W3G250-HK19-10

EC axial compact fan

sickle-shaped blades (S series), single-intake

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Nominal data

Type	**W3G250-HK19-10**
Motor	**M3G055-CF**

Phase		1~
Nominal voltage	VAC	230
Nominal voltage range	VAC	200 .. 240
Frequency	Hz	50/60
Method of obtaining data		ml
Status		prelim.
Speed (rpm)	min^{-1}	3000
Power consumption	W	166
Current draw	A	1.4
Max. back pressure	Pa	150
Max. back pressure	in. wg	0.6
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	40

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}	%	42.2	28.8
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		53.4	40
05 Variable speed drive		Yes	

09 Power consumption P_{ed}	kW	0.16
09 Air flow q_v	m^3/h	1505
09 Pressure increase p_{fs}	Pa	150
10 Speed (rpm) n	min^{-1}	2980
11 Specific ratio*		1.00

Data obtained at optimum efficiency level.

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

LU-152884

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

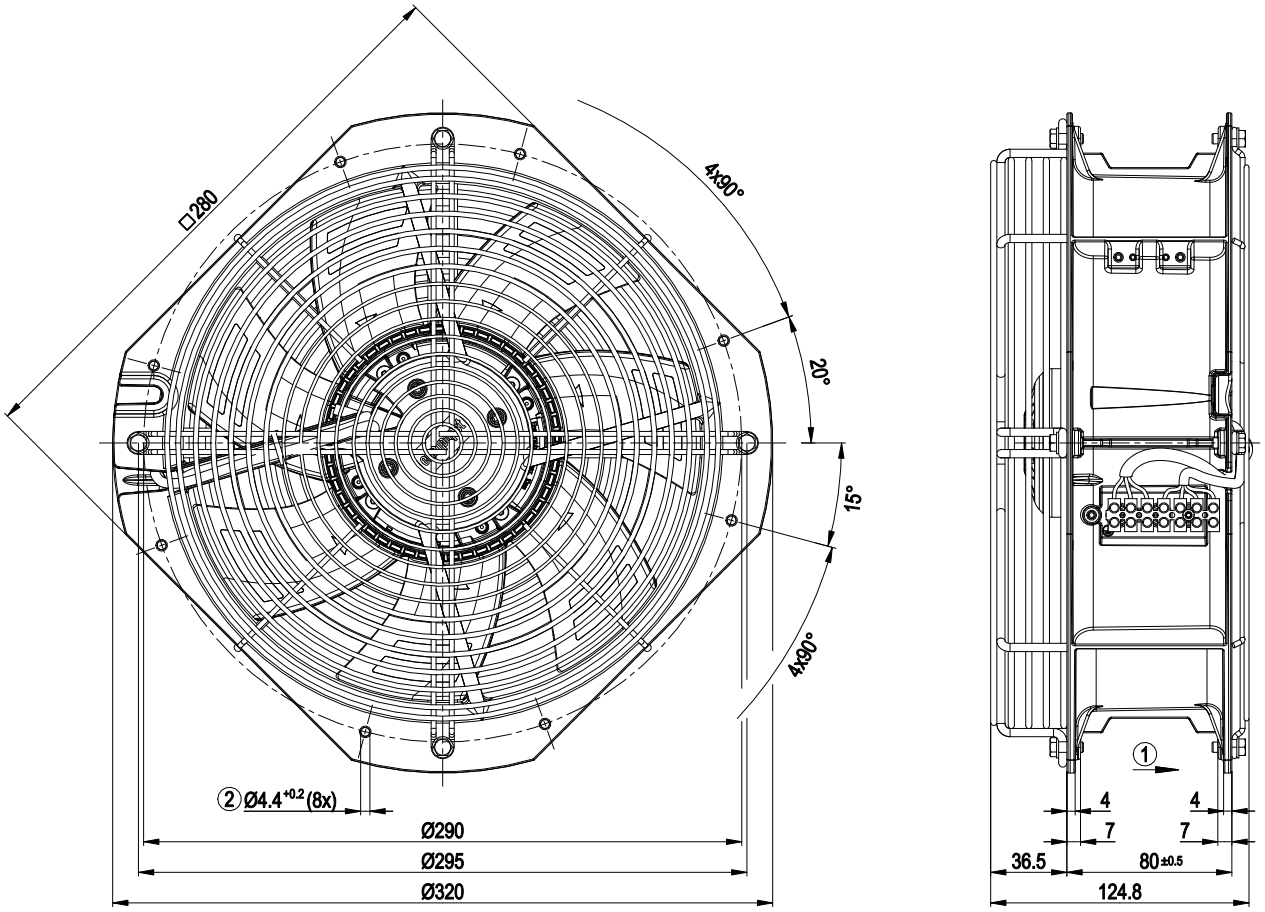
Weight	3.3 kg
Size	250 mm
Motor size	55
Rotor surface	Thick-film passivated
Blade material	Press-fitted, painted sheet steel blank, sprayed with PP plastic
Fan housing material	Die-cast aluminum
Guard grille material	Steel, coated with black plastic (RAL 9005); steel, coated with white aluminum plastic (RAL 9006)
Number of blades	7
Airflow direction	V
Direction of rotation	Counterclockwise, viewed toward rotor
Degree of protection	IP54
Insulation class	"B"
Moisture (F) / Environmental (H) protection class	H1
Max. permitted ambient temp. for motor (transport/storage)	+ 80 °C
Min. permitted ambient temp. for motor (transport/storage)	- 40 °C
Installation position	Any
Condensation drainage holes	None, open rotor
Mode	S1
Motor bearing	Ball bearing
Technical features	- Output 10 VDC, max. 10 mA - Tach output - Power limiter - Motor current limitation - Soft start - Control input 0-10 VDC / PWM - Control interface with SELV potential safely disconnected from the mains - Overvoltage detection - Thermal overload protection for electronics/motor - Line undervoltage detection
Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)	<= 3.5 mA
Electrical hookup	Terminal strip
Motor protection	Electronic motor protection
With cable	Variable
Protection class	I (with customer connection of protective earth)
Conformity with standards	EN 60335-1; CE
Approval	CSA C22.2 No. 77 + CAN/CSA-E60730-1; UL 1004-7 + 60730-1

