K3G400-RP45-66

MW-Cleanroom Products (Shanghai)

EC centrifugal module - RadiCal

backward-curved, single-intake

with support plate

ebm-papst Mulfingen GmbH & Co. KG
Bachmühle 2 · D-74673 Mulfingen
Phone +49 7938 81-0
Fax +49 7938 81-110
info1@de.ebmpapst.com
www.ebmpapst.com

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

ErP2015 EXCEEDS THE NORM

Nominal data

Type	**K3G400-RP45-66**
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	min^{-1}	1200
Power consumption	W	300
Current draw	A	1.5 (200V)
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	40

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

Data according to ErP Directive

		Actual	Req. 2015
01 Overall efficiency η_{es}	%	64.7	45.9
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		80.8	62
05 Variable speed drive		Yes	

09 Power consumption P_{ed}	kW	0.29
09 Air flow q_v	m^3/h	2395
09 Pressure increase p_{fs}	Pa	259
10 Speed n	min^{-1}	1215
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-4826

EC centrifugal module - RadiCal

backward-curved, single-intake
with support plate

Technical description

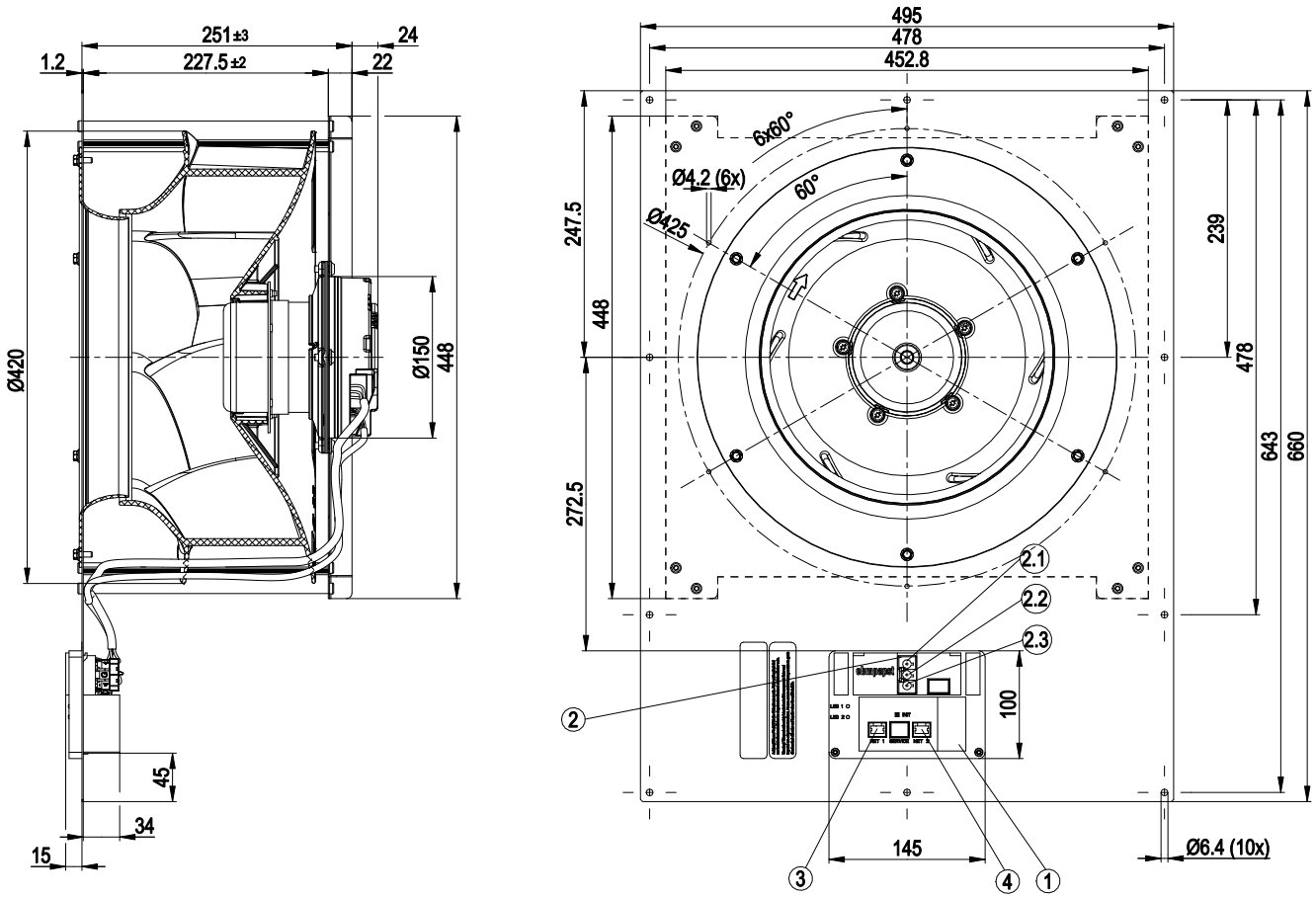
Weight	11.2 kg
Fan size	400 mm
Rotor surface	Painted black
Electronics housing material	Die-cast aluminum
Impeller material	PP plastic
Support plate material	Sheet steel with aluminum-zinc coating
Spacer material	Aluminum
Inlet nozzle material	ABS plastic
Number of blades	6
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP20
Insulation class	"B"
Moisture (F) / Environmental (H) protection class	F0
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
Mode	S1
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
Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)	<= 3.5 mA
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	UL 1004-3; CSA C22.2 No. 77

