

KARTA KATALOGOWA

K3G400-PA27-71

Moduł wentylatora promieniowego EC RadiPac, łopatki zakrzywione do tyłu, jednostronnie ssący, z ramą wsporczą

Producent: ebm-papst



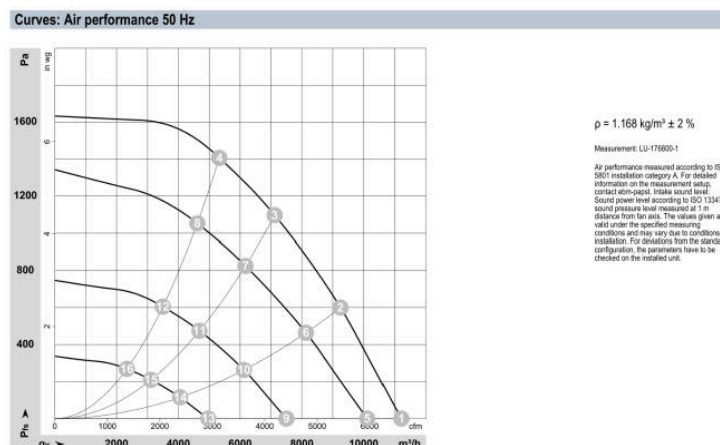
Zdjęcie poglądowe

Dane znamionowe	
Napięcie znamionowe	3~ 400 V (380...480 V)
Częstotliwość	50/60 Hz
Prędkość obrotowa	2750 obr/min
Pobór mocy	3350 W
Pobór prądu	5,2 A
Maks. wydajność	11200 m³/h
Maks. ciśnienie statyczne	1625 Pa
Temperatura otoczenia	-25...+40 °C
Regulacja obrotów	0-10 V / PWM, MODBUS RTU

Budowa	
Wielkość	400 mm
Silnik	M3G150-FF
Materiał wirnika	blacha aluminiowa
Obudowa elektroniki	odlew aluminiowy
Liczba łopatek	5
Kierunek obrotów	w prawo, patrząc na wirnik
Stopień ochrony	IP55
Klasa izolacji	F
Zabezpieczenie silnika	ochrona przed odwrotną polaryzacją i zablokowaniem wirnika
Łożyskowanie	kulkowe
Podłączenie	skrzynka zaciskowa
Masa	32 kg

Dane ErP (UE 327/2011)	
Sprawność całkowita	69,4 %
Przepływ w pkt. optymalnym	6755 m³/h
Przyrost ciśnienia	1175 Pa
Regulacja prędkości (ErP)	tak

Charakterystyka przepływowa (50 Hz)



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backward-curved, single-intake
with support bracket

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Nominal data

Type	K3G400-PA27-71	
Motor	M3G150-FF	
Phase		3~
Nominal voltage	VAC	400
Nominal voltage range	VAC	380 .. 480
Frequency	Hz	50/60
Method of obtaining data		ml
Speed	min ⁻¹	2750
Power consumption	W	3350
Current draw	A	5.2
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}	%	69.4	57
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		74.4	62
05 Variable speed drive		Yes	

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

09 Power consumption P_{ed}	kW	3.31
09 Air flow q_v	m³/h	6755
09 Pressure increase p_{fs}	Pa	1175
10 Speed n	min ⁻¹	2750
11 Specific ratio*		1.01

