EC centrifugal fan - Plug fan

backward curved, single inlet

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Nominal data

Type	R3G450-AZ26-03	
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}]	2750
Power input	[W]	5370
Current draw	[A]	8,3
Min. ambient temperature	[°C]	-25
Max. ambient temperature	[°C]	+40

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

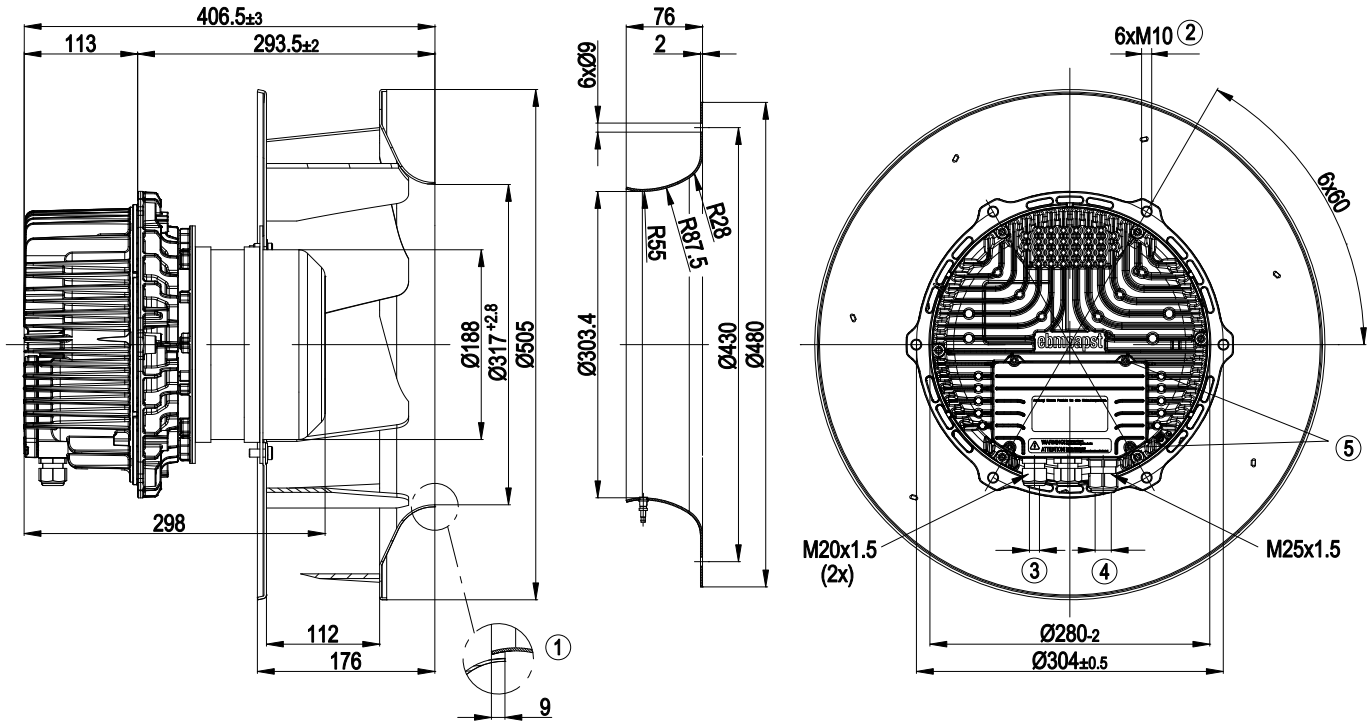
Leackage current	<= 3,5 mA
Size	450 mm
Operation mode	S1
Direction of rotation	Clockwise, seen on rotor
Mounting position	Shaft horizontal or rotor on bottom; rotor on top on request
Electrical leads	Via terminal box
EMC interference emission	Acc. to EN 61000-6-3 (household environment)
EMC interference immunity	Acc. to EN 61000-6-2 (industrial environment)
Humidity class	F5
Insulation class	"F"
Condensate discharge holes	Rotor-side
Bearing motor	Ball bearing
Mass	31.5 kg
Material of electronics housing	Die-cast aluminium, coated in black
Material of impeller	Aluminium sheet, white plastic-coated
Motor protection	Reverse polarity and locked-rotor protection
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 - 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 - RS485 ebmBUS - Motor current limit - Soft start - Line undervoltage / phase failure detection - Output 10 VDC, max. 10 mA - Output 20 VDC, max. 50 mA
Max. permissible ambient motor temp. (transp./ storage)	+80 °C
Min. permissible ambient motor temp. (transp./storage)	-40 °C

