D3G250-ED07-H1

EC centrifugal fan

forward-curved, dual-intake

with housing (flange)

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Nominal data

Type	**D3G250-ED07-H1**
Motor	**M3G084-GF**

Phase		1~
Nominal voltage	VAC	230
Nominal voltage range	VAC	200 .. 277
Frequency	Hz	50/60
Method of obtaining data		fa
Speed (rpm)	min^{-1}	1050
Power consumption	W	500
Current draw	A	2.2
Min. back pressure	Pa	0
Min. back pressure	in. wg	0
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	60
Starting current	A	3.4

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}	%	50.9	34.3
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		60.6	44
05 Variable speed drive		Yes	

09 Power consumption P_{ed}	kW	0.28
09 Air flow q_v	m^3/h	1510
09 Pressure increase p_{fs}	Pa	311
10 Speed (rpm) n	min^{-1}	1270
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

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Technical description

Weight	12.1 kg
Size	250 mm
Motor size	84
Rotor surface	Painted black
Electronics housing material	Die-cast aluminum
Impeller material	Sheet steel, galvanized
Housing material	Sheet steel, galvanized
Motor suspension	Motor mounted on brackets for one-sided vibration damping
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP55
Insulation class	"F"
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	Shaft horizontal
Condensation drainage holes	None
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
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
Motor protection	Thermal overload protector (TOP) internally connected
With cable	Variable
Protection class	I (with customer connection of protective earth)
Conformity with standards	EN 61800-5-1; EN 60335-1; CE
Approval	CSA C22.2 No. 77 + CAN/CSA-E60730-1; EAC; UL 1004-7 + 60730-1

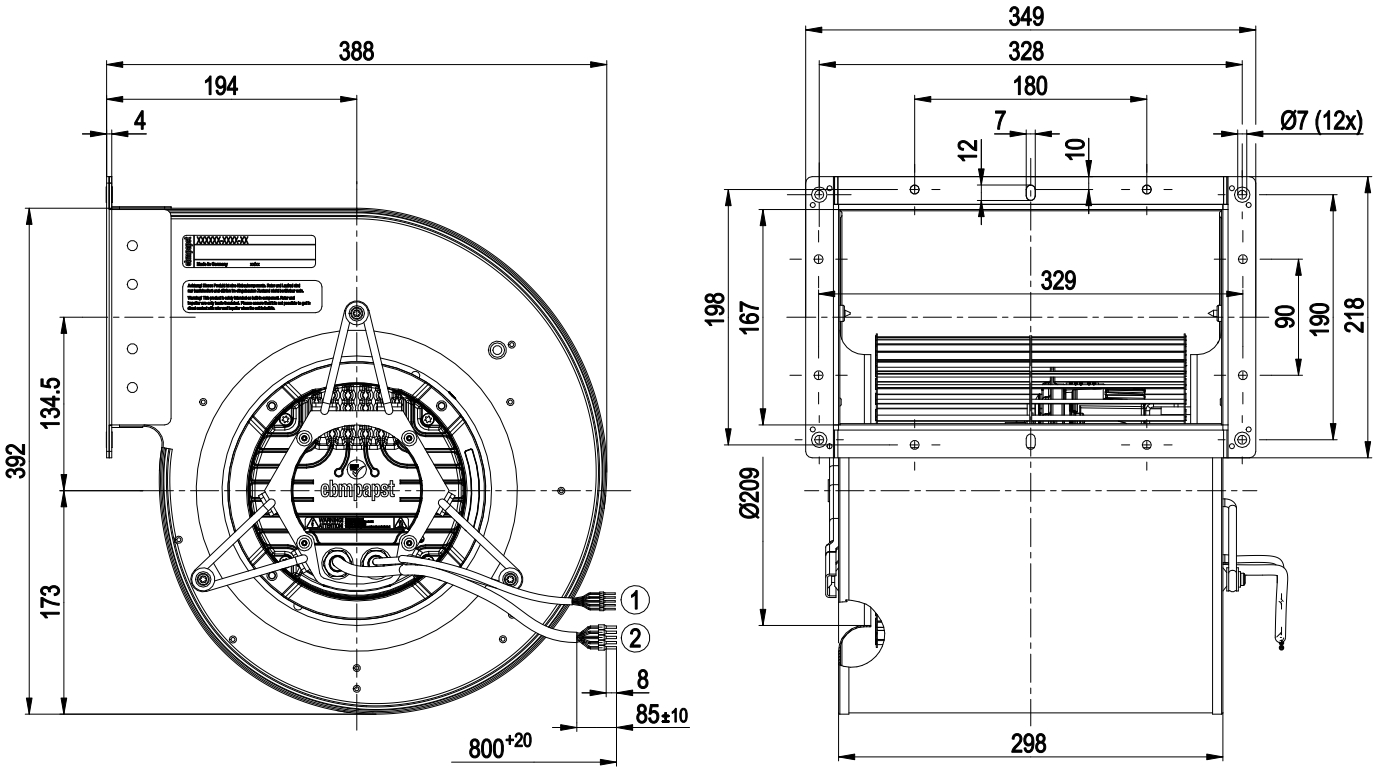
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Product drawing



