K3G250-RR01-H8

EC centrifugal module - RadiCal

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

ErP2015 EXCEEDS THE NORM

Nominal data

Type	**K3G250-RR01-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	min^{-1}	3600
Power consumption	W	480
Current draw	A	2.1
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 ErP Directive

		Actual	Req. 2015
01 Overall efficiency η_{es}	%	52	48.1
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		65.9	62
05 Variable speed drive		Yes	

09 Power consumption P_{ed}	kW	0.47
09 Air flow q_v	m^3/h	1055
09 Pressure increase p_{fs}	Pa	756
10 Speed n	min^{-1}	3610
11 Specific ratio*		1.01

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-172033

EC centrifugal module - RadiCal

backward-curved, single-intake

with support plate

Technical description

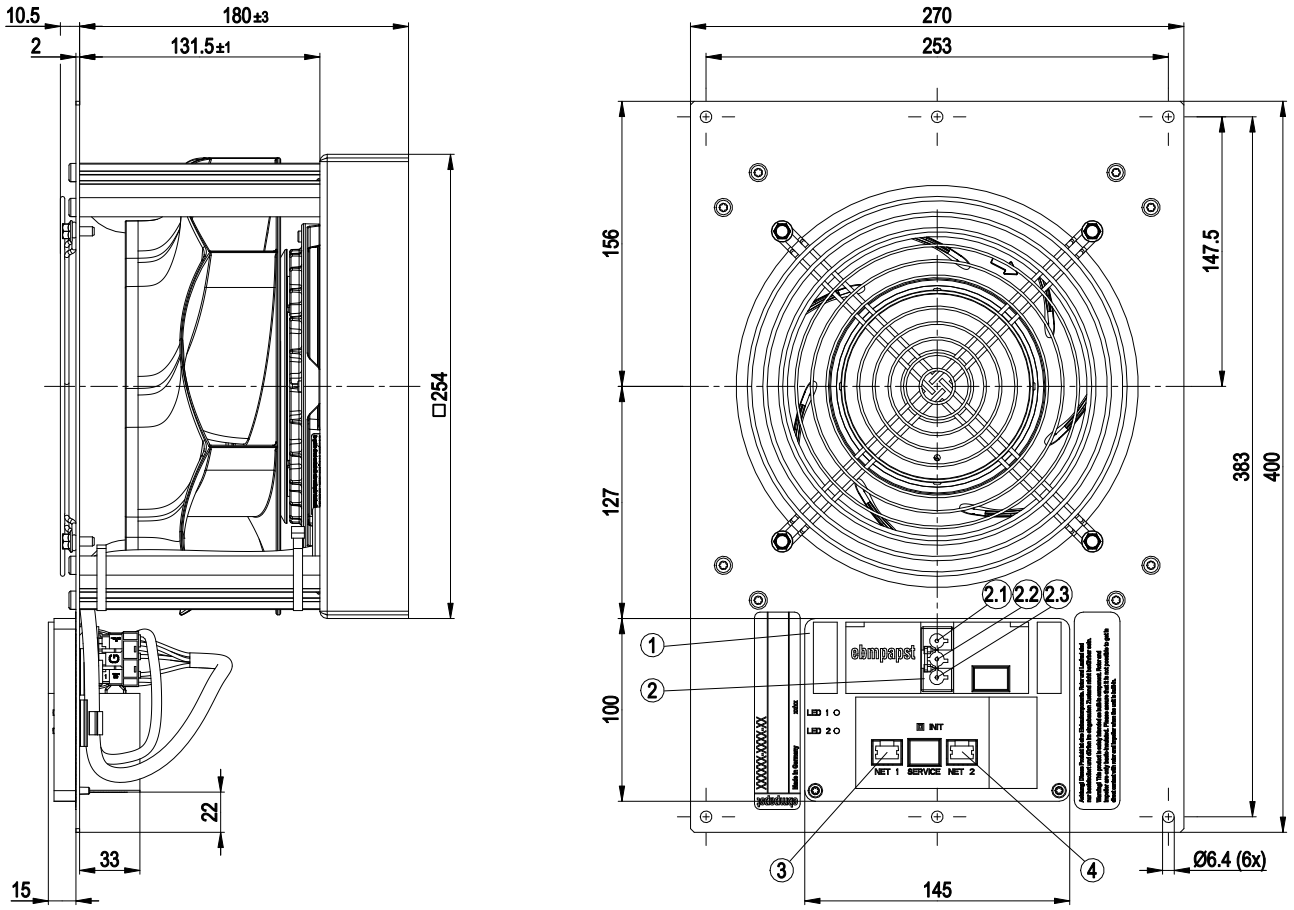
Weight	5.5 kg
Fan size	250 mm
Rotor surface	Painted black
Electronics housing material	Die-cast aluminum
Impeller material	PP plastic
Support plate material	Sheet aluminum
Spacer material	Aluminum
Inlet nozzle material	Sheet aluminum
Guard grille material	Steel, coated with white-aluminum plastic (RAL 9006)
Number of blades	7
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	Motor IP 55, electronics IP 20
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	On rotor side
Mode	S1
Motor bearing	Ball bearing
Technical features	- Output 10 VDC, max. 10 mA - Operation and alarm display - 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
EMC immunity to interference	According to EN 61000-6-2 (industrial environment)
EMC circuit feedback	According to EN 61000-3-2/3
EMC interference emission	According to EN 61000-6-3 (household environment)
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
Protection class	I (with customer connection of protective earth)
Conformity with standards	EN 61800-5-1; CE
Approval	UL 1004-7 + 60730; C22.2 No.77 + CAN/CSA-E60730-1; EAC

