EC centrifugal fan

backward-curved, single-intake

Limited partnership · Headquarters Mulfingen
Amtsgericht (court of registration) Stuttgart · HRA 590344

General partner Elektrobau Mulfingen GmbH · Headquarters Mulfingen
Amtsgericht (court of registration) Stuttgart · HRB 590142

Nominal data

Type	**R3G400-AH11-H8**
Motor	**M3G084-DF**

Phase		1~
Nominal voltage	VAC	230
Nominal voltage range	VAC	200 .. 277
Frequency	Hz	50/60
Method of obtaining data		ml
Speed (rpm)	min^{-1}	1750
Power consumption	W	380
Current draw	A	1.67
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	60

ml = Max. load · me = Max. efficiency · fa = Free air · cs = Customer specification · ce = Customer equipment
Subject to change

Data according to Commission Regulation (EU) 327/2011

		Actual	Req. 2015
01 Overall efficiency η_{es}	%	59.9	47
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		74.9	62
05 Variable speed drive		Yes	

09 Power consumption P_{ed}	kW	0.37
09 Air flow q_v	m^3/h	1605
09 Pressure increase p_{fs}	Pa	455
10 Speed (rpm) n	min^{-1}	1755
11 Specific ratio*		1.00

Data obtained at optimum efficiency level.
The ErP data is determined using a motor-impeller combination in a standardized measurement setup.

* Specific ratio = 1 + p_{fs} / 100 000 Pa

LU-166149

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Technical description

Weight	5.3 kg
Size	400 mm
Motor size	84
Rotor surface	Painted black
Electronics housing material	Die-cast aluminum
Impeller material	Sheet aluminum
Number of blades	6
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	Motor IP55, electronics IP20
Insulation class	"F"
Moisture (F) / Environmental (H) protection class	H0 - dry environment
Max. permitted ambient temp. for motor (transport/storage)	+80 °C
Min. permitted ambient temp. for motor (transport/storage)	-40 °C
Installation position	Shaft horizontal or rotor on top; rotor on bottom on request
Condensation drainage holes	None
Mode	S1
Motor mounting	Ball bearing
Technical features	- Output 10 VDC, max. 10 mA - Operation and alarm display with LED - Alarm relay - Integrated PID controller - Power limiter - Motor current limitation - PFC, active - RS-485 MODBUS-RTU - Soft start - Control input 0-10 VDC / PWM - Control interface with SELV potential safely disconnected from the mains - Thermal overload protection for electronics/motor - Line undervoltage / phase failure detection
Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)	<= 3.5 mA
Electrical hookup	Plug
Motor protection	Thermal overload protector (TOP) internally connected
With cable	Variable
Protection class	I (with customer connection of protective earth)
Conformity with standards	EN 61800-5-1; CE
Approval	CSA C22.2 No. 77 + CAN/CSA-E60730-1; UL 1004-7 + 60730

