W3G350-XH05-H1

EC axial fan - AxiEco

with inlet ring and guard grill

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Nominal data

Type	**W3G350-XH05-H1**
Motor	**M3G084-DF**

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}	2200
Power consumption	W	500
Current draw	A	2.2
Max. back pressure	Pa	350
Max. back pressure	in. wg	1.41
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	60

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 (EN 17166)

		Actual	Req. 2015
01 Overall efficiency η_{es}	%	51.1	31.8
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		59.3	40
05 Variable speed drive		Yes	

09 Power consumption P_{ed}	kW	0.51
09 Air flow q_v	m^3/h	3175
09 Pressure increase p_{fs}	Pa	280
10 Speed (rpm) n	min^{-1}	2235
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-211766

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Technical description

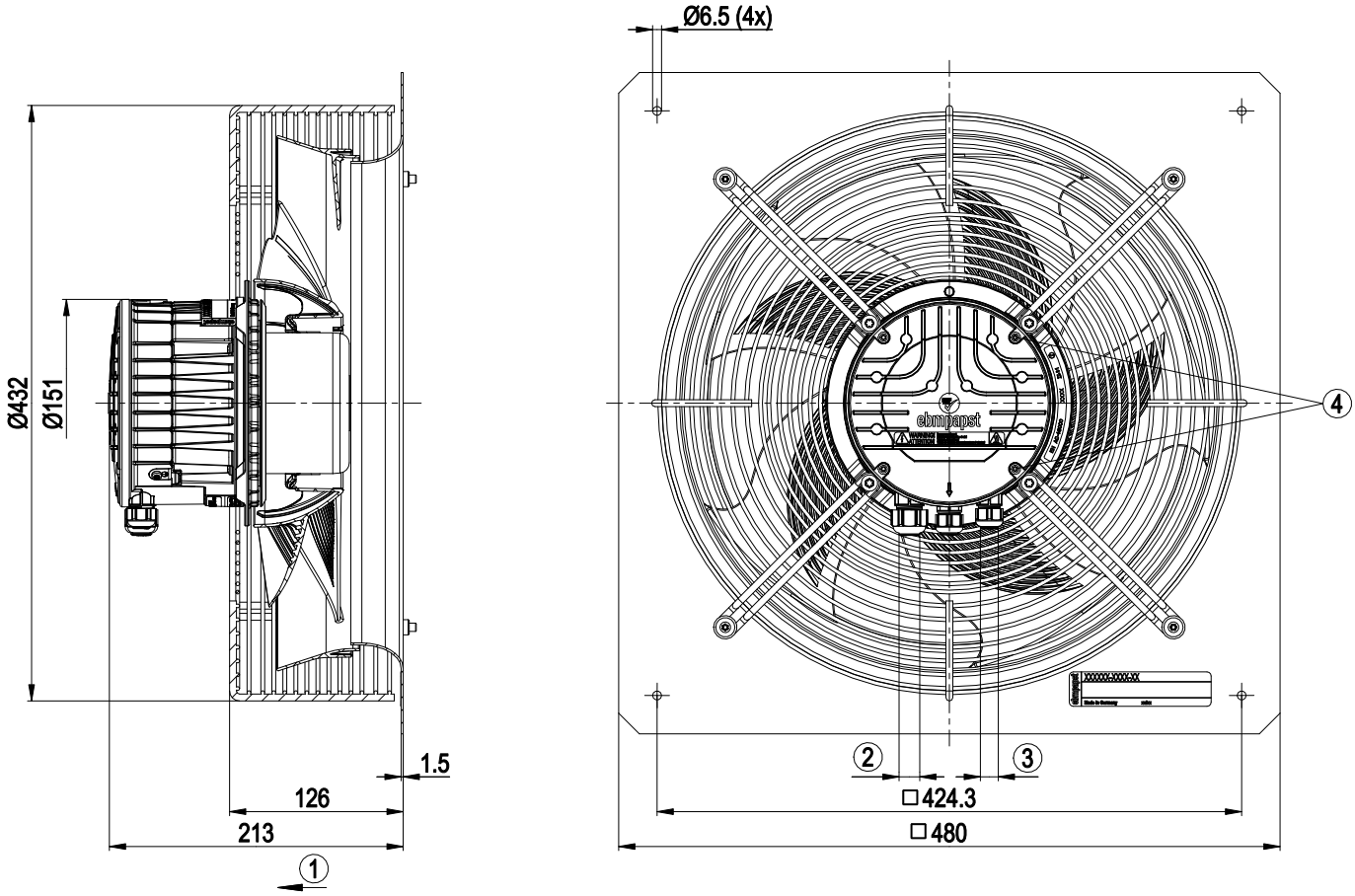
Size	350 mm
Motor size	84
Rotor surface	Painted black
Terminal box material	PP plastic
Electronics housing material	Die-cast aluminum, painted black
Impeller material	PP plastic, galvanized sheet-metal plate
Inlet ring material	Sheet steel, galvanized and coated with black plastic (RAL 9005)
Guard grille material	Steel, coated with black plastic (RAL 9005)
Number of blades	5
Airflow direction	V
Direction of rotation	Clockwise, 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
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
Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)	<= 3.5 mA
Electrical hookup	Terminal box
Motor protection	Thermal overload protector (TOP) internally connected
Protection class	I (with customer connection of protective earth)
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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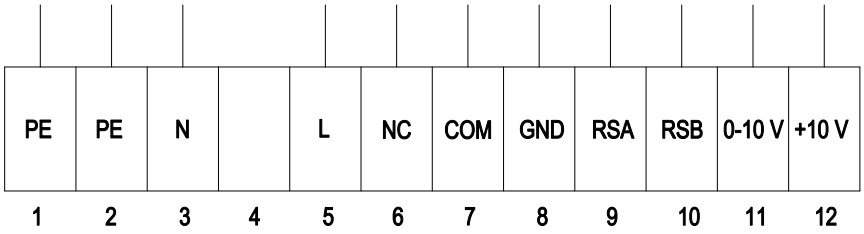
Product drawing



