

EC axial fan

sickled blades (S series)
with guard grille for short nozzle

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Nominal data

Type	S3G500-AE33-01	
Motor	M3G112-GA	
Phase		3~
Nominal voltage	[VAC]	400
Nominal voltage range	[VAC]	380 .. 480
Frequency	[Hz]	50/60
Type of data definition		ml
Speed	[min ⁻¹]	1440
Power input	[W]	1050
Current draw	[A]	1,9
Min. ambient temperature	[°C]	-25
Max. ambient temperature	[°C]	60
Air flow	[m ³ /h]	7230
Back pressure	[Pa]	174
Sound pressure level	[dB(A)]	75

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

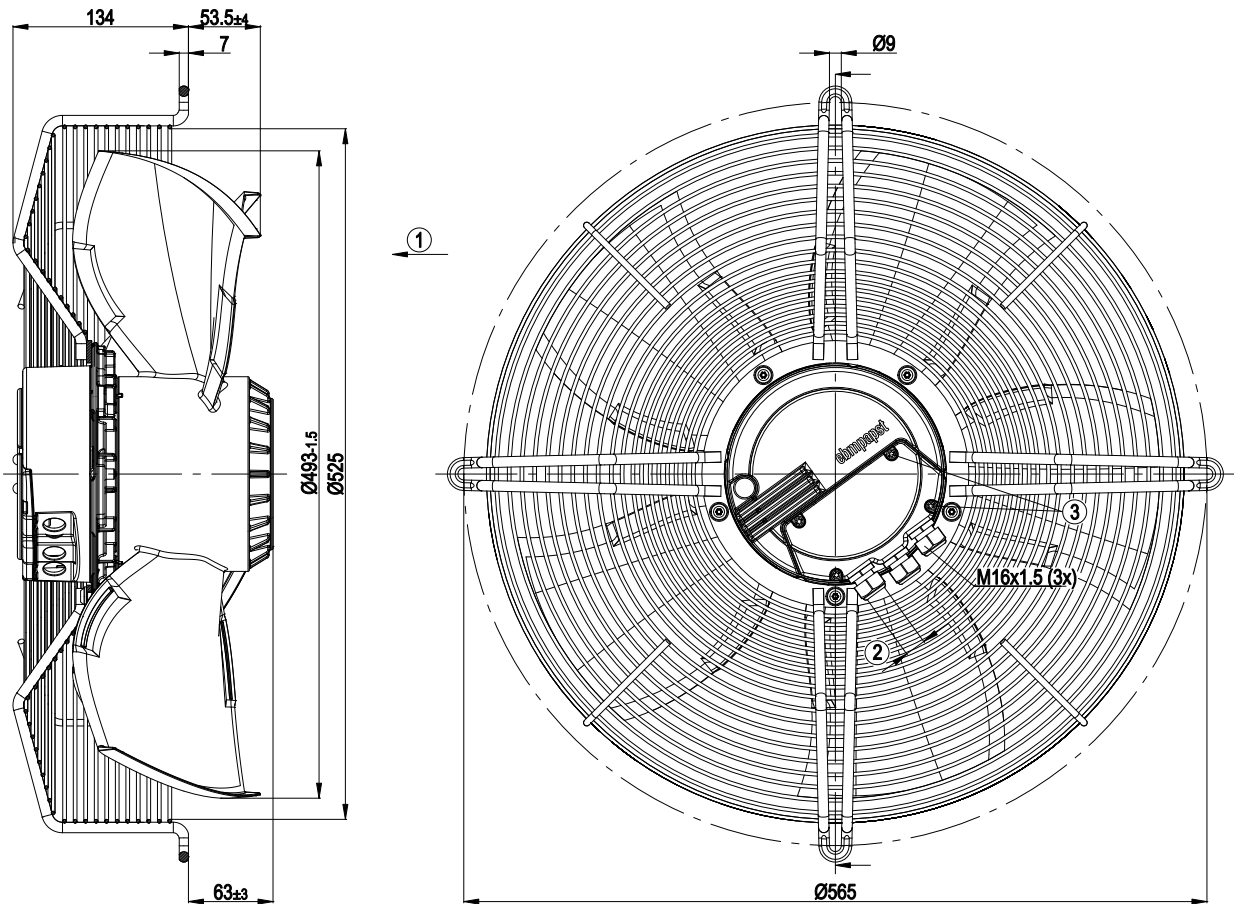
Technical features

Leakage current	<= 3,5 mA
Size	500 mm
Operation mode	S1
Direction of rotation	"V"
Mounting position	Shaft horizontal or rotor on bottom; rotor on top on request
Electrical leads	Via terminal box
EMC harmonics	Acc. to EN 61000-3-2/3
EMC interference emission	Acc. to EN 61000-6-3
EMC interference immunity	Acc. to EN 61000-6-2
Insulation class	"B"
