D3G400-GG04-01

EC centrifugal fan - RadiFit

backward curved, dual inlet

with housing (flange)



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Nominal data

Type	**D3G400-GG04-01**	
Motor	**M3G112-IA**	
Phase		3~
Nominal voltage	VAC	400
Nominal voltage range	VAC	380 .. 480
Frequency	Hz	50/60
Type of data definition		ml
Speed (rpm)	min^{-1}	1920
Power input	W	2380
Current draw	A	3.7
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	40

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}	%	65.7	54.2
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		72.5	61
05 Variable speed drive		Yes	

09 Power input P_{ed}	kW	2.27
09 Air flow q_v	m^3/h	6870
09 Pressure increase p_{fs}	Pa	736
10 Speed (rpm) n	min^{-1}	1930
11 Specific ratio*		1.01

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-167589

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Technical features

Mass	39.2 kg
Size	400 mm
Surface of rotor	Coated in black
Material of electronics housing	Die-cast aluminium
Material of impeller	Aluminium sheet
Housing material	Sheet steel, galvanised
Motor suspension	Motor mounted via brackets on one side
Direction of rotation	Clockwise, seen on rotor
Type of protection	IP 54
Insulation class	"F"
Humidity (F)/environmental protection class (H)	F3-1
Max. permissible ambient motor temp. (transp./ storage)	+85 °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	None
Operation mode	S1
Motor bearing	Ball bearing
Technical features	- Output 10 VDC, max. 10 mA - Operation and alarm display - External 24 V input (programming) - Alarm relay - Integrated PID controller - Output limit - Motor current limit - PFC, passive - RS485 MODBUS RTU - Soft start -Maximum EEPROM write cycles 100,000 - Control input 0-10 VDC / PWM - Control interface with SELV potential safely disconnected from the mains - Temperature derating - Over-temperature protected electronics / motor - Line undervoltage / phase failure detection
EMC interference immunity	Acc. to EN 61000-6-2 (industrial environment)
EMC interference emission	Acc. to EN 61000-6-3 (household environment), except EN 61000-3-2 for professionally used devices with a total rated power greater than 1 kW
Touch current acc. IEC 60990 (measuring network Fig. 4, TN system)	<= 3.5 mA
Electrical leads	Via terminal box
Motor protection	Thermal overload protector (TOP) wired internally
Cable exit	Variable
Degree of soiling	3
Protection class	I (if protective earth is connected by customer)
Product conforming to standard	CE
Remark	Standard conformity as per EN 61800-5-1 and EN 60335-1 in preparation

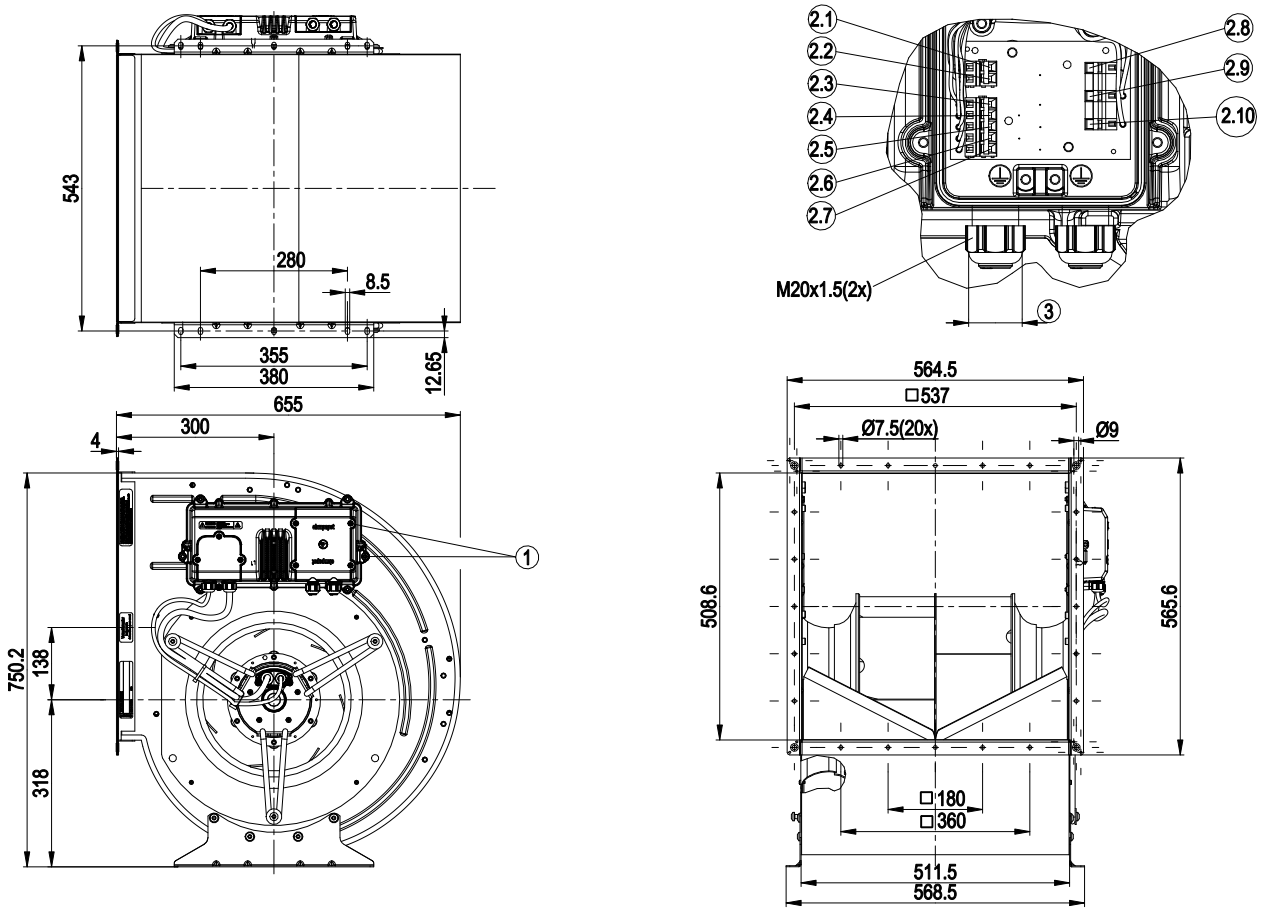
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Product drawing



