D3G355-GG03-01

EC centrifugal fan - RadiFit

backward curved, dual inlet

with housing (flange)



ebm-papst Mulfingen GmbH & Co. KG
Bachmühle 2 · D-74673 Mulfingen
Phone +49 7938 81-0
Fax +49 7938 81-110
info1@de.ebmpapst.com
www.ebmpapst.com

Limited partnership · Headquarters Mulfingen
County court Stuttgart · HRA 590344

General partner Elektrobau Mulfingen GmbH · Headquarters Mulfingen
County court Stuttgart · HRB 590142

Nominal data

Type	**D3G355-GG03-01**	
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}	2600
Power input	W	3160
Current draw	A	4.9
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}	%	65.1	55.5
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		70.6	61
05 Variable speed drive		Yes	

09 Power input 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 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-167206

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Technical features

Mass	37 kg
Size	355 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

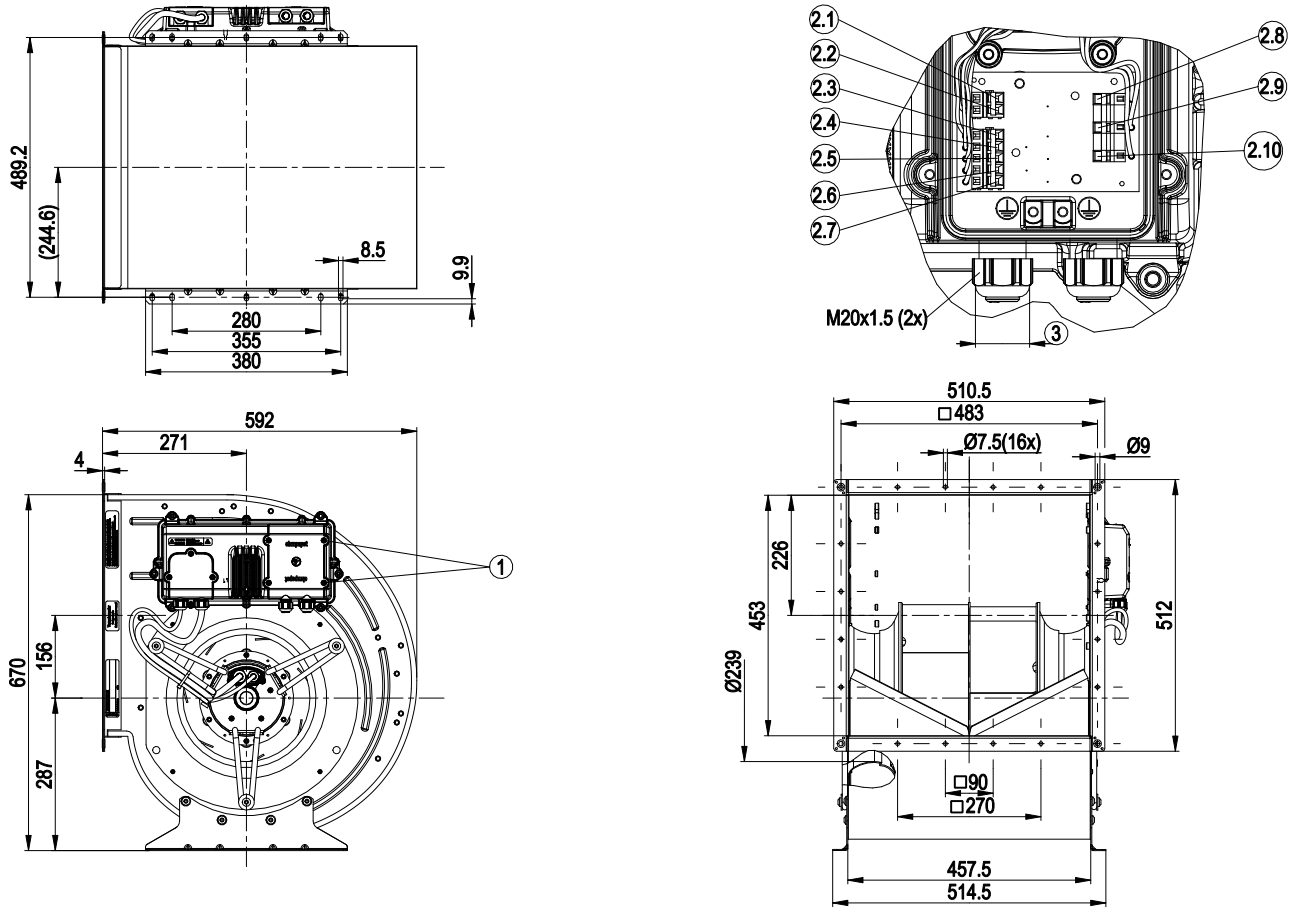
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Product drawing



