K3G450-AR36-15

EC centrifugal module

backward curved, single inlet

with support plate

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Nominal data

Type	**K3G450-AR36-15**
Motor	**M3G150-FF**

Phase		3~
Nominal voltage	VAC	200
Nominal voltage range	VAC	200 .. 240
Frequency	Hz	50/60
Type of data definition		ml
State		prelim.
Speed (rpm)	min^{-1}	3250
Power input	W	5180
Current draw	A	16.5
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

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Technical features

Mass	48.7 kg
Size	450 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 distancing profiles	Aluminium
Material of inlet nozzle	Sheet steel, galvanised
Number of blades	7
Direction of rotation	Clockwise, seen on rotor
Type of protection	IP 20
Insulation class	"F"
Humidity (F)/environmental protection class (H)	F0
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
Cooling bore / aperture	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 - Input for sensor 0-10 V or 4-20 mA - 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	C22.2 Nr.77 + CAN/CSA-E60730-1; UL 1004-7 + 60730

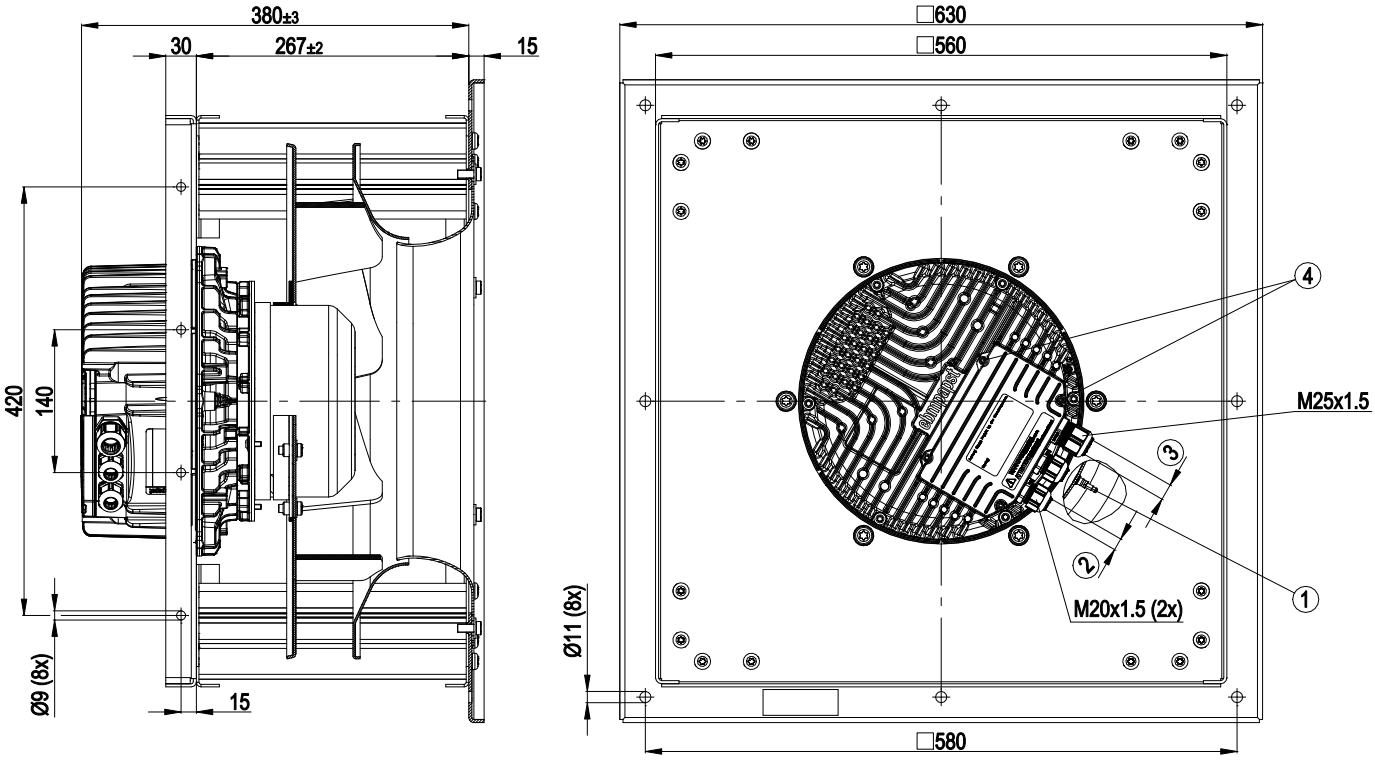
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Product drawing



