R3G560-RB33-78

EC centrifugal fan - RadiCal

backward curved, single inlet

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	**R3G560-RB33-78**
Motor	**M3G150-IF**

Phase		3~
Nominal voltage	VAC	400
Nominal voltage range	VAC	380 .. 480
Frequency	Hz	50/60
Type of data definition		ml
State		prelim.
Speed (rpm)	min^{-1}	1650
Power input	W	2950
Current draw	A	4.5
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	45

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}	%	67.6	56.4
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		73.2	62
05 Variable speed drive		Yes	

09 Power input P_{ed}	kW	2.92
09 Air flow q_v	m^3/h	9885
09 Pressure increase p_{fs}	Pa	681
10 Speed (rpm) n	min^{-1}	1655
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-162921

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Technical features

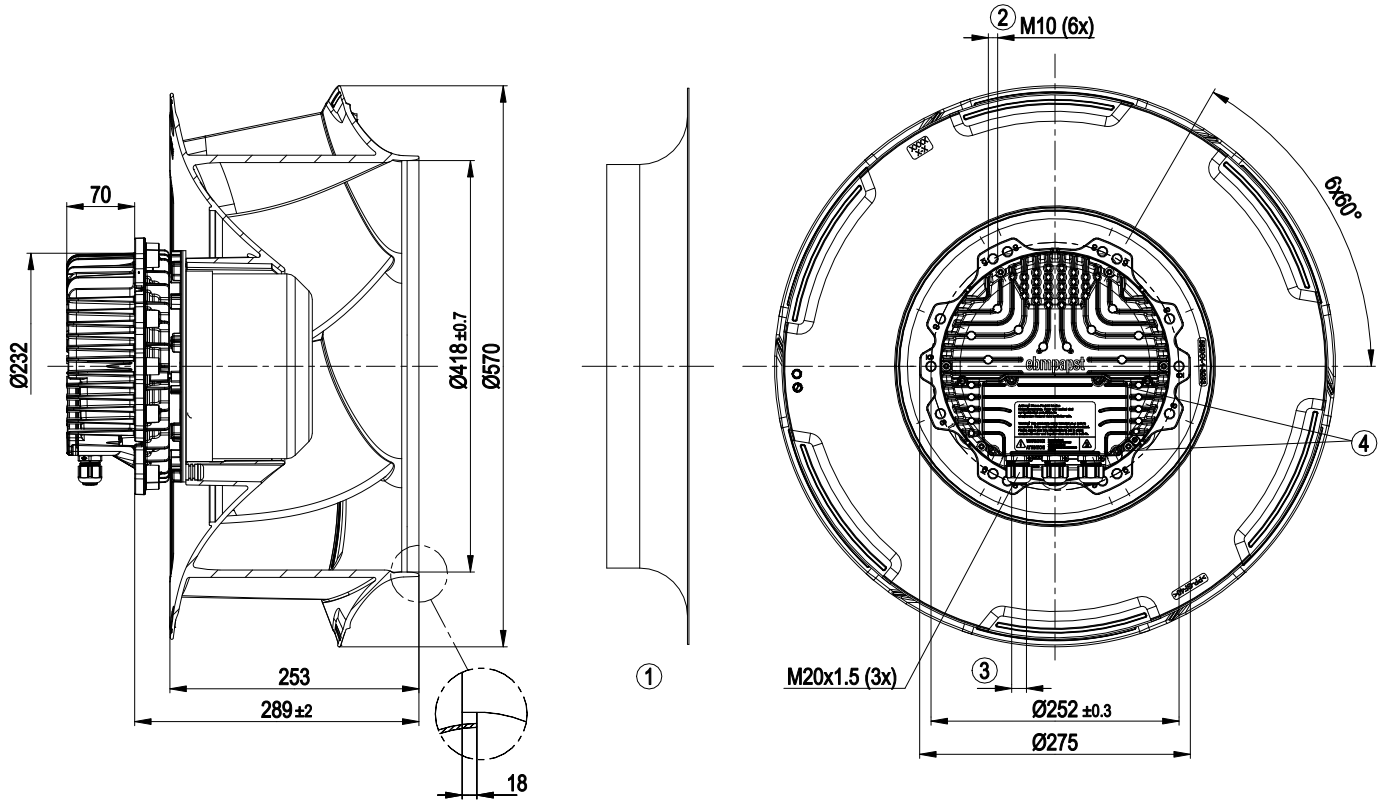
Mass	26.5 kg
Size	560 mm
Surface of rotor	Coated in black
Material of electronics housing	Die-cast aluminium
Material of impeller	PP plastic
Number of blades	6
Direction of rotation	Clockwise, seen on rotor
Type of protection	IP 55
Insulation class	"F"
Humidity (F)/environmental protection class (H)	H1
Max. permissible ambient motor temp. (transp./ storage)	+80 °C
Min. permissible ambient motor temp. (transp./storage)	-40 °C
Mounting position	Shaft horizontal 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) - External release input - Alarm relay - Integrated PID controller - Motor current limit - PFC, passive - 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
Touch current acc. IEC 60990 (measuring network Fig. 4, TN system)	<= 3.5 mA
Electrical leads	Via terminal box
Motor protection	Reverse polarity and locked-rotor protection
Protection class	I (if protective earth is connected by customer)
Product conforming to standard	EN 61800-5-1; CE
Approval	EAC