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Product drawing



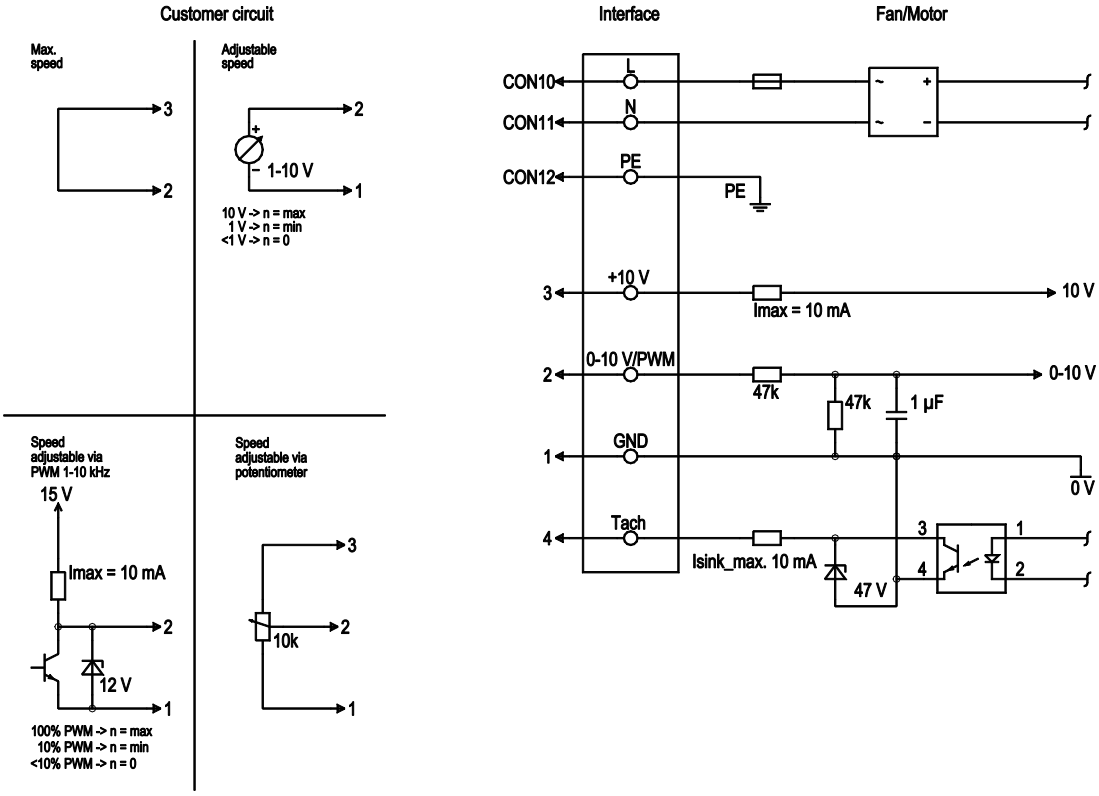
1	Direction of air flow "V"
2	For self-tapping M5 screws