Condensate discharge holes	Rotor-side
Bearing motor	Ball bearing
Mass	12.4 kg
Material of electronics housing	Die-cast aluminium, coated in black
Material of guard grille	Steel, phosphated and coated in black plastic
Motor protection	Thermal overload protector (TOP) wired internally
Surface of rotor	Cast in PA plastic
Number of blades	5
Type of protection	IP 54
Protection class	I
Technical features	- PFC, passive - Control input 0-10 VDC / PWM - Over-temperature protected electronics / motor - Alarm relay - Integrated PID controller - Input for sensor 0-10 V and 4-20 mA - Output for slave 0-10 V max. 3 mA - Output 20 VDC (+25 %/-10 %) max. 50 mA - Output 10 VDC (+/-3 %) max. 10 mA - RS485 ebmBUS - Motor current limit - Soft start - Under-voltage detection / 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



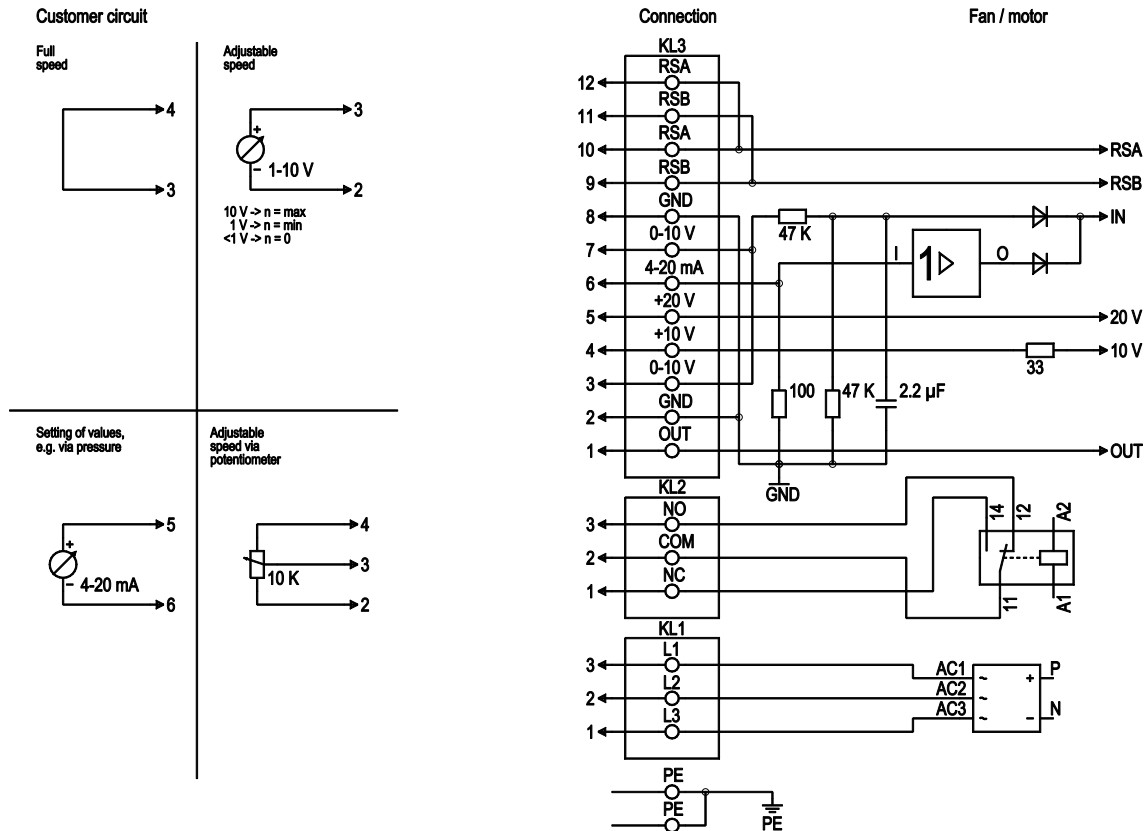
1	Direction of air flow "V"
2	Cable diameter: min. 4 mm; max. 10 mm; tightening torque: 2±0.2 Nm
3	Tightening torque 3.5±0.5 Nm