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

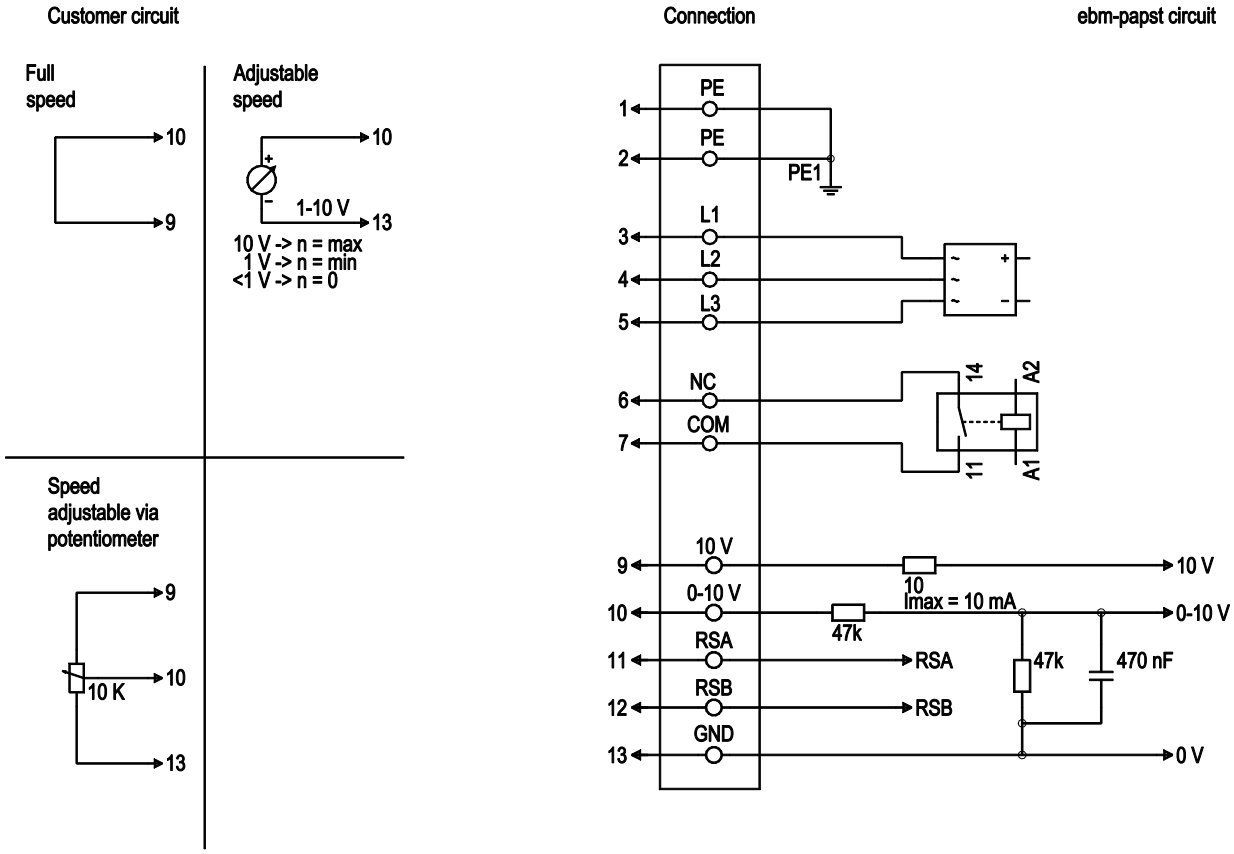
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Connection screen



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

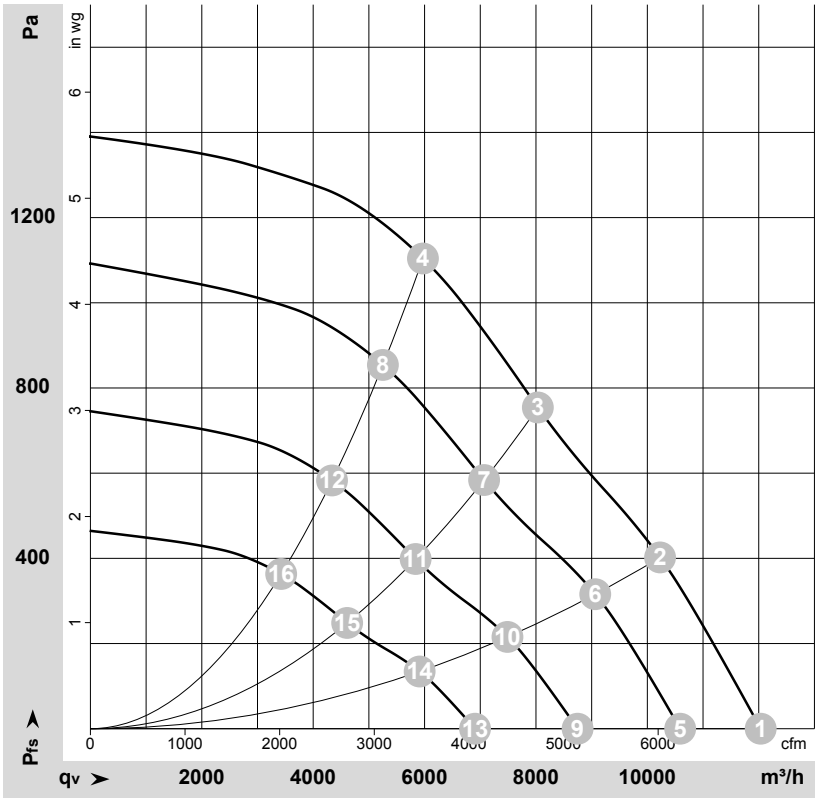
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Charts: Air flow 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-174904-1

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	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

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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