D3G355-FG03-05

EC centrifugal fan - RadiFit

backward-curved, dual-intake

with housing (without flange)



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Nominal data

Type	**D3G355-FG03-05**
Motor	**M3G112-IA**

Phase		3~
Nominal voltage	VAC	400
Nominal voltage range	VAC	380 .. 480
Frequency	Hz	50/60
Method of obtaining data		ml
Speed (rpm)	min^{-1}	2600
Power consumption	W	3160
Current draw	A	4.9
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}	%	65.1	55.5
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		70.6	61
05 Variable speed drive		Yes	

09 Power consumption P_{ed}	kW	3
09 Air flow q_v	m^3/h	6105
09 Pressure increase p_{fs}	Pa	1085
10 Speed (rpm) n	min^{-1}	2600
11 Specific ratio*		1.01

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

LU-167206

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Technical description

Weight	34 kg
Size	355 mm
Motor size	112
Rotor surface	Painted black
Electronics housing material	Die-cast aluminum
Impeller material	Sheet aluminum
Housing material	Sheet steel, galvanized
Motor suspension	Motor mounted with brackets on both sides
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP54
Insulation class	"F"
Moisture (F) / Environmental (H) protection class	H1
Max. permitted ambient temp. for motor (transport/storage)	+85 °C
Min. permitted ambient temp. for motor (transport/storage)	-40 °C
Installation position	Shaft horizontal or rotor on bottom; rotor on top on request
Condensation drainage holes	On rotor side
Mode	S1
Motor bearing	Ball bearing
Technical features	- Output 10 VDC, max. 10 mA - Operation and alarm display - External 24 V input (parameter setting) - Alarm relay - Integrated PID controller - Power limiter - Motor current limitation - PFC, passive - RS-485 MODBUS-RTU - Soft start - EEPROM write cycles: 100,000 maximum - Control input 0-10 VDC / PWM - Control interface with SELV potential safely disconnected from the mains - Temperature derating - Thermal overload protection for electronics/motor - Line undervoltage / phase failure detection
EMC immunity to interference	According to EN 61000-6-2 (industrial environment)
EMC interference emission	According to EN 61000-6-3 (household environment), except EN 61000-3-2 for professionally used equipment with a total rated power greater than 1 kW
Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)	<= 3.5 mA
Electrical hookup	Terminal box
Motor protection	Thermal overload protector (TOP) internally connected
With cable	Variable
Pollution degree	3
Protection class	I (with customer connection of protective earth)
Conformity with standards	CE

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Approval	EAC
Comment	Conformity with EN 61800-5-1 and EN 60335-1 in preparation

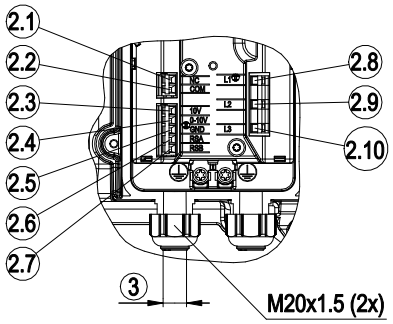
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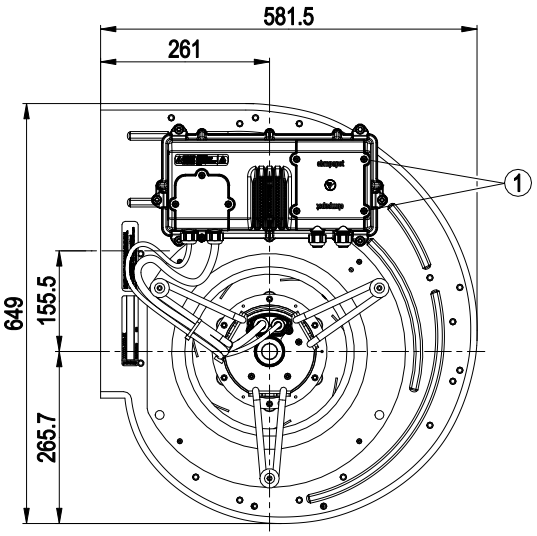
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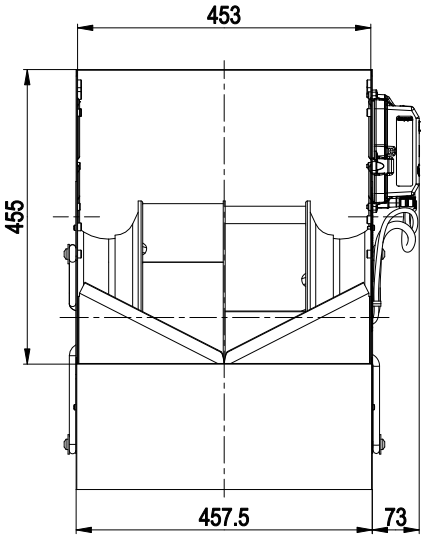
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Product drawing