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Connection diagram



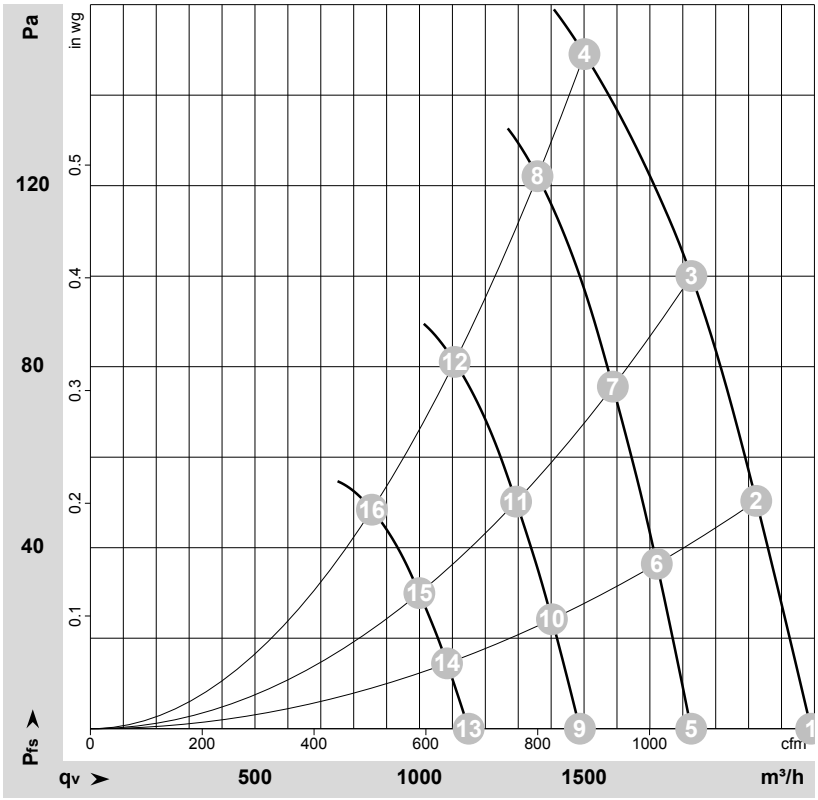
No.	Conn.	Designation	Color	Function/assignment
	CON10	L	black	Supply connection, power supply, phase, see nameplate for voltage range
	CON11	N	blue	Supply connection, power supply, neutral conductor, see nameplate for voltage range
	CON12	PE	green/yellow	Ground connection
	2	0- 10V PWM	yellow	0-10 V / PWM control input, Ri=100 kΩ, SELV
	4	Tach	white	Tach output, open collector, 1 pulse per revolution, Isink max = 10 mA, SELV
	3	+10 V	red	Fixed voltage output 10 VDC +/-3 %, Imax. 10 mA, short-circuit-proof, power supply for ext. devices (e.g. pot), SELV
	1	GND	blue	Reference ground for control interface, SELV

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Curves: Air performance 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-152884-1

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	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	3240	143	1.19	67	74	2190	0	1290	0.00
2	230	50	3175	156	1.30	67	74	2025	50	1190	0.20
3	230	50	3110	166	1.40	68	75	1825	100	1075	0.40
4	230	50	3000	166	1.40	66	73	1500	150	885	0.60
5	230	50	2700	83	0.69	62	69	1825	0	1075	0.00
6	230	50	2700	97	0.80	63	70	1720	38	1015	0.15
7	230	50	2700	110	0.91	64	71	1585	76	935	0.31
8	230	50	2700	126	1.04	63	70	1360	123	800	0.49
9	230	50	2200	45	0.37	57	64	1485	0	875	0.00
10	230	50	2200	52	0.43	58	65	1400	25	825	0.10
11	230	50	2200	59	0.49	59	66	1295	50	760	0.20
12	230	50	2200	68	0.56	58	65	1105	82	650	0.33
13	230	50	1700	21	0.17	50	58	1150	0	675	0.00
14	230	50	1700	24	0.20	52	59	1085	15	640	0.06
15	230	50	1700	27	0.23	53	59	1000	30	590	0.12
16	230	50	1700	31	0.26	52	59	855	49	505	0.20

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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