W3G650-DL06-G4

EC axial fan

sickled blades (S series)

with full square nozzle

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Nominal data

Type	**W3G650-DL06-G4**
Motor	**M3G084-FA**

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}	710
Power input	W	220
Current draw	A	1.0
Max. back pressure	Pa	65
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	60
Starting current	A	1.0

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

Data according to ErP directive

		Actual	Request 2015
01 Overall efficiency η_{es}	%	43.7	29.1
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		54.6	40
05 Variable speed drive		Yes	

09 Power input P_{ed}	kW	0.19
09 Air flow q_v	m^3/h	6025
09 Pressure increase p_{fs}	Pa	46
10 Speed (rpm) n	min^{-1}	710
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-161116

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Technical features

Mass	22 kg
Size	650 mm
Surface of rotor	Coated in black
Material of electronics housing	Die-cast aluminium
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, coated in black plastic (RAL9005)
Number of blades	5
Direction of air flow	"A"
Direction of rotation	Clockwise, seen on rotor
Type of protection	IP 55; Depending on installation and position
Insulation class	"F"
Humidity (F)/environmental protection class (H)	F3-1
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
Condensate discharge holes	Rotor-side
Operation mode	S1
Motor bearing	Ball bearing; (sealed)
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 60335-1; EN 61800-5-1; CE
Approval	UL 1004-7 + 60730; C22.2 Nr.77 + CAN/CSA-E60730-1

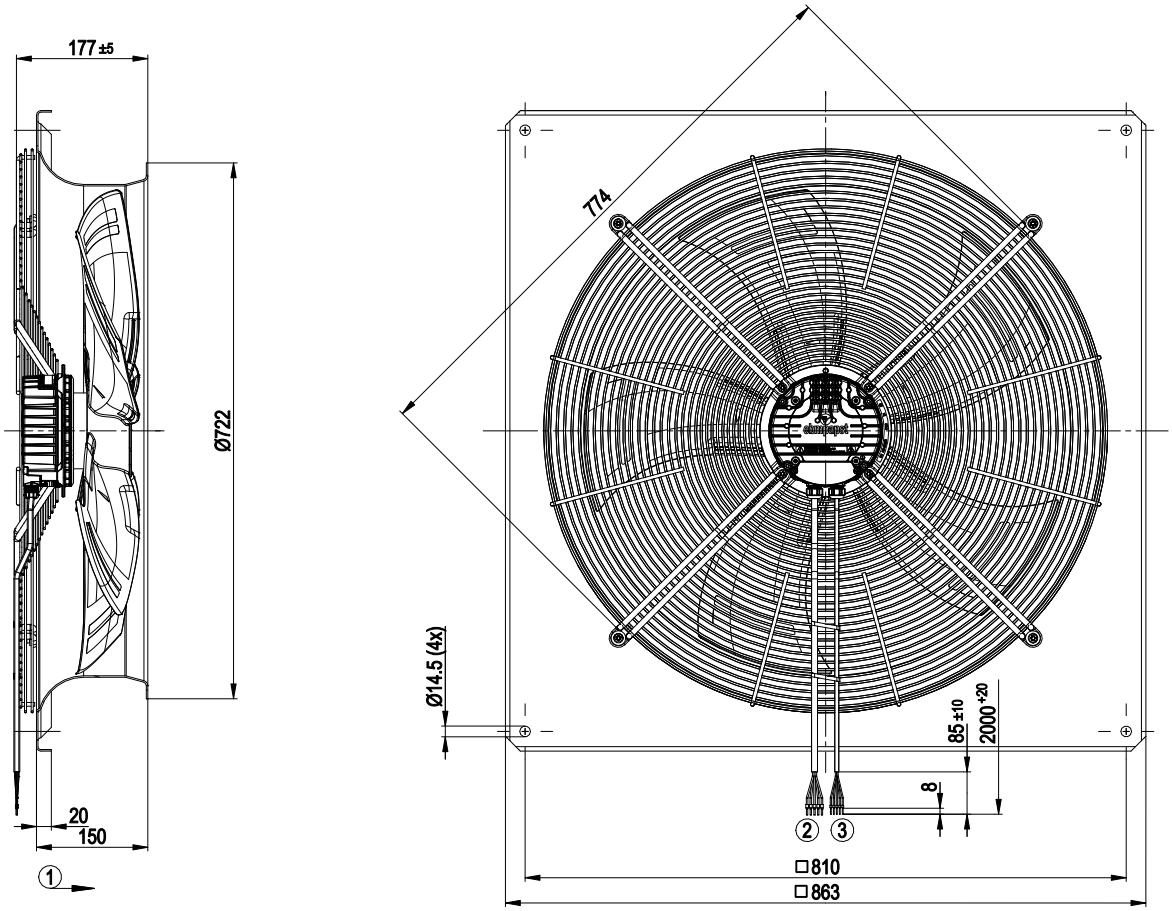
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Product drawing