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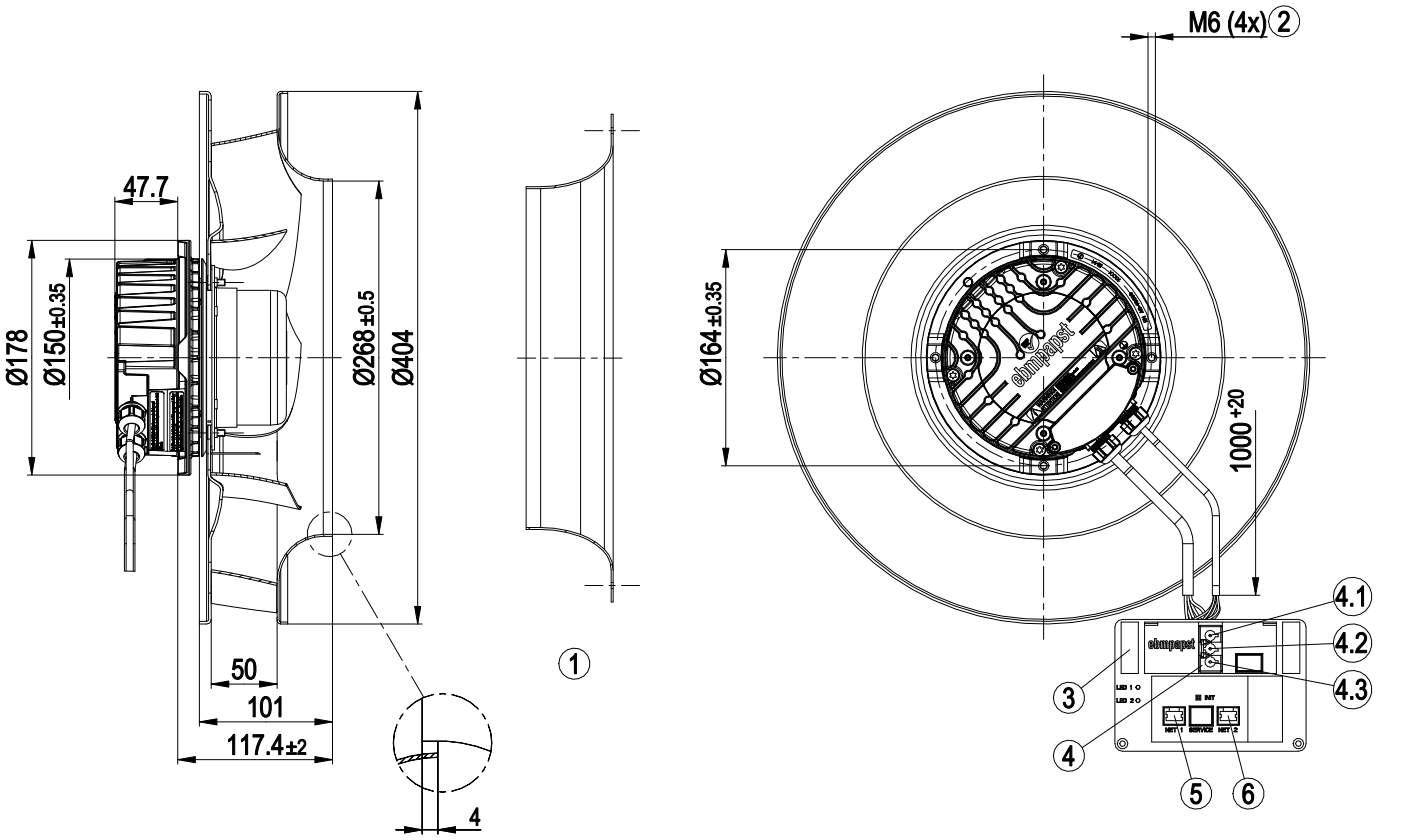
Product drawing



1	Accessory part: Inlet ring 54476-2-4013 not included in scope of delivery.
2	Max. clearance for screw 16 mm
3	Terminal box
4	Connector housing 3-pole GST18/3 Wieland 92.032.9058.1
4.1	N
4.2	PE
4.3	L
5	8-pole socket housing tyco 100616-2
6	8-pole socket housing tyco 100616-2

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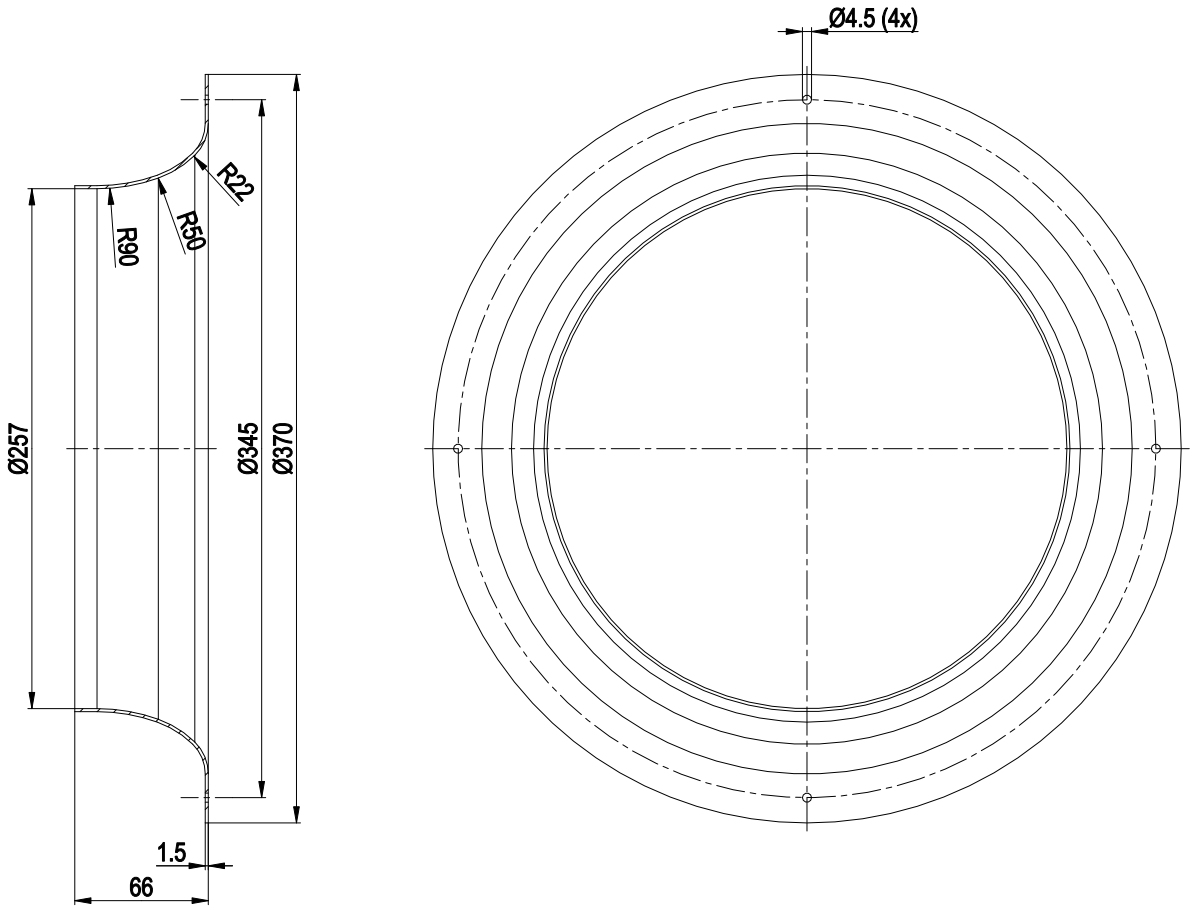
Accessory part



