K3G280-PS10-J3

EC centrifugal module - RadiPac

backward curved, single inlet

with support bracket

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	**K3G280-PS10-J3**	
Motor	**M3G084-FA**	
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}	3400
Power input	W	1050
Current draw	A	1.6
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}	%	67.1	51.6
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		77.5	62
05 Variable speed drive		Yes	

09 Power input P_{ed}	kW	1.02
09 Air flow q_v	m^3/h	2810
09 Pressure increase p_{fs}	Pa	808
10 Speed (rpm) n	min^{-1}	3390
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-174002

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Technical features

Mass	9.3 kg
Size	280 mm
Surface of rotor	Coated in black
Material of terminal box	PP plastic
Material of electronics housing	Die-cast aluminium, coated in black
Material of impeller	PP plastic
Material of mounting plate	Sheet steel, galvanised and coated in black
Material of support bracket	Steel, galvanised and coated in black
Material of inlet nozzle	Sheet steel, galvanised and coated in black
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)	H2+
Note ambient temperature	Occasional start-up between -40°C and -25°C is permissible. For continuous operation at ambient temperatures below -25°C (e.g. refrigeration applications) we recommend our fan version with special low-temperature bearings.
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) - Alarm relay - Integrated PID controller - 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 - 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
Protection class	I (if protective earth is connected by customer)

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Product conforming to standard	EN 61800-5-1; CE
Approval	C22.2 Nr.77 + CAN/CSA-E60730-1; UL 1004-7 + 60730

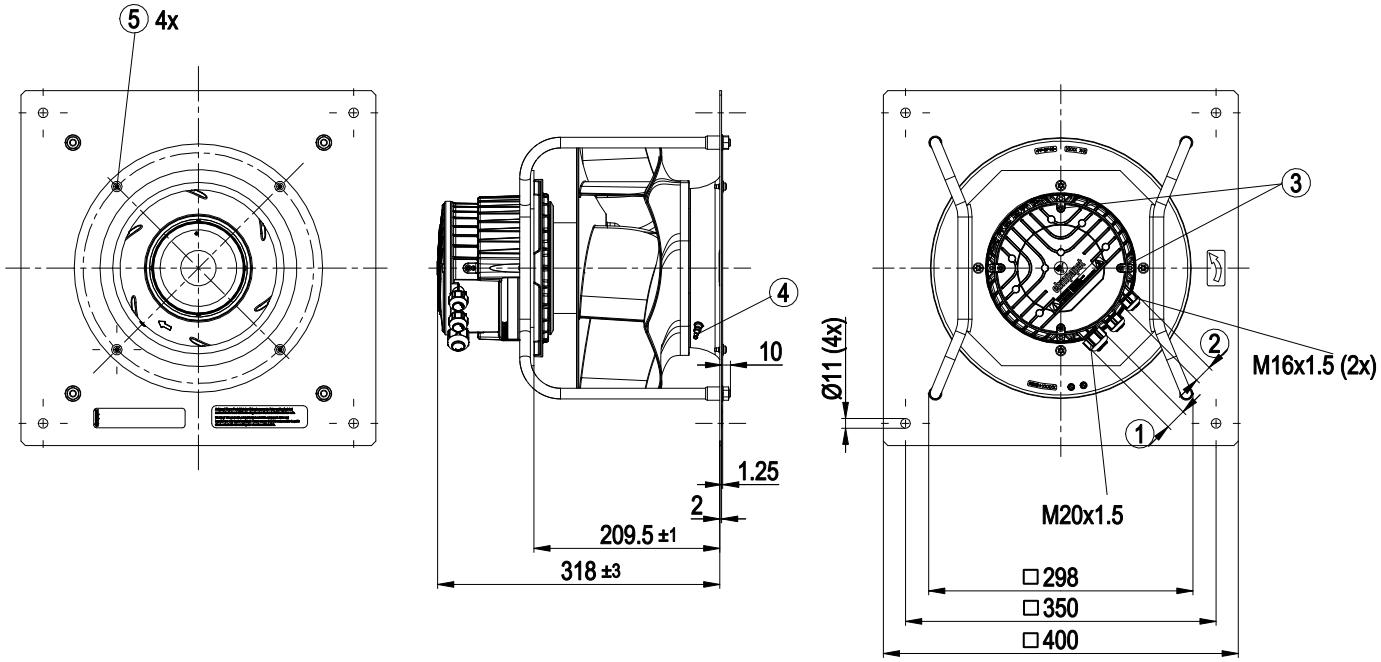
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Product drawing



1	Cable diameter min. 8 mm, max. 12 mm, tightening torque 2.5±0.4 Nm
2	Cable diameter min. 6 mm, max. 10 mm, tightening torque 2.5±0,4 Nm Cable diameter min. 4 mm, max. 7 mm, tightening torque 2.5±0.4 Nm (use must be made of sealing ring provided)
3	Tightening torque 1.5±0.2 Nm
4	Inlet nozzle with pressure tap (k-factor: 77)
5	Mounting for inlet nozzle and FlowGrid

