K3G355-PG60-25

EC centrifugal module - RadiPac

backward curved, single inlet

with support bracket

K3G355-PG60-25 ebmpapst Datasheet
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Nominal data

Type	**K3G355-PG60-25**
Motor	**M3G112-EA**

Phase		1~
Nominal voltage	VAC	230
Nominal voltage range	VAC	200 .. 277
Frequency	Hz	50/60
Type of data definition		ml
Speed (rpm)	min^{-1}	2480
Power input	W	1300
Current draw	A	5.8
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	50

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}	%	64.9	52.7
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		74.2	62
05 Variable speed drive		Yes	

09 Power input P_{ed}	kW	1.31
09 Air flow q_v	m^3/h	3730
09 Pressure increase p_{fs}	Pa	761
10 Speed (rpm) n	min^{-1}	2490
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-174534

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Technical features

Mass	24.2 kg
Size	355 mm
Surface of rotor	Coated in black
Material of electronics housing	Die-cast aluminium
Material of impeller	Aluminium sheet
Material of mounting plate	Sheet steel, galvanised
Material of support bracket	Steel, coated in black
Material of inlet nozzle	Sheet steel, galvanised
Number of blades	5
Direction of rotation	Clockwise, seen on rotor
Type of protection	IP 54
Insulation class	"B"
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	Refer to product drawing
Condensate discharge holes	Rotor-side
Operation mode	S1
Motor bearing	Ball bearing
Technical features	- Output 10 VDC, max. 10 mA - Output 20 VDC, max. 50 mA - Output for slave 0-10 V - Tach output - Input for sensor 0-10 V or 4-20 mA - External 24 V input (programming) - External release input - Alarm relay - Integrated PID controller - Output limit - Motor current limit - PFC, active - 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	Thermal overload protector (TOP) wired internally
Protection class	I (if protective earth is connected by customer)
Product conforming to standard	EN 61800-5-1; CE
Approval	EAC; UL 1004-7 + 60730; C22.2 Nr.77 + CAN/CSA-E60730-1

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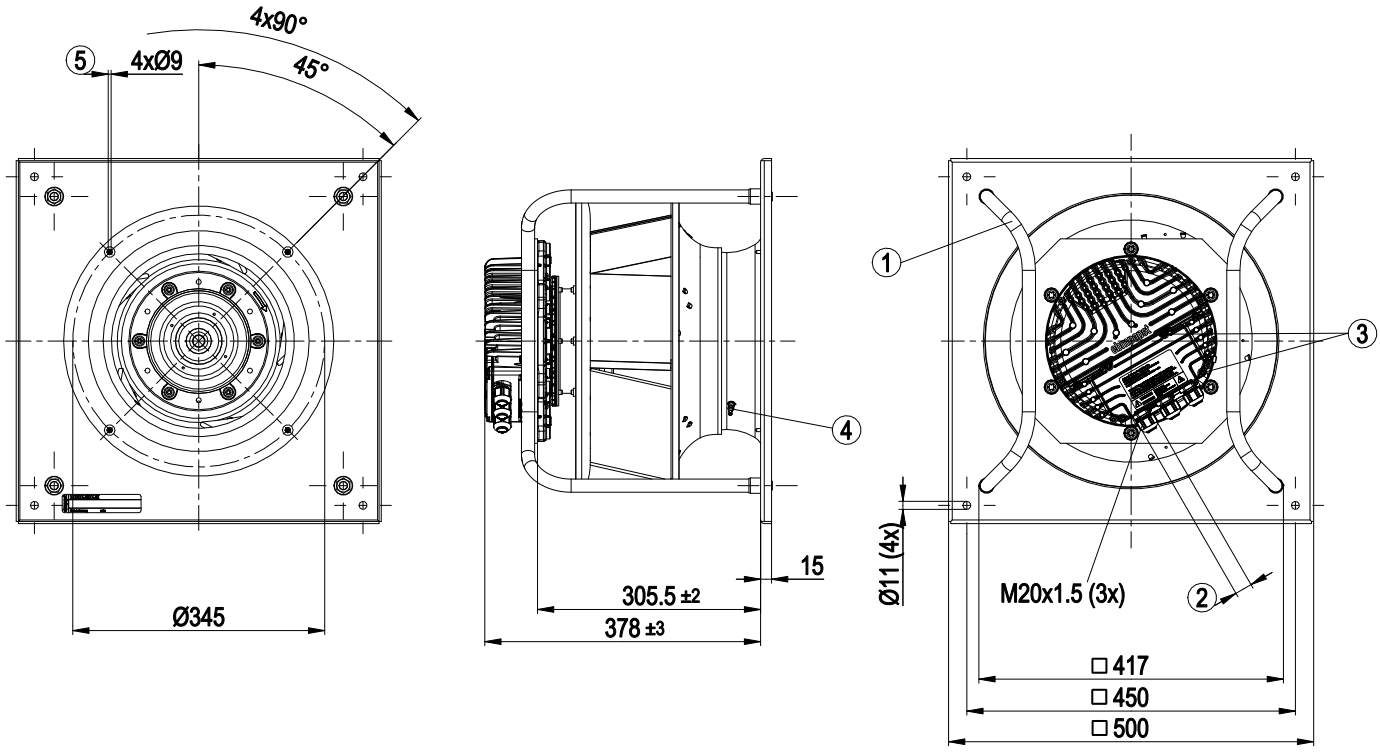
Product drawing