ebm-papst Mulfingen GmbH & Co. KG · Bachmühle 2 · D-74673 Mulfingen · Phone +49 (0) 7938 81-0 · Fax +49 (0) 7938 81-110 · info1@de.ebmpapst.com · www.ebmpapst.com

EC centrifugal module - RadiCal

backward-curved, single-intake
with support plate

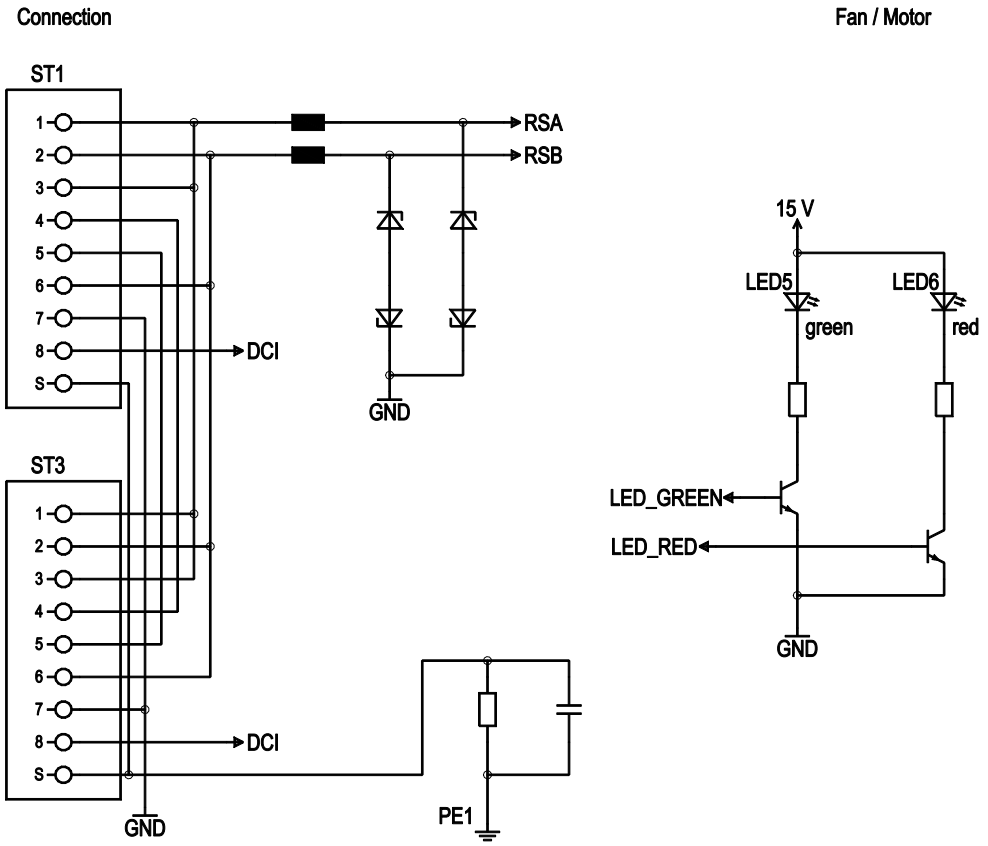
Product drawing



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 socket housing tyco 100616-2
4	8-pole socket housing tyco 100616-2

ebm-papst Mulfingen GmbH & Co. KG · Bachmühle 2 · D-74673 Mulfingen · Phone +49 (0) 7938 81-0 · Fax +49 (0) 7938 81-110 · info1@de.ebmpapst.com · www.ebmpapst.com