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Product drawing



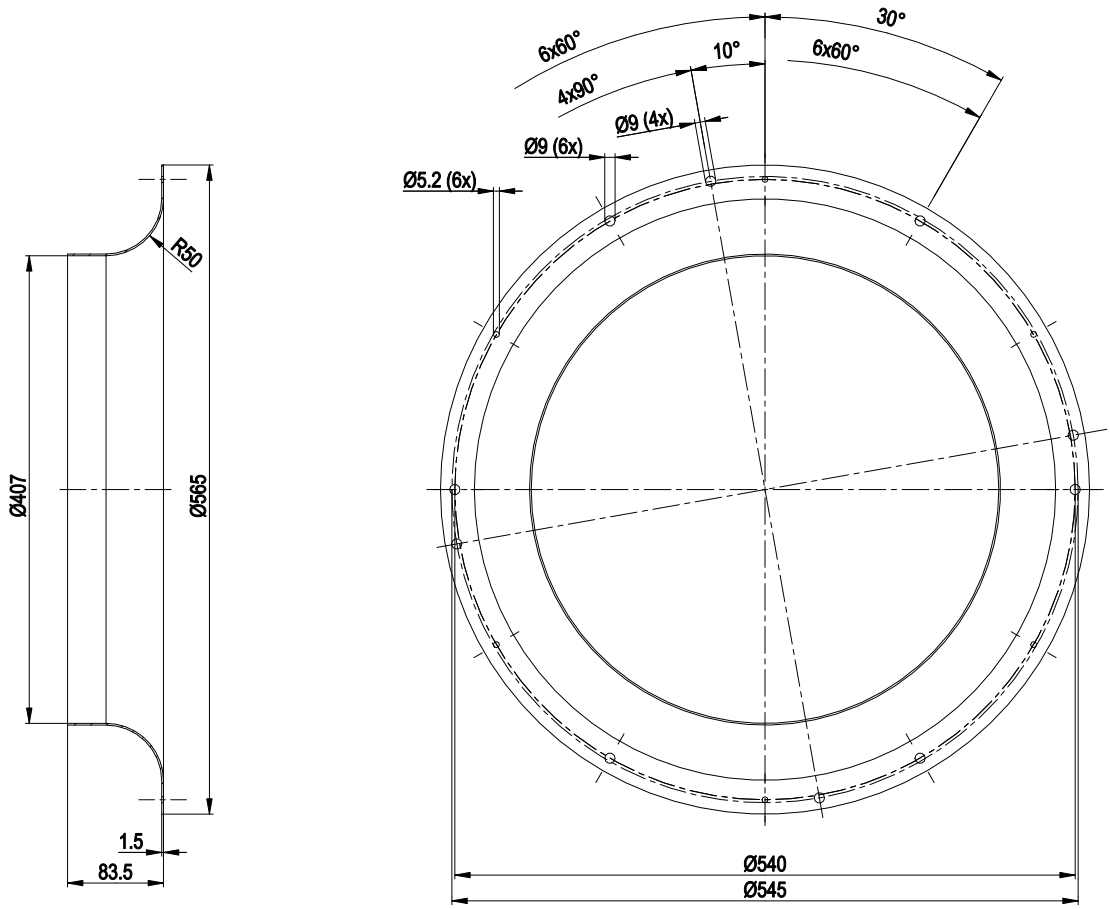
1	Accessory part: Inlet nozzle 54482-2-4013 not included in scope of delivery
2	Thread reach max. 25 mm
3	Cable diameter min. 4 mm, max. 10 mm, tightening torque 4±0.6 Nm
4	Tightening torque 3.5±0.5 Nm

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Accessory part



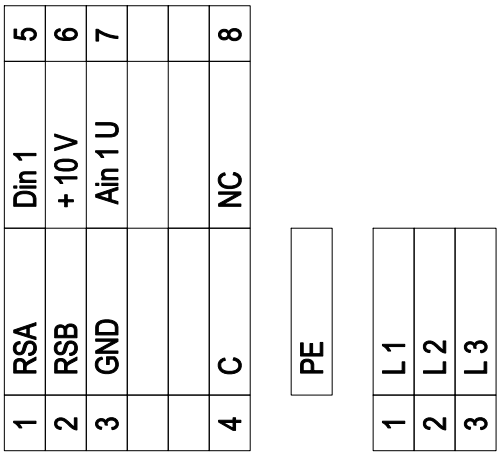
Accessory part: Inlet nozzle 54482-2-4013 not included in scope of delivery

