

## ASIA PACIFIC SHENGRUI LIMITED

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## Nominal data

Type	R3G560-RB31-71	
Motor	M3G150-IF	
Phase		3~
Nominal voltage	VAC	400
Nominal voltage range	VAC	380 .. 480
Frequency	Hz	50/60
Type of data definition		ml
Speed	min <sup>-1</sup>	1650
Power input	W	2900
Current draw	A	4.43
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	55

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

Installation category	A
Efficiency category	Static
Variable speed drive	Yes
Specific ratio*	1.01

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

		Actual	Request 2013	Request 2015
Overall efficiency $\eta_{es}$	%	66.5	52.3	56.3
Efficiency grade N		72.2	58	62
Power input $P_{ed}$	kW	2.85		
Air flow $q_v$	m <sup>3</sup> /h	9375		
Pressure increase $p_{fs}$	Pa	690		
Speed n	min <sup>-1</sup>	1650		

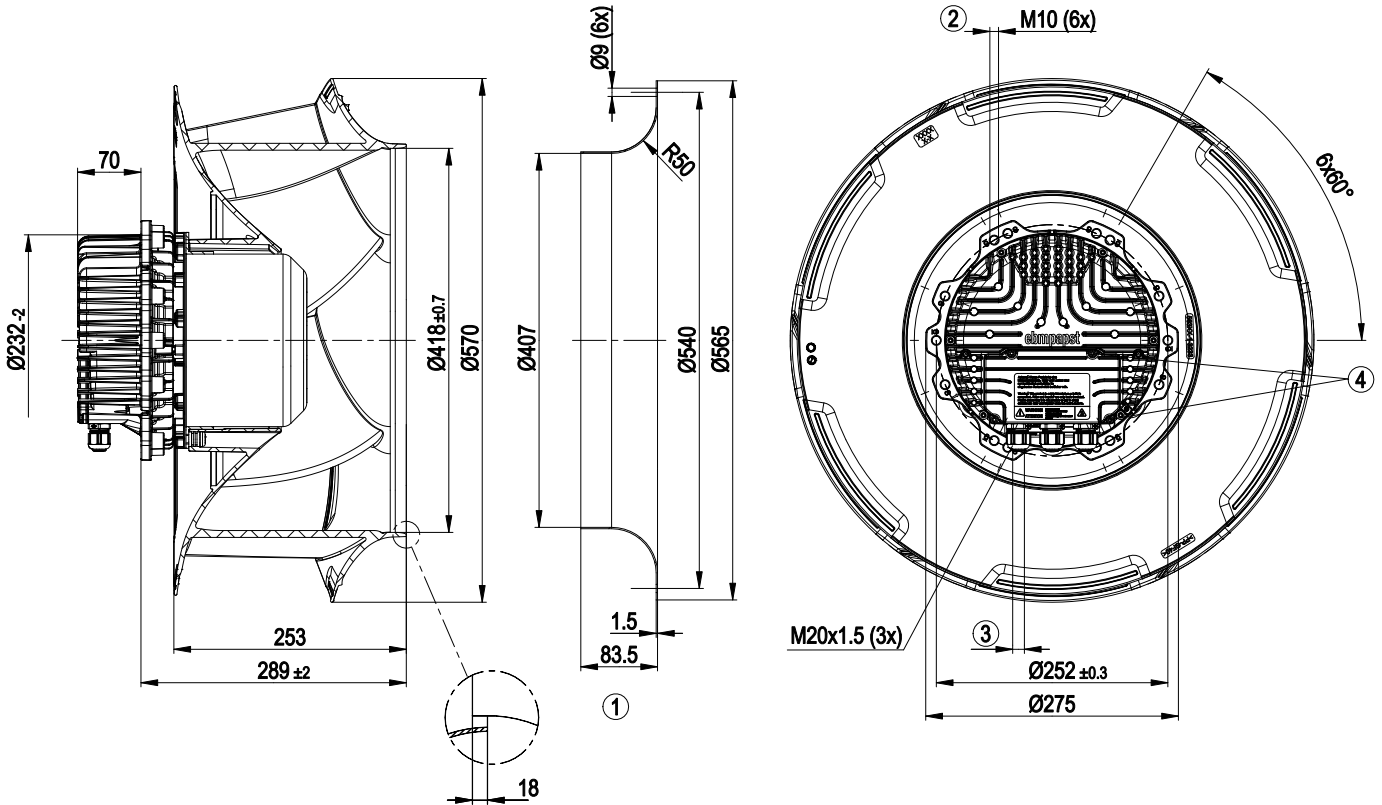
Data definition with optimum efficiency.  
The ErP data is determined using a motor-impeller combination in a standardised measurement configuration.