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

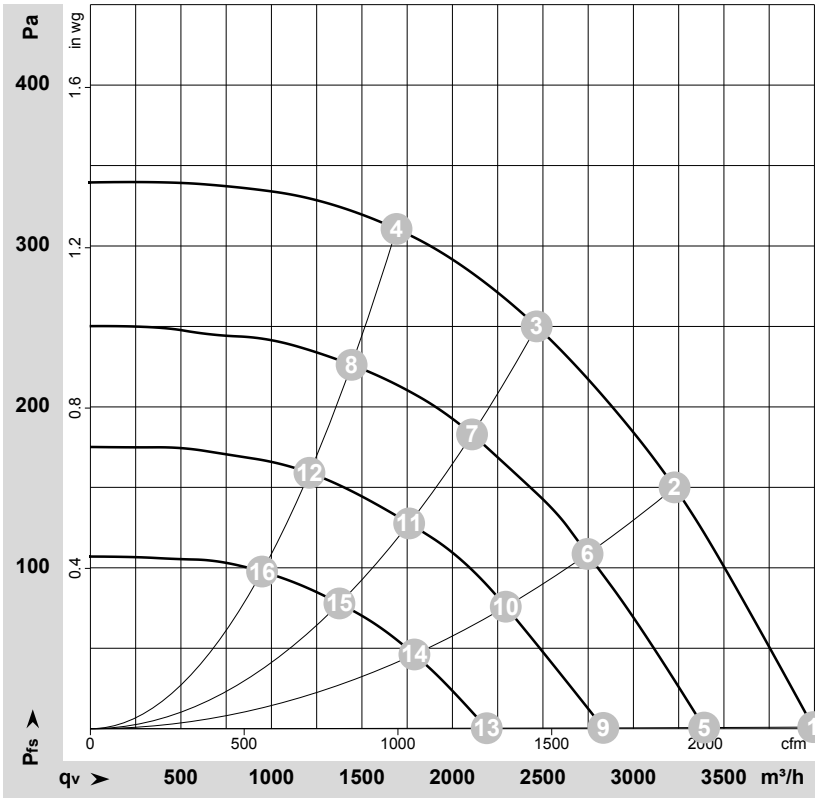
ebm-papst Mulfingen GmbH & Co. KG · Bachmühle 2 · D-74673 Mulfingen · Phone +49 (0) 7938 81-0 · Fax +49 (0) 7938 81-110 · info1@de.ebmpapst.com · www.ebmpapst.com

EC centrifugal module - RadiCal

backward-curved, single-intake

with support plate

Curves: Air performance 60 Hz



ρ = 1.217 kg/m³ ± 2 %

Measurement: LU-4826-2

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	qv	p_{fs}
	V	Hz	min^{-1}	W	A	m^3/h	Pa
1	277	60	1200	198	0.74	3995	0
2	277	60	1200	276	1.02	3225	150
3	277	60	1200	300	1.10	2465	250
4	277	60	1200	278	1.02	1690	310
5	277	60	1040	127	0.49	3390	0
6	277	60	1040	172	0.65	2745	109
7	277	60	1040	188	0.71	2110	183
8	277	60	1040	175	0.66	1445	226
9	277	60	870	80	0.33	2835	0
10	277	60	870	105	0.42	2295	76
11	277	60	870	114	0.45	1760	128
12	277	60	870	107	0.42	1210	159
13	277	60	680	44	0.22	2190	0
14	277	60	680	57	0.26	1790	47
15	277	60	680	62	0.27	1375	78
16	277	60	680	59	0.26	950	98

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

ebm-papst Mulfingen GmbH & Co. KG · Bachmühle 2 · D-74673 Mulfingen · Phone +49 (0) 7938 81-0 · Fax +49 (0) 7938 81-110 · info1@de.ebmpapst.com · www.ebmpapst.com