EC centrifugal module - RadiCal

backward-curved, single-intake

with support plate

Product drawing



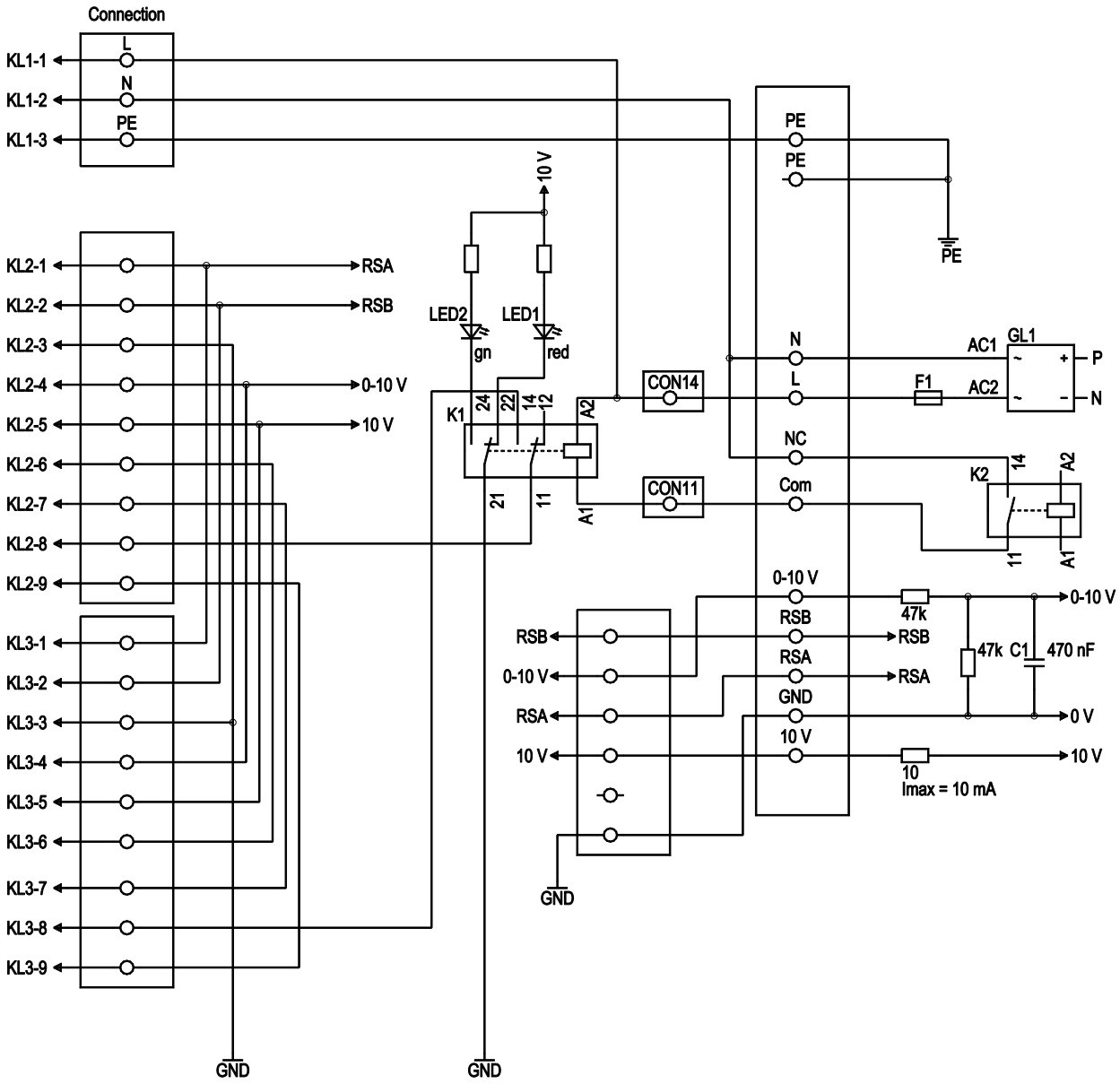
1	Terminal box
2	Connector housing 3-pole GST18/3 Wieland 92.032.9058.1
2.1	N
2.2	PE
2.3	L
3	8-pole socket housing tyco 100616-2
4	8-pole socket housing tyco 100616-2