1	Airflow direction "V"
2	Cable diameter min. 8 mm, max. 12 mm, tightening torque 1.8±0.3 Nm (use must be made of seal provided) Cable diameter min. 4 mm, max. 10 mm, tightening torque 1.8±0.3 Nm
3	Cable diameter min. 6 mm, max. 10 mm, tightening torque 1.8±0.3 Nm (use must be made of seal provided) Cable diameter min. 4 mm, max. 7 mm, tightening torque 1.8±0.3 Nm
4	Tightening torque 1.5 ± 0.2 Nm

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Connection diagram



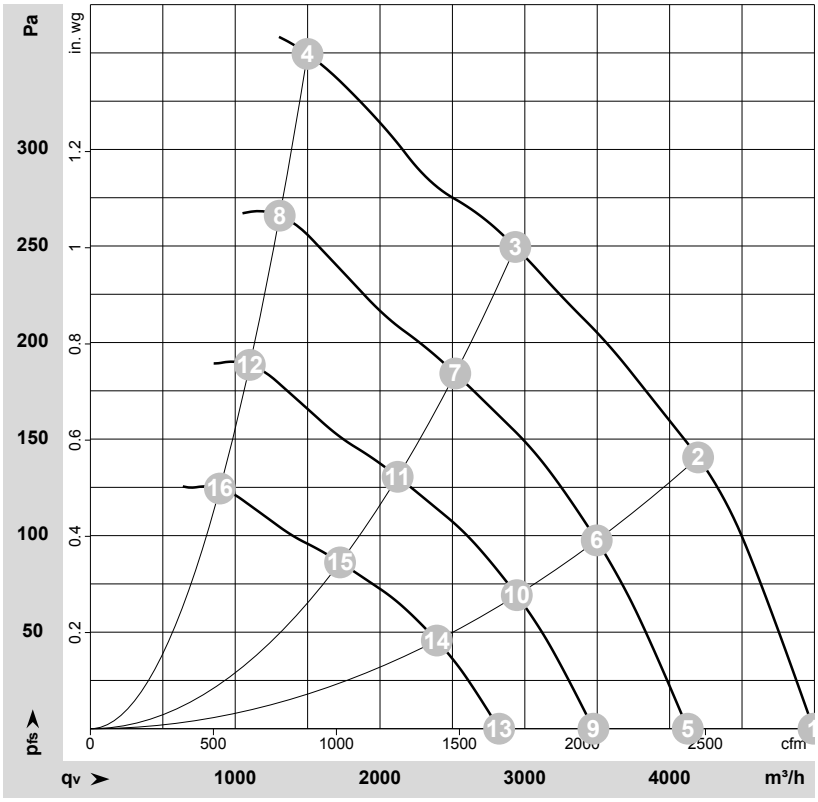
No.	Conn.	Designation	Function/assignment
	1	PE	Protective earth
	2	PE	Protective earth
	3	N	Power supply, neutral conductor
	4	-	not used
	5	L	Power supply, phase
	6	NC	Status relay, floating status contact, break for failure, contact rating 250 VAC / 2 A (AC1) / min. 10 mA; basic insulation on supply side and reinforced insulation on control interface side
	7	COM	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
	8	GND	Reference ground for control interface, SELV
	9	RSA	RS485 interface for MODBUS, RSA; SELV
	10	RSB	RS485 interface for MODBUS, RSB; SELV
	11	0-10 V	Analog input (set value) SELV, 0-10 V, Ri = 100 kΩ, adjustable curve
	12	+10 V	Fixed voltage output 10 VDC, SELV, +10 V ±3%, max. 10 mA, short-circuit-proof, power supply for external devices (e.g. pot)

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Curves: Air performance 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-212334-1

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_{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	1~	230	50	2300	435	1.91	73	79	4995	0	2940	0.00
2	1~	230	50	2280	500	2.20	69	75	4195	140	2470	0.56
3	1~	230	50	2215	500	2.20	69	75	2935	250	1725	1.00
4	1~	230	50	2200	500	2.20	74	81	1500	350	880	1.41
5	1~	230	50	1900	245	1.08	68	75	4125	0	2430	0.00
6	1~	230	50	1900	292	1.28	64	71	3495	98	2060	0.39
7	1~	230	50	1900	322	1.41	65	71	2520	184	1485	0.74
8	1~	230	50	1900	337	1.47	71	77	1305	271	770	1.09
9	1~	230	50	1600	147	0.64	64	70	3475	0	2045	0.00
10	1~	230	50	1600	174	0.76	60	66	2945	69	1735	0.28
11	1~	230	50	1600	192	0.84	60	67	2120	131	1250	0.53
12	1~	230	50	1600	201	0.88	66	73	1100	192	650	0.77
13	1~	230	50	1300	79	0.34	59	65	2825	0	1660	0.00
14	1~	230	50	1300	93	0.41	55	61	2395	46	1410	0.18
15	1~	230	50	1300	103	0.45	55	62	1725	86	1015	0.35
16	1~	230	50	1300	108	0.47	61	68	895	127	525	0.51

Wired = Wiring · U = Voltage · f = Frequency · n = Speed (rpm) · P_{ed} = Power consumption · I = Current draw · LpA_{in} = Sound pressure level intake side · LwA_{in} = Sound power level intake side
q_V = Air flow · p_{fs} = Pressure increase

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