## Technical features

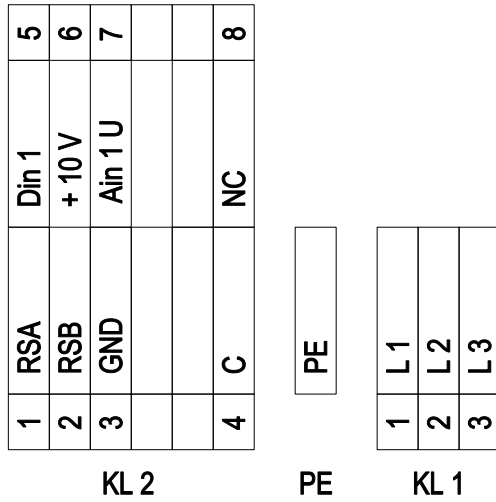
<b>Mass</b>	22.7 kg
<b>Size</b>	560 mm
<b>Surface of rotor</b>	Coated in black
<b>Material of electronics housing</b>	Die-cast aluminium
<b>Material of impeller</b>	PP plastic
<b>Number of blades</b>	6
<b>Direction of rotation</b>	Clockwise, seen on rotor
<b>Type of protection</b>	IP 54
<b>Insulation class</b>	"F"
<b>Humidity class</b>	F4-1
<b>Max. permissible ambient motor temp. (transp./ storage)</b>	+80 °C
<b>Min. permissible ambient motor temp. (transp./storage)</b>	-40 °C
<b>Mounting position</b>	Shaft horizontal or rotor on bottom; rotor on top on request
<b>Condensate discharge holes</b>	Rotor-side
<b>Operation 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>- Operation and alarm display</li> <li>- External 24 V input (programming)</li> <li>- External release input</li> <li>- Alarm relay</li> <li>- Integrated PID controller</li> <li>- Motor current limit</li> <li>- PFC, passive</li> <li>- RS485 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>- Over-temperature protected electronics / motor</li> <li>- Line undervoltage / phase failure detection</li> </ul>
<b>EMC interference immunity</b>	Acc. to EN 61000-6-2 (industrial environment)
<b>EMC interference emission</b>	Acc. to EN 55022 (Class B, household environment)
<b>Touch current acc. IEC 60990 (measuring network Fig. 4, TN system)</b>	<= 3.5 mA
<b>Electrical leads</b>	Via terminal box
<b>Motor protection</b>	Reverse polarity and locked-rotor protection
<b>Protection class</b>	I (if protective earth is connected by customer at the connection point of the housing)
<b>Product conforming to standard</b>	EN 61800-5-1; CE
<b>Approval</b>	GOST

Product drawing



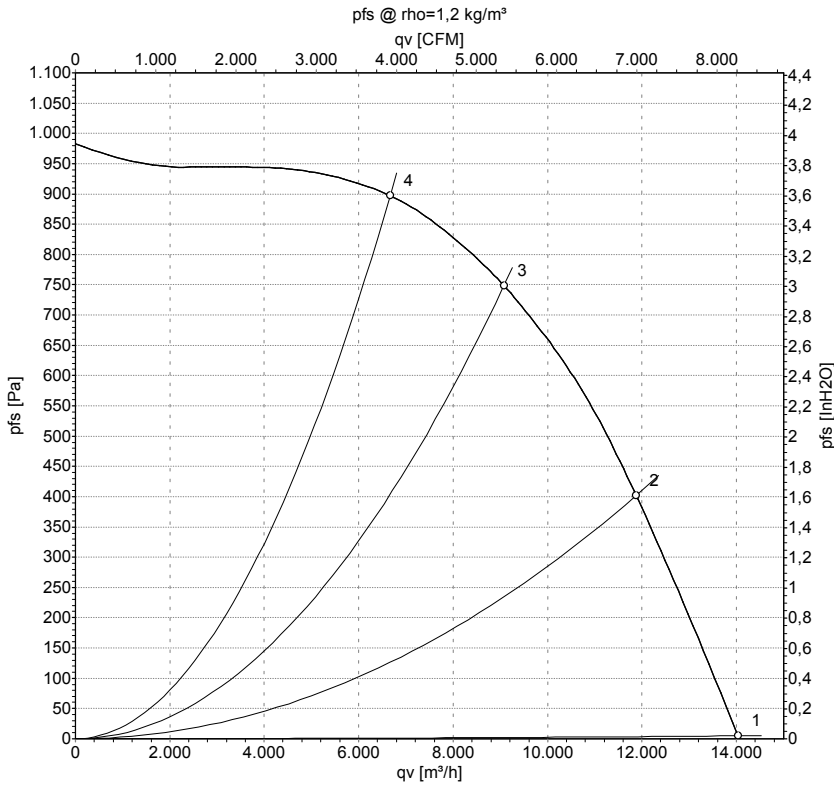
1	Accessory part: Inlet nozzle 54482-2-4013, not included in the standard scope of delivery
2	Depth of screw max. 25 mm
3	Cable diameter: min. 4 mm, max. 10 mm, tightening torque: 4 $\pm$ 0.6 Nm
4	Tightening torque 3.5 $\pm$ 0.5 Nm

## 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
KL 2	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
KL 2	7	Ain1 U	Analogue input 1 (set value) 0-10 V, Ri = 100 kΩ, parametrisable curve, only usable as alternative to input Ain1 I SELV
KL 2	8	NC	Status relay, floating status contact; break for failure

## Charts: Air flow 50 Hz



Measurement: LU-147559

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 <sub>ed</sub>	I	LwA <sub>in</sub>	qv	p <sub>fs</sub>
		V	Hz	min <sup>-1</sup>	W	A	dB(A)	m <sup>3</sup> /h	Pa
1	Y	400	50	1650	2010	3.10	87	14040	0
2	Y	400	50	1650	2630	4.10	81	11900	400
3	Y	400	50	1650	2900	4.43	77	9100	750
4	Y	400	50	1650	2770	4.30	80	6670	900

Conn. = Connection · U = Supply voltage · f = Frequency · n = Speed · P<sub>ed</sub> = Power input · I = Current draw · LwA<sub>in</sub> = Sound power level inlet side · qv = Air flow · p<sub>fs</sub> = Pressure increase

