K3G400-AC27-59

MW-Cleanroom Products (Shanghai)

EC centrifugal module

backward-curved, single-intake

with support plate

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	**K3G400-AC27-59**
Motor	**M3G084-FA**

Phase		1~
Nominal voltage	VAC	230
Nominal voltage range	VAC	200 .. 277
Frequency	Hz	50/60
Method of obtaining data		ml
Status		prelim.
Speed (rpm)	min^{-1}	1350
Power consumption	W	390
Current draw	A	1.7
Max. ambient temperature	°C	30

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}	%	56.7	47.1
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		71.6	62
05 Variable speed drive		Yes	

09 Power consumption P_{ed}	kW	0.38
09 Air flow q_v	m^3/h	2405
09 Pressure increase p_{fs}	Pa	295
10 Speed (rpm) n	min^{-1}	1360
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-170203

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Technical description

Weight	9.9 kg
Fan size	400 mm
Rotor surface	Painted black
Electronics housing material	Die-cast aluminum
Impeller material	Sheet aluminum
Support plate material	Sheet aluminum
Spacer material	Aluminum
Inlet nozzle material	Sheet aluminum
Number of blades	6
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP20
Insulation class	"B"
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	Rotor on top
Condensation drainage holes	None
Motor bearing	Ball bearing
Technical features	- Operation and alarm display with LED - Integrated PID controller - LON / RS485 with DCI function - Motor current limitation - PFC, active - Soft start - Control interface with SELV potential safely disconnected from the mains - Thermal overload protection for electronics/motor - Line undervoltage / phase failure detection
Electrical hookup	With 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
Approval	CSA C22.2 No. 77; UL 1004-3

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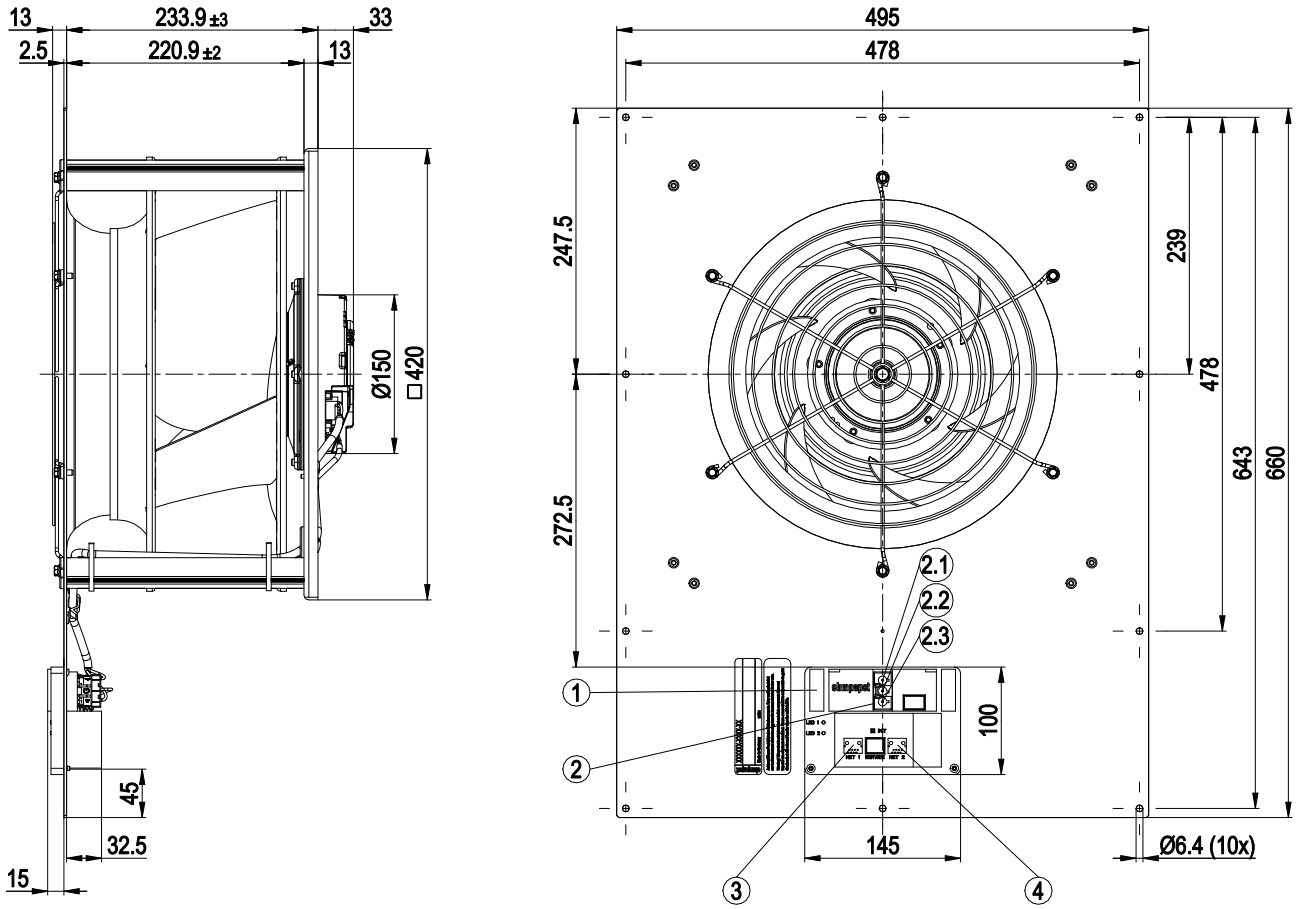
Product drawing



