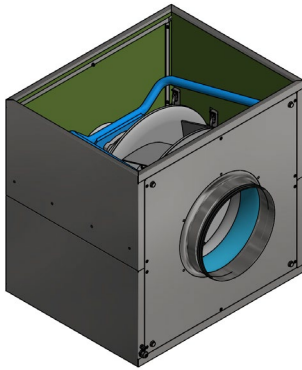


BF900S-560PC0401

## BoxFan

Built-in Radical EC fan  
With square air inlet and outlet



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### Nominal data

Type	BF900S-560PC0401	
EC Ventilator	K3G560-PC04-01	
Phase		3~
Nominal voltage	VAC	400
Nominal voltage range	VAC	380...480
Frequency	Hz	50/60
Type of data definition		ml
Speed	min <sup>-1</sup>	1760
Power input	W	5000
Current draw	A	7,7
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	40

ml = Max. load · me = Max. efficiency · rfa = running at free air · cs = customer specs · cu = customer unit  
Subject to alterations

### Data in accordance with the EU environment design regulation 327/2011 for built-in fan units.

	Actual	Request 2015			
Overall efficiency $\eta_{es}$	70,2%	58,9%	Power input $P_{ed}$	kW	5,03
Installation category	A		Airflow $q_v$	m <sup>3</sup> /h	11760
Efficiency category	Static		Pressure increase $p_{fs}$	Pa	1035
Efficiency grade N	73,3%	62%	Speed n	min <sup>-1</sup>	1770
Variable speed drive	Yes		Specific ratio*		1.01

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

Data definition with optimum efficiency.  
The ErP data is determined using a motor-impeller combination in a standardized measurement setup

**Technical features**

<b>Rotor surface</b>	Painted black
<b>Electronic housing material</b>	Die-cast aluminium
<b>Impeller material</b>	Sheet aluminium
<b>Support plate material</b>	Sheet steel, galvanized
<b>Support bracket material</b>	Steel, painted black
<b>Material of inlet nozzle</b>	Sheet steel, galvanized
<b>Number of blades</b>	5
<b>Direction of rotation</b>	Clockwise, viewed toward rotor
<b>Degree of protection</b>	IP 55
<b>Insulation class</b>	"F"
<b>Moisture (F) / Environmental (H) protection class</b>	H1
<b>Max. permitted ambient temp. for motor (transport/storage)</b>	+80 °C
<b>Min. permitted ambient motor temp. (transp./storage)</b>	-40 °C
<b>Mounting position</b>	See product drawing
<b>Condensate discharge holes</b>	Rotor side
<b>Mode</b>	S1
<b>Motor bearing</b>	Ball bearing
<b>Technical features</b>	<ul style="list-style-type: none"> <li>- Output 10 VDC, max. 10 mA</li> <li>- Output 20 VDC, max. 50 mA</li> <li>- Output for slave 0-10 V</li> <li>- Operation and alarm display</li> <li>- Input for sensor 0-10 V or 4-20 mA</li> <li>- External 24 V input (programming)</li> <li>- External release input</li> <li>- Alarm relay</li> <li>- Integrated PID controller</li> <li>- Output limit</li> <li>- Motor current limit</li> <li>- PFC, passive</li> <li>- RS485 MODBUS RTU</li> <li>- Soft start</li> <li>- Control input 0-10 VDC / PWM</li> <li>- Control interface with SELV potential safely disconnected from the mains</li> <li>- Over-temperature protected electronics / motor</li> <li>- Line undervoltage / phase failure detection</li> </ul>
<b>EMC interference immunity</b>	According to EN 61000-6-2 (industrial environment)
<b>EMC interference emission</b>	Acc. to EN 61000-6-3 (household environment), except EN 61000-3-2 for professionally used devices with a total rated power greater than 1 kW
<b>Touch current acc. IEC 60990 (measuring network Fig. 4, TN system)</b>	≤ 3.5 mA
<b>Electrical hookup</b>	Terminal box
<b>Motor protection</b>	Reverse polarity and locked-rotor protection
<b>Protection class</b>	I (with customer connection of protective earth)