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

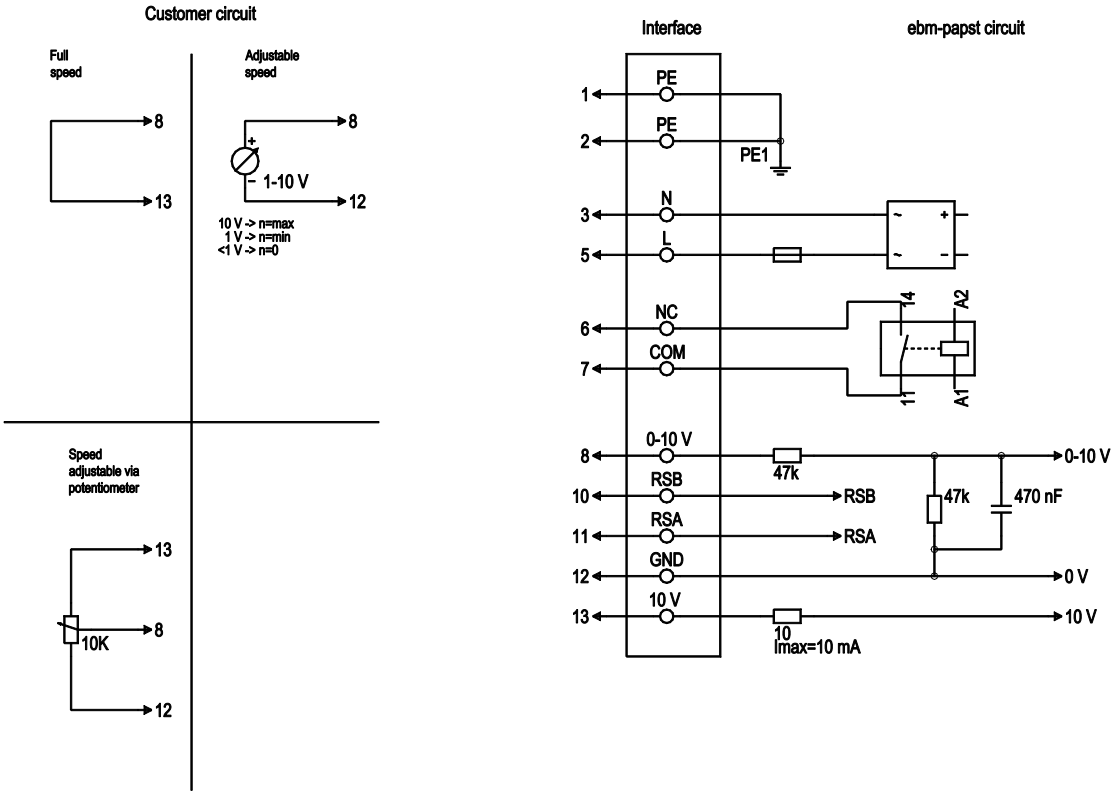
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Connection screen



