D3G280-GG10-01

EC centrifugal fan - RadiFit

backward curved, dual inlet

with housing (flange)



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Nominal data

Type	**D3G280-GG10-01**
Motor	**M3G084-GF**

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}	2900
Power input	W	1320
Current draw	A	2.1
Min. ambient temperature	°C	-40
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}	%	63.5	51.4
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		73.1	61
05 Variable speed drive		Yes	

09 Power input P_{ed}	kW	1.22
09 Air flow q_v	m^3/h	2940
09 Pressure increase p_{fs}	Pa	875
10 Speed (rpm) n	min^{-1}	2920
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-168518

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Technical features

Mass	19.6 kg
Size	280 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	Rotor-side
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

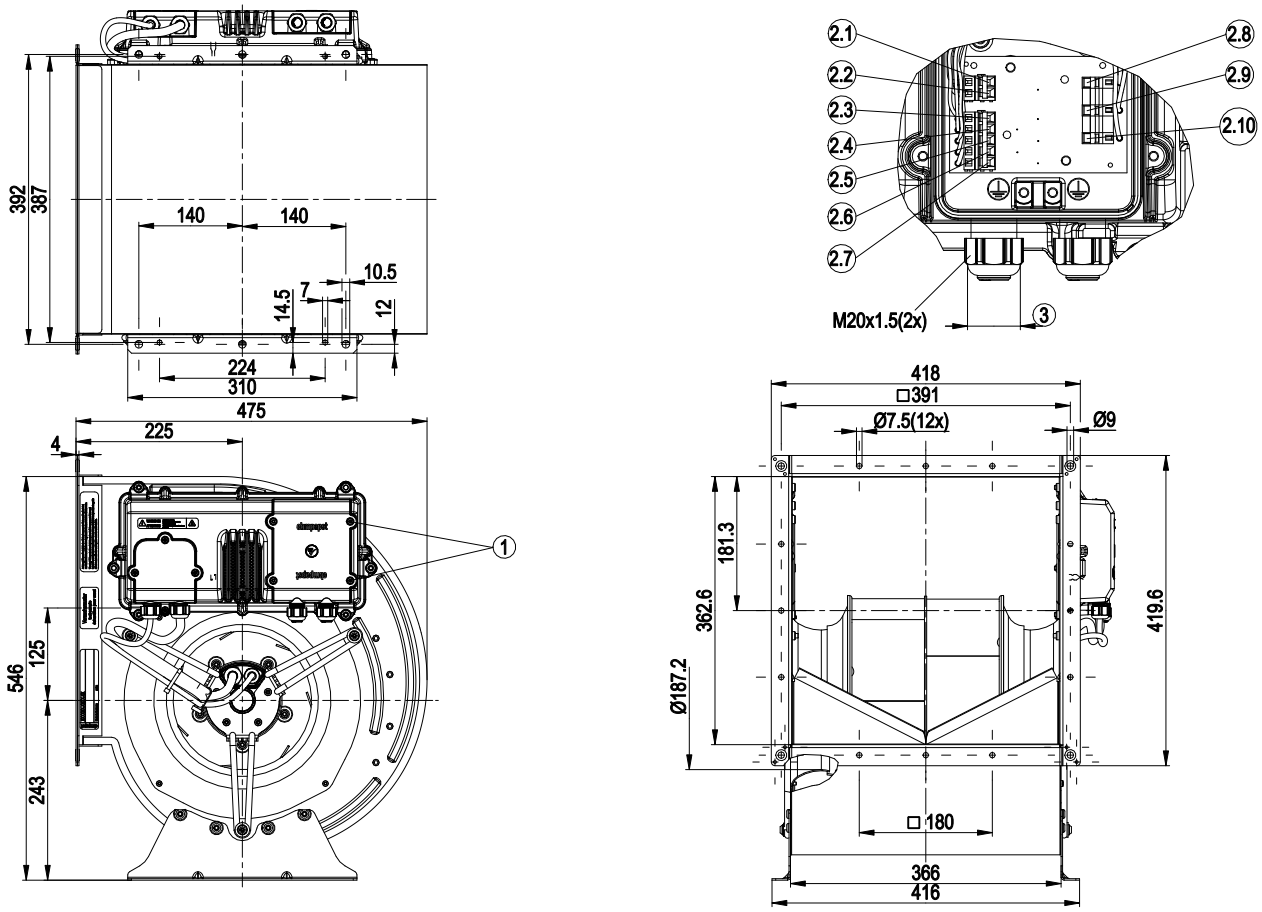
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Product drawing



