EC axial fan - HyBlade

sickle-shaped blades (S series)

with round full nozzle

W3G400-CC14-A3 ebmpapst Datasheet
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www.fansco.com

Nominal data

Type	**W3G400-CC14-A3**
Motor	**M3G084-FA**

Phase		1~
Nominal voltage	VAC	230
Nominal voltage range	VAC	200 .. 277
Frequency	Hz	50/60
Method of obtaining data		ml
Speed (rpm)	min^{-1}	1630
Power consumption	W	435
Current draw	A	1.9
Max. back pressure	Pa	150
Max. back pressure	inH2O	0.6
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	55

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}	%	39.8	31.2
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		48.6	40
05 Variable speed drive		Yes	

09 Power consumption P_{ed}	kW	0.4
09 Air flow q_v	m^3/h	3485
09 Pressure increase p_{fs}	Pa	150
10 Speed (rpm) n	min^{-1}	1650
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-130132

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Technical description

Weight	8.7 kg
Fan size	400 mm
Rotor surface	Painted black
Electronics housing material	Die-cast aluminum
Blade material	Press-fitted sheet steel blank, sprayed with PP plastic
Fan housing material	Sheet steel, pre-galvanized and coated with black plastic (RAL 9005)
Guard grille material	Steel, coated with black plastic (RAL 9005)
Number of blades	5
Airflow direction	"V"
Direction of rotation	Counterclockwise, viewed toward rotor
Degree of protection	IP54
Insulation class	"B"
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
Technical features	- Output 10 VDC, max. 10 mA - Alarm relay - Motor current limitation - PFC, active - Soft start - Control input 0-10 VDC / PWM - Control interface with SELV potential safely disconnected from supply - 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	With plug
Motor protection	Thermal overload protector (TOP) internally connected
With cable	Variable
Protection class	I (with customer connection of protective earth)
Conformity with standards	EN 60335-1; CE
Approval	UL 2111; CSA C22.2 No. 77

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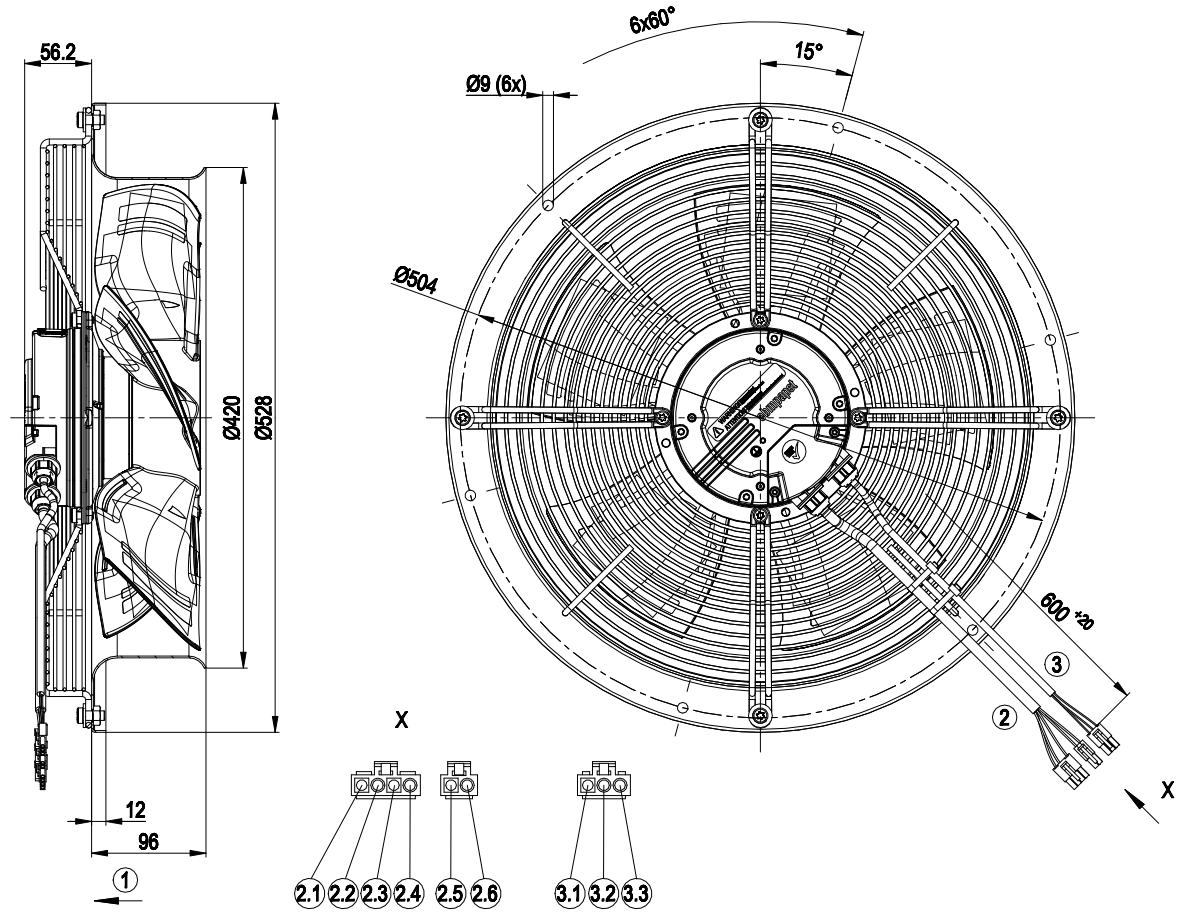
Product drawing