1	Installation position: Shaft horizontal (install the support struts only vertically as shown in the illustration!) or rotor on bottom; rotor on top on request
2	Cable diameter min. 4 mm, max. 10 mm, tightening torque 4±0.6 Nm
3	Tightening torque 3.5±0.5 Nm
4	Inlet nozzle with pressure tap (k-factor: 148)
5	Mounting holes for FlowGrid

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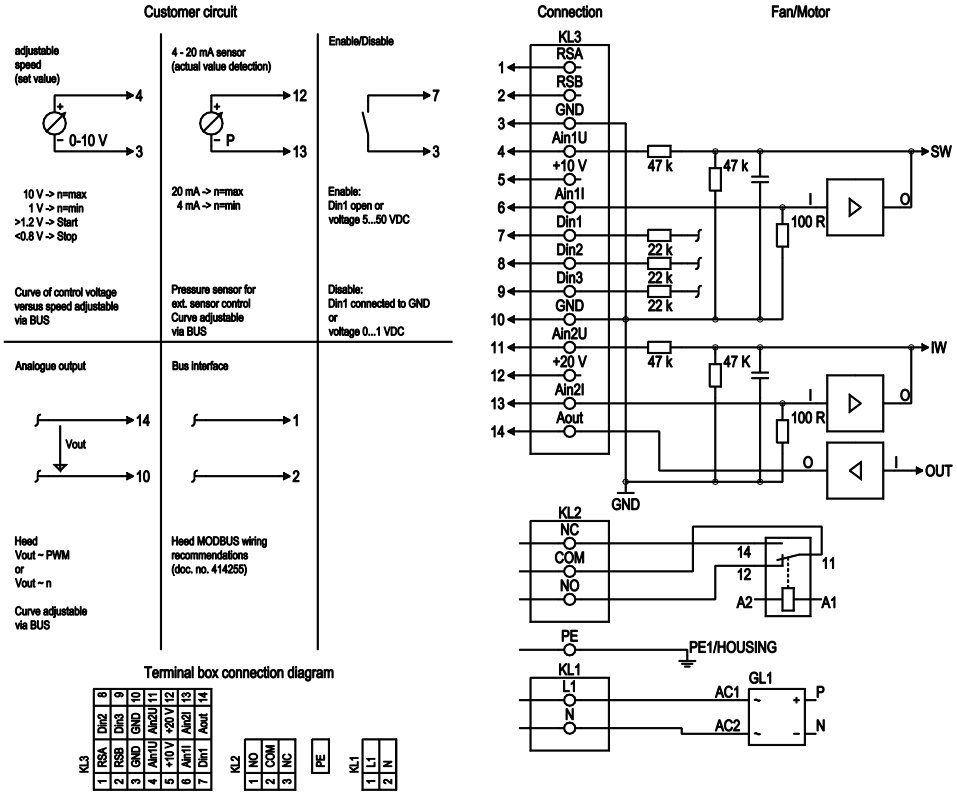
Connection screen



No.	Conn.	Designation	Function / assignment
KL1	1	L1	Power supply, phase
KL1	2	N	Power supply, neutral conductor
PE	PE	PE	Earth connection, PE connection
KL2	1	NO	Status relay, floating status contact, make for failure
KL2	2	COM	Status relay, floating status contact, changeover contact, common connection, contact rating, max. 250 VAC/2 A (AC1)/min. 10 mA
KL2	3	NC	Status relay, floating status contact, break for failure
KL3	1	RSA	Bus connection RS-485, RSA, MODBUS RTU; SELV
KL3	2	RSB	Bus connection RS-485, RSB, MODBUS RTU; SELV
KL3	3	GND	Signal ground for control interface, SELV
KL3	4	Ain1 U	Analogue input 1, set value: 0-10 V, Ri = 100 kΩ, parametrisable curve, only for use as alternative to input Ain1; SELV
KL3	5	+10 V	Fixed voltage output 10 VDC, +10 V +/-3 %, max. 10 mA, short-circuit-proof, power supply for ext. devices (e.g. potentiometer); SELV
KL3	6	Ain1 I	Analogue input 1, set value: 4-20 mA; Ri = 100 Ω, parametrisable curve, only for use as alternative to input Ain1 U; SELV
KL3	7	Din1	Digital input 1: Enabling of electronics, Enabling: Pin open 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 VDC; SELV
KL3	8	Din2	Digital input 2: Parameter set 1/2 switching, depending on EEPROM setting, the valid/used parameter set can be selected via the bus or via the 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

