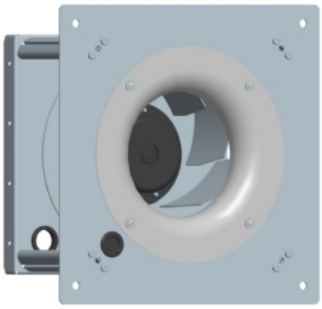
K3G500-AQ12-04

EC centrifugal module - Plug Fan

backward curved, single inlet

with support plate



K3G500-AQ12-04 ebmpapst Datasheet
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Nominal data

Type	**K3G500-AQ12-04**	
Motor	**M3G150-IF**	
Phase		3~
Nominal voltage	[VAC]	400
Nominal voltage range	[VAC]	380 .. 480
Frequency	[Hz]	50/60
Type of data definition		ml
State		prelim.
Speed	[min^{-1}]	2000
Power input	[W]	4300
Current draw	[A]	6,6
Min. ambient temperature	[°C]	-25
Max. ambient temperature	[°C]	+40
Air flow	[m^3/h]	8700
Back pressure	[Pa]	1090
Sound power level	[dB(A)]	84
Sound pressure level	[dB(A)]	77

ml = max. load · me = max. efficiency · rfa = running at free air · cs = customer specs · cu = customer unit
Subject to alterations

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Technical features

Leackage current	<= 3,5 mA
Size	500 mm
Line	Plug fans
Operation mode	S1
Direction of rotation	Clockwise, seen on rotor
Mounting position	Shaft horizontal or rotor on bottom
Electrical leads	Via terminal box
EMC interference emission	Acc. to EN 61000-6-3
EMC interference immunity	Acc. to EN 61000-6-2
Insulation class	"F"
Condensate discharge holes	Rotor-side
Bearing motor	Ball bearing
Mass	60.5 kg
Material of distancing profiles	Aluminium
Material of electronics housing	Die-cast aluminium
Material of impeller	Sheet aluminium, laser-welded
Material of mounting plate	Sheet steel, hot-galvanised; aluminium spacer profiles
Motor protection	Reverse polarity and locked-rotor protection
Product conforming to standard	EN 61800-5-1
Surface of rotor	Coated in black
Number of blades	7
Type of protection	IP 54
Protection class	I
Technical features	- PFC, passive - Control input 0-10 VDC / PWM - Output 10 VDC, max. 10 mA - Over-temperature protected electronics / motor - Alarm relay - Integrated PID controller - Input for sensor 0-10 V or 4-20 mA - Output for slave 0-10 V - Output 20 VDC, max. 50 mA - RS485 ebmBUS - Motor current limit - Soft start - Line undervoltage / phase failure detection
Max. permissible ambient motor temp. (transp./ storage)	+80 °C
Min. permissible ambient motor temp. (transp./storage)	-40 °C

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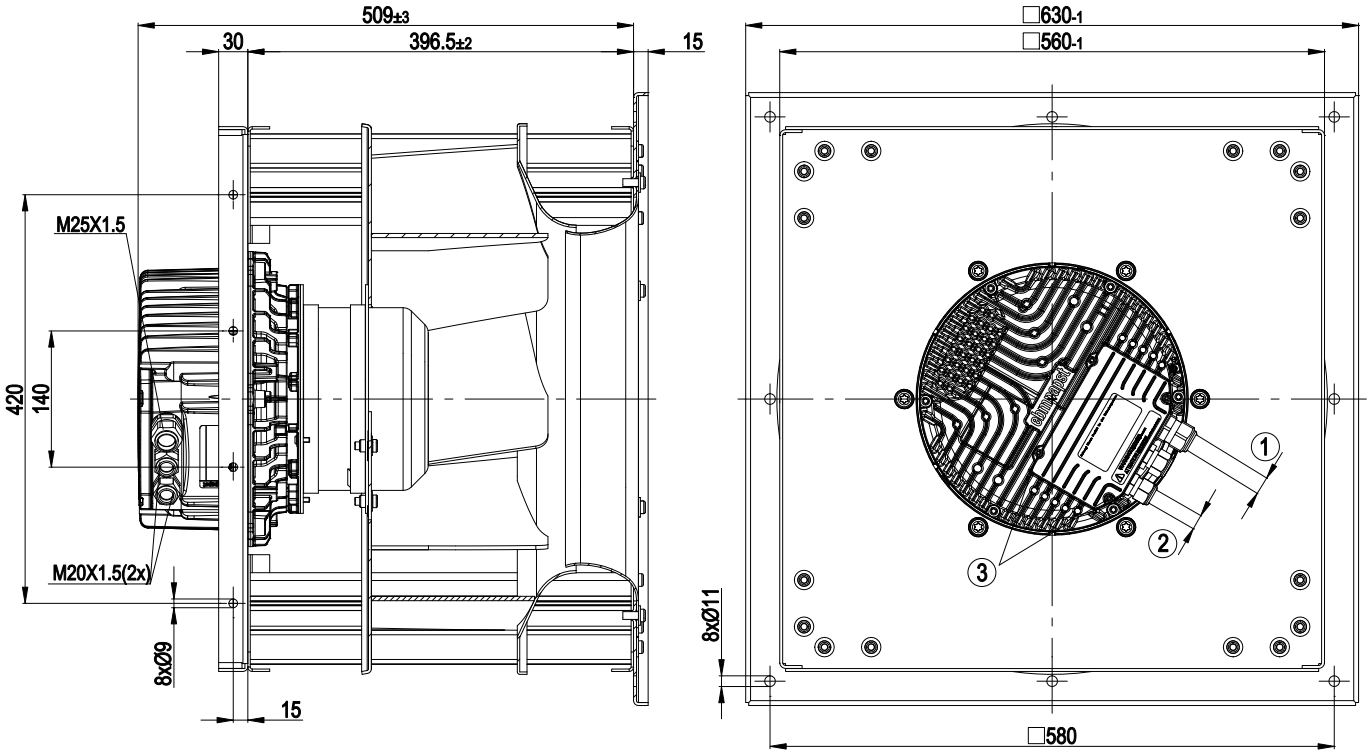
Product drawing



