W3G400-FK08-H1

EC axial fan - HyBlade

sickled blades (S series)

with full square nozzle

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Nominal data

Type	**W3G400-FK08-H1**
Motor	**M3G084-DF**

Phase		1~
Nominal voltage	VAC	230
Nominal voltage range	VAC	200 .. 277
Frequency	Hz	50/60
Type of data definition		ml
Speed (rpm)	min^{-1}	1760
Power input	W	500
Current draw	A	2.2
Max. back pressure	Pa	180
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	60
Starting current	A	2.8

ml = Max. load · me = Max. efficiency · fa = Running at free air · cs = Customer specs · cu = Customer unit
Subject to alterations

Data in accordance with ecodesign regulation EU 327/2011

		Actual	Request 2015
01 Overall efficiency η_{es}	%	39.6	31.8
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		47.8	40
05 Variable speed drive		Yes	

09 Power input P_{ed}	kW	0.5
09 Air flow q_v	m^3/h	3505
09 Pressure increase p_{fs}	Pa	184
10 Speed (rpm) n	min^{-1}	1745
11 Specific ratio*		1.00

Data definition with optimum efficiency.
The ErP data is determined using a motor-impeller combination in a standardised measurement configuration.

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

LU-156072

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Technical features

Mass	8.9 kg
Size	400 mm
Motor size	84
Surface of rotor	Coated in black
Material of electronics housing	Die-cast aluminium, coated in black
Material of blades	Press-fitted sheet steel blank, sprayed with PP plastic
Material of wall ring	Sheet steel, galvanised and coated in black plastic (RAL 9005)
Material of guard grille	Steel, galvanised and coated in black plastic (RAL 9005)
Number of blades	5
Direction of air flow	V
Direction of rotation	Counter-clockwise, seen on rotor
Type of protection	IP55
Insulation class	"F"
Humidity (F) / environmental protection class (H)	H2
Max. permissible ambient motor temp. (transp./ storage)	+80 °C
Min. permissible ambient motor temp. (transp./storage)	-40 °C
Mounting position	Shaft horizontal or rotor on bottom; rotor on top on request
Condensation drainage holes	Rotor-side
Operation mode	S1
Motor bearing	Ball bearing
Technical features	- Output 10 VDC, max. 10 mA - Operation and alarm display - Alarm relay - Integrated PID controller - Output limit - Motor current limit - PFC, active - RS485 MODBUS RTU - Soft start - Control input 0-10 VDC / PWM - Control interface with SELV potential safely disconnected from the mains - Over-temperature protected electronics / motor - Line undervoltage / phase failure detection
EMC interference immunity	Acc. to EN 61000-6-2 (industrial environment)
EMC harmonics	Acc. to EN 61000-3-2/3
EMC interference emission	Acc. to EN 61000-6-3 (household environment)
Touch current acc. IEC 60990 (measuring network Fig. 4, TN system)	<= 3.5 mA
Motor protection	Thermal overload protector (TOP) wired internally
Cable exit	Variable
Protection class	I (if protective earth is connected by customer)
Product conforming to standard	EN 61800-5-1; EN 60335-1; CE
Approval	UL 1004-7 + 60730; EAC; CCC; CSA C22.2 no. 77 + CAN/CSA-E60730-1