1	Tightening torque 3±0.5 Nm
2.1	NC
2.2	COM
2.3	+10 V
2.4	0-10 V
2.5	GND
2.6	RSA
2.7	RSB
2.8	L1
2.9	L2
2.10	L3
3	Cable diameter min. 8 mm, max. 12 mm, tightening torque 2.5±0.4 Nm

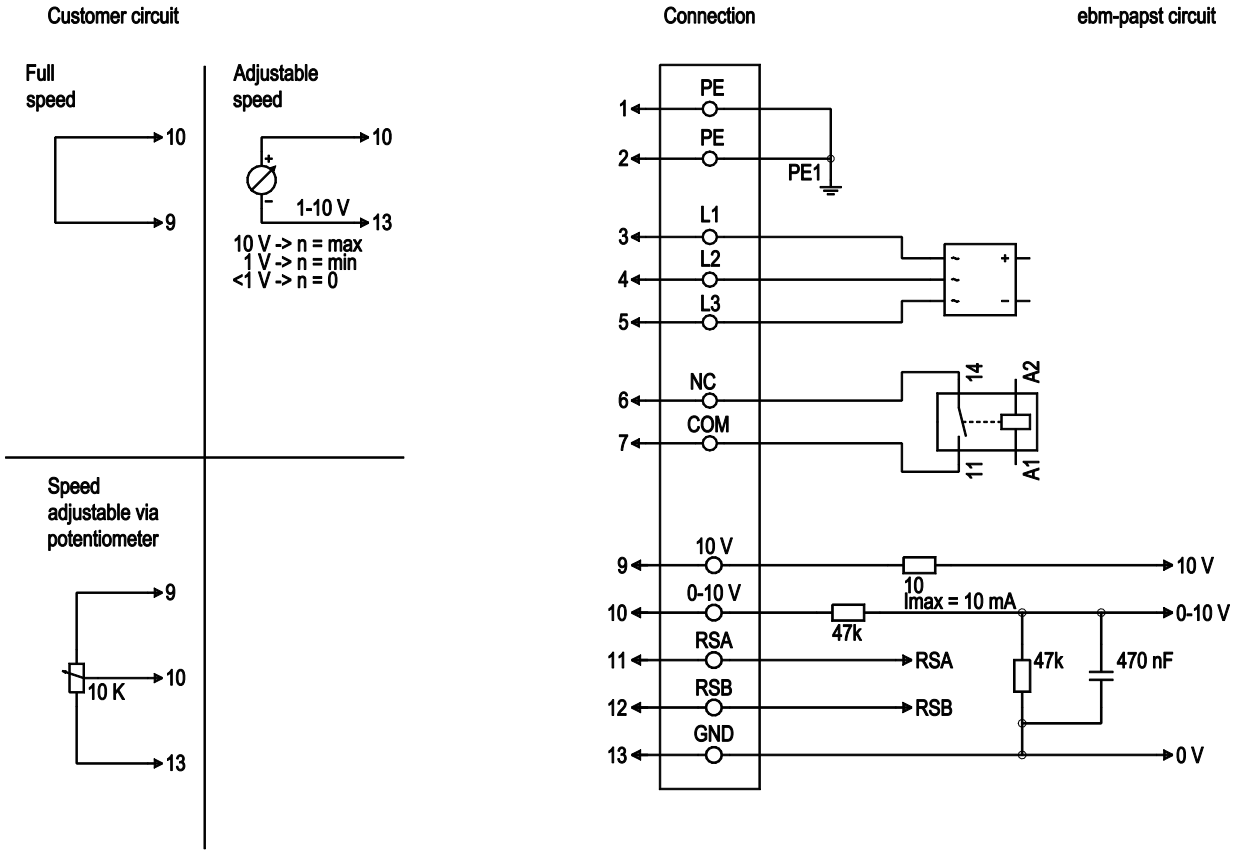
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Connection screen