1	Cable diameter: min. 9 mm, max. 16 mm; tightening torque: 6±0.6 Nm
2	Cable diameter: min. 4 mm, max. 10 mm; tightening torque: 4±0.4 Nm
3	Tightening torque 3.5±0.5 Nm

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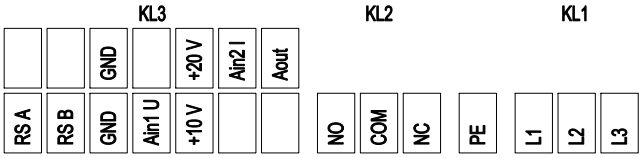
Connection screen



No.	Pin	Signal	Function / assignment
PE		PE	Ground wire
KL1		L3	Power line, L3
KL1		L2	Power line, L2
KL1		L1	Power line, L1
KL2		NC	Alarm relay, normally closed connection
KL2		COM	Alarm relay, COMMON (2 A, 250 VAC, AC1)
KL2		NO	Alarm relay, normally open connection
KL3		+10 V	Supply for external potentiometer, 10 VDC(+/-3 %) max. 10 mA
KL3		Ain1U	Analogue set value input, 0-10 V (impedance 100 kΩ), can be used as an alternative to connection Ain2 I only
KL3		GND	GND
KL3		RSB	RS485 interface for ebmBus, RS B
KL3		RSA	RS485 interface for ebmBus, RS A
KL3		Aout	Analog output 0-10 V max. 5 mA, output of the current level control coefficient
KL3		Ain2 I	Analogue actual value input, 4-20 mA (impedance 100 Ω), can be used only as an alternative to connection Ain1 U only
KL3		+20 V	Supply for external sensor, 20 VDC (+25 %/-10 %) max. 40 mA
KL3		GND	GND

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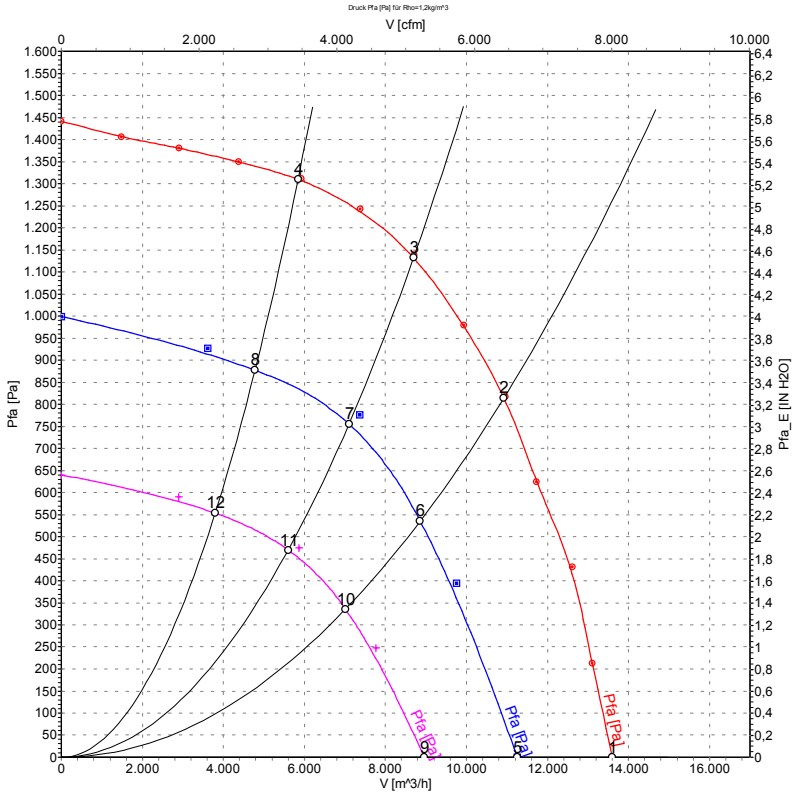
Charts: Air flow 50 Hz



Measurement: LU-109096
Measurement: LU-117418
Measurement: LU-117419

Measured values

	U	f	n	P_1	I	LpA_{ss}	LwA_{ss}	η_{TL}	$\dot{V}$	p_{fa}
	[V]	[Hz]	[min^{-1}]	[W]	[A]	[dB(A)]	[dB(A)]	[%]	[m^3/h]	[Pa]
1	400	50	2000	2683	4.07	89	98	22	13600	0
2	400	50	2000	4038	6.15	80	87	75	10930	822
3	400	50	2000	4271	6.52	77	84	78	8695	1140
4	400	50	2000	3813	5.79	80	87	64	5845	1313
5	400	50	1660	1509	2.33	84	92	22	11250	0
6	400	50	1660	2042	3.13	75	82	75	8860	538
7	400	50	1660	2233	3.41	73	79	78	7100	786
8	400	50	1660	2001	3.07	76	82	64	4780	879
9	400	50	1320	801	1.32	77	85	22	8960	0
10	400	50	1320	1067	1.71	69	76	75	7015	337
11	400	50	1320	1134	1.80	67	74	78	5600	485
12	400	50	1320	1033	1.66	68	75	64	3795	555