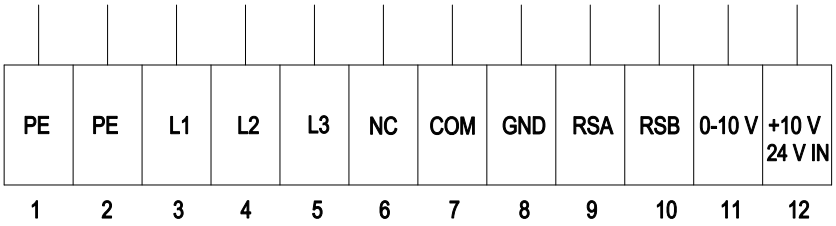
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Connection screen



No.	Conn.	Designation	Function / assignment
	1	PE	Protective earth
	2	PE	Protective earth
	3	L1	Power supply
	4	L2	Power supply
	5	L3	Power supply
	6	NC	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
	7	COM	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
	8	GND	Signal ground for control interface, SELV
	9	RSA	RS-485 interface for MODBUS, RSA; SELV
	10	RSB	RS-485 interface for MODBUS, RSB; SELV
	11	0-10 V	Analogue input (set value) SELV, 0-10 V, Ri=100kΩ, parametrisable curve
	12	+10 V	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

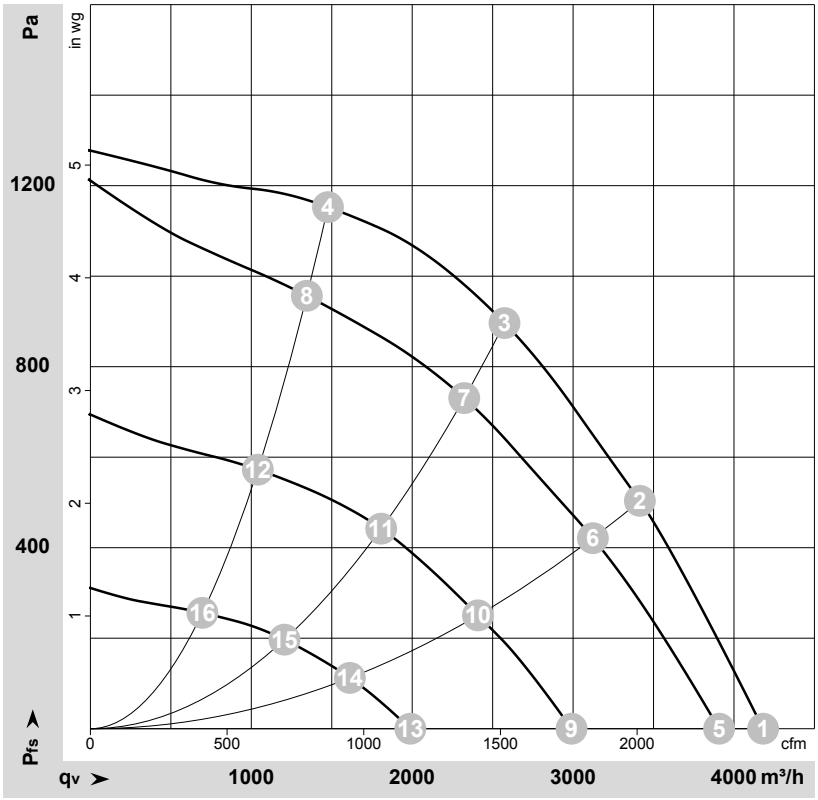
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Charts: Air flow 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-174002-1

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

	U	f	n	P_{ed}	I	LpA_{in}	LwA_{in}	q_V	p_{fs}	q_V	p_{fs}
	V	Hz	min^{-1}	W	A	dB(A)	dB(A)	m^3/h	Pa	cfm	inH2O
1	400	50	3400	743	1.17	81	88	4180	0	2460	0.00
2	400	50	3400	963	1.49	75	83	3415	500	2010	2.01
3	400	50	3400	1050	1.60	72	80	2575	900	1515	3.61
4	400	50	3400	926	1.43	76	85	1475	1150	870	4.62
5	400	50	3185	624	0.99	79	86	3905	0	2300	0.00
6	400	50	3110	717	1.12	73	80	3125	423	1840	1.70
7	400	50	3060	779	1.21	69	77	2325	732	1370	2.94
8	400	50	3110	710	1.11	74	81	1345	957	790	3.84
9	400	50	2445	295	0.54	72	79	2990	0	1760	0.00
10	400	50	2400	351	0.61	65	73	2410	251	1420	1.01
11	400	50	2380	384	0.65	61	68	1805	446	1065	1.79
12	400	50	2410	345	0.60	68	75	1040	572	615	2.30
13	400	50	1635	107	0.29	62	70	1990	0	1170	0.00
14	400	50	1615	125	0.31	56	63	1615	113	950	0.45
15	400	50	1605	134	0.33	52	59	1205	198	710	0.79
16	400	50	1615	123	0.31	55	63	695	256	410	1.03

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 · q_V = Air flow
p_{fs} = Pressure increase

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