

R3G560-RB27-C1 ebmpapst Datasheet  
 sales@fansco.com  
 www.fansco.com

Limited partnership · Headquarters Mulfingen  
 Amtsgericht (court of registration) Stuttgart · HRA 590344  
 General partner Elektrobau Mulfingen GmbH · Headquarters Mulfingen  
 Amtsgericht (court of registration) Stuttgart · HRB 590142

## Nominal data

Type	R3G560-RB27-C1	
Motor	M3G150-IF	
Phase		3~
Nominal voltage	VAC	400
Nominal voltage range	VAC	380 .. 480
Frequency	Hz	50/60
Method of obtaining data		me
Status		prelim.
Speed (rpm)	min <sup>-1</sup>	1660
Power consumption	W	3190
Current draw	A	4.6
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 $\eta_{es}$	%	63.9	56.8	09 Power consumption $P_{ed}$	kW	3.18
02 Measurement category		A		09 Air flow $q_v$	m <sup>3</sup> /h	9650
03 Efficiency category		Static		09 Pressure increase $p_{fs}$	Pa	726
04 Efficiency grade N		69.1	62	10 Speed (rpm) n	min <sup>-1</sup>	1665
05 Variable speed drive		Yes		11 Specific ratio <sup>*</sup>		1.01

Data obtained at optimum efficiency level.  
 The ErP data is determined using a motor-impeller combination in a standardized measurement setup.