* Specific ratio = $1 + p_{fs} / 100\,000\text{ Pa}$ LU-176800



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Technical description

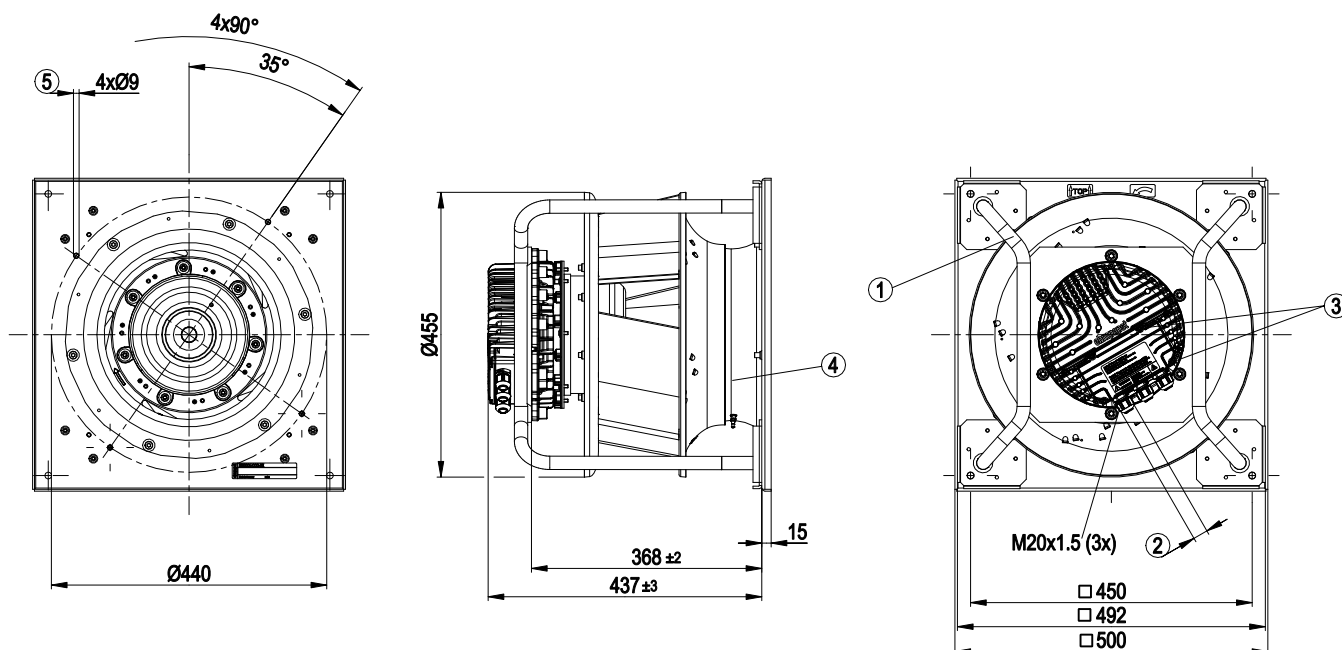
Weight	32 kg
Fan size	400 mm
Rotor surface	Painted black
Electronics housing material	Die-cast aluminum
Impeller material	Sheet aluminum
Support plate material	Sheet steel, galvanized
Support bracket material	Steel, painted black
Inlet nozzle material	Sheet steel, galvanized
Number of blades	5
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP55
Insulation class	"F"
Moisture (F) / Environmental (H) protection class	H1
Max. permitted ambient temp. for motor (transport/storage)	+80 °C
Min. permitted ambient temp. for motor (transport/storage)	-40 °C
Installation position	See product drawing
Condensation drainage holes	On rotor side
Mode	S1
Motor bearing	Ball bearing
Technical features	- Output 10 VDC, max. 10 mA - Operation and alarm display - External 24 V input (parameter setting) - External release input - Alarm relay - Integrated PID controller - Motor current limitation - PFC, passive - 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	Via terminal box
Motor protection	Reverse polarity and locked-rotor protection
Protection class	I (with customer connection of protective earth)
Conformity with standards	EN 61800-5-1; CE
Approval	EAC

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Product drawing



1	Installed position: shaft horizontal (install support struts only vertically as illustrated) or rotor on bottom; rotor on top on request
2	Cable diameter min. 4 mm, max. 10 mm, tightening torque 4 ± 0.6 Nm
3	Tightening torque 3.5 ± 0.5 Nm
4	Inlet ring with pressure tap (k-factor: 188)
5	Mounting holes for FlowGrid

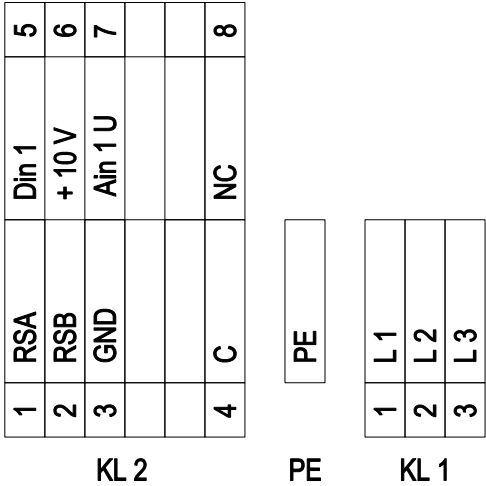
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Connection diagram