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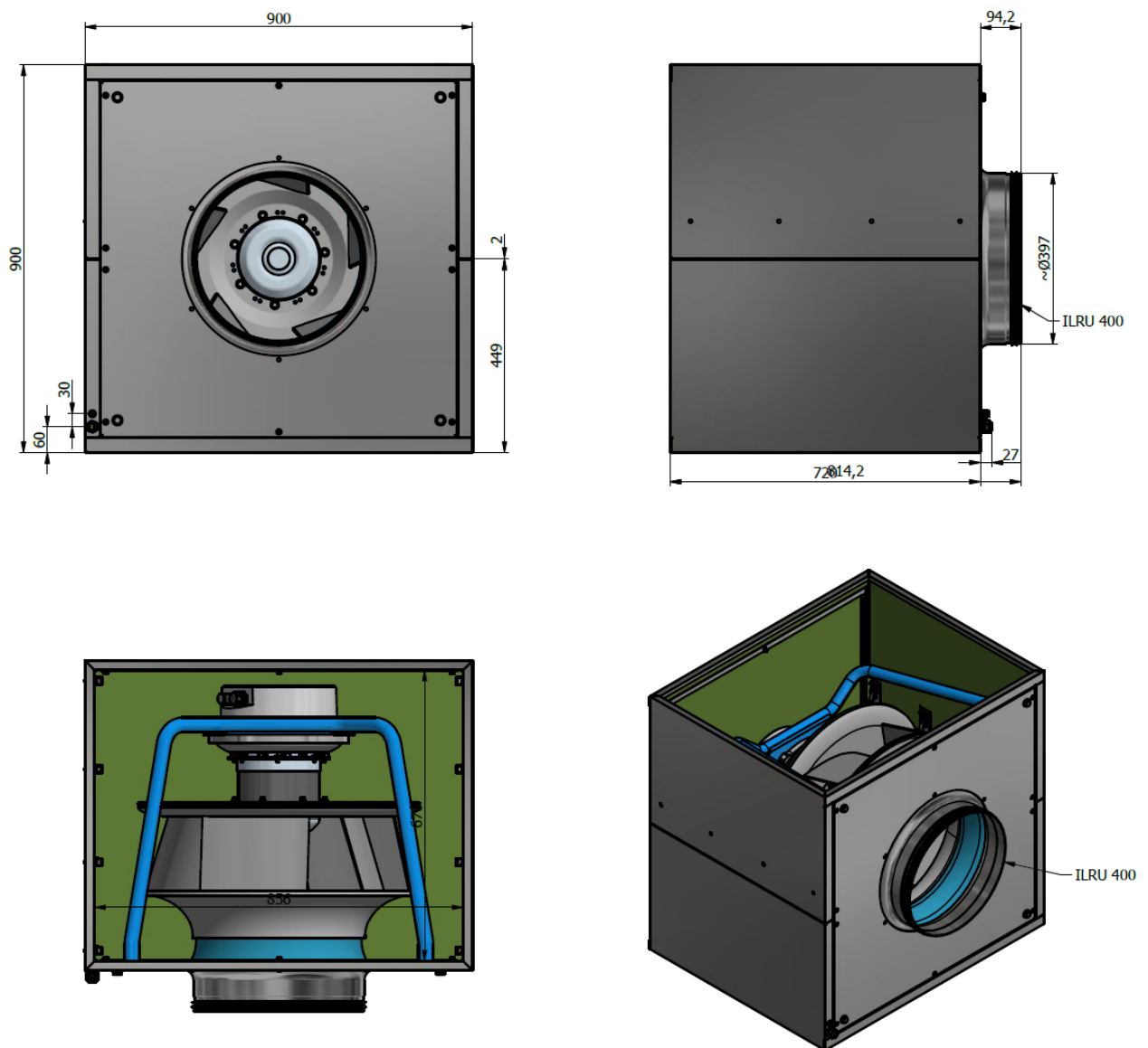
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### Physical description

Weight	111 kg
Plate thickness, chassis	1 mm
Plate thickness, fan plate and inspection hatch	3 mm
Insulation	20 mm foam
Cable glands, PG	M12 og M20
Duct connection, ILU	indtag Ø400 / afkast 856x676 mm
Dimensions	See product drawing

