D3G250-ED07-H4

EC centrifugal fan

forward curved, dual inlet

with housing (flange)

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Nominal data

Type	**D3G250-ED07-H4**
Motor	**M3G084-GF**

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

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 (EN 17166)

		Actual	Request 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 input 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 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

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Technical features

Mass	12.1 kg
Size	250 mm
Motor size	84
Surface of rotor	Coated in black
Material of electronics housing	Die-cast aluminium
Material of impeller	Sheet steel, galvanised
Housing material	Sheet steel, galvanised
Motor suspension	Motor anti-vibration mounted on one side via brackets
Direction of rotation	Clockwise, seen on rotor
Type of protection	IP55
Insulation class	"F"
Humidity (F) / environmental protection class (H)	H1
Max. permissible ambient motor temp. (transp./ storage)	+80 °C
Min. permissible ambient motor temp. (transp./storage)	-40 °C
Mounting position	Shaft horizontal
Condensation drainage holes	None
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
Electrical connection	Connector with connection line
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	CSA C22.2 no. 77 + CAN/CSA-E60730-1; EAC; UL 1004-7 + 60730-1

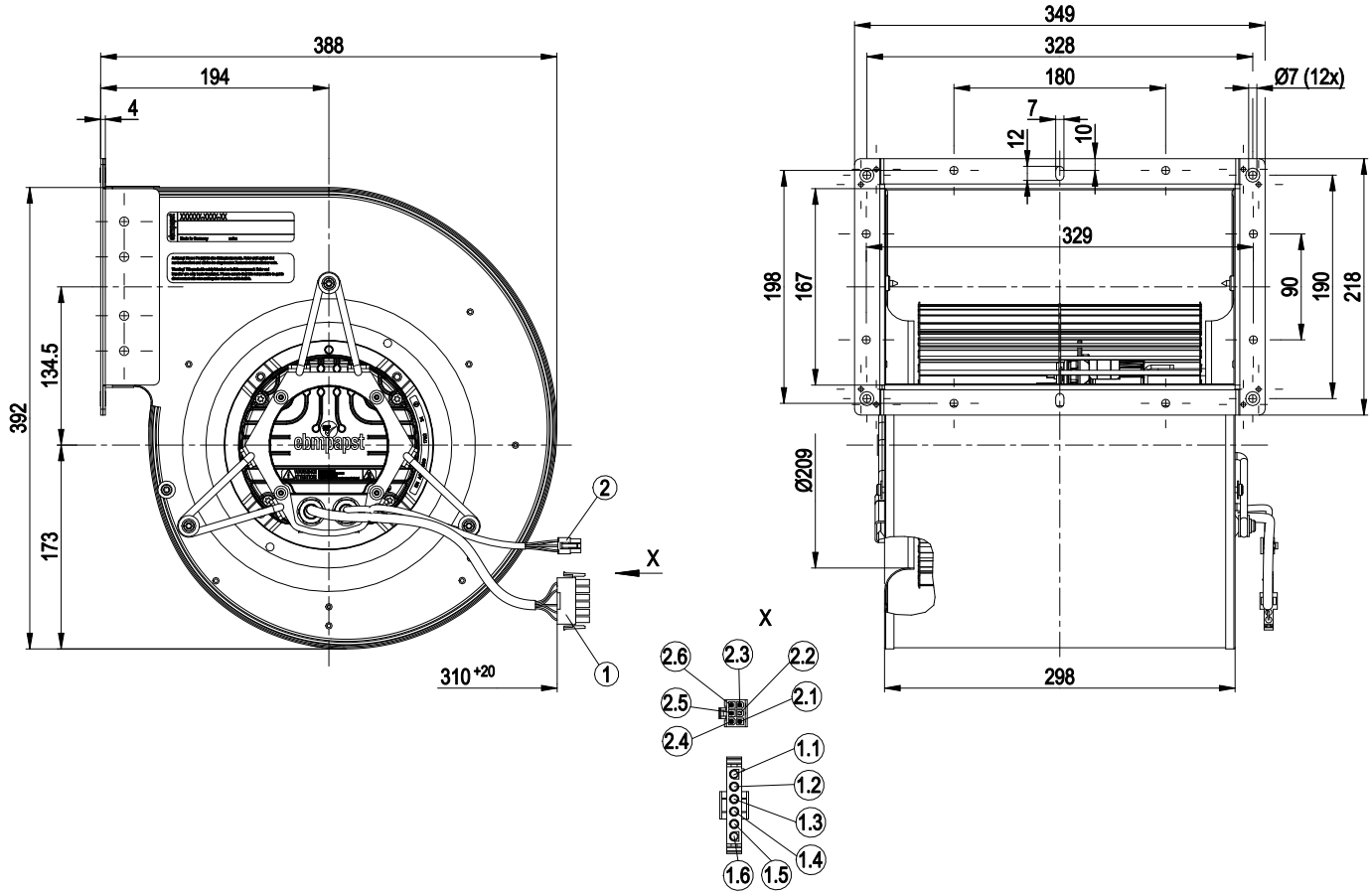
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Product drawing



1	Connection line PVC AWG18 with connector housing 6-pole Tyco 640581-2, 5x female connector Tyco 926882-1
1.1	PE (green / yellow)
1.2	N (blue)
1.3	L (black)
1.4	not used
1.5	NC (white 1)
1.6	COM (white 2)
2	Connection line PVC AWG22 with connector housing 6-pole Molex 39-01-2065, 5x female connector Molex 39-00-0038
2.1	0-10 V PWM (yellow)
2.2	not used
2.3	GND (blue)
2.4	+10 V (red)
2.5	RSA (white)
2.6	RSB (brown)