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 1.8±0.3 Nm

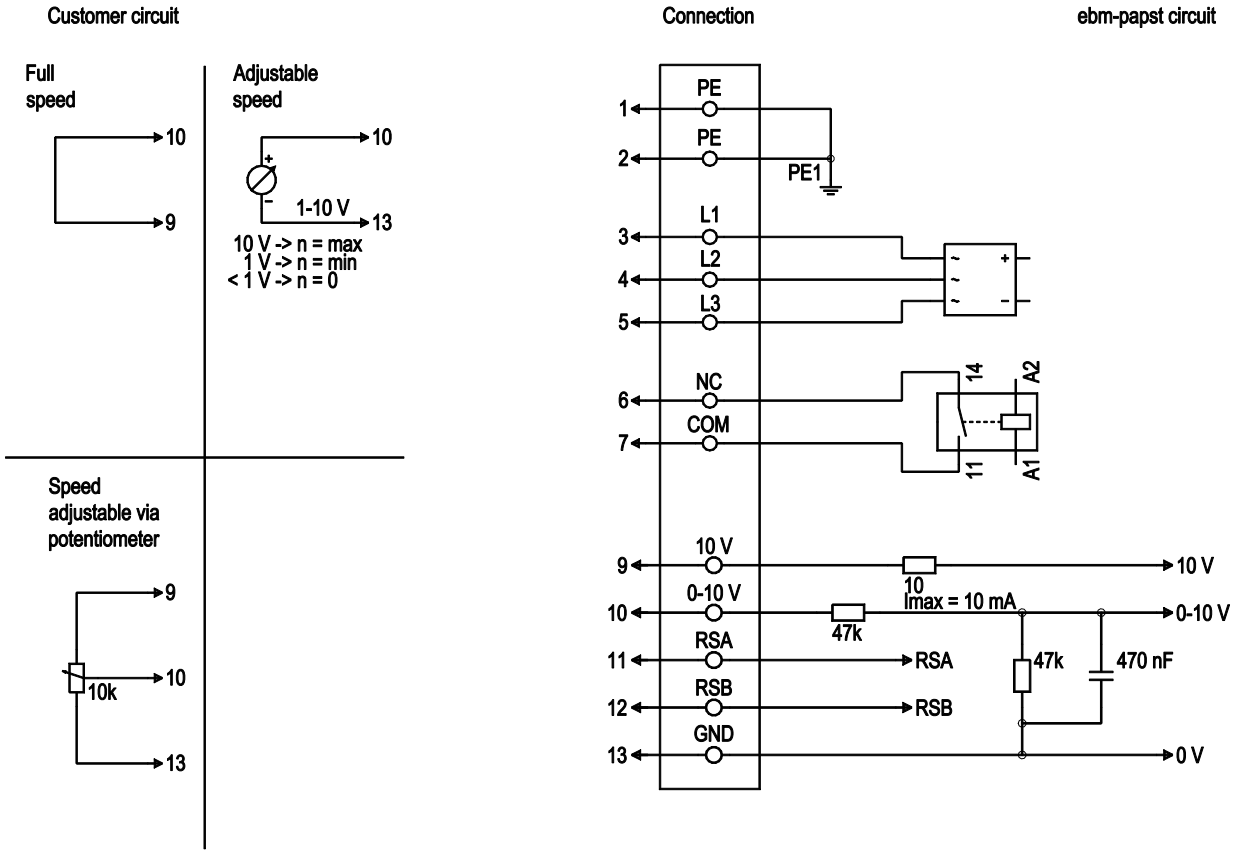
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Connection diagram