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

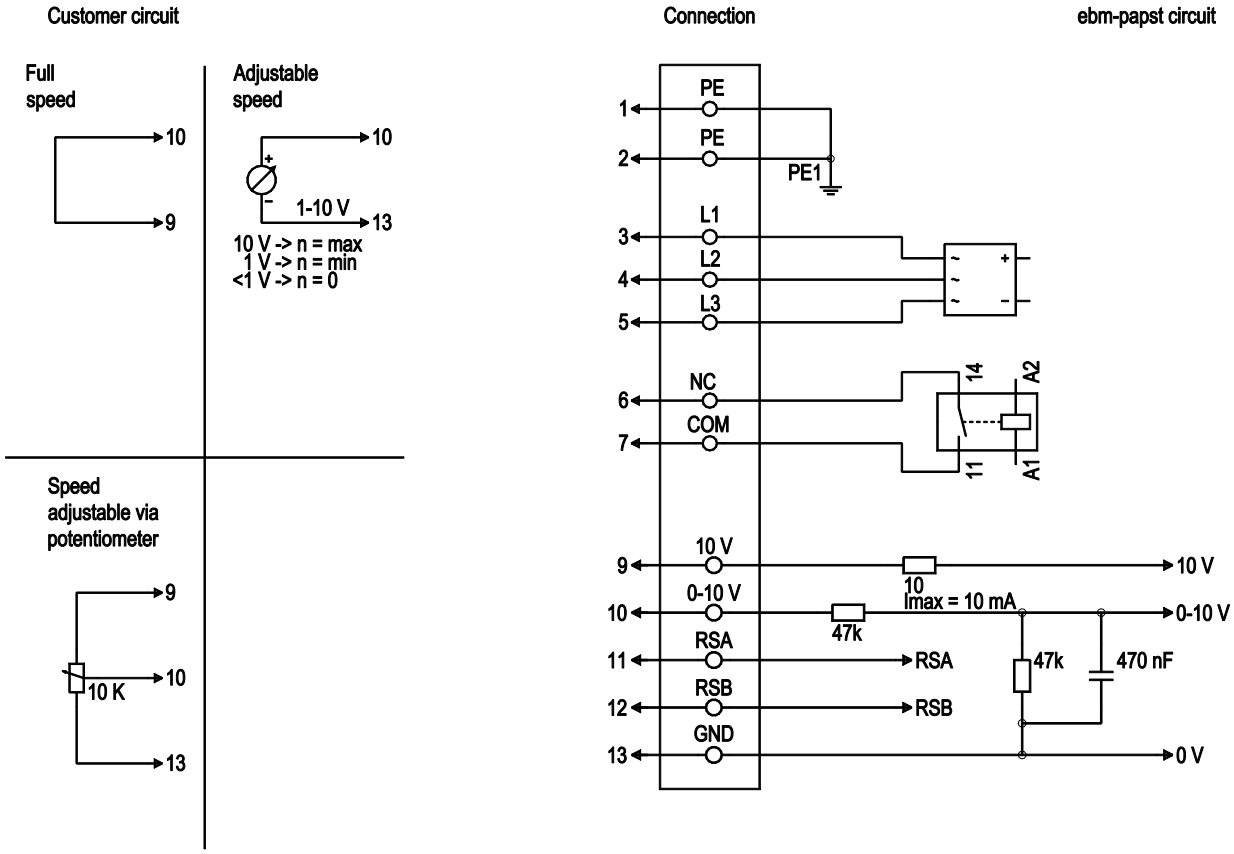
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Connection screen