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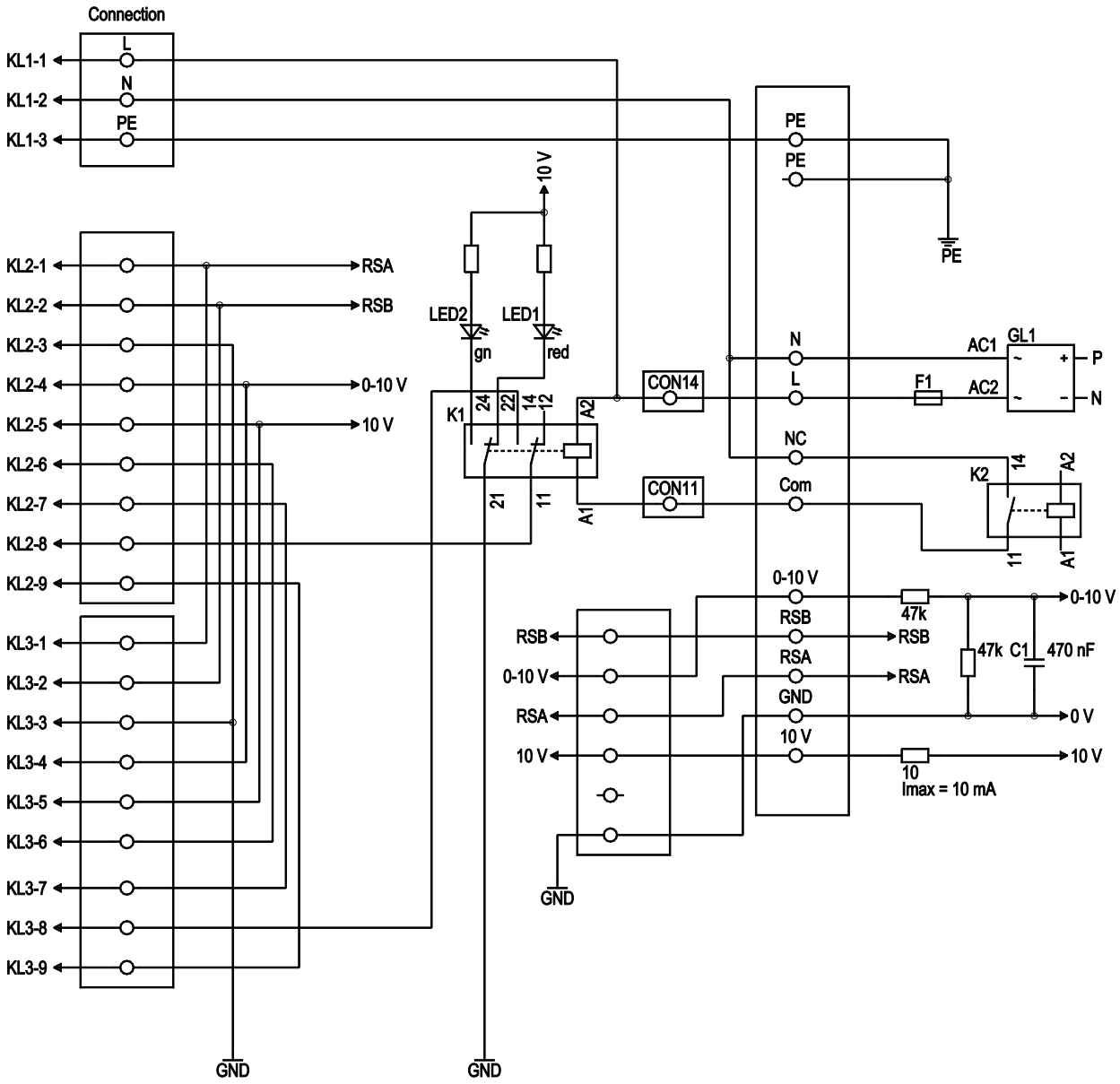
Connection diagram