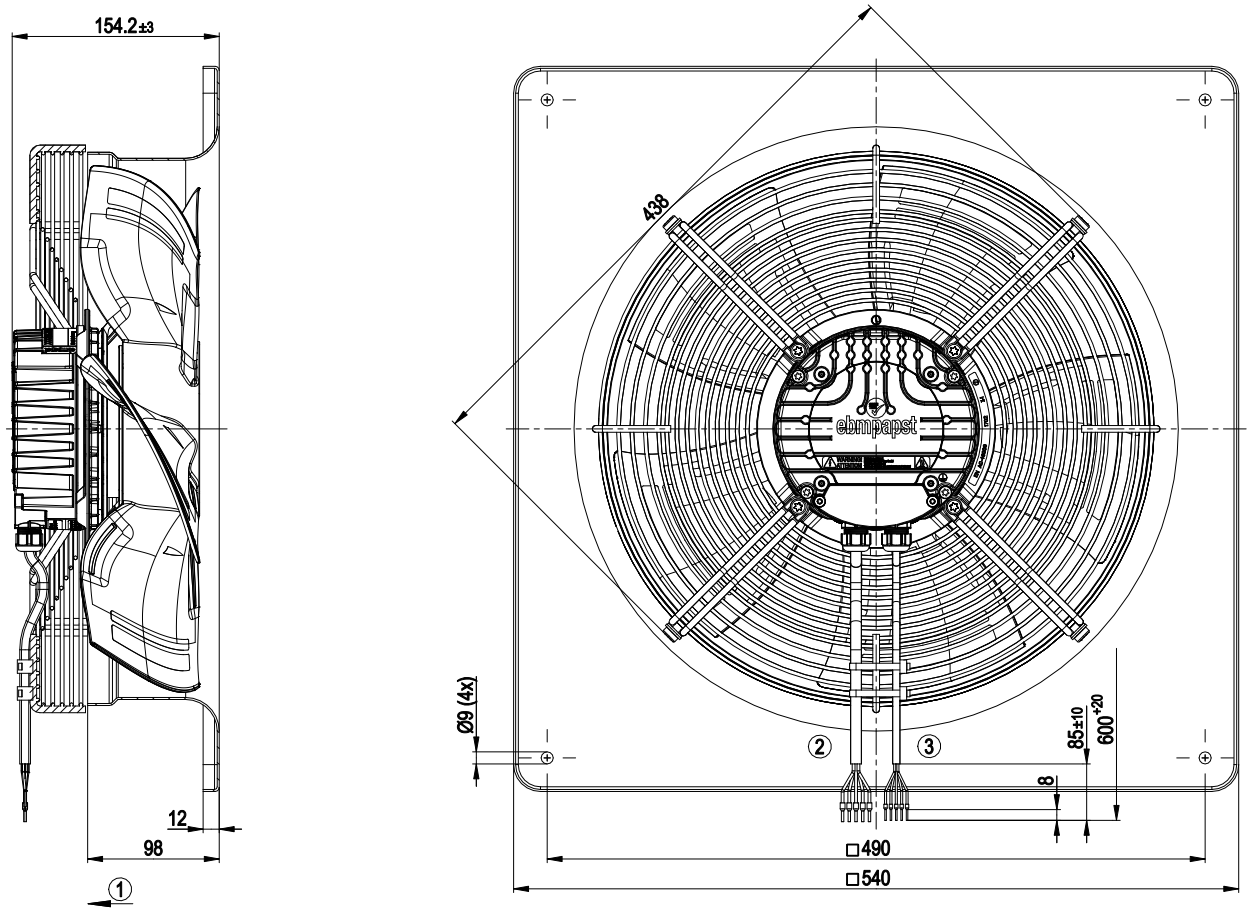
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Product drawing



1	Direction of air flow "V"
2	Connection line PVC AWG18, 5x crimped core-end sleeves
3	Connection line PVC AWG22, 5x crimped core-end sleeves