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Connection screen



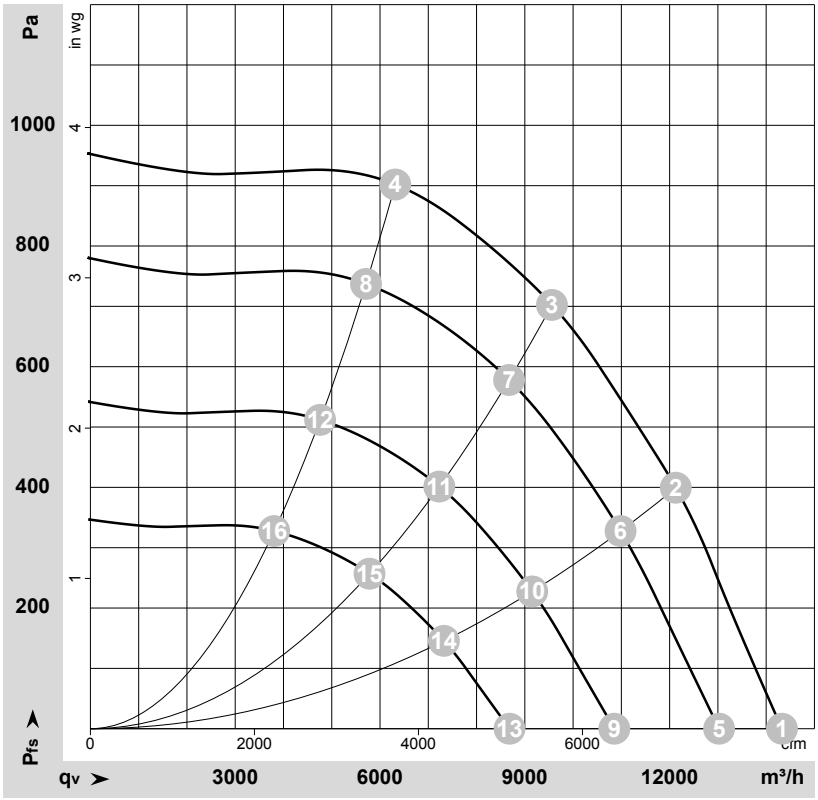
No.	Conn.	Designation	Function / assignment
KL 1	1	L1	Mains supply connection, supply voltage 3~380-480 VAC; 50/60 Hz
KL 1	2	L2	Mains supply connection, supply voltage 3~380-480 VAC; 50/60 Hz
KL 1	3	L3	Mains supply connection, supply voltage 3~380-480 VAC; 50/60 Hz
PE		PE	Earth connection, PE connection
KL 2	1	RSA	Bus connection RS-485, RSA, MODBUS RTU; SELV
KL 2	2	RSB	Bus connection RS-485, RSB, MODBUS RTU; SELV
KL 2	3	GND	Signal ground for control interface; SELV
KL2	4	C	Status relay; floating status contact; changeover contact; common connection; contact rating 250 VAC / 2 A (AC1)
KL 2	5	Din1	Digital input 1 enabling of electronics, enabling: open pin or applied voltage 5-50 VDC disabling: bridge to GND or applied voltage <1 VDC reset function: triggers software reset after a level change to <1 V; SELV
KL 2	6	+ 10 V	Fixed voltage output 10 VDC; +10 V -3 %, max. 10 mA, short-circuit-proof, power supply for external devices (e.g. potentiometer); SELV Alternative: +24 VDC input for parametrisation via MODBUS without mains power
KL 2	7	Ain1 U	Analogue input 1 (set value) 0-10 V, Ri=100 kΩ, parametrisable curve; SELV
KL2	8	NC	Status relay, floating status contact; break for failure

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Charts: Air flow 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-162921-1

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	1650	2024	3.16	80	87	90	14330	0	8435	0.00
2	Y	400	50	1650	2725	4.21	74	81	85	12130	400	7140	1.61
3	Y	400	50	1650	2950	4.50	70	77	81	9560	700	5630	2.81
4	Y	400	50	1650	2825	4.36	73	81	84	6315	900	3715	3.61
5	Y	400	50	1500	1520	2.38	77	85	87	13025	0	7665	0.00
6	Y	400	50	1500	2022	3.13	71	79	82	10985	329	6465	1.32
7	Y	400	50	1500	2187	3.37	67	75	79	8675	580	5105	2.33
8	Y	400	50	1500	2087	3.22	71	79	82	5710	738	3360	2.96
9	Y	400	50	1250	880	1.37	73	80	83	10855	0	6390	0.00
10	Y	400	50	1250	1170	1.81	67	74	78	9155	229	5385	0.92
11	Y	400	50	1250	1266	1.95	63	70	74	7230	403	4255	1.62
12	Y	400	50	1250	1208	1.86	66	74	77	4760	512	2800	2.06
13	Y	400	50	1000	450	0.70	67	74	77	8685	0	5110	0.00
14	Y	400	50	1000	599	0.93	61	68	72	7325	146	4310	0.59
15	Y	400	50	1000	648	1.00	57	64	68	5785	258	3405	1.04
16	Y	400	50	1000	618	0.95	61	69	72	3805	328	2240	1.32

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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