<sup>\*</sup> Specific ratio =  $1 + p_{fs} / 100\,000\text{ Pa}$

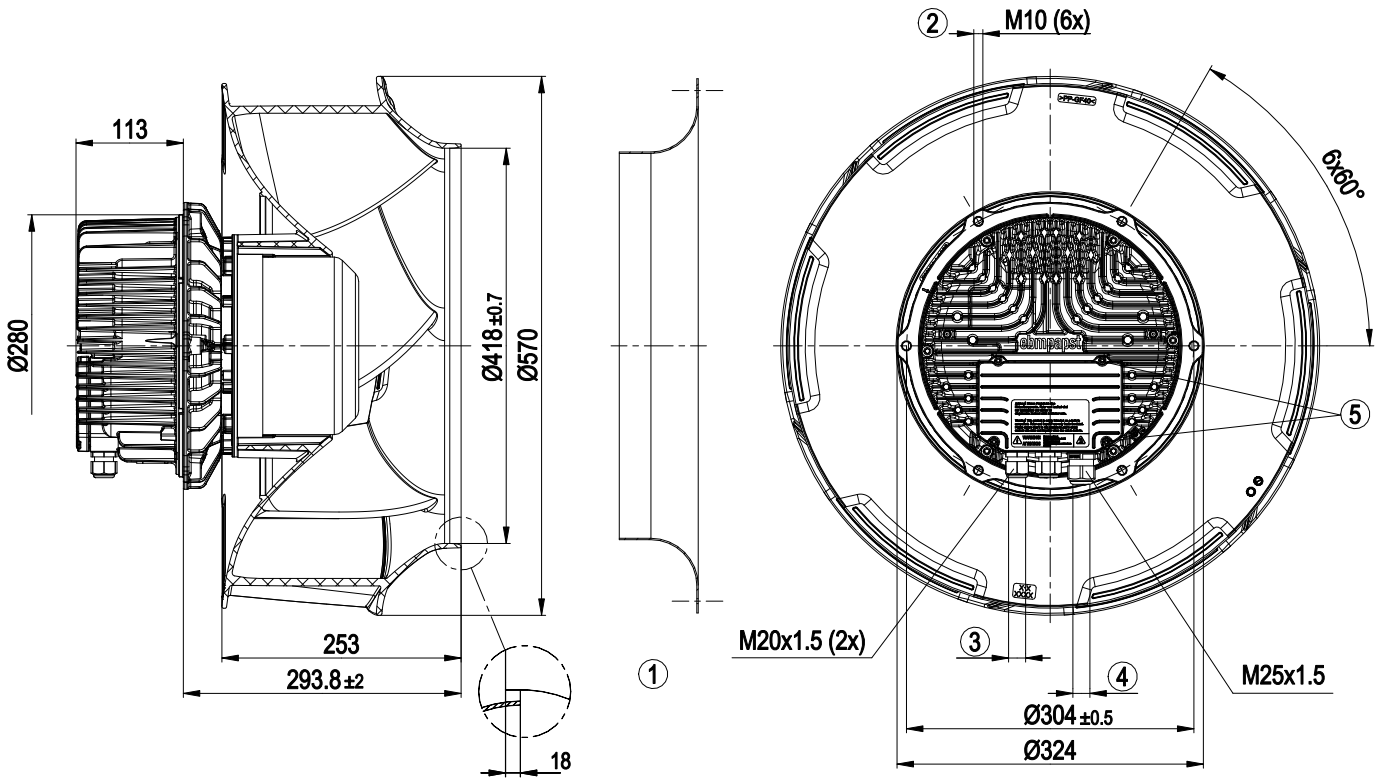
LU-182950



### Technical description

<b>Weight</b>	33.5 kg
<b>Size</b>	560 mm
<b>Motor size</b>	150
<b>Rotor surface</b>	Painted black
<b>Electronics housing material</b>	Die-cast aluminum
<b>Impeller material</b>	PP plastic
<b>Number of blades</b>	6
<b>Direction of rotation</b>	Clockwise, viewed toward rotor
<b>Degree of protection</b>	IP55
<b>Insulation class</b>	"F"
<b>Moisture (F) / Environmental (H) protection class</b>	H1
<b>Max. permitted ambient temp. for motor (transport/storage)</b>	+80 °C
<b>Min. permitted ambient temp. for motor (transport/storage)</b>	-40 °C
<b>Installation position</b>	Shaft horizontal or rotor on bottom; rotor on top on request
<b>Condensation drainage holes</b>	On rotor side
<b>Mode</b>	S1
<b>Motor bearing</b>	Ball bearing
<b>Technical features</b>	<ul style="list-style-type: none"> <li>- Output 10 VDC, max. 10 mA</li> <li>- Output 20 VDC, max. 50 mA</li> <li>- Output for slave 0-10 V</li> <li>- Operation and alarm display</li> <li>- Input for sensor 0-10 V or 4-20 mA</li> <li>- External 24 V input (parameter setting)</li> <li>- External release input</li> <li>- Integrated PI controller</li> <li>- Power limiter</li> <li>- Motor current limitation</li> <li>- PFC, active</li> <li>- RS-485 MODBUS-RTU</li> <li>- Soft start</li> <li>- Control input 0-10 VDC / PWM</li> <li>- Control interface with SELV potential safely disconnected from the mains</li> <li>- Thermal overload protection for electronics/motor</li> <li>- Line undervoltage / phase failure detection</li> </ul>
<b>Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)</b>	<= 3.5 mA
<b>Electrical hookup</b>	Terminal box
<b>Motor protection</b>	Reverse polarity and locked-rotor protection
<b>Protection class</b>	I (with customer connection of protective earth)
<b>Conformity with standards</b>	EN 61800-5-1; CE
<b>Approval</b>	CSA C22.2 No. 77 + CAN/CSA-E60730-1; EAC; UL 1004-7 + 60730-1