No.	Conn.	Designation	Color	Function/assignment
1	1	L	black	Supply connection, power supply single-phase 200-277 VAC, 50/60 Hz
1	2	N	blue	Power supply, single-phase 200-277 VAC, 50/60 Hz
1	3	PE	green/yellow	Ground connection
2	1	RSA	-	Bus connection RS485, RSA, MODBUS-RTU; SELV
2	2	RSB	-	Bus connection RS485, RSB, MODBUS-RTU; SELV
2	3	GND	-	Reference ground for control interface; SELV
2	4	0-10 V	-	Control input
2	5	+10 V	-	Fixed voltage output 10 VDC
2	6	RES	-	Reserve
2	7	COM*	-	Alarm COM*
2	8	NC	-	NC KL2 UMAX 24 V
2	9	Schirm	-	Shield

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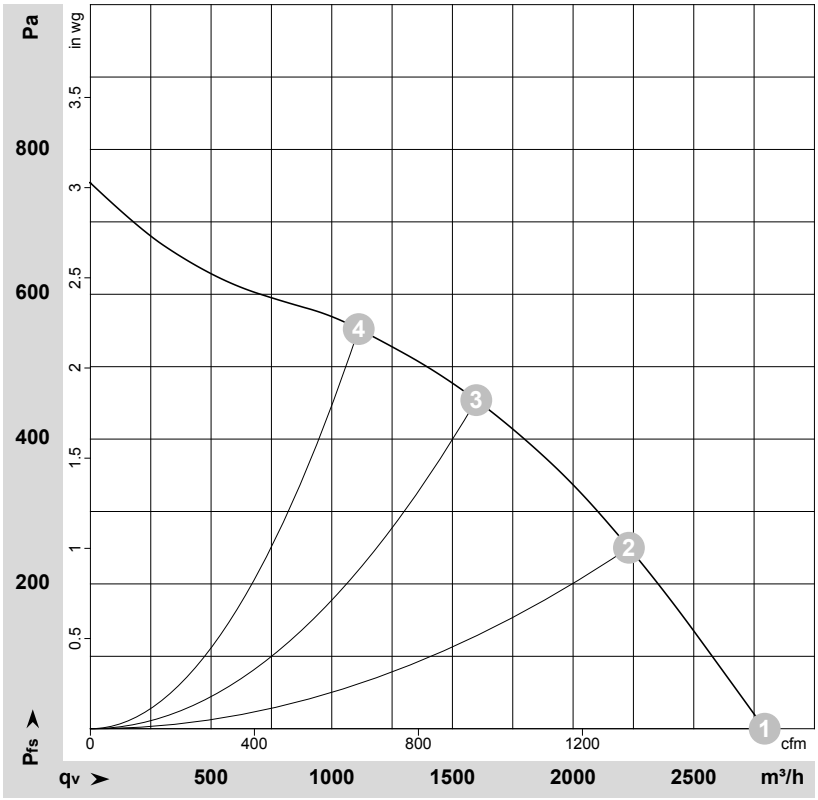
Curves: Air performance 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-166149-1

Air performance measured according to ISO 5801 installation category A. For detailed information on the measurement setup, contact ebm-papst. Intake sound level: Sound power level according to ISO 13347 / sound pressure level measured at 1 m distance from fan axis. The values given are valid under the specified measuring conditions and may vary due to conditions of installation. For deviations from the standard configuration, the parameters have to be checked on the installed unit.

Measured values

	U	f	n	P_{ed}	I	q_V	p_{fs}	q_V	p_{fs}
	V	Hz	min^{-1}	W	A	m^3/h	Pa	cfm	in. wg
1	230	50	1750	288	1.28	2795	0	1645	0.00
2	230	50	1750	356	1.57	2230	250	1315	1.00
3	230	50	1750	380	1.67	1600	450	940	1.81
4	230	50	1750	358	1.58	1110	550	655	2.21

U = Power supply · f = Frequency · n = Speed (rpm) · P_{ed} = Power consumption · I = Current draw · q_V = Air flow · p_{fs} = Pressure increase