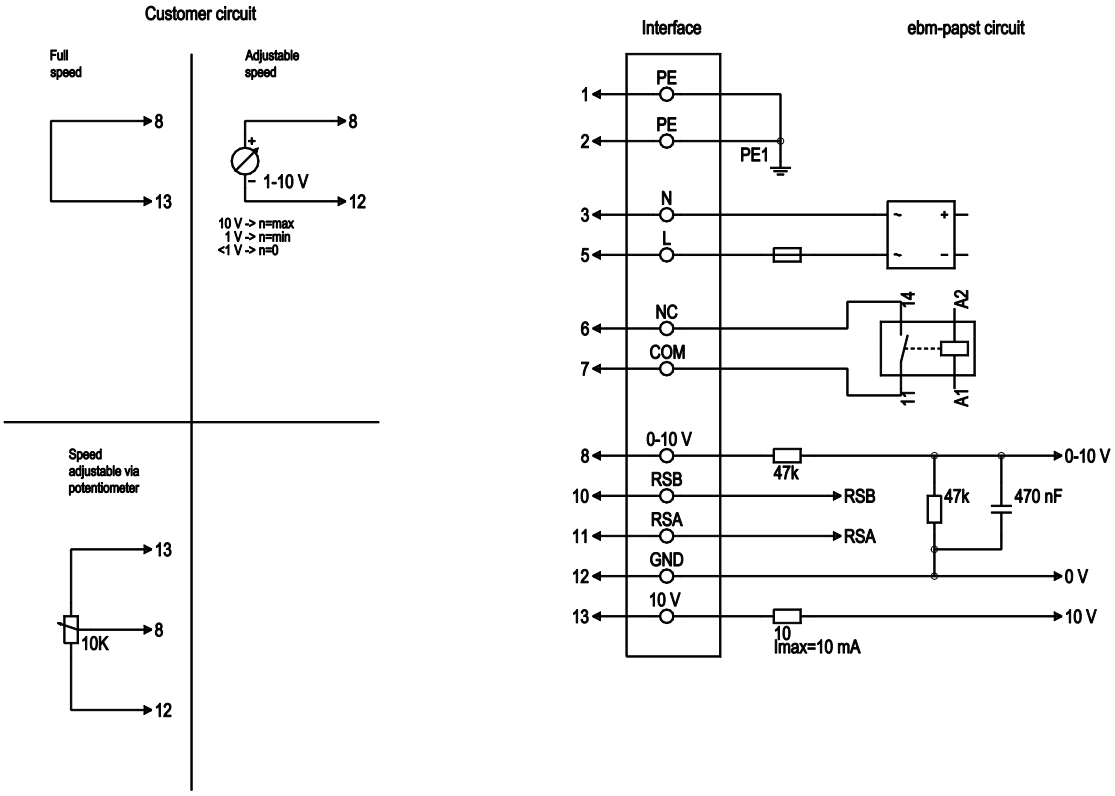
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Connection screen



No.	Conn.	Designation	Colour	Function / assignment
1	1, 2	PE	green/yellow	Protective earth
1	3	N	blue	Supply voltage, neutral conductor, 50/60 Hz
1	5	L	black	Supply voltage, phase, 50/60 Hz
1	6	NC	white 1	Status relay, floating status contact; break for failure, contact rating 250 VAC / 2A (AC1) min. 10 mA, basic insulation on mains side and reinforced insulation on control interface side
1	7	COM	white 2	Status relay, floating status contact; common connection, contact rating 250 VAC / 2A (AC1) min. 10 mA, basic insulation on mains side and reinforced insulation on control interface side
2	8	0-10V	yellow	Analogue input 1 (set value); 0-10 V; Ri=100kΩ; parametrisable curve
2	10	RSB	brown	RS485 interface for Modbus, RSB
2	11	RSA	white	RS485 interface for Modbus, RSA
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 external devices (e.g. potentiometer)