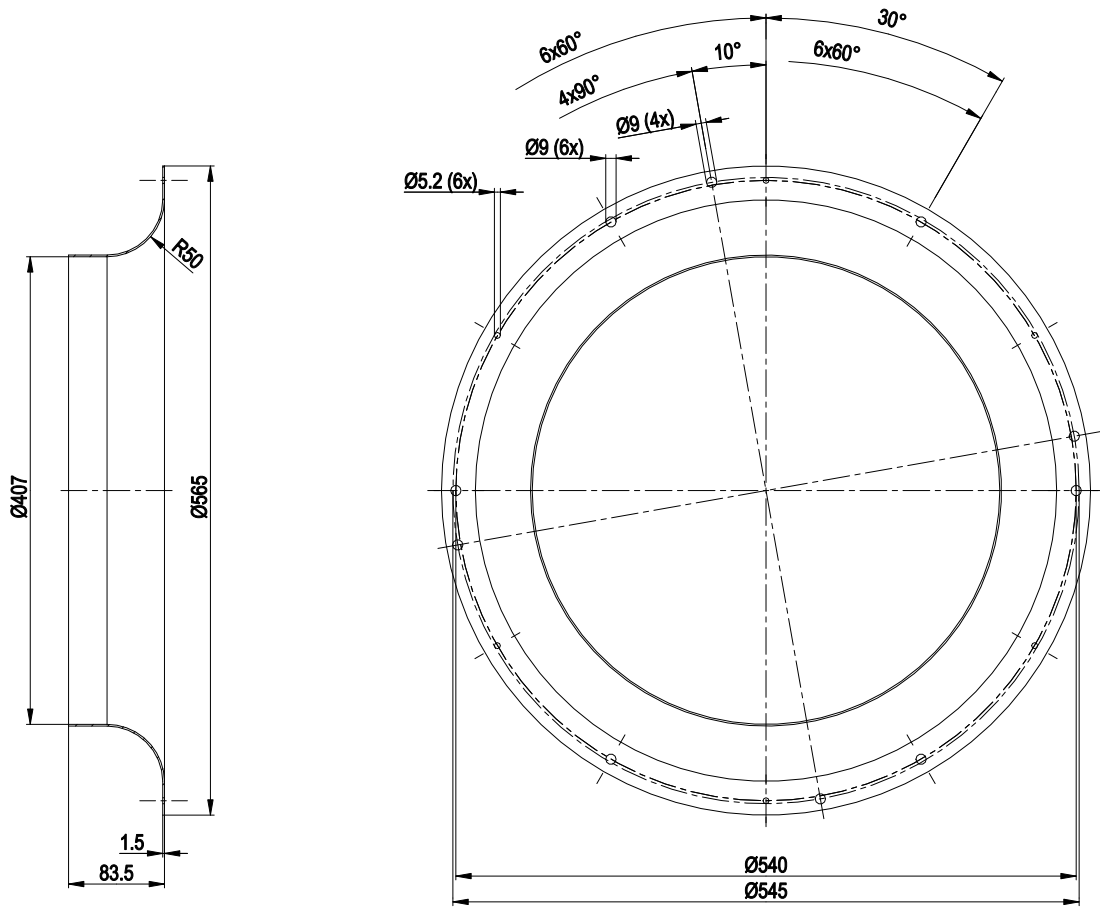
Product drawing



1	Accessory part: inlet ring 54482-2-4013 not included in scope of delivery
2	Max. clearance for screw 20 mm
3	Cable diameter min. 4 mm, max. 10 mm, tightening torque $4 \pm 0.6$ Nm
4	Cable diameter min. 9 mm, max. 16 mm, tightening torque $6 \pm 0.9$ Nm
5	Tightening torque $3.5 \pm 0.5$ Nm



