached with defined air duct components (e.g. inlet rings).
The dimensions must be requested from ebm-papst. If other air conduction geometries are used on the installation side, the ebm-papst evaluation loses its validity/the conformity must be confirmed again.

The product does not fall within the scope of Regulation (EU) 2019/1781 due to the exception specified in Article 2 (2a) (motors completely integrated into a product).

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Technical description

Weight	11.3 kg
Size	500 mm
Motor size	84
Rotor surface	Painted black
Electronics housing material	Die-cast aluminum, painted black
Blade material	Press-fitted sheet steel blank, sprayed with PP plastic
Support ring material	Steel, coated with black plastic (RAL 9005)
Fan housing material	Sheet steel, galvanized and coated with black plastic (RAL 9005)
Airflow direction	V
Direction of rotation	Counterclockwise, viewed toward rotor
Degree of protection	IP55
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 made of stainless steel; (sealed)
Technical features	- Output 10 VDC, max. 10 mA - Operation and alarm display - Alarm relay - Integrated PID controller - Power limiter - Motor current limitation - PFC, active - RS-485 MODBUS-RTU - Soft start - Control input 0-10 VDC / PWM - Control interface with SELV potential safely disconnected from the mains - Thermal overload protection for electronics/motor - Line undervoltage / phase failure detection
EMC immunity to interference	According to EN 61000-6-2 (industrial environment)
EMC circuit feedback	According to EN 61000-3-2/3
EMC interference emission	According to EN 61000-6-3 (household environment)
Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)	<= 3.5 mA
Electrical hookup	Connector with cable
Motor protection	Thermal overload protector (TOP) internally connected
With cable	Variable

Protection class assignment	I; If a protective earth is connected by the customer This component for installation may have several local protection classes. This information relates to this component's basic design. The final protection class is based on the component's intended installation and connection.
Conformity with standards	EN 61800-5-1; CE
Approval	UL 1004-7 + 60730-1; EAC; CSA C22.2 No. 77 + CAN/CSA-E60730-1

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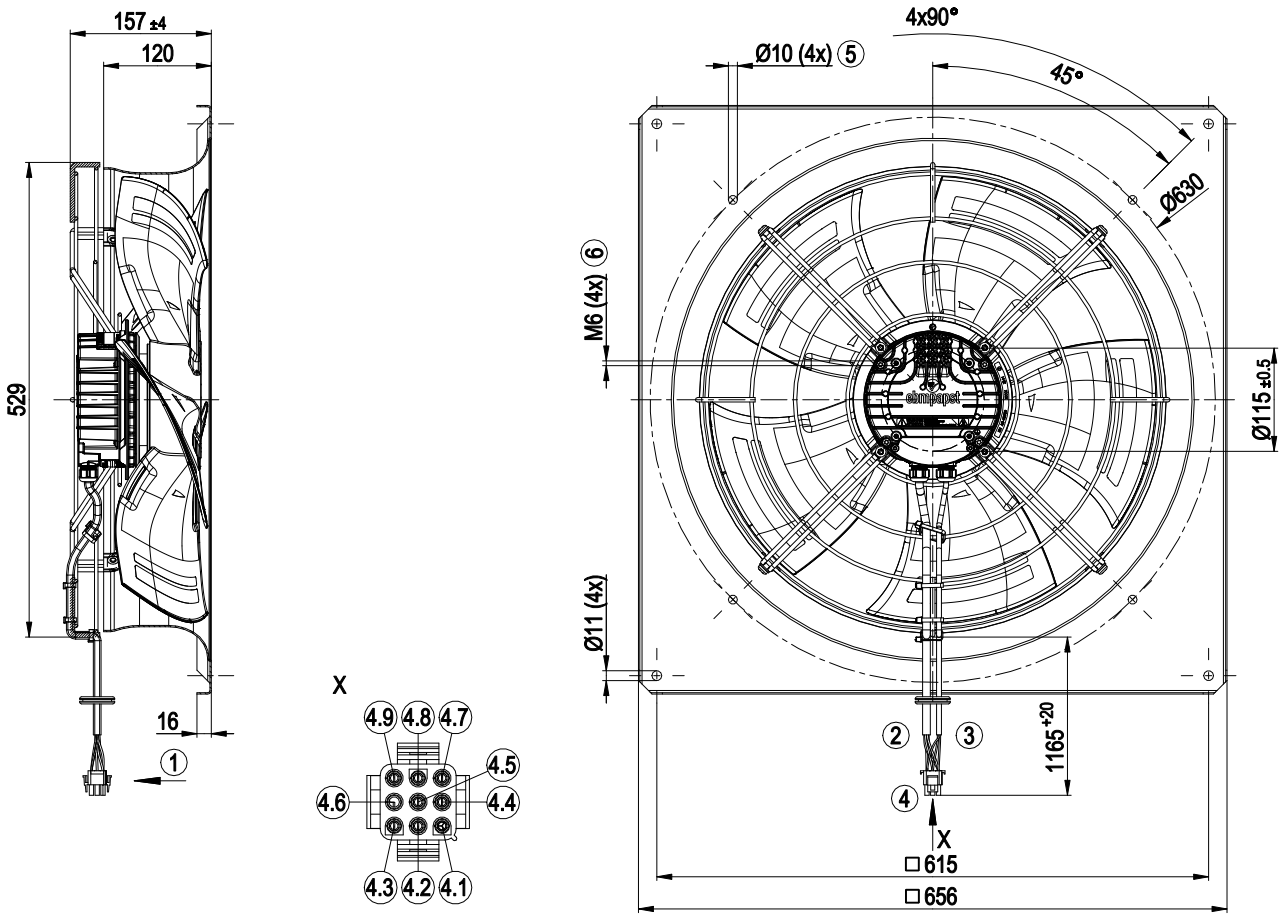
Product drawing