1	Cable PVC AWG22		5x wire-end ferrule	2	Cable PVC AWG18
	5x wire-end ferrule				

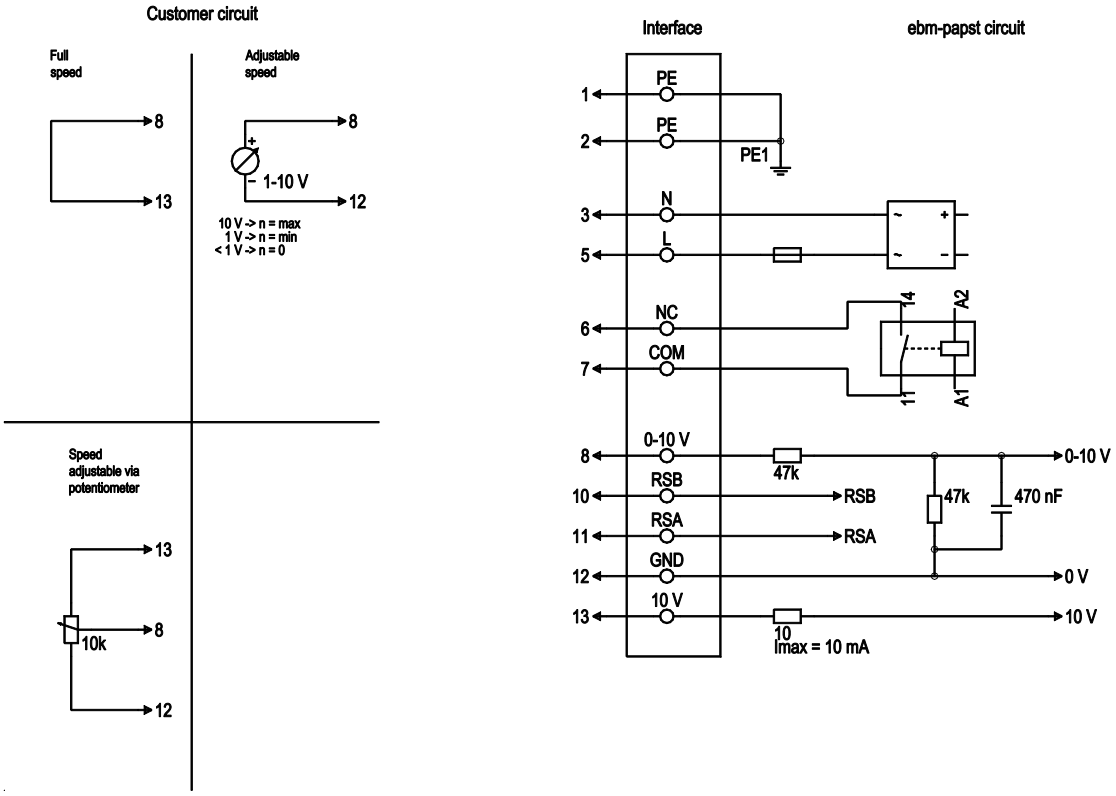
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Connection diagram