No.	Conn.	Designation	Function/assignment
KL 1	1	L1	Supply connection, power supply 3-phase 380-480 VAC, 50/60 Hz
KL 1	2	L2	Supply connection, power supply 3-phase 380-480 VAC, 50/60 Hz
KL 1	3	L3	Supply connection, power supply 3-phase 380-480 VAC, 50/60 Hz
PE		PE	Ground connection, PE connection
KL 2	1	RSA	Bus connection RS485, RSA, MODBUS-RTU; SELV
KL 2	2	RSB	Bus connection RS485, RSB, MODBUS-RTU; SELV
KL 2	3	GND	Reference ground for control interface; SELV
KL2	4	C	Status relay, floating status contact, common connection, changeover contact; contact rating 250 VAC / 2 A (AC1)
KL 2	5	Din1	Digital input 1 enable electronics, enable: pin open or applied voltage 5-50 VDC; disable: bridge to GND or applied voltage < 1 VDC; reset function: triggers software reset after a level change to < 1 V; SELV
KL 2	6	+ 10 V	Fixed voltage output 10 VDC, +10 V ±3%, max. 10 mA, short-circuit-proof, power supply for external devices (e.g. pot); SELV; Or: +24 VDC input for parameter setting via MODBUS without line voltage
KL 2	7	Ain1 U	Analog input 1 (set value) 0-10 V, Ri = 100 kΩ, adjustable curve; SELV
KL2	8	NC	Status relay, floating status contact, break for failure



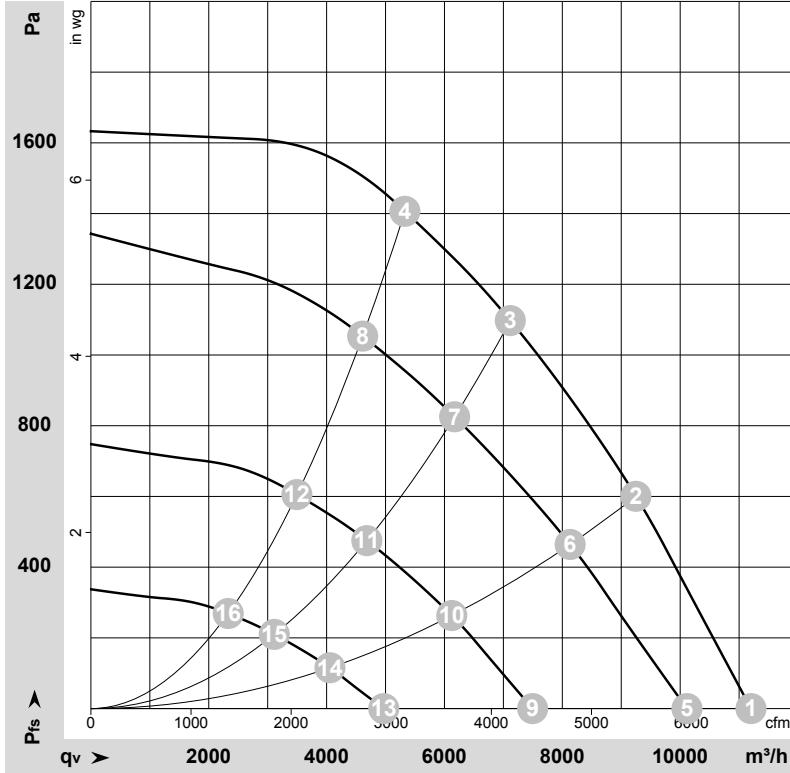
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Curves: Air performance 50 Hz



$\rho = 1.168 \text{ kg/m}^3 \pm 2 \%$

Measurement: LU-176800-1

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	LpA _{in}	LwA _{in}	LwA _{out}	qv	P _{fs}
	V	Hz	min ⁻¹	W	A	dB(A)	dB(A)	dB(A)	m ³ /h	Pa
1	400	50	2750	1846	2.90	93	100	101	11200	0
2	400	50	2750	2827	4.35	83	90	94	9250	600
3	400	50	2750	3289	5.04	78	85	93	7115	1100
4	400	50	2750	3350	5.20	79	86	93	5330	1400
5	400	50	2490	1389	2.24	89	96	97	10115	0
6	400	50	2415	1940	3.04	80	87	91	8130	469
7	400	50	2385	2162	3.37	74	82	89	6170	826
8	400	50	2380	2179	3.39	76	83	89	4610	1054
9	400	50	1850	619	1.20	80	87	89	7495	0
10	400	50	1820	869	1.52	71	80	84	6125	265
11	400	50	1805	977	1.66	68	77	82	4680	475
12	400	50	1805	982	1.67	69	78	83	3495	605
13	400	50	1240	227	0.61	69	77	78	4970	0
14	400	50	1215	298	0.73	60	69	73	4055	117
15	400	50	1205	330	0.78	58	66	71	3110	210
16	400	50	1205	332	0.79	59	66	72	2330	269

U = Power supply · f = Frequency · n = Speed · P_{ed} = Power consumption · I = Current draw · LpA_{in} = Sound pressure level intake side · LwA_{in} = Sound power level intake side
LwA_{out} = Sound power level outlet side · qv = Air flow · P_{fs} = Pressure increase