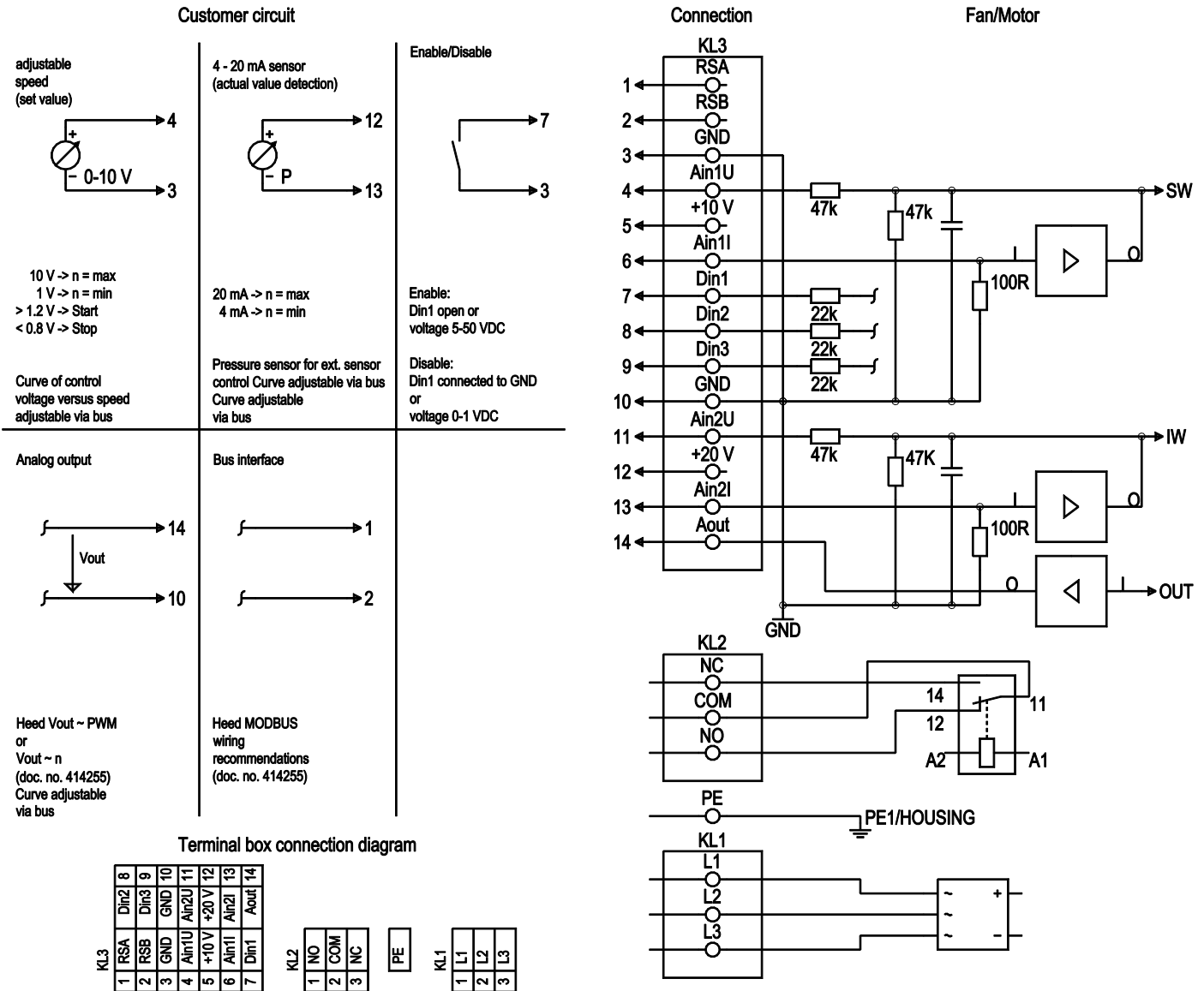
Accessory part



Accessory part: inlet ring 54482-2-4013 not included in scope of delivery



## Connection diagram

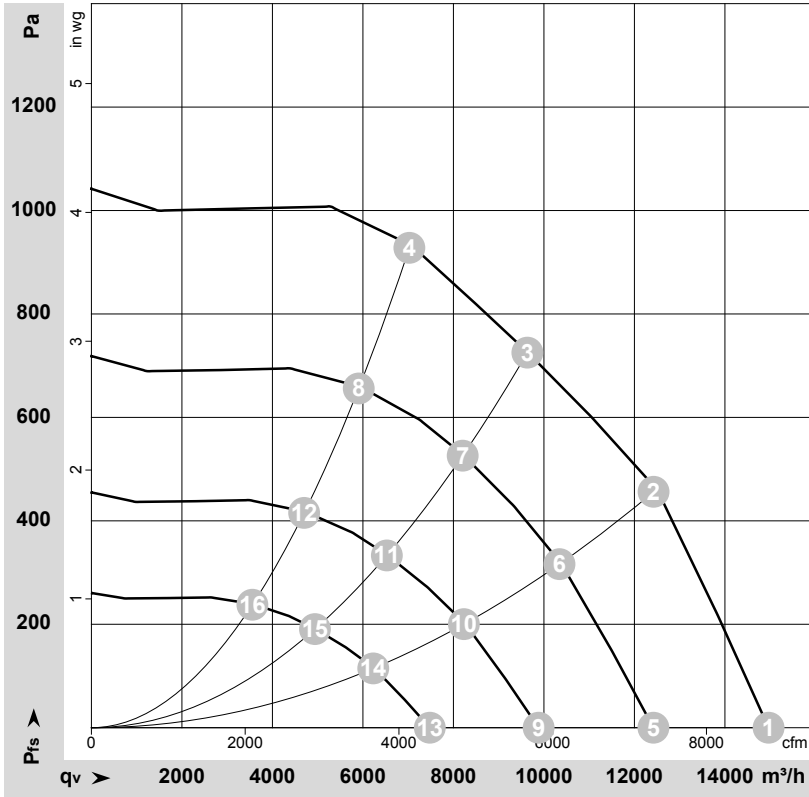


No.	Conn.	Designation	Function/assignment
KL 1	1	L1	Supply connection, power supply; for nominal voltage range see technical data
KL 1	2	L2	Supply connection, power supply; for nominal voltage range see technical data
KL 1	3	L3	Supply connection, power supply; for nominal voltage range see technical data
PE	PE	PE	Ground connection, PE connection
KL 2	1	NO	Status relay, floating status contact, make for failure
KL2	2	COM	Status relay, floating status contact, common connection, contact rating 250 VAC / 2 A (AC1) / min. 10 mA, reinforced insulation on supply side and on control interface side
KL2	3	NC	Status relay, floating status contact, break for failure
KL 3	1	RSA	Bus connection RS485, RSA, MODBUS-RTU; SELV
KL 3	2	RSB	Bus connection RS485, RSB, MODBUS-RTU; SELV
KL 3	3 / 10	GND	Reference ground for control interface; SELV
KL 3	4	Ain1 U	Analog input 1, set value: 0-10 V, Ri = 100 kΩ, adjustable curve, only usable as alternative to input Ain1 I; SELV