1	Direction of air flow "V"
2	Cable PVC AWG18; with connector housing JST ELP-04V and connector housing JST ELP-02V, 5x socket JST SLF-41T-P1.3E crimped
2.1	PE (green/yellow)
2.2	N (blue)
2.3	not used
2.4	L (black)
2.5	COM (white 2)
2.6	NC (white 1)
3	Cable PVC AWG22; with connector housing JST ELP-03V, 3x socket JST SLF-01T-P1.3E crimped
3.1	+10 V (red)
3.2	0-10 V/PWM (yellow)
3.3	GND (blue)

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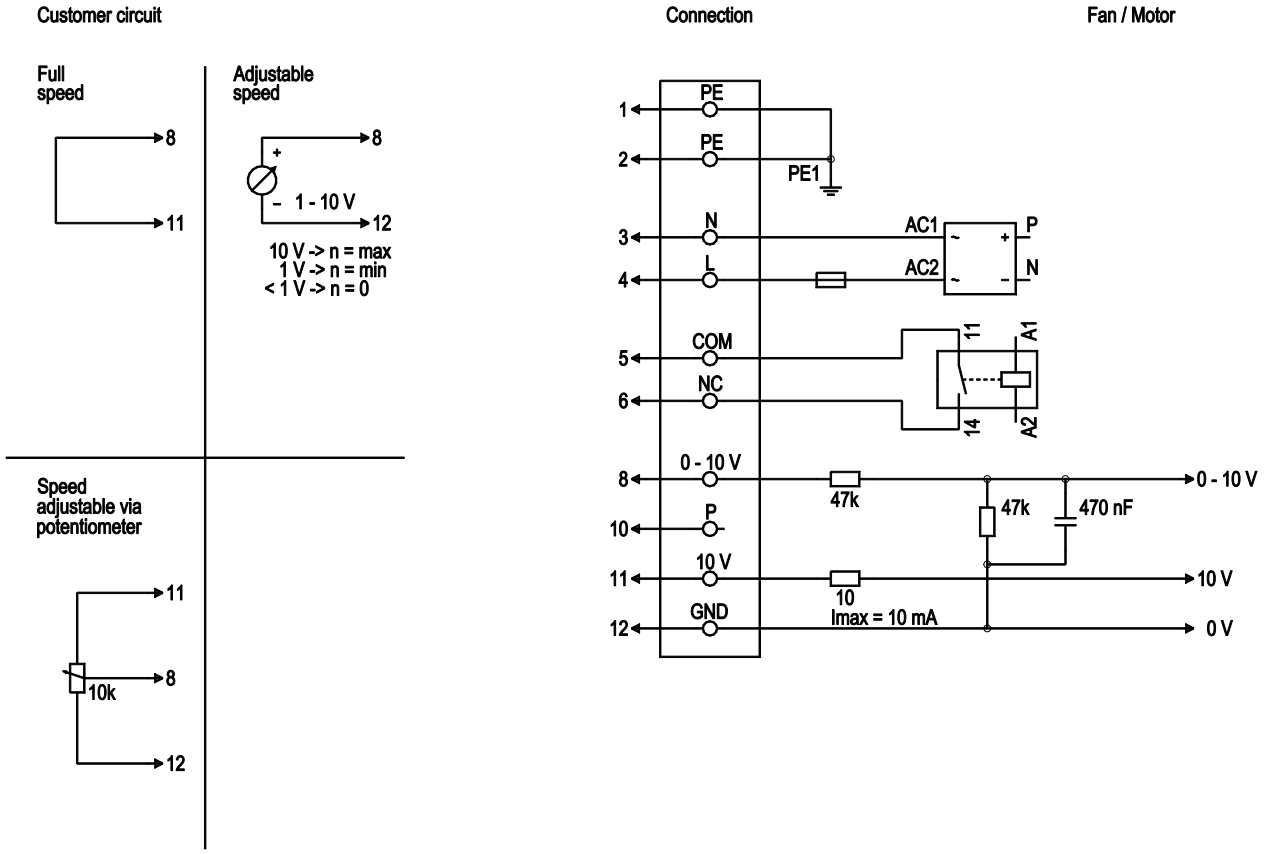
Connection diagram



No.	Conn.	Designation	Color	Function/assignment
1	1, 2	PE	green/yellow	Protective earth
1	3	N	blue	Power supply, neutral conductor, see nameplate for voltage range, 50/60 Hz
1	4	L	black	Power supply, phase, see nameplate for voltage range, 50/60 Hz
1	5	COM	white 1	Floating status contact, break for failure (2 A, max. 250 VAC, min. 10 mA)
1	6	NC	white 2	Floating status contact, break for failure
2	8	0 -10 V	yellow	Control input, set value 0-10 VDC, impedance 100 kOhm, SELV
2	10	P	orange	not used
2	11	10 VDC	red	Voltage output 10 VDC (±3%), max. 10 mA, power supply for external devices (e.g. potentiometers), SELV
2	12	GND	blue	Reference ground for control interface, SELV

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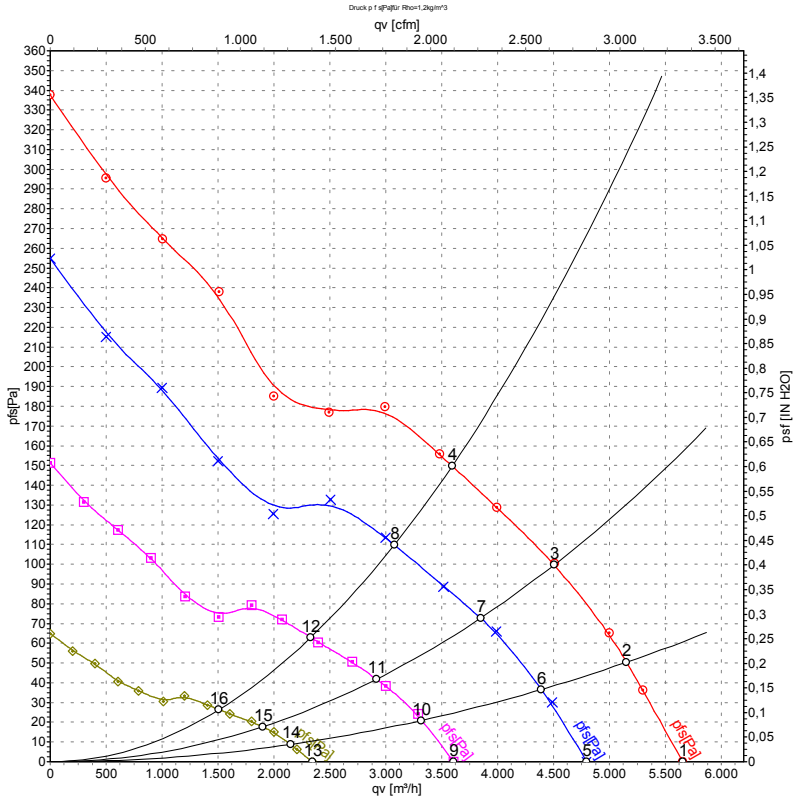
Curves: Air performance 50 Hz



Measurement: LU-130132-1
Measurement: LU-130134-1
Measurement: LU-130136-1
Measurement: LU-130137-1

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

	U	f	n	P_{ed}	I	qv	p_{fs}	qv	p_{fs}
	V	Hz	min^{-1}	W	A	m^3/h	Pa	CFM	inH2O
1	230	50	1680	366	1.62	5655	0	3330	0.00
2	230	50	1665	382	1.69	5155	50	3035	0.20
3	230	50	1660	399	1.76	4505	100	2650	0.40
4	230	50	1630	435	1.90	3595	150	2115	0.60
5	230	50	1425	228	1.03	4795	0	2825	0.00
6	230	50	1420	241	1.08	4390	37	2585	0.15
7	230	50	1415	250	1.12	3850	73	2265	0.29
8	230	50	1410	255	1.14	3075	110	1810	0.44
9	230	50	1085	106	0.54	3605	0	2125	0.00
10	230	50	1080	112	0.56	3320	22	1955	0.09
11	230	50	1075	116	0.57	2915	42	1715	0.17
12	230	50	1070	120	0.59	2330	63	1370	0.25
13	230	50	705	38	0.31	2345	0	1380	0.00
14	230	50	700	39	0.31	2145	9	1265	0.04
15	230	50	700	41	0.31	1900	18	1120	0.07
16	230	50	700	41	0.31	1510	26	890	0.10

U = Power supply · f = Frequency · n = Speed (rpm) · P_{ed} = Power consumption · I = Current draw · qv = Air flow · p_{fs} = Pressure increase