1	Airflow direction "V"
2	Cable PVC AWG18
	5x socket Molex 39-00-0059
3	Cable PVC AWG22
	3x plug pin TE 926886-1
4	9-pole connector housing TE 1863003-1
4.1	PE
4.2	L
4.3	N
4.4	COM
4.5	NC
4.6	not used
4.7	GND
4.8	0-10 V/PWM
4.9	+10 V
5	Attachment holes for FlowGrid 50710-2-2957 (not included in scope of delivery)
6	Max. clearance for screw 12 mm

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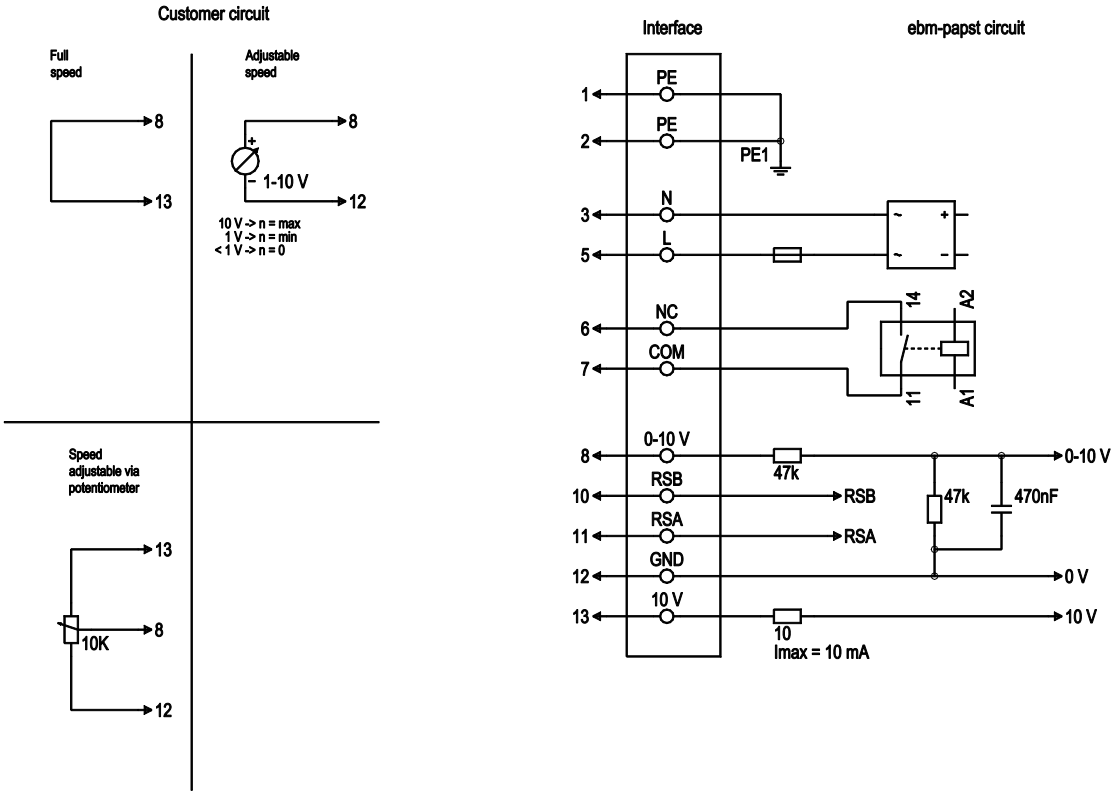
Connection diagram