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Product drawing



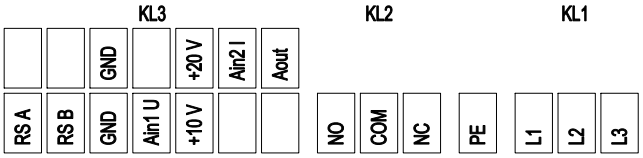
1	Accessory part: inlet nozzle 45076-2-4013 with a pressure tap not included in the standard scope of delivery; other inlet nozzles on request
2	Depth of screw max. 20 mm
3	Cable diameter: min. 4 mm, max. 10 mm; tightening torque: 4±0.6 Nm
4	Cable diameter: min. 9 mm, max. 16 mm; tightening torque: 6±0.9 Nm
5	Tightening torque 3.5±0.5 Nm

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Terminal connections



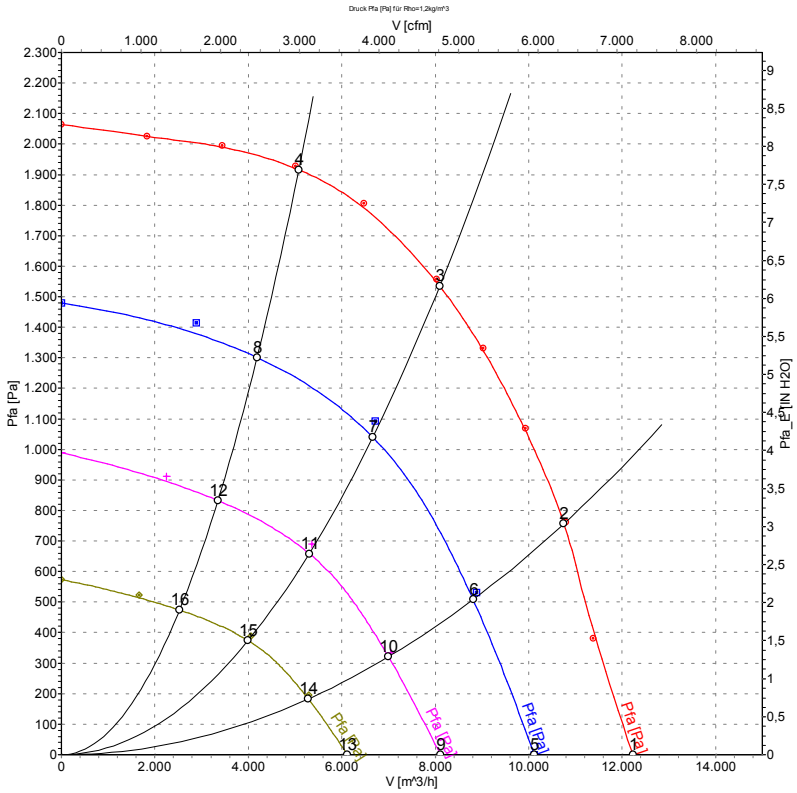
No.	Pin	Signal	Function / assignment
PE		PE	Ground wire
KL1		L3	Power line, L3
KL1		L2	Power line, L2
KL1		L1	Power line, L1
KL2		NC	Alarm relay, normally closed connection
KL2		COM	Alarm relay, COMMON (2 A, 250 VAC, AC1)
KL2		NO	Alarm relay, normally open connection
KL3		+10 V	Supply for external potentiometer, 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-122139
Measurement: LU-122147
Measurement: LU-122148
Measurement: LU-122149

Measured values

	U	f	n	P_1	I	LpA_{ss}	LpA_{ds}	LwA_{ss}	LwA_{ds}	$\hat{V}$	p_{fa}
	[V]	[Hz]	[min^{-1}]	[W]	[A]	[dB(A)]	[dB(A)]	[dB(A)]	[dB(A)]	[m^3/h]	[Pa]
1	400	50	2750	3229	4.98	92	90	100	105	12230	0
2	400	50	2750	4492	6.92	86	84	93	99	10750	775
3	400	50	2750	5370	8.30	82	81	89	95	8095	1550
4	400	50	2750	5098	7.82	85	84	94	98	5075	1925
5	400	50	2280	1781	2.78	89	85	97	101	10120	0
6	400	50	2280	2516	3.90	81	79	88	94	8810	551
7	400	50	2280	3078	4.76	76	75	83	91	6665	1098
8	400	50	2280	2653	4.12	81	79	88	94	4185	1306
9	400	50	1815	987	1.60	84	80	91	95	8110	0
10	400	50	1815	1315	2.09	74	73	82	87	7000	342
11	400	50	1815	1587	2.45	71	70	77	85	5300	695
12	400	50	1815	1395	2.19	74	73	81	87	3345	834
13	400	50	1375	488	0.95	75	72	82	87	6120	0
14	400	50	1375	607	1.07	68	65	74	80	5280	196
15	400	50	1375	717	1.21	64	62	72	77	3995	393
16	400	50	1375	646	1.13	67	64	74	79	2525	474

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