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

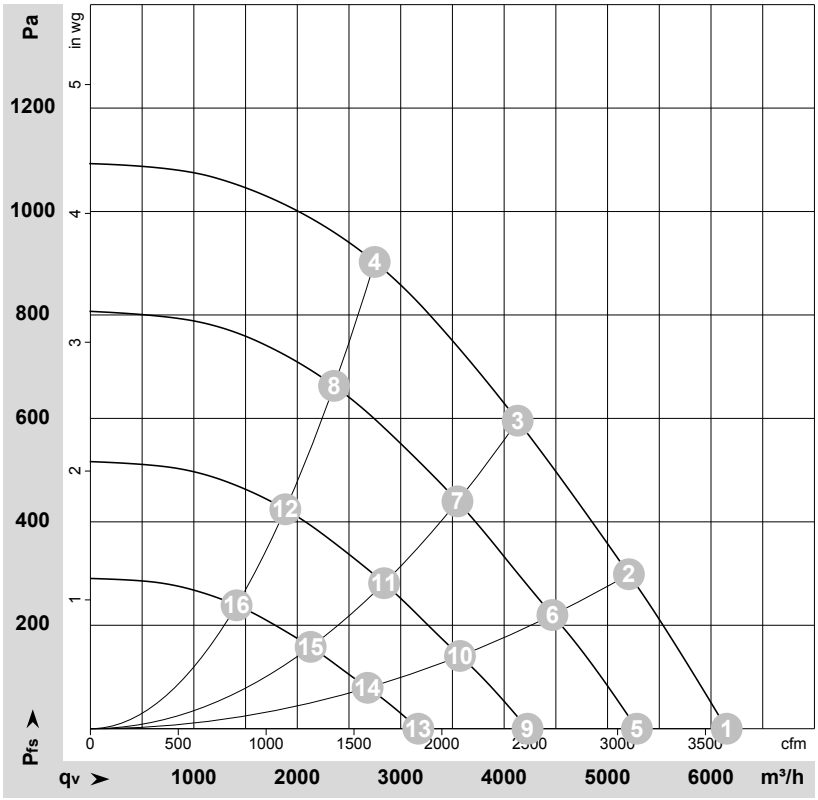
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Charts: Air flow 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-168518-1

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	2900	1191	1.98	78	92	96	6150	0	3620	0.00
2	Y	400	50	2900	1297	2.10	75	89	94	5205	300	3065	1.20
3	Y	400	50	2900	1320	2.10	73	86	91	4130	600	2430	2.41
4	Y	400	50	2900	1191	1.98	72	85	89	2750	900	1615	3.61
5	Y	400	50	2500	755	1.25	74	88	93	5285	0	3110	0.00
6	Y	400	50	2500	819	1.34	71	85	90	4465	220	2630	0.88
7	Y	400	50	2500	838	1.37	69	82	87	3550	441	2090	1.77
8	Y	400	50	2500	750	1.25	68	81	85	2355	664	1385	2.67
9	Y	400	50	2000	386	0.64	68	82	87	4225	0	2490	0.00
10	Y	400	50	2000	419	0.69	65	80	84	3575	141	2105	0.57
11	Y	400	50	2000	429	0.70	63	76	82	2840	283	1670	1.14
12	Y	400	50	2000	384	0.64	62	75	79	1885	425	1110	1.71
13	Y	400	50	1500	163	0.27	61	75	80	3170	0	1865	0.00
14	Y	400	50	1500	177	0.29	58	72	77	2680	79	1575	0.32
15	Y	400	50	1500	181	0.30	56	69	74	2130	159	1255	0.64
16	Y	400	50	1500	162	0.27	55	68	72	1415	239	830	0.96

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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