No.	Conn.	Designation	Colour	Function / assignment
1	1, 2	PE	green/yellow	Protective earth
1	3, 4, 5	L1, L2, L3	black	Power supply 50 / 60 Hz
1	6	NC	white 1	Status relay, floating status contact, break for failure; contact rating 250 VAC / 2 A (AC1) / min. 10 mA, reinforced insulation on mains side and basic insulation on control interface side (or reinforced insulation on control interface side up to 250 VAC potential difference)
1	7	COM	white 2	Status relay, floating status contact, break for failure; contact rating 250 VAC / 2 A (AC1) / min. 10 mA, reinforced insulation on mains side and basic insulation on control interface side (or reinforced insulation on control interface side up to 250 VAC potential difference)
2	9	+10 V	red	Fixed voltage output 10 VDC, SELV, +10 V +/-3%, max. 10 mA short-circuit-proof, power supply for ext. devices (e.g. potentiometer); Fixed voltage input 24 VDC for parameter setting via MODBUS without mains power supply
2	10	0-10 V	yellow	Analogue input (set value) SELV, 0-10 V, Ri=100kΩ, parametrisable curve
2	11	RSA	white	RS-485 interface for MODBUS, RSA; SELV
2	12	RSB	brown	RS-485 interface for MODBUS, RSB; SELV
2	13	GND	blue	Signal ground for control interface, SELV

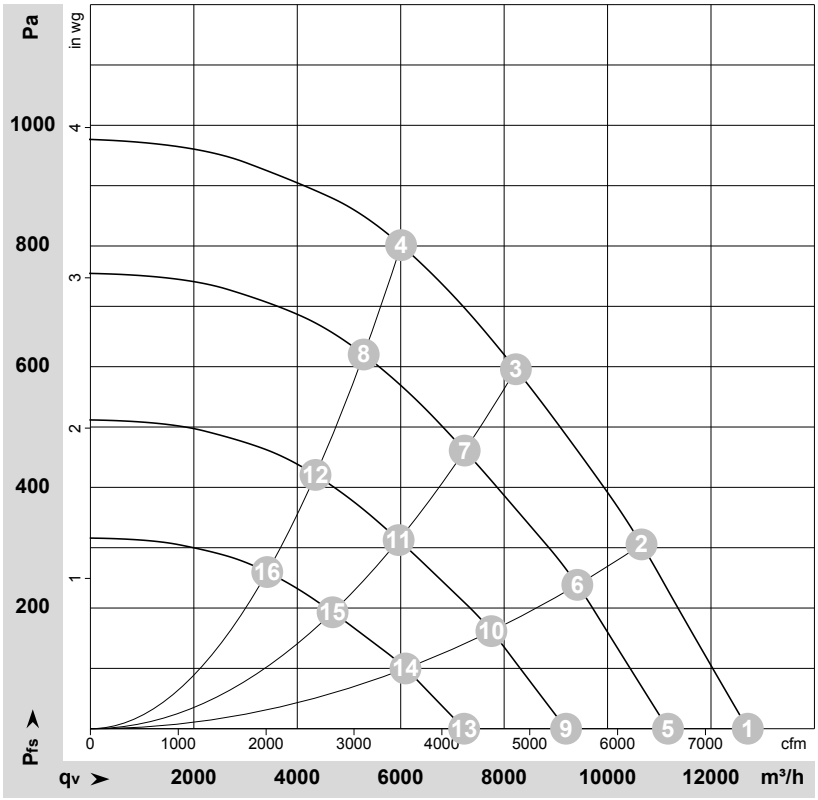
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Charts: Air flow 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-167589-1

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}	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	Y	400	50	1920	2172	3.39	78	91	95	12710	0	7480	0.00
2	Y	400	50	1920	2380	3.70	76	88	92	10655	300	6270	1.20
3	Y	400	50	1920	2380	3.70	73	85	89	8230	600	4845	2.41
4	Y	400	50	1920	2159	3.38	72	84	88	6010	800	3535	3.21
5	Y	400	50	1700	1473	2.30	75	88	92	11170	0	6575	0.00
6	Y	400	50	1700	1675	2.60	72	85	89	9415	241	5540	0.97
7	Y	400	50	1700	1627	2.53	70	82	86	7235	462	4260	1.85
8	Y	400	50	1700	1470	2.30	69	80	84	5285	620	3110	2.49
9	Y	400	50	1400	823	1.29	70	83	87	9195	0	5415	0.00
10	Y	400	50	1400	935	1.45	68	80	84	7755	163	4565	0.65
11	Y	400	50	1400	909	1.41	65	77	81	5960	313	3510	1.26
12	Y	400	50	1400	821	1.28	64	76	80	4350	421	2560	1.69
13	Y	400	50	1100	399	0.62	64	77	81	7225	0	4255	0.00
14	Y	400	50	1100	454	0.70	62	74	78	6090	101	3585	0.41
15	Y	400	50	1100	441	0.69	59	71	75	4685	194	2755	0.78
16	Y	400	50	1100	398	0.62	58	69	74	3420	260	2010	1.04

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

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