No.	Conn.	Designation	Function / assignment
KL3	9	Din3	Digital input 3: Controller function of integrated controller, depending on EEPROM setting, the controller function of the integrated controller can be selected via the bus or the digital input Din 3 normal: pin open or applied voltage 5-50 VDC inverse: bridge to GND or applied voltage <1 VDC; SELV
KL3	10	GND	Signal ground for control interface, SELV
KL3	11	Ain2 U	Analogue input 2, actual value: 0-10 V, Ri = 100 kΩ, parametrisable curve, only usable as alternative to input Ain2; SELV
KL3	12	+20 V	Fixed voltage output 20 VDC, +20 V +25/-10%, max. 50 mA, short-circuit-proof power supply for external devices (e.g. sensors); SELV Alternatively: +24 V DC input for parametrisation via MODBUS without mains power
KL3	13	Ain2 I	Analogue input 2, actual value: 4-20 mA, Ri = 100 Ω, parametrisable curve, only for use as alternative to input Ain2 U; SELV
KL3	14	Aout	Analogue output 0-10 VDC, max. 5 mA, output of the current motor level control coefficient / motor speed parametrisable curve; SELV

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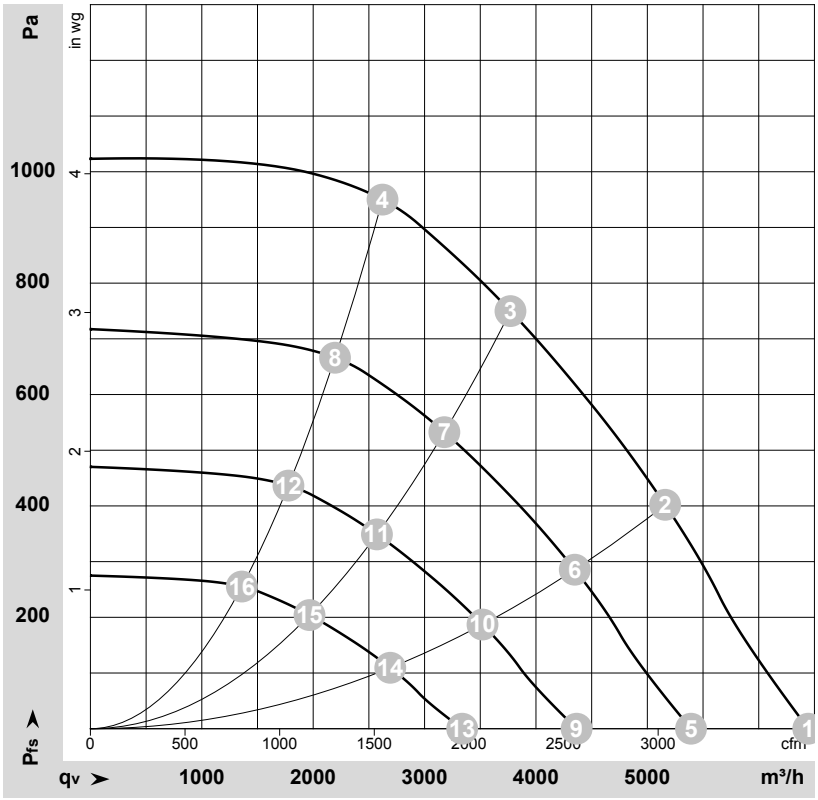
Charts: Air flow 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-174534-1

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}	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	230	50	2480	725	3.19	79	86	89	6445	0	3795	0.00
2	230	50	2480	1101	4.80	72	80	84	5160	400	3035	1.61
3	230	50	2480	1300	5.80	70	77	82	3770	750	2220	3.01
4	230	50	2480	1277	5.57	74	81	86	2620	950	1545	3.81
5	230	50	2100	425	1.87	75	82	85	5390	0	3175	0.00
6	230	50	2100	659	2.87	68	76	80	4350	285	2560	1.14
7	230	50	2100	786	3.43	66	73	78	3180	533	1870	2.14
8	230	50	2100	750	3.27	70	76	81	2195	675	1295	2.71
9	230	50	1700	225	0.99	69	76	79	4365	0	2570	0.00
10	230	50	1700	350	1.52	63	70	75	3520	187	2070	0.75
11	230	50	1700	417	1.82	61	68	72	2570	349	1515	1.40
12	230	50	1700	398	1.74	64	71	76	1780	442	1045	1.77
13	230	50	1300	101	0.44	62	70	73	3340	0	1965	0.00
14	230	50	1300	156	0.68	56	64	68	2690	109	1585	0.44
15	230	50	1300	187	0.81	54	61	66	1965	204	1160	0.82
16	230	50	1300	178	0.78	57	64	69	1360	259	800	1.04

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