No.	Conn.	Designation	Color	Function/assignment
1	1, 2	PE	green/yellow	Protective earth
1	3	N	blue	Power supply, neutral conductor, 50/60 Hz
1	5	L	black	Power supply, phase, 50/60 Hz
1	6	NC	white 1	Status relay, floating status contact; break for failure, contact rating 250 VAC/2 A (AC1) min. 10 mA, basic insulation on supply side and reinforced insulation on control interface side
1	7	COM	white 2	Status relay, floating status contact; common connection, contact rating 250 VAC/2 A (AC1) min. 10 mA, basic insulation on supply side and reinforced insulation on control interface side
2	8	0-10V	yellow	Analog input (set value); 0-10 V; Ri = 100 kΩ; adjustable curve
2	10	RSB		not brought out via wire
2	11	RSA		not brought out via wire
2	12	GND	blue	Reference ground for control interface, SELV
2	13	+10V	red	Fixed voltage output 10 VDC; +10 V +/-3%; max. 10 mA; short-circuit-proof; power supply for ext. devices (e.g. potentiometer)

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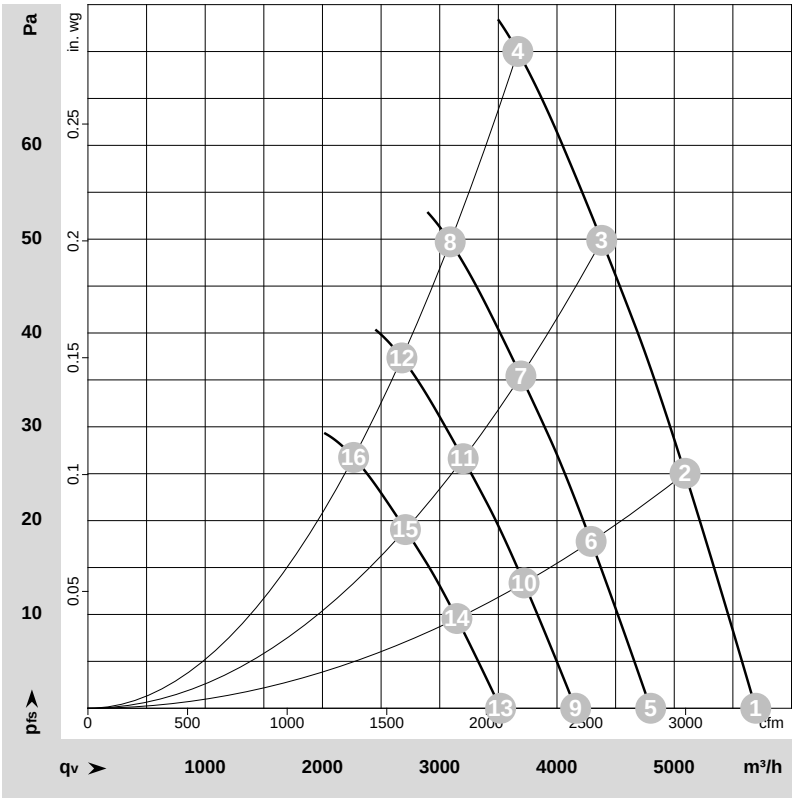
Curves: Air performance 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-219862-1

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}	LwA	q_V	p_{fs}	q_V	p_{fs}
		V	Hz	min^{-1}	W	A	dB(A)	dB(A)	dB(A)	dB	m^3/h	Pa	cfm	in. wg
1	1~	230	50	890	138	0.62	59	65	65	68	5695	0	3350	0.00
2	1~	230	50	890	159	0.70	56	62	62	65	5090	26	2995	0.10
3	1~	230	50	890	175	0.78	54	61	60	63	4380	50	2580	0.20
4	1~	230	50	890	185	0.80	54	61	60	63	3665	70	2160	0.28
5	1~	230	50	750	82	0.37	55	61	60	64	4800	0	2825	0.00
6	1~	230	50	750	95	0.42	52	58	58	61	4290	18	2525	0.07
7	1~	230	50	750	105	0.46	50	56	56	59	3690	36	2175	0.14
8	1~	230	50	750	112	0.49	50	56	56	59	3090	50	1820	0.20
9	1~	230	50	650	54	0.24	51	57	57	60	4160	0	2450	0.00
10	1~	230	50	650	62	0.27	48	55	54	57	3720	14	2190	0.06
11	1~	230	50	650	68	0.30	46	53	52	55	3200	27	1885	0.11
12	1~	230	50	650	73	0.32	46	53	52	56	2680	38	1575	0.15
13	1~	230	50	550	33	0.15	47	53	52	56	3520	0	2070	0.00
14	1~	230	50	550	37	0.17	44	50	50	53	3145	10	1850	0.04
15	1~	230	50	550	41	0.18	42	49	48	51	2710	19	1595	0.08
16	1~	230	50	550	44	0.19	42	49	48	51	2265	27	1335	0.11

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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