1	Terminal box
2	Connector housing 3-pole GST18/3 Wieland 92.032.9058.1
2.1	N
2.2	PE
2.3	L
3	8-pole connector housing TE 100616-2
4	8-pole connector housing TE 100616-2

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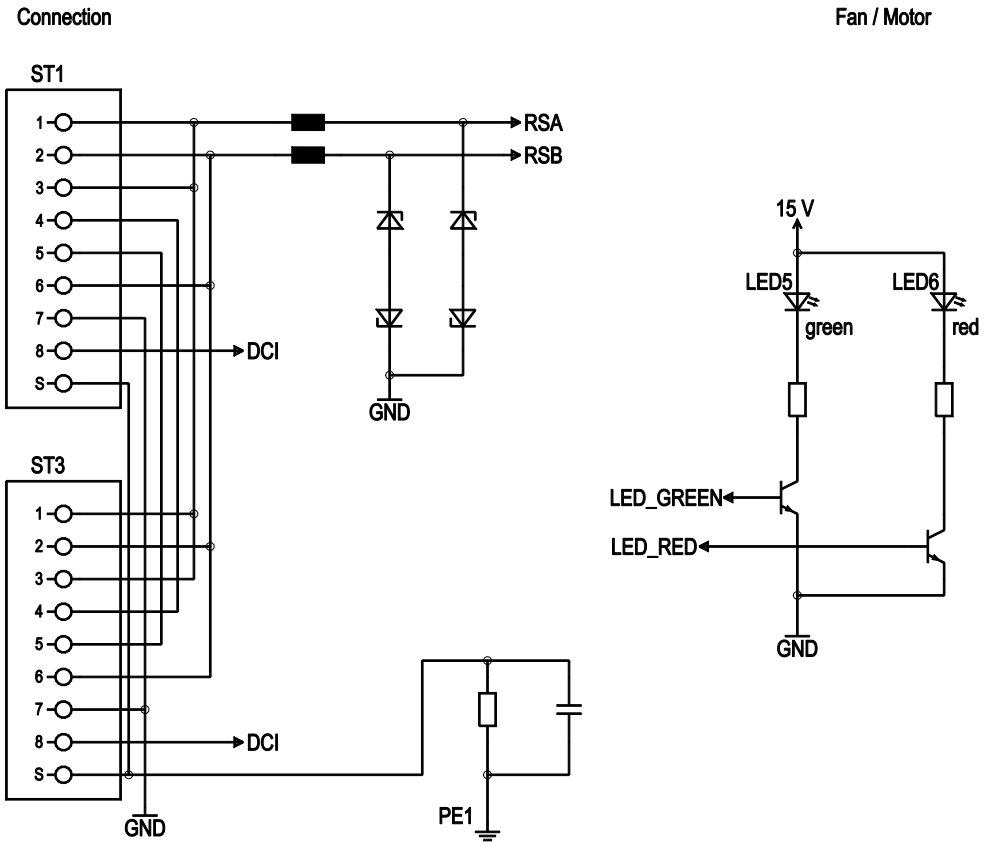
Connection diagram