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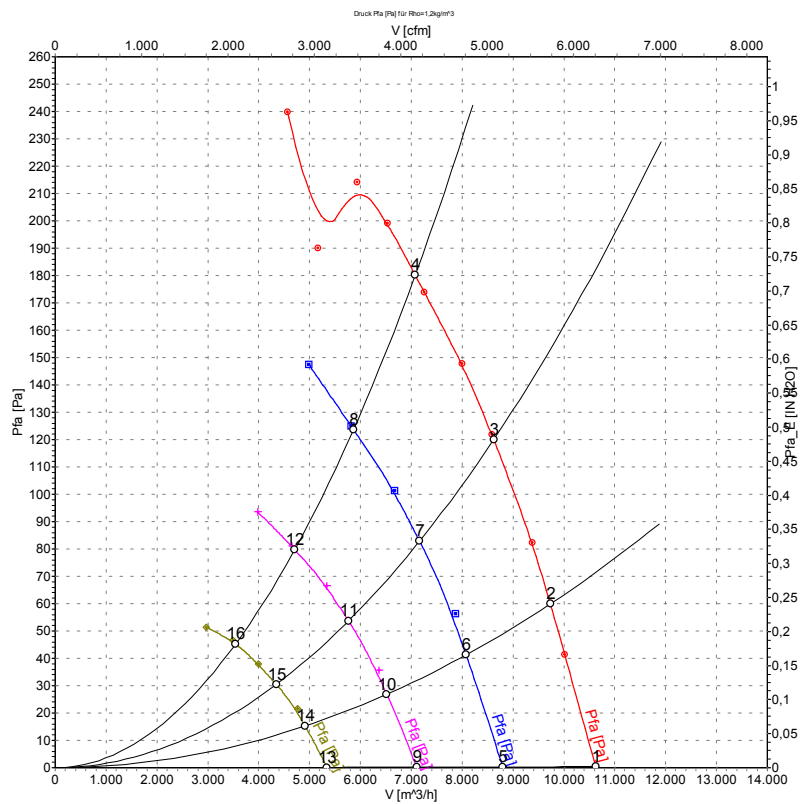
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Connection screen



No.	Pin	Signal	Function / assignment
PE		PE	Protective earth connection
KL1	1, 2, 3	L1, L2, L3	Supply voltage, 50/60 Hz
KL2	1	NC	Floating status message contact, normally closed connection
KL2	2	COM	Floating status message contact, changeover contact, common connection (2 A, max. 250 VAC, min. 10 mA, AC1)
KL2	3	NO	Floating status message contact, normally open connection
KL3	1	OUT	Analog output, 0-10 VDC, max. 3 mA, SELV, output of the current level control coefficient: 1 V equates to 10% level control coefficient. 10 V equate to 100% level control coefficient.
KL3	2, 8	GND	Reference mass for control interface, SELV
KL3	3, 7	0-10 V	Use control / actual value input 0-10 VDC, impedance 100 kΩ only as alternative to 4-20 mA input, SELV
KL3	4	+10 V	Voltage output 10 VDC (+/-3%), max. 10 mA, supply voltage for external devices (e.g. potentiometers), SELV
KL3	5	+20 V	Voltage output 20 VDC (+25%/-10%), max. 50 mA, supply voltage for external devices (e.g. sensors), SELV
KL3	6	4-20 mA	Use control / actual value input 4-20 mA, impedance 100 Ω, only as alternative to 0-10 V input, SELV
KL3	9, 11	RSB	RS485 interface for ebmBus, RSB, SELV
KL3	10, 12	RSA	RS485 interface for ebmBus, RSA, SELV

Charts: Air flow 50 Hz



Measurement: LU-102191
 Measurement: LU-120643
 Measurement: LU-120644
 Measurement: LU-120645

Measured values

	U	f	n	P ₁	I	LpA _{ss}	LpA _{ds}	LwA _{ss}	η _{TL}	$\dot{V}$	p _{fa}
	[V]	[Hz]	[min ⁻¹]	[W]	[A]	[dB(A)]	[dB(A)]	[dB(A)]	[%]	[m ³ /h]	[Pa]
1	400	50	1450	918	1.48	72	66	77	80	10630	0
2	400	50	1450	979	1.56	73	66	79	78	9735	60
3	400	50	1450	1030	1.64	74	67	80	72	8620	120
4	400	50	1450	1051	1.85	75	68	82	62	7075	180
5	400	50	1195	499	0.92	67	62	73	84	8790	0
6	400	50	1195	539	0.97	68	61	74	82	8080	44
7	400	50	1195	562	1.01	69	61	75	76	7165	83
8	400	50	1195	567	1.02	70	62	76	65	5865	124
9	400	50	960	267	0.54	61	56	68	88	7105	0
10	400	50	960	286	0.57	61	55	69	86	6515	29
11	400	50	960	303	0.61	62	55	70	78	5765	54
12	400	50	960	312	0.62	63	56	71	66	4710	80
13	400	50	720	125	0.30	52	47	60	90	5345	0
14	400	50	720	133	0.31	53	47	61	87	4910	16
15	400	50	720	140	0.32	53	47	61	81	4345	30
16	400	50	720	141	0.32	54	48	62	70	3545	46