### Product drawing

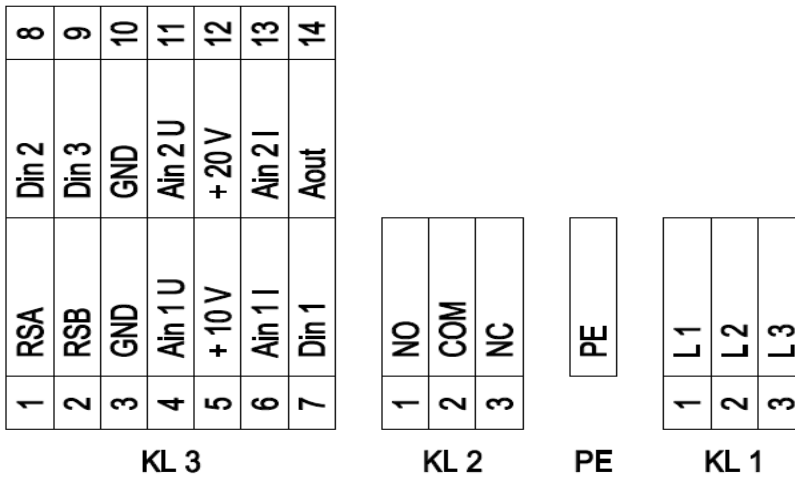




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## Connection diagram

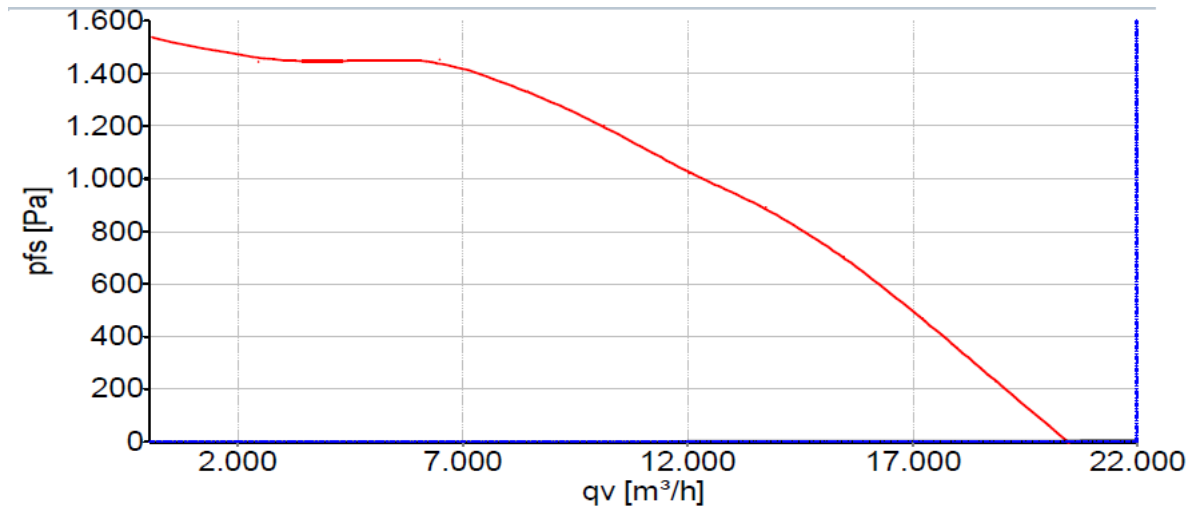


No.	Conn.	Designation	Function/assignment
KL 1	1	L1	Supply connection, power supply 3-phase 380-480 VAC, 50/60 Hz
KL 1	2	L2	Supply connection, power supply 3-phase 380-480 VAC, 50/60 Hz
KL1	3	L3	Supply connection, power supply 3-phase 380-480 VAC, 50/60 Hz
PE		PE	Ground connection, PE connection
KL 2	1	NO	Status relay, floating status contact; make for failure
KL 2	2	COM	Status relay, floating status contact; changeover contact; common connection; contact rating 250 VAC / max. 2 A (AC1) / min. 10 mA
KL 2	3	NC	Status relay, floating status contact; break for failure
KL 3	1	RSA	Bus connection RS485, RSA, MODBUS-RTU; SELV
KL 3	2	RSB	Bus connection RS485, RSB, MODBUS-RTU; SELV
KL 3	3 / 10	GND	Reference ground for control interface; SELV
KL 3	4	Ain1 U	Analog input 1, set value: 0-10 V, Ri = 100 kΩ, adjustable curve, only usable as alternative to input Ain1 I; SELV
KL 3	5	+ 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
KL 3	6	Ain1 I	Analog input 1, set value: 4-20 mA, Ri = 100 Ω, adjustable curve, only usable as alternative to input Ain1U; SELV
KL 3	7	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 VDC; SELV
KL 3	8	Din2	Digital input 2: Switching parameter sets 1/2, according to EEPROM setting, the valid or used parameter set can be selected via bus or via digital input DIN2. Parameter set 1: pin open or applied voltage 5-50 VDC Parameter set 2: bridge to GND or applied voltage < 1 VDC; SELV
KL 3	9	Din3	Digital input 3: according to EEPROM setting, the integrated controller's direction of action can be selected as normal/inverse via bus or digital input normal: pin open or applied voltage 5-50 VDC inverse: bridge to GND or applied voltage < 1 VDC; SELV
KL 3	11	Ain2 U	Analog input 2, measured value: 0-10 V, Ri = 100 kΩ, adjustable curve, only usable as alternative to input Ain2I; SELV
KL 3	12	+ 10 V	Fixed voltage output 20 VDC, +20 V +25/-10%, max. 50 mA, short-circuit-proof power supply for external devices (e.g. sensors); SELV
KL 3	13	Ain2 I	Analog input 2, measured value: 4-20 mA, Ri = 100 Ω, adjustable curve, only usable as alternative to input Ain2U; SELV
KL 3	14	Aout	Analog output 0-10 VDC, max. 5 mA, output of current motor modulation level / motor speed adjustable curve; SELV

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## Curves: Air performance 50 Hz



Measurement: LU-173565-1

Air performance measured as per ISO 5801 Installation category A. For detailed information on the measuring set-up, please contact ebm-papst. Suction-side noise levels: LwA measured as per ISO 13347 / LpA measured with 1m distance to fan axis. The values given are valid under the measuring conditions mentioned above and may vary according to the actual installation situation. With any deviation from the standard set-up, the specific values have to be checked and reviewed with the unit installed.