No.	Conn.	Designation	Color	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 supply 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 supply 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 external devices (e.g. pot); fixed voltage input 24 VDC for setting parameters via MODBUS without line voltage supply
2	10	0-10 V	yellow	Analog input (set value) SELV, 0-10 V, Ri = 100 kΩ, adjustable curve
2	11	RSA	white	RS485 interface for MODBUS, RSA; SELV
2	12	RSB	brown	RS485 interface for MODBUS, RSB; SELV
2	13	GND	blue	Reference ground for control interface, SELV

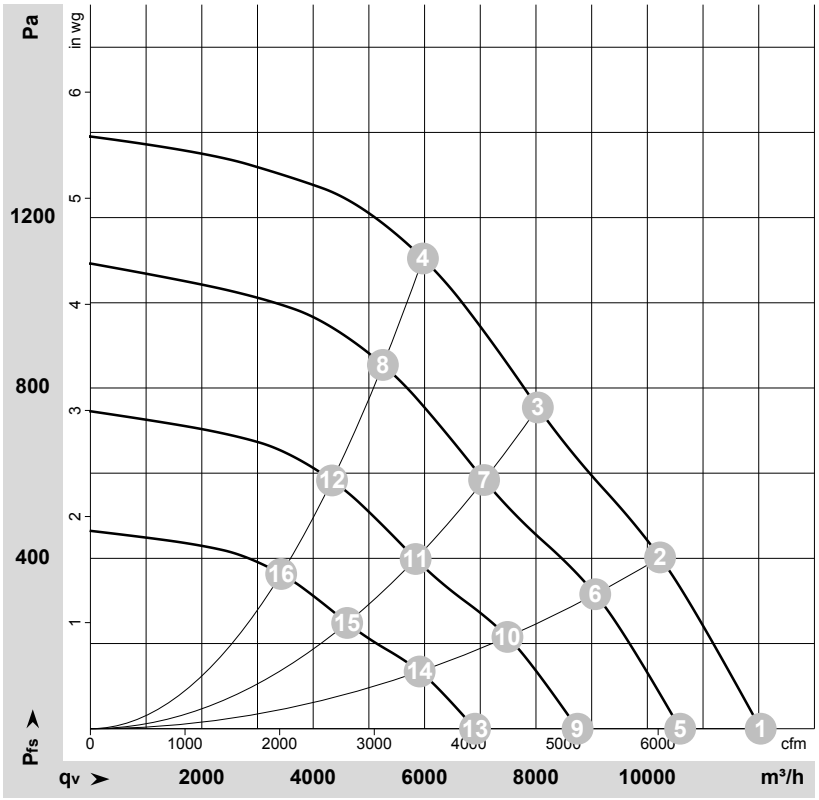
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Curves: Air performance 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-174904-1

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}	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	in. wg
1	Y	400	50	2600	2979	4.59	82	95	100	12035	0	7085	0.00
2	Y	400	50	2600	3160	4.90	80	93	97	10230	400	6020	1.61
3	Y	400	50	2600	3160	4.90	78	91	95	8035	750	4730	3.01
4	Y	400	50	2600	3040	4.68	76	89	93	5970	1100	3515	4.42
5	Y	400	50	2300	2029	3.13	78	92	97	10590	0	6235	0.00
6	Y	400	50	2300	2200	3.39	77	90	94	9065	318	5335	1.28
7	Y	400	50	2300	2163	3.33	75	87	92	7070	583	4160	2.34
8	Y	400	50	2300	2069	3.18	73	86	90	5250	858	3090	3.44
9	Y	400	50	1900	1144	1.76	74	87	92	8750	0	5150	0.00
10	Y	400	50	1900	1240	1.91	72	85	89	7490	217	4405	0.87
11	Y	400	50	1900	1219	1.88	70	83	87	5840	398	3435	1.60
12	Y	400	50	1900	1166	1.80	68	81	85	4340	586	2555	2.35
13	Y	400	50	1500	563	0.87	68	81	86	6905	0	4065	0.00
14	Y	400	50	1500	610	0.94	66	79	83	5910	135	3480	0.54
15	Y	400	50	1500	600	0.92	64	77	81	4610	248	2715	1.00
16	Y	400	50	1500	574	0.88	62	75	79	3425	365	2015	1.47

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

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