EC centrifugal module - RadiCal

backward-curved, single-intake

with support plate

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

EC centrifugal module - RadiCal

backward-curved, single-intake

with support plate

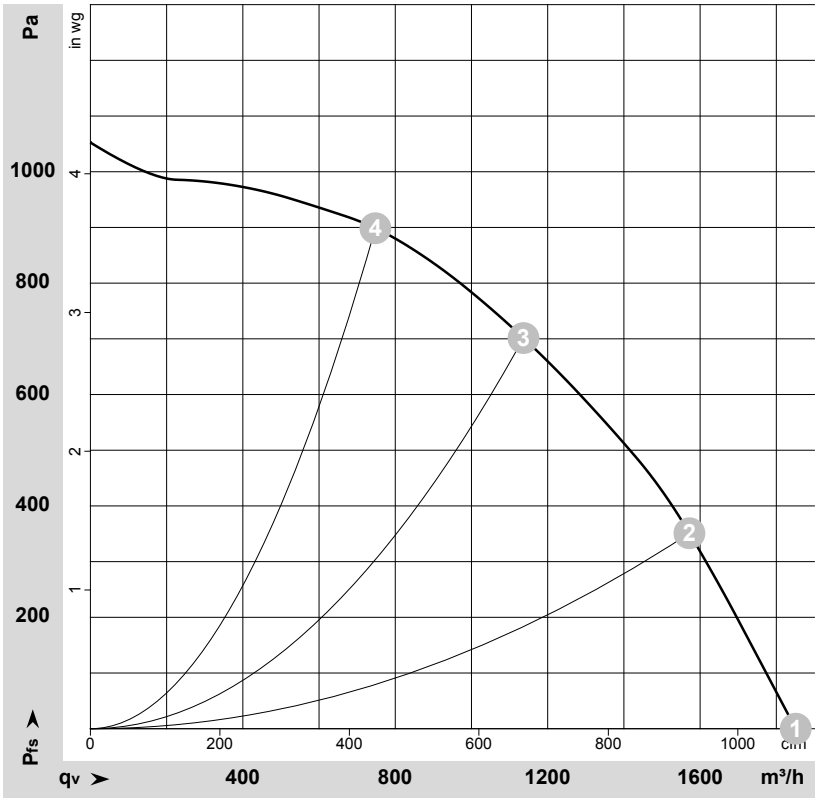
No.	Conn.	Designation	Color	Function/assignment
3	1	RSA	-	Bus connection RS485, RSA, MODBUS-RTU; SELV
3	2	RSB	-	Bus connection RS485, RSB, MODBUS-RTU; SELV
3	3	GND	-	Reference ground for interface; SELV
3	4	0-10 V	-	Control input
3	5	+10 V	-	Fixed voltage output 10 VDC
3	6	RES	-	Reserve
3	7	COM*	-	Alarm COM*
3	8	NC*	-	NC* KL3 UMAX 24 V
3	9	Schirm	-	Shield

EC centrifugal module - RadiCal

backward-curved, single-intake

with support plate

Curves: Air performance 50 Hz



ρ = 1.148 kg/m³ ± 2 %

Measurement: LU-172033-1

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	qv	p_{fs}
	V	Hz	min^{-1}	W	A	m^3/h	Pa
1	230	50	3600	364	1.60	1850	0
2	230	50	3600	438	1.92	1570	350
3	230	50	3600	480	2.10	1135	700
4	230	50	3600	438	1.92	750	900

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