No.	Conn.	Designation	Color	Function/assignment
1	1, 2	PE	green/yellow	Protective earth
1	3	N	blue	Power supply, neutral conductor, 50/60 Hz
1	5	L	black	Power supply, 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 supply 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 supply side and reinforced insulation on control interface side
2	8	0-10V	yellow	Analog input (set value); 0-10 V; Ri = 100 kΩ; adjustable 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. pot)

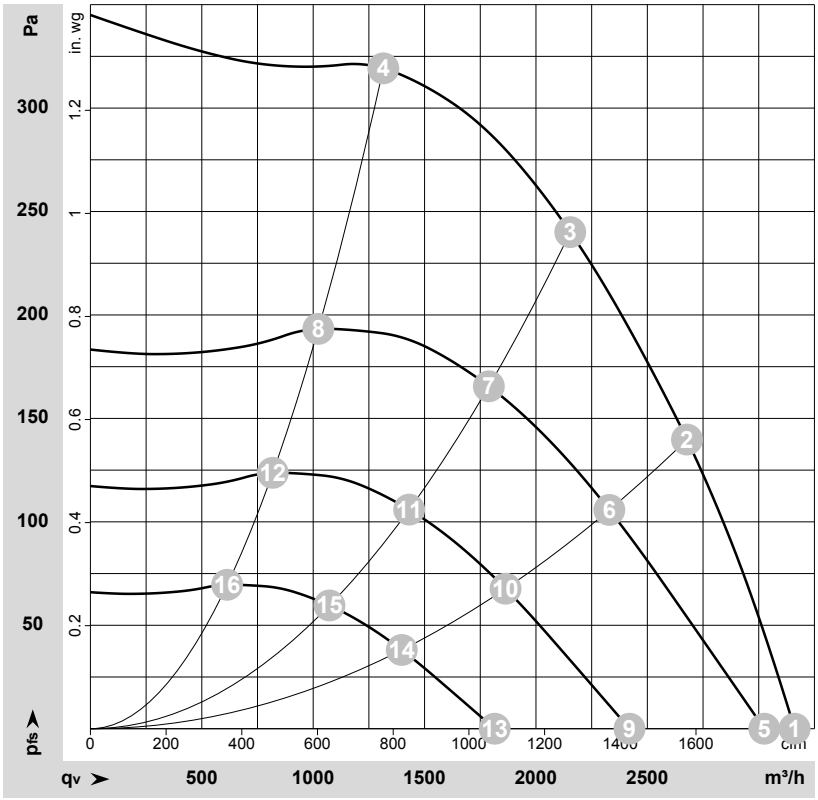
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Curves: Air performance 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-159282-1

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	1050	500	2.20	67	81	3160	0	1860	0.00
2	1~	230	50	1150	462	2.02	64	78	2680	140	1575	0.56
3	1~	230	50	1205	384	1.68	61	75	2155	240	1270	0.96
4	1~	230	50	1285	260	1.16	59	72	1315	320	775	1.28
5	1~	230	50	1000	441	1.93	66	80	3025	0	1780	0.00
6	1~	230	50	1000	305	1.33	60	74	2330	106	1370	0.43
7	1~	230	50	1000	220	0.96	57	70	1790	166	1055	0.67
8	1~	230	50	1000	123	0.55	53	66	1025	194	600	0.78
9	1~	230	50	800	226	0.99	61	74	2420	0	1425	0.00
10	1~	230	50	800	156	0.68	55	68	1865	68	1095	0.27
11	1~	230	50	800	113	0.49	51	64	1430	106	840	0.43
12	1~	230	50	800	63	0.28	47	60	820	124	480	0.50
13	1~	230	50	600	95	0.42	53	67	1815	0	1070	0.00
14	1~	230	50	600	66	0.29	47	61	1400	38	825	0.15
15	1~	230	50	600	48	0.21	44	57	1075	60	630	0.24
16	1~	230	50	600	26	0.12	40	53	615	70	360	0.28

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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