LED1 / LED2

Status	Priority	Address S/N	Speed	LED red	LED green
General malfunction	1	S/N any	n any	Flashing 1 Hz	OFF
Signal function	2	S/N <> 1/1	n any	OFF	Flashing 10 Hz
As-delivered condition	3	S/N = 1/1	n > 0	Always ON	OFF
After initializing	3	S/N <> 1/1	n > 0	OFF	Always ON
Fan to speed 0	3	S/N <> 1/1	n = 0	OFF	Flashing 1 Hz
As-delivered condition	3	S/N = 1/1	n = 0	Always ON	Flashing 1 Hz

No.	Conn.	Designation	Function/assignment
ST1/ST3	1	LON_A	Bus connection RS485, LON_A
ST1/ST3	2	LON_B	Bus connection RS485, LON_B
ST1/ST3	3	LON_A	Bus connection RS485, LON_A
ST1/ST3	4	-	Bridge ST1 – ST3
ST1/ST3	5	-	Bridge ST1 – ST3
ST1/ST3	6	LON_B	Bus connection RS485, LON_B
ST1/ST3	7	GND	Reference ground
ST1/ST3	8	DCI	Daisy chain signal
ST1/ST3	S	Schirm	Shield for RJ45 CAT5 wire

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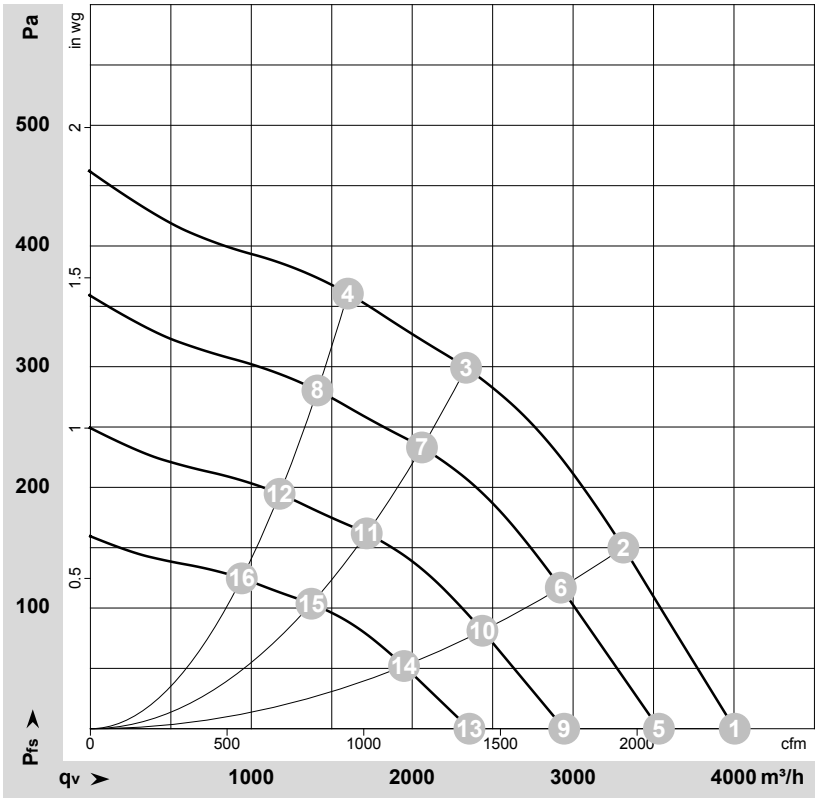
Curves: Air performance 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-170203-1

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	1350	304	1.33	4005	0	2355	0.00
2	230	50	1350	360	1.58	3315	150	1950	0.60
3	230	50	1350	390	1.70	2335	300	1375	1.20
4	230	50	1350	337	1.48	1600	360	940	1.45
5	230	50	1200	209	0.91	3535	0	2080	0.00
6	230	50	1200	247	1.08	2925	117	1720	0.47
7	230	50	1200	264	1.16	2060	234	1215	0.94
8	230	50	1200	231	1.01	1410	281	830	1.13
9	230	50	1000	121	0.53	2945	0	1735	0.00
10	230	50	1000	143	0.63	2435	81	1435	0.33
11	230	50	1000	153	0.67	1715	162	1010	0.65
12	230	50	1000	134	0.59	1175	195	690	0.78
13	230	50	800	62	0.27	2355	0	1385	0.00
14	230	50	800	73	0.32	1950	52	1145	0.21
15	230	50	800	78	0.34	1375	104	810	0.42
16	230	50	800	68	0.30	940	125	555	0.50

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