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)

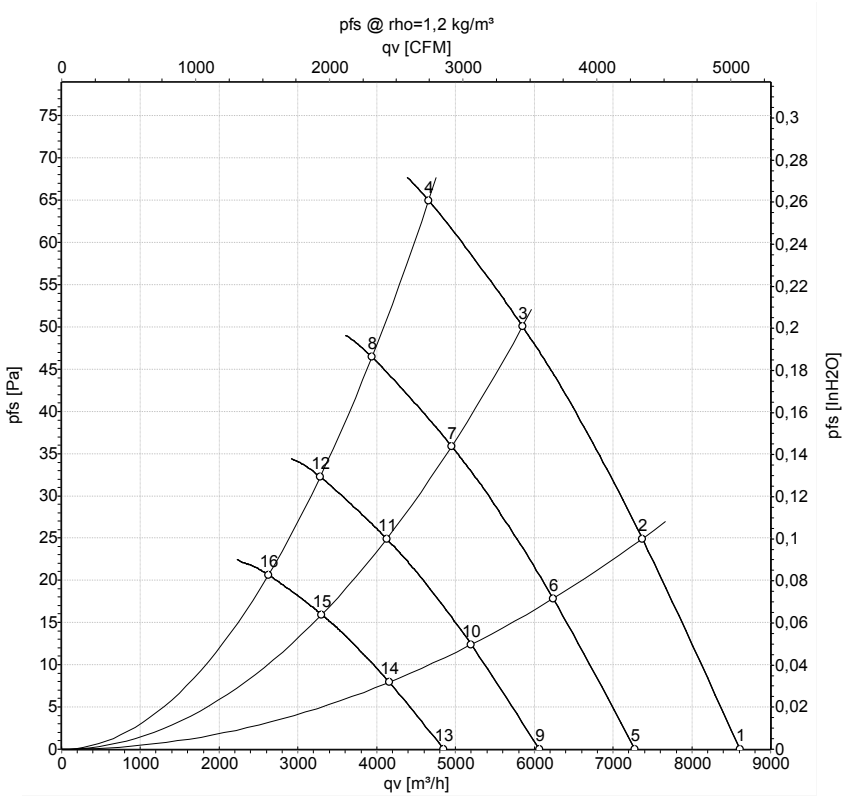
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Charts: Air flow 50 Hz



Measurement: LU-161116-1

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}	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	inH2O
1	230	50	710	138	0.65	54	60	59	8610	0	5070	0.00
2	230	50	710	172	0.79	55	60	60	7375	25	4340	0.10
3	230	50	710	201	0.91	55	61	61	5850	50	3445	0.20
4	230	50	710	220	1.00	58	65	65	4660	65	2745	0.26
5	230	50	600	83	0.39	50	56	55	7275	0	4285	0.00
6	230	50	600	104	0.48	51	56	55	6240	18	3670	0.07
7	230	50	600	122	0.55	51	57	56	4950	36	2915	0.14
8	230	50	600	134	0.60	53	61	61	3940	47	2320	0.19
9	230	50	500	48	0.23	45	51	50	6065	0	3570	0.00
10	230	50	500	60	0.28	46	52	51	5200	13	3060	0.05
11	230	50	500	70	0.32	46	53	52	4125	25	2430	0.10
12	230	50	500	77	0.35	49	56	56	3285	32	1930	0.13
13	230	50	400	25	0.12	39	45	45	4850	0	2855	0.00
14	230	50	400	31	0.14	40	46	45	4160	8	2450	0.03
15	230	50	400	36	0.16	41	47	46	3300	16	1945	0.06
16	230	50	400	40	0.18	43	50	50	2625	21	1545	0.08

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 · LwA_{out} = Sound power level outlet side
q_V = Air flow · p_{fs} = Pressure increase

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