No.	Conn.	Designation	Function/assignment
KL 3	5	+ 10 V	Fixed voltage output 10 VDC, + 10 V +/-3%, max. 10 mA, short-circuit-proof, power supply for ext. devices (e.g. potentiometers); SELV
KL 3	6	Ain1 I	Analog input 1, set value: 4-20 mA, Ri = 100 Ω, adjustable curve, only usable as alternative to input Ain1 U; SELV
KL 3	7	Din1	Digital input 1: enable electronics, enable: pin open or applied voltage 5-50 VDC disable: bridge to GND or applied voltage < 1 VDC reset function: triggers software reset after a level change to < 1 VDC; SELV
KL 3	8	Din2	Digital input 2: Switching parameter sets 1/2, according to EEPROM setting, the valid or used parameter set can be selected via bus or via digital input DIN2. Parameter set 1: pin open or applied voltage 5-50 VDC Parameter set 2: bridge to GND or applied voltage < 1 VDC; SELV
KL 3	9	Din3	Digital input 3: according to EEPROM setting, the integrated controller's direction of action can be selected via bus or digital input Din3; normal: pin open or applied voltage 5-50 VDC inverse: bridge to GND or applied voltage < 1 VDC; SELV
KL 3	11	Ain2 U	Analog input 2, measured value: 0-10 V, Ri = 100 kΩ, adjustable curve, only usable as alternative to input Ain2 I; SELV
KL 3	12	+ 20 V	Fixed voltage output 20 VDC, +20 V +/-25/-10%, max. 50 mA, short-circuit-proof, power supply for ext. devices (e.g. sensors); SELV Alternatively: +24 VDC input for parameterization without line voltage
KL 3	13	Ain2 I	Analog input 2, measured value: 4-20 mA, Ri = 100 Ω, adjustable curve, only usable as alternative to input Ain2 U; SELV
KL 3	14	Aout	Analog output 0-10 VDC, max. 5 mA, output of current motor modulation level / motor speed adjustable curve; SELV

## Curves: Air performance 50 Hz



$\rho = 1.175 \text{ kg/m}^3 \pm 2 \%$

Measurement: LU-182950-1

Air performance measured according to ISO 5801 installation category A. For detailed information on the measurement setup, contact ebmpapst. 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 <sub>ed</sub>	I	LpA <sub>in</sub>	LwA <sub>in</sub>	LwA <sub>out</sub>	q <sub>v</sub>	p <sub>fs</sub>	q <sub>v</sub>	p <sub>fs</sub>
		V	Hz	min <sup>-1</sup>	W	A	dB(A)	dB(A)	dB(A)	m <sup>3</sup> /h	Pa	cfm	in. wg
1	Y	400	50	1710	2250	3.30	80	87	93	14970	0	8810	0.00
2	Y	400	50	1710	3120	4.50	75	82	90	12420	468	7310	1.88
3	Y	400	50	1660	3190	4.60	73	80	88	9630	725	5670	2.91
4	Y	400	50	1690	3180	4.60	75	82	89	7030	935	4140	3.75
5	Y	400	50	1420	1289	1.87	75	83	88	12420	0	7310	0.00
6	Y	400	50	1420	1788	2.60	70	77	85	10345	321	6090	1.29
7	Y	400	50	1420	1974	2.87	69	76	84	8205	528	4830	2.12
8	Y	400	50	1420	1889	2.74	71	78	85	5910	660	3475	2.65
9	Y	400	50	1130	650	0.94	70	77	82	9885	0	5815	0.00
10	Y	400	50	1130	901	1.31	64	72	79	8230	204	4845	0.82
11	Y	400	50	1130	995	1.44	63	70	78	6530	334	3845	1.34
12	Y	400	50	1130	952	1.38	65	72	79	4700	418	2765	1.68
13	Y	400	50	855	281	0.41	63	70	75	7480	0	4400	0.00
14	Y	400	50	855	390	0.57	57	65	72	6230	117	3665	0.47
15	Y	400	50	855	431	0.63	56	63	71	4940	191	2910	0.77
16	Y	400	50	855	412	0.60	58	65	72	3555	239	2095	0.96

Wired = Wiring · U = Voltage · f = Frequency · n = Speed (rpm) · P<sub>ed</sub> = Power consumption · I = Current draw · LpA<sub>in</sub> = Sound pressure level intake side · LwA<sub>in</sub> = Sound power level intake side · LwA<sub>out</sub> = Sound power level outlet side · q<sub>v</sub> = Air flow · p<sub>fs</sub> = Pressure increase