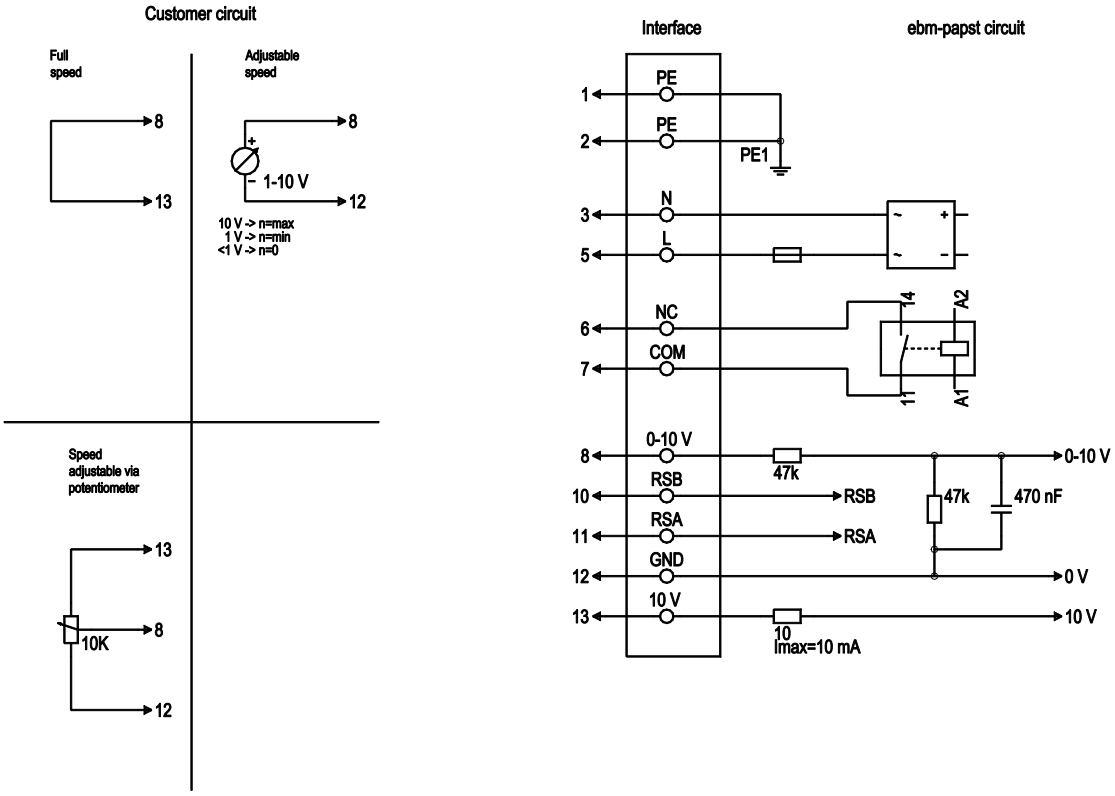
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Connection screen



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)

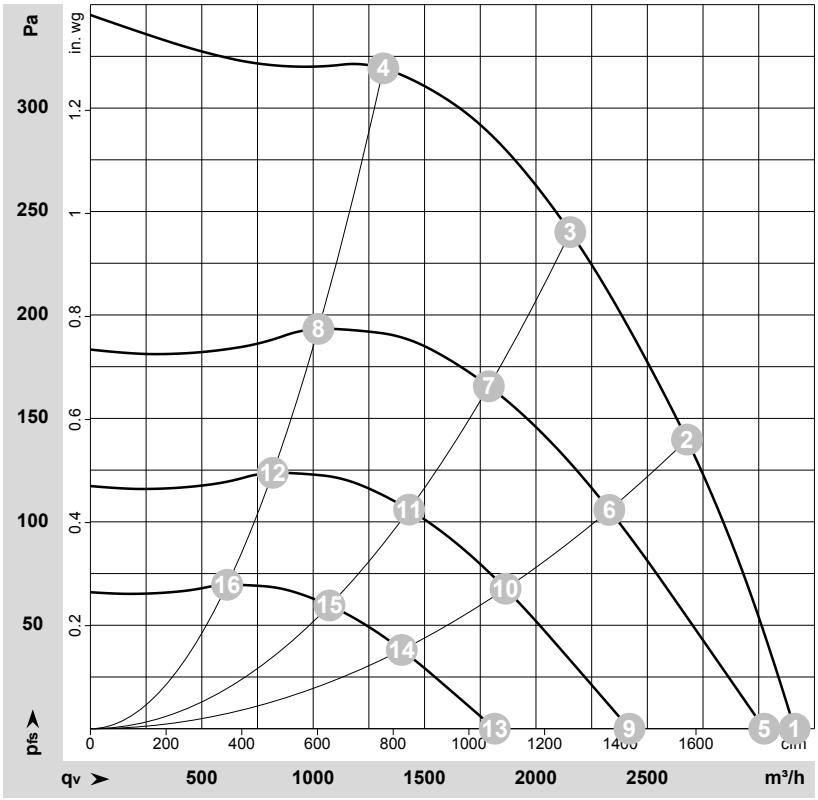
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Charts: Air flow 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-159282-1

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

	Conn.	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

Conn. = Connection · 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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