1	Inlet nozzle with bleeder connection for pressure relief (k-factor: 225)
2	Cable diameter: min. 4 mm, max. 10 mm; tightening torque: 4 Nm±0.6 Nm
3	Cable diameter: min. 9 mm, max. 16 mm; tightening torque: 6 Nm±0.9 Nm
4	Tightening torque 3.5 Nm±0.5 Nm

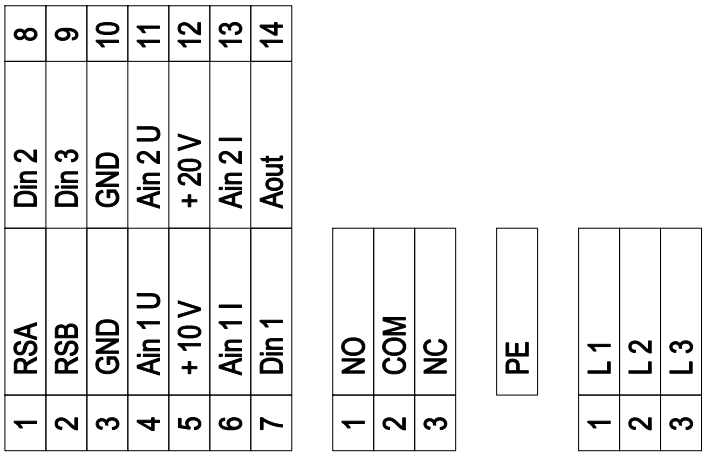
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Connection screen



No.	Conn.	Designation	Function / assignment
KL 1	1	L1	Mains supply connection, supply voltage 3~200-240 VAC; 50/60 Hz
KL 1	2	L2	Mains supply connection, supply voltage 3~200-240 VAC; 50/60 Hz
KL 1	3	L3	Mains supply connection, supply voltage 3~200-240 VAC; 50/60 Hz
PE		PE	Earth connection, PE connection
KL 2	1	NO	Status relay, floating status contact; normally open; close with error
KL2	2	COM	Status relay; floating status contact; changeover contact; common connection; contact rating 250 VAC / max. 2 A (AC1) / min. 10 mA
KL2	3	NC	Status relay, floating status contact; break with error
KL 3	1	RSA	Bus connection RS-485, RSA, MODBUS RTU; SELV
KL 3	2	RSB	Bus connection RS-485, RSB, MODBUS RTU; SELV
KL 3	3 / 10	GND	Signal ground for control interface; SELV
KL 3	4	Ain1 U	Analogue input 1, set value: 0-10 V, Ri = 100 kΩ, parametrisable curve, only usable as alternative to input Ain1; SELV
KL 3	5	+ 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 3	6	Ain1 I	Analogue input 1, set value: 4-20 mA; Ri = 100 Ω, parametrisable curve, only usable as alternative to input Ain1 U; SELV
KL 3	7	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 VDC; SELV
KL 3	8	Din2	Digital input 2: parameter set switch 1/2, according to EEPROM setting, the valid/used parameter set can be selected via bus or via digital input DIN2. Parameter set 1: open pin 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: controller function of integrated controller, according to EEPROM setting, the controller function of the integrated controller is normally/inversely selectable per bus or per digital input normal: open pin or applied voltage 5-50 VDC inverse: bridge to GND or applied voltage <1 VDC; SELV
KL 3	11	Ain2 U	Analogue input 2, actual value: 0-10 V, Ri = 100 kΩ, parametrisable curve, only usable as alternative to input Ain2; SELV
KL 3	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