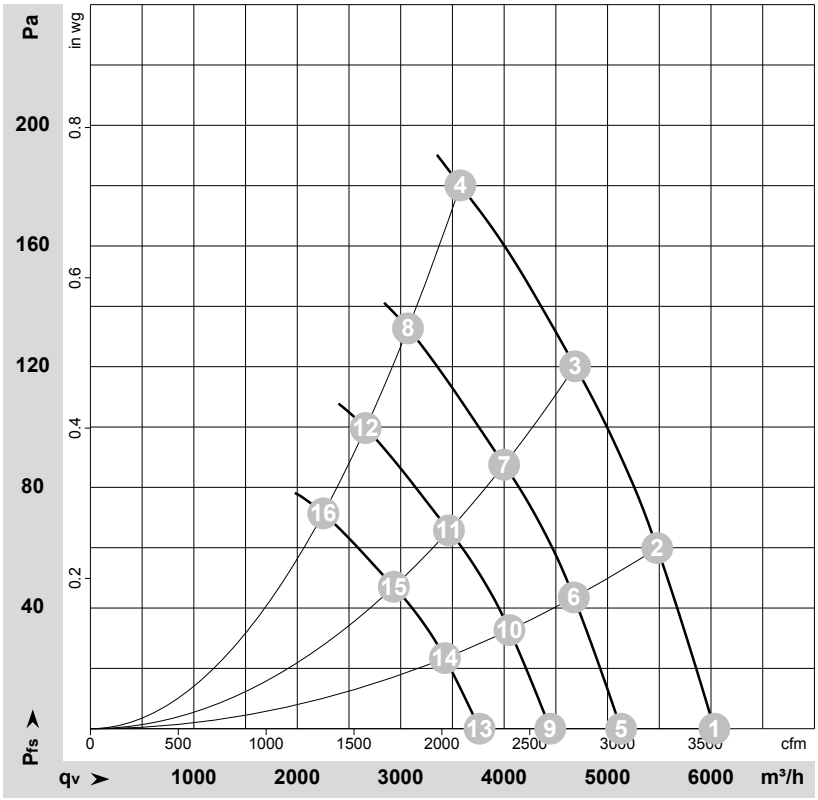
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Charts: Air flow 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-156072-1

Air performance measured as per ISO 5801 Installation category A. For detailed information on the measuring set-up, please contact ebm-papst. Suction-side noise levels: LwA measured as per ISO 13347 / LpA measured with 1m distance to fan axis. The values given are valid under the measuring conditions mentioned above and may vary according to the actual installation situation. With any deviation from the standard set-up, the specific values have to be checked and reviewed with the unit installed.

Measured values

	U	f	n	P_{ed}	I	LpA_{in}	LwA_{in}	q_V	p_{fs}	q_V	p_{fs}
	V	Hz	min^{-1}	W	A	dB(A)	dB(A)	m^3/h	Pa	cfm	in. wg
1	230	50	1760	432	1.89	72	79	6035	0	3550	0.00
2	230	50	1760	464	2.03	70	77	5480	60	3225	0.24
3	230	50	1760	490	2.14	66	73	4685	120	2760	0.48
4	230	50	1760	500	2.20	66	74	3575	180	2105	0.72
5	230	50	1500	265	1.16	69	75	5130	0	3020	0.00
6	230	50	1500	288	1.26	67	74	4675	45	2750	0.18
7	230	50	1500	305	1.33	64	71	4000	88	2355	0.35
8	230	50	1500	317	1.38	63	70	3070	133	1805	0.53
9	230	50	1300	173	0.75	65	72	4445	0	2615	0.00
10	230	50	1300	187	0.82	63	70	4050	34	2385	0.14
11	230	50	1300	198	0.87	61	68	3465	66	2040	0.26
12	230	50	1300	207	0.90	60	67	2660	100	1565	0.40
13	230	50	1100	105	0.46	61	68	3760	0	2215	0.00
14	230	50	1100	114	0.50	59	66	3430	24	2020	0.10
15	230	50	1100	120	0.52	57	64	2935	47	1725	0.19
16	230	50	1100	125	0.55	56	63	2250	72	1325	0.29

U = Supply voltage · f = Frequency · n = Speed (rpm) · P_{ed} = Power input · I = Current draw · LpA_{in} = Sound pressure level inlet side · LwA_{in} = Sound power level inlet side · q_V = Air flow
p_{fs} = Pressure increase

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