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No.	Conn.	Designation	Function / assignment
KL 3	13	Ain2 I	Analogue input 2, actual value: 4-20 mA, Ri = 100 Ω, parametrisable curve, only usable as alternative to input Ain2 U; SELV
KL 3	14	Aout	Analogue output 0-10 VDC, max. 5 mA, output of the current motor level control coefficient / motor speed parametrisable curve; SELV

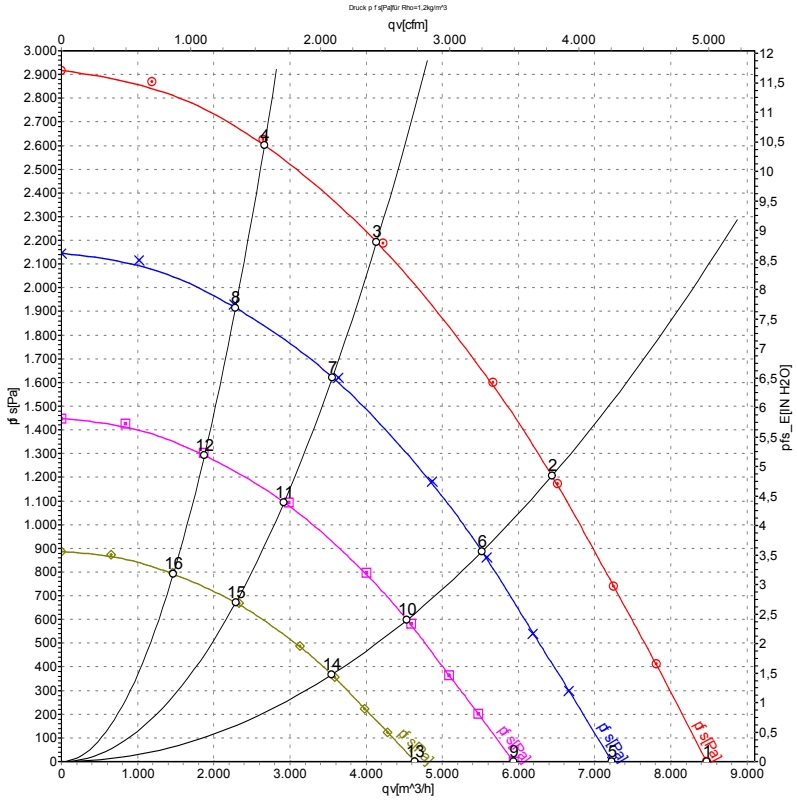
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Charts: Air flow 50 Hz



Measurement: LU-125820-1

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}	qv	p_{fs}	qv	p_{fs}
	V	Hz	min^{-1}	W	A	dB(A)	dB(A)	dB(A)	m^3/h	Pa	CFM	inH2O
1	200	50	3250	2875	8.92	88	99	104	8470	0	4985	0.00
2	200	50	3250	4408	13.72	84	93	100	6440	1200	3790	4.82
3	200	50	3250	5180	16.50	86	94	100	4135	2200	2435	8.83
4	200	50	3250	4881	15.25	91	99	103	2665	2600	1565	10.44
5	200	50	2800	1782	5.53	85	96	101	7225	0	4250	0.00
6	200	50	2800	2780	8.65	81	90	97	5520	891	3250	3.58
7	200	50	2800	3291	10.28	83	91	97	3560	1638	2095	6.58
8	200	50	2800	3079	9.62	88	96	99	2285	1927	1345	7.74
9	200	50	2300	987	3.06	81	92	96	5935	0	3490	0.00
10	200	50	2300	1541	4.80	76	86	92	4535	601	2670	2.41
11	200	50	2300	1824	5.70	78	86	93	2925	1105	1720	4.44
12	200	50	2300	1707	5.33	83	91	95	1875	1300	1105	5.22
13	200	50	1800	473	1.47	75	86	91	4645	0	2735	0.00
14	200	50	1800	738	2.30	71	80	87	3550	368	2090	1.48
15	200	50	1800	874	2.73	73	81	87	2285	677	1345	2.72
16	200	50	1800	818	2.56	